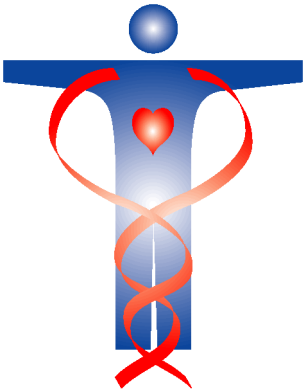


STATIC

Statistics for Intensive Care

User Manual

by Michael Weisenberger

STATIC Database User Manual

Version 6.5.x

IMPORTANT LICENSE INFORMATION

Use of STATIC software is subject to its license agreement, which can be found in the software. Please read the License Agreement carefully before using the software.

Table of Contents

Table of Contents

Chapter 1
Introduction

1.1.0 Introduction

STATIC is a sophisticated Relational, Multi User, Cross Platform, Client Server Database. If that sentence completely puts you off reading the rest of this manual, don t worry, we did that on purpose! Rest assured that we will try to give you all the tools you need in order to understand how STATIC works and how you can work with STATIC.

1.1.1 Reading Manuals

Most Users want to dive straight in and use new software. We can understand that - we often do the same! But in the case of STATIC, if you do that, you will remain ignorant of a substantial number of its features and power. Please believe us in this.

There is more and more evidence that it is far more productive to just read the manual cover to cover instead of experimenting with the software first. We prefer a combination, and suggest that both done simultaneously is even more productive.

At the same time we are very conscious of the assertion of Usability Groups that say that Help Doesn t . We welcome feedback on aspects of this manual that you found difficult to understand and found required expansion in order to be helpful.

1.1.2 Setting up STATIC

STATIC has been in development for over 8 years and on the way has grown from a little Intensive Care database to what you see today. As a result STATIC is now very flexible and adapts well to many Critical Care Departments. With the flexibility and adaptability goes the need for STATIC to be tailored to your particular requirements. Without this T ailoring ST ATIC will not function optimally in your particular environment. So, at the very least look through the Preferences section File: Preferences on page 41 to ensure that STATIC is actually set up to function correctly for your Department.

1.1.3 Help with the Jargon

This manual contains both a description of every aspect of STATIC and, when appropriate theoretical background making it easy for you to understand and use STATIC. In order to get the best out of STATIC, especially in the Reporting area, it is crucial that you have at least a rudimentary understanding of how relational databases work. We know that many of you will not have worked with a database before. The jargon of the database world is every bit as demanding as the Medical world. We suggest strongly if you do not have experience of databases that you read the chapter on Relational databases Speaking the Language of Databases on page 519 in order to familiarize yourself with the most important concepts.

1.1.4 Limits to the Manual

This manual does not cover everything. You will still need to learn how to operate your chosen computer installation yourself. We only mention other software or hardware when they affect the function of STATIC directly.

1.1.5 What's Next?

In the chapters that follow, you will launch the STATIC database and explore.

We assume that the Database Administrator has already installed your Application onto your computer.

STATIC will look the same whether you are using the Single User version or the Client Server version. The only difference from your point of view is in the Launching of STATIC, which is what we will describe next.

Chapter 2
Launching STATIC

2.1.0 Introduction

This chapter is designed for users who are not familiar with launching STATIC. In this introduction to STATIC database operations, you will learn:

Launching a STATIC Database

Entering your Password

Startup sequence of events

2.1.1 Launching a STATIC Database

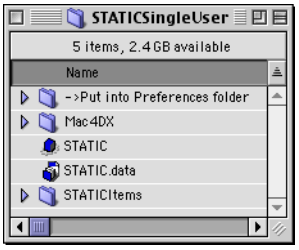
This launch procedure assumes that you have already installed STATIC Single User and, if using Client Server, installed Clients and launched 4D Server. If this is not already done, ask your Database Administrator to do this for you or follow the instructions in the Database Administrator Manual.

When you open your STATIC folder you will be presented by one of 4 folder contents depending on whether you are on Macintosh or Windows and on whether you are running Client Server or Single User: If your Database Administrator has followed our suggestions you should find a Folder {Subdirectory} called STATIC on your Disk Drive. Open this now.

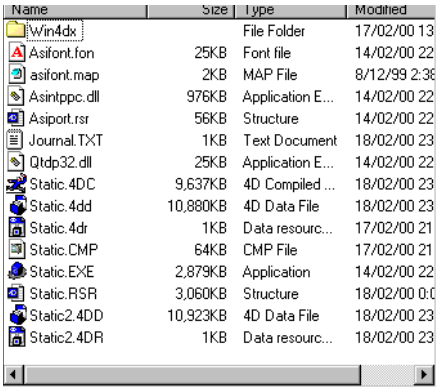
Single User

Here are the steps to launch STATIC Single User:

1 Inside the STATIC folder will be a folder called STATICSingleUser. Open this next:.



STATIC Single User Folder Mac



STATIC Single User Folder Win

2 Double-click on the icon STATIC {STATIC.exe}:

STATIC Icon

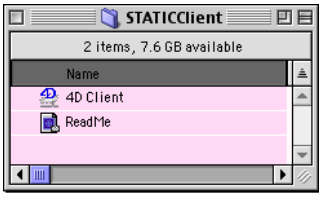
3 STATIC will now launch.

Client Server

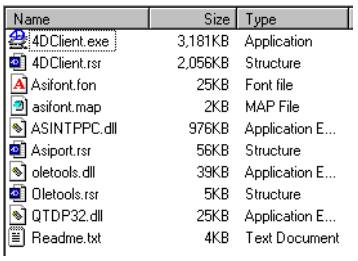
We are assuming here that the Server is already running, ready for connections from Clients.

Here are the steps to launch STATIC Client:

1 Inside the STATIC folder will be a folder called STATICClient. Open this next:.



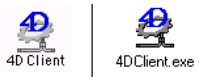
The STATIC Client Folder Mac



Name	Size	Type
4DClient.exe	3,181KB	Application
4DClient.rsr	2,056KB	Structure
Asifont.fon	25KB	Font file
asifont.map	2KB	MAP File
ASINTPPC.dll	976KB	Application E...
Asiport.rsr	56KB	Structure
oletools.dll	39KB	Application E...
Oletools.rsr	5KB	Structure
QTDP32.dll	25KB	Application E...
Readme.txt	4KB	Text Document

The STATIC Client Folder Win

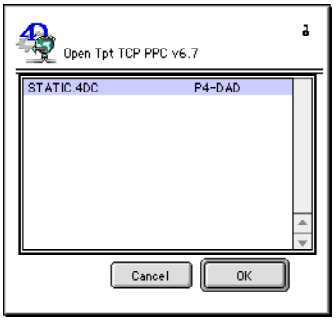
2 Double-click on the icon 4D Client {4D Client.exe}:
Note: 4D Client may sometimes be named 4D Client 6.5.x. The other characters behind the name, indicate the version of this particular client program.



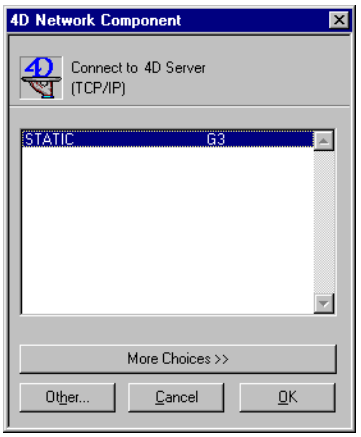
4D Client Icon

After a short delay a window will open. It is in this window that you will choose the STATIC server you require and connect to it.

Why is it arranged like this? Simple, 4D Client can connect to ANY 4D Server running many different applications (Accounting, E-Mail servers, Medical Patient databases etc. In short there may be many different databases running on your network serving many different purposes. The window that appears will look as follows, depending on the Operating System:



TCP/IP Network Component Window Mac



TCP/IP Network Component Window Win

3 Select STATIC in the Data Servers pane of the window
Sometimes STATIC will be listed as STATIC.4DC - that is OK.

4 Click on OK button
That s it!

From now on STATIC will look the same on Macintosh and Windows. So this manual will show screen shots of either platform. On the rare occasions when there is a difference worth noting we will alert you to this.

2.1.2 Entering Your password

STATIC will next display the ***Enter Password dialog***:

The Enter Password dialog Mac

The Enter Password dialog Win

Select the *Administrator* from the User List and type your password into the Password field. Press the *OK* button.

STATIC ships with the Administrator set to (i.e. a blank). So you do not need to set a password when you first run STATIC. Later we will show you how to set your own password for the Administrator and all other Users.

User Tip: Passwords and User Names are ***case-sensitive***. If you type a letter as lower case and it should be capitalized, STATIC will consider that an incorrect password. The same is true if you type a letter as Capital when it should be lower case. For this application, make sure you enter the password with the capitalization exactly as it is shown in the user name. Be sure to check the Caps Lock; make sure that it is OFF.

Note: One of the most common sign-on mistakes is to leave the CAPS LOCK key down while typing the password.

2.1.3 Startup sequence of events

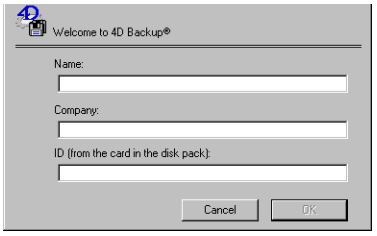
In this section we will describe some of the dialogs you may encounter during Startup.

STATIC is a complex program and has certain minimum requirements. To make life easier for you, we have created various checks to ensure that your environment and STATIC meet these minimums. These checks take time, but are well worth it as they ensure your data integrity.

The areas described below will give you some idea as to what is checked. Feedback is sometimes just informative. At other times a result will cause STATIC to Exit as continuing may be a violation of the License or because it is impossible for STATIC to function properly within the current hardware environment.

Welcome to 4D Backup

If you are using Single User STATIC, you may encounter this dialog:



4D Backup Registration Dialog

At the moment just click the Cancel button and STATIC will continue. This dialog is covered in the 4D Backup section of the STATIC Administrator manual

External Environment:

What is checked	Comments
Operating System version	Minimum as set out in the Appendix.
Processor type	Minimum as set out in the Appendix
Screen size and resolution	Must be at least 800 X 600
Memory available	Absolute RAM on your computer
Virtual memory	Checks if it is ON (Mac only, always ON for Windows)
Hard disc space	Extra space required to store reports and a growing datafile

External Environment

Internal Environment

What is checked	Comments
Various internal configurations	Stack sizes etc.
Memory settings	Looks for minimum, if exceeded or equalled will continue
Crash recovery	Reset the cache if last exit of the database was a crash or other non standard Quit
Deletion of the database cache	Only for Client Server
4D Server is set to Demo mode	Only for Client Server
Database Schema	Field description and type for Queries

Internal Environment

Restart Dialog

Just restart if you get this Dialog:

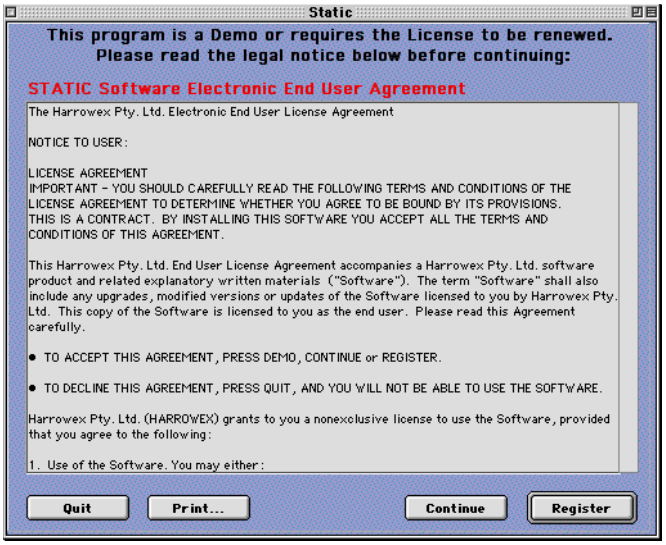
Restart Alert

Everything is OK but STATIC has reset various internal parameters which require a Quit to become active. Usually the Quit sequence will activate automatically once you dismiss the above dialog. Occasionally you will have to select the Quit item from the File menu in order to Quit STATIC before restarting.

Sometimes STATIC requires 2 restarts such as these before becoming usable. This will usually only happen when the Database has been updated by the programmers and various changes require several restarts prior to resuming normal operation.

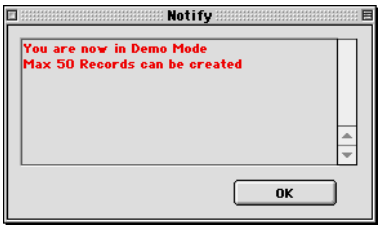
License

If the program is a Demo and Unregistered, you will see the following Dialog. For the moment just click on the close box of the window or click on the continue button and it will go away. We will describe this window in more detail in the Registration section.



License Window

Once the above window has gone the following window will display:



The Demo Dialog

This just reminds you that you are using a Demo version of STATIC. See the Registration section to for details.

Password maintenance

Invites change of password for a specific user. See password section of this manual for more details. If the system requires you to change your password you will see this dialog:

Password change warning Dialog

Followed by this one:

Change Password at Startup

You could now set your Administrator Password if you want to. Type in twice, once for each field. This makes it less likely that you have not made a mistake while typing. Then press OK.

Note: If you are using STATIC for the first time then it will allow you to keep the original password which in this case is a Blank. So you could just press OK if you want to and change the password later. Usually this is not allowed but to make things easy for the Demo we have set the Preferences for Passwords to allow the same Password even though the whole point of the dialog is to force the User to change their password to something new.

Completion of Startup

After Startup has completed, STATIC will display the Main menu bar and the Splash Screen as shown below:

The Main Menu Bar

Splash Screen

This screen gives you a lot of useful information. In the above screen the items are:

Demo Version - License status. This can be either Demo, Registered or Timed Out.

STATIC 2005.12.29 - The current version number of this version of STATIC you are running

16/02/2006 - Date of manufacture of this version of STATIC. This is the most accurate way of determining which version of STATIC you are using.

6.5.9 - Version of the database engine

Windows“2000version 5.0 - OS version currently used - this will of course differ depending on the OS used.

D:\STATICComp\STATIC.4DD - Path to the datafile currently being used - this will of course differ depending on the OS used.

You are now ready to explore STATIC!

Chapter 3
Help

3.1.0 Introduction

This chapter will explain the help system for STATIC. In this chapter, you will learn about:

3.1.1 Help: HTML Help availability

If your Administrator has set up Client Server and Single User properly then you should have the online HTML Help system available.

3.1.2 Help: Installing the Help System

The HTML Help system is supplied as a separate installer. The HTML Help Installer contains a single Folder called HelpFiles . This folder contains almost 1000 files that need to be kept together for the Help system to work.

Placement of HelpFiles Folder - Single User Installation

This folder needs to placed at the same level as the STATIC application.

Placement of HelpFiles Folder - Server Installation

This folder needs to placed at the same level as the 4D Server application. You do not need to place this HelpFiles Folder on the Clients.

Placement of HelpFiles Folder - Client Installation

You do NOT need to install Help on any Client. The Help system will be installed for you on all Clients if the Help system is installed on the Server

Activation of the Help System

To activate the Help System, just restart STATIC - everything else is automatically handled for you. You will notice a small window in the lower right hand corner of the screen as the Help system in the Help folder is copied into your datafile. This is required in order to generate the data required for the Help Find and the Table of Contents selection area.

Updating the Help System

If you are updating the Help system, just place the Help folder into the appropriate location. This will delete the old Help folder. Everything else is again automatically handled for you.

3.1.3 Help: Help from the Help Menu Item

You can access Help in several ways:

Macintosh	Windows
F1 key	F1.
Select Help for STATIC from the Help Menu	Select Help for STATIC from the Help Menu
Help key	

Selecting Help for STATIC

3.1.4 Help: Contextual Help

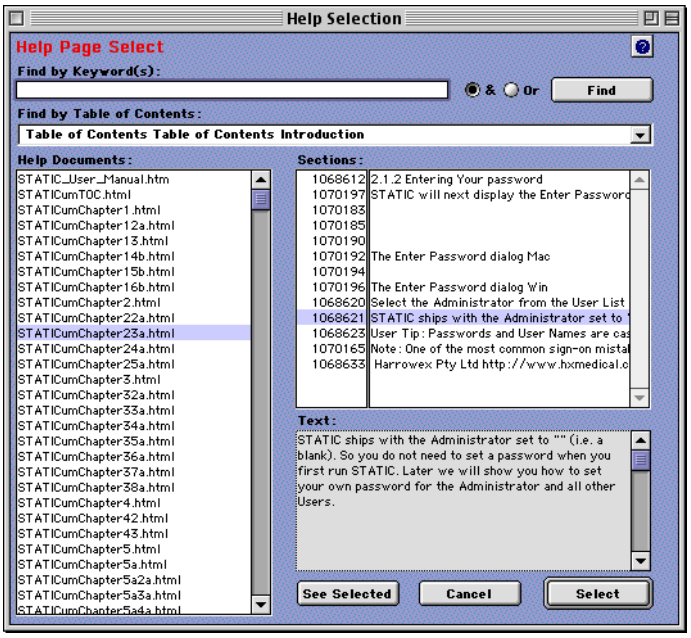
You will find a Help Icon on most forms. The Help Icon looks like this:

The Help Icon

Clicking on this Icon will launch your default browser and display the Help associated with the form that you are currently viewing.

Searching the Help System

If you hold down the Control Key while clicking the Help Icon, you will display the following window if you are the Administrator. If you are not the Administrator you will not see the Sections area or the Select Button:



Help Page Selection Window - Administrator

You can use this area to browse the Help topics and selectively view topics of interest.

Use the Keyword area to display pages that may contain the information that you seek.

Or go to a particular topic based on the Table of Contents.

Often by just viewing the text you will probably already find the answer that you seek, but you can also display the Help page in your Browser by clicking the See Selected Button.

Window Items	Purpose
Find By Keyword(s)	Look for any Help documents that contain the words entered here. Multiple words need to be separated by a space. The search is activated by clicking on the Find Button. If the & radio control is selected then ALL words must be in the document for that document to be selected. If the Or radio control is selected then ANY document that contains ANY of the words in your list will be selected.
Find by Table of Contents	This Drop Down list allows you to navigate directly to the document containing the content specified by the Table of Contents of the Help system.
Help Documents	Selection of Help documents returned by a Find action or all the documents contained in the Help folder.
Sections	Each Help document is divided into Sections. This area allows you to select a particular section to view or to select as the target area to display for the current selected form.
Text	Displays the content of a Section or the content of the Help document.

Window Items

Button Name	Action
& and Or Radio buttons	If the & radio control is selected then ALL words must be in the document for it to be selected. If the Or radio control is selected then ANY document that contains ANY of the words in your list will be selected.
Find	Initiates a Search for Keywords.
See Selected	Launches the default Web Browser for your installation, displays the selected Help document and scrolls to the selected Section.
Select	Makes the current selected Help document and section the Help page that is seen when the user clicks the Help Icon on the current selected Form.
Cancel	Dismiss this Help Select form

Buttons

Personalizing Help

Help is set by the Developer for each Page for every Form that displays the Help Icon. This is the Default Help always available.

Help is highly personal, so we have made it possible for you to override our default settings and associate the Help topic that you think is more relevant for your installation.

To personalize Help do the Following:

1. Navigate to a particular Help topic via the Find by Table of Contents or by the Find by Keyword area.
2. Select the Section that you think is most relevant.
3. Test the selected Help Document and Section by clicking the See Selected Button - the selected document and section should display within a Browser window.
4. If you are happy with your selection click the Select Button and the selected Help will be associated with the currently displayed form.
5. The selected Help will now be the Help you will see when you click on the Help Icon on the page displayed.

Chapter 4
STATIC Interface

4.1.0 Introduction

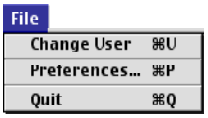
This chapter is designed for users who are not familiar with the STATIC database interface. In this introduction to the STATIC Interface, you will learn:

4.1.1 Interface: STATIC Interface Objects

STATIC uses a number of Interface Objects. We want to be consistent in this manual in our naming of these objects. In order to achieve this we will now describe most of them.

4.1.2 Interface: Opening a Window

The first thing you need to do, in order to start working with STATIC, is choose a menu option to open a window:



Opening a Window from the File menu

A window contains a logical grouping of information. This information may be from one table, or from several related tables. The purpose of windows is to make your work easier by presenting information to you in logical units. There are three general types of windows: ***List windows***, ***Single-Record windows*** and ***Dialogs***.

4.1.3 Interface: Opening Multiple Windows

STATIC allows you to have several windows active at the same time. This is very convenient when you need to see and work with several different types of information simultaneously. This ability to work with multiple windows is made possible by something in STATIC called ***Processes***. A Process runs in its own window, and each process acts as if it is a separate copy of STATIC. One process could be printing, while another process is displaying a list window, and a third process is displaying a data entry form.

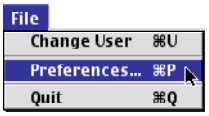
4.1.4 Interface: Managing Multiple Windows

After you have opened multiple windows, your screen may look quite cluttered. Because of limited space on the screen, a window may be partly hidden behind another window. To bring a window to the front so you can see all the information and make modifications, you simply click anywhere on the window.

4.1.5 Interface: Using Menus to Activate Windows

When you click on a window to bring it to the front, we say that you are ***activating a window***. Another way to activate a window is to choose that window in a menu.

For instance, choosing the Preferences item in the File menu:



Choosing the Preferences item in the File menu

This either opens the Prefs window for the first time or brings it to the front if it is hidden below another window:

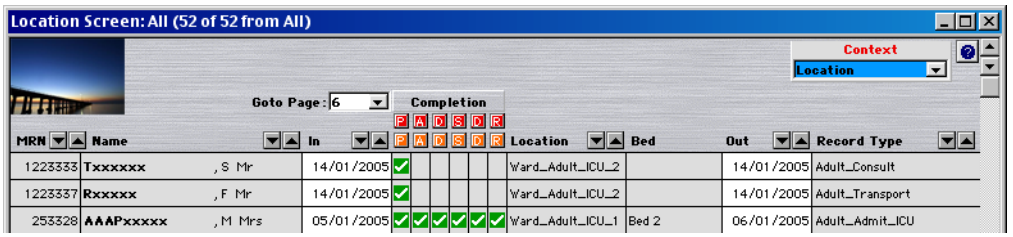
The Preference window brought to the front

4.1.6 Interface: Working with List Windows

In a STATIC application, the usual way to view records is by first navigating to a screen that displays a list of records in a particular table. We refer to this type of screen as an ***Output Layout*** or an ***Output Form***. A more appropriate name for this type of screen might be a ***List Window***.

Interface Objects in a List Window

A List Window shows you a selection of records from a table; it also gives you several options or actions that you can perform on one or more of the records being displayed:



Admissions List Window

To perform these actions, a list window uses the following types of interface objects:

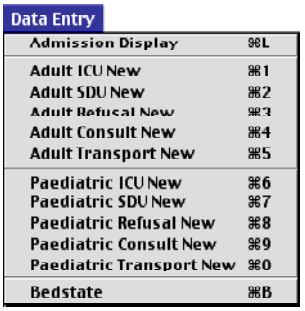
Sort Buttons

Sort buttons

Sort the List into ascending or descending order.

Pull-down Menu

If you have used a computer in the past, you are probably already familiar with pull-down menus:



A pull-down menu

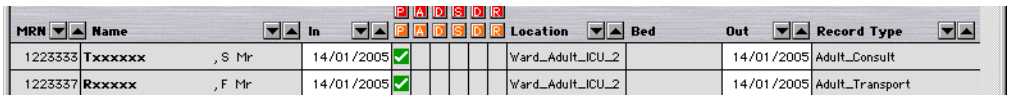
The pull-down menus in STATIC are very similar to pull-down menus in other applications. These are the menus available from the menu bar at the top of the screen {in the MDI window}. In STATIC the main menu is always available whatever window is currently active. A pull-down menu is a menu that you pull-down in order to make a selection. Although there are other types of menus, the pull-down is the most common type of menu. In fact, when we use the term menu without specifying the type of menu, we are usually referring to a pull-down menu.

Window Title

A Window Title

The Window Title might provide you with a variety of information. The above window title tells you the name of the Window and the Record Count.

List of Fields



List of Fields in a List view

A list window usually contains a small percentage of the total fields in the table that is being viewed. The purpose of this list of fields is to help you decide if a particular record is the one you want to view.

Action Buttons in a List Window

Action Buttons in a List view

Action buttons in a List window are convenient because they remind you of what can be done, and they give you a visual clue as to how to do it. In a List window, action buttons may require that you highlight some records first, and then choose an action.

Here is a list of common action buttons in List windows:

Button Name	Action
All	Display all the records.
Reduce	Reduce the selection of records to the ones selected.
Add	Add a record.
Delete	Delete the selected records.
Modify	Modify the selected record. You can also do this by double clicking on the record selected. You can usually open as many records as memory allows.

Button actions

Drop-down Menu

A Drop-down menu is so named because it drops down when you click on it:

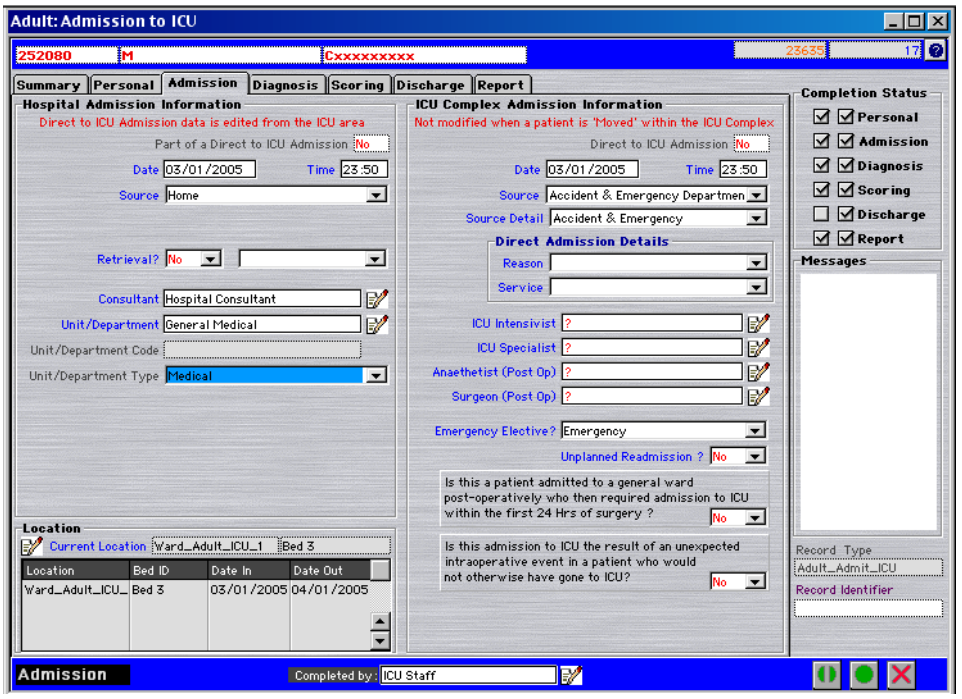
A Drop down menu

Other Interface controls

Most other interface controls are standard for the platform you are using. However be aware that the window controls should all work as expected when they are present. Also, even if there is no visual control to tell you, you can often resize a window by clicking on the bottom right corner and dragging.

4.1.7 Interface: Drilling Down to a Single Record

When you are in a List Window, you can ***double-click*** a record to view and modify the data in that record. In the database world, we call this drilling down to the next level. :



The ICU Single record form

When you are viewing a single record, you are viewing a STATIC ***Input Form***. When you need to create or change an individual record, you will usually work with an Input Form. In STATIC most records open within their own window. This makes it easy to compare the contents and/or cut and paste between them. It also increases the amount of memory required by STATIC and the complexity of the underlying code!

Interface Objects in a Single-Record Window

When you are in single-record window, you might have several different interface objects available for your use. Each form is different; here is a list of the possible types of objects that you might see in a single-record window:

Field

A field is a container for storing and retrieving a specific piece of information about a specific record. A field may contain date, numerical, alpha-numerical, or graphical information. The caption, which is usually above or to the left of the field, tells you what kind of information is stored there.

A Field

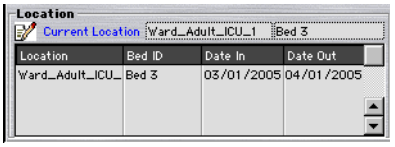
Variable

A Variable is a temporary storage container that the program uses to get or display information that will only be available while this record is being displayed. A variable might look like a field on the screen; however, a variable is *not* saved with your data. Its contents might have been derived from a field.

A variable

Included SubTable

An included subtable is a list view that is contained *within* a single-record view. The included subtable may or may not be double-clickable, depending on the type of information, and depending on whether or not there are additional fields of information that are stored behind the list view .



An included subtable

Button

A Button is an object that you push or click with the mouse, in order to initiate an action. Some buttons are plain rectangles, other buttons are graphical objects. Most buttons can also be tabbed to, and then activated from the keyboard.

A Button

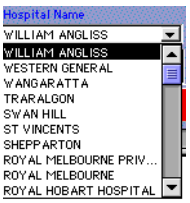
Link to Source Table

Lookup data can be viewed directly while within a data entry area by clicking on a button such as the one below.

Lookup Button

Combo Box

A combo box is a *combination* of a variable and a popup menu. You can type a variable in the box of a combo box, or you can choose from a popup menu that is associated with the combo box.



A Combo box.

We tend to avoid Combo boxes in STATIC like the plague. Why? Because everybody enters their own information as they see fit without any controls or standards - a sure way of making the data collected on a single fields almost useless. When a variety of data needs to be collected for a field, we usually give you the option of a Drop down menu that you (the Administrator) can edit.

The one exception is within the Query area where this control is actually useful - you can define whatever you want or select a predefined item from a list.

Checkbox

A checkbox is a way to present and update boolean information (yes/no, true/false, 1/0, etc.)

A Checkbox

Radio Buttons

Radio buttons usually come in groups, and radio buttons are mutually exclusive: when one is on the others are off.

A Radio Button Group

Drop-down Menu

A drop-down menu is so named because it drops down when you click on it.

A Drop down menu - input form

We use drop down menus a lot in STATIC. They ensure data integrity as the user is forced to choose from a limited list of options and the usual problems of misspelling, extra characters and strange entries are avoided.

Record Navigation Buttons

These allow you to save and exit the form. This can usually also be done from the close box. STATIC is intelligent enough to sense when a record has been changed - so if you Cancel a record it will ask you if you really want to do this as you will loose all your changes if you continue.

Record navigation buttons

Some forms do not have any navigation buttons or only a subset of them. In that case the only way to signal that you want to save or cancel your changes is to click the close box of the window. A dialog box will then determine if the record changes are saved or not.

Most standard keyboard controls are supported for Saving and Cancelling records:

Keyboard	Action
Enter	Save the record
Return	Save the record (unless the cursor is in a Text field that accepts Return)
Tab	Move to next Tabbable object
Esc	Cancel record changes
Function key F4	Cancel record changes
Control and . (Ctl.)	Cancel record changes (Control Fullstop)

Keyboard actions

4.1.8 Interface: Date selection wizard

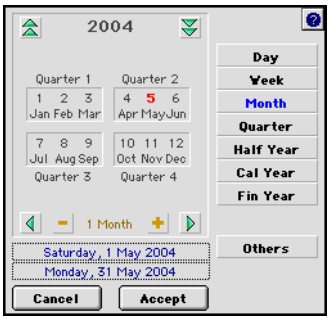
In various areas of STATIC you will need to specify a date or date range. Sometimes we have given you the ability to choose the dates using a wizard described below.

The Date Selection Wizard is primarily designed to give you the ability to specify consistent date ranges. This includes Financial and Calendar Years, as well as Months and Quarters. There is also the option to specify any date range you want.

Clicking on a date range area:

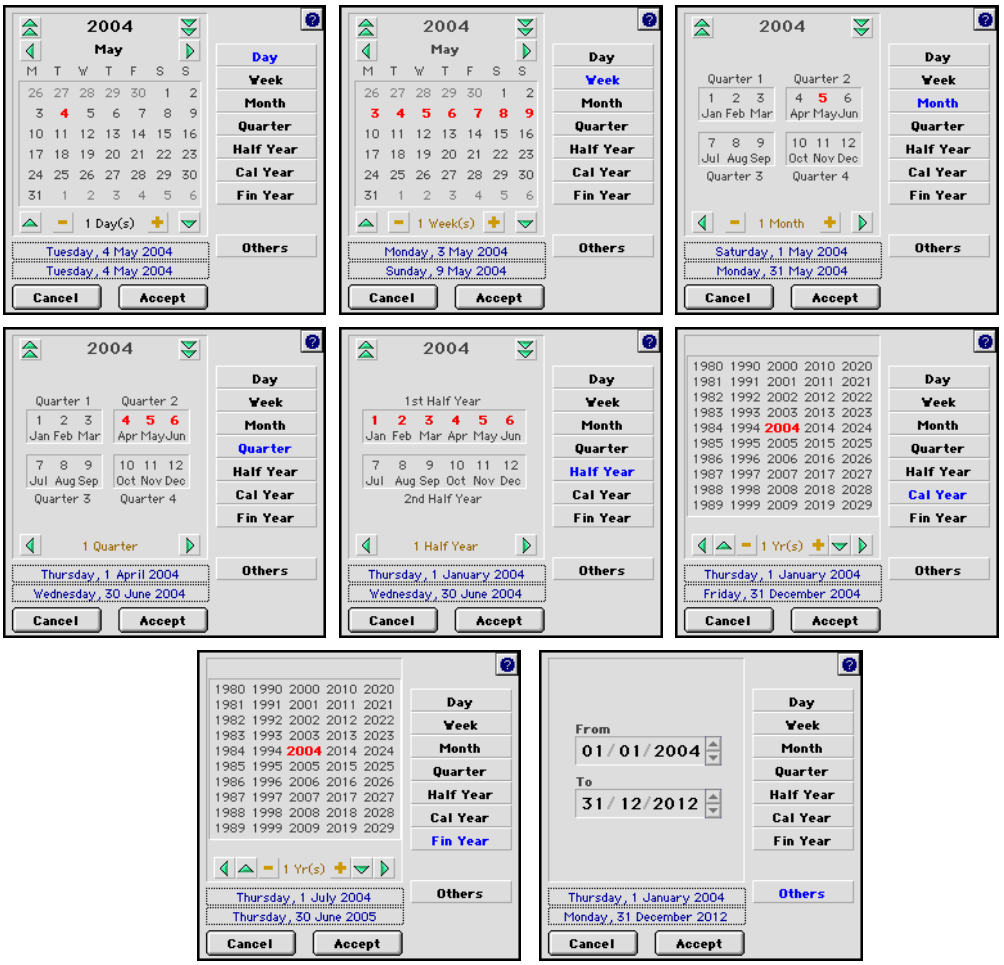
Date Selection Wizard: Clicking on Date range area

Will present the following window. Which option in this window displays first is set within the calling code. In this case the option to select a specific month has been set:



Date Selection Wizard: Clicking on Date range area

There are several pages of options that should make it quicker for you to select the date range you require:



Date Selection Wizard: Options available

The controls are very simple:

Previous Year

Next Year

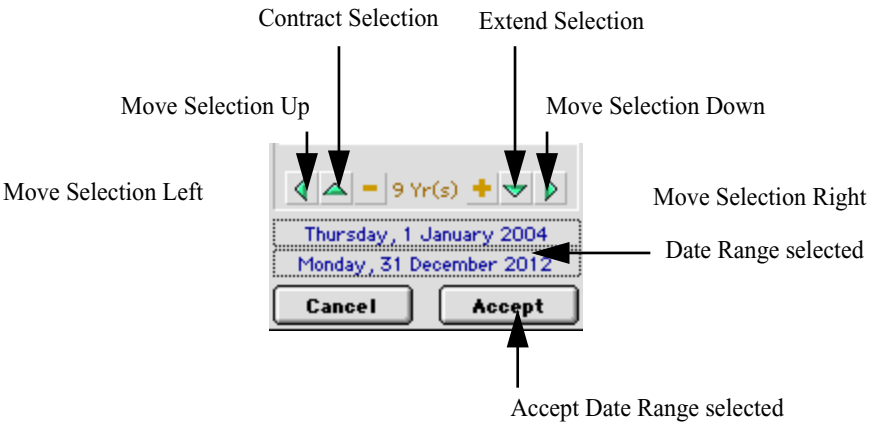
Previous Month

Next Month

Date Selection Wizard: Date Controls

The above controls change the display of the possible days, months or years available for selection. After this select the day, month, quarter, half year or year that you require. If you need to select more than one day, month or year then you can use the controls described below to extend your selection.

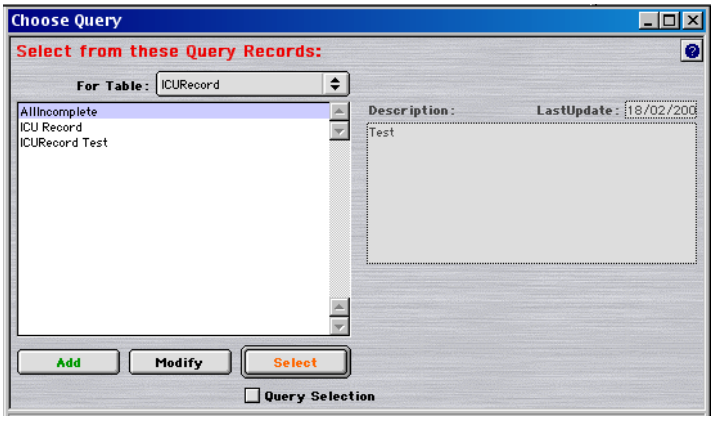
The controls shown below change, move or extend/contract the date range actually selected:



Date Selection Wizard: Date Controls

The best way to learn to use this control is to play with it!

4.1.9 Interface: Select Query window



Query: Select Query window

This is the window that opens whenever you access a Query... button on a form. We have implemented Queries this way as it allows you to reuse previously defined Queries in all parts of the database.

Window Items	Purpose
Query List	Lists all the Queries available. This list is controlled by the **For Table** Drop down menu.
For Table drop down list	Use this drop down list to view only Queries that have been defined as belonging to the specified Table in the Drop Down list. You can also choose to view All Queries. Note: Queries in STATIC can create selections for more than one Table at the same time. Designating a Query to a particular Table is thus not a clear decision - a Query could easily belong to several Tables.
Information pane	This gives you some details about the Query selected.
Owner	The author of the currently selected Query.
Date	Last date on which the currently selected Query was edited.

Window Items

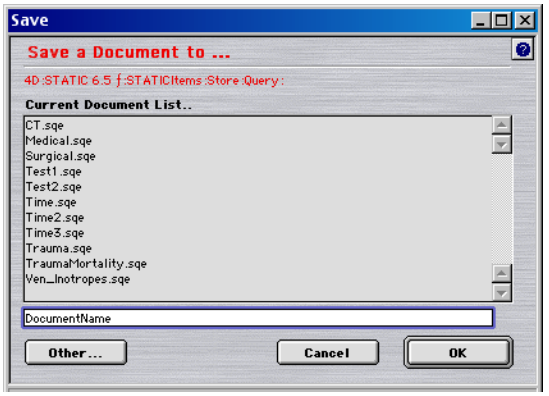
Button Name	Action
Add	Add a Query.
Edit	Modify the selected Query. You can also do this by double click on the query selected. You will only have access to the Query if you are the Owner or the Administrator.
Query Selection	Restrict the Query to query ONLY the currently selected records (in the form that originated this request) for the Master Table indicated. If this is not selected then the WHOLE table is queried.
Select button	This executes the selected query.

Buttons

4.1.10 Interface: Saving a Document

If you choose an option that will allow you to save a document, STATIC will usually give you the option to save the document to a predefined area within the STATICItems folder. See STATICItems Folder on page 31.

If this is the destination, then the following Dialog will appear:



Interface: Save a Document Window

1 Edit DocumentName to what you require.

The default name DocumentName is preset but can be changed. Do NOT add a file extension - this will be done automatically for you. Note that if you enter a name that already appears on the list presented, then STATIC will postfix the name with a numeral and then add the extension (You can see that this has happened in the above Dialog for the Default name).

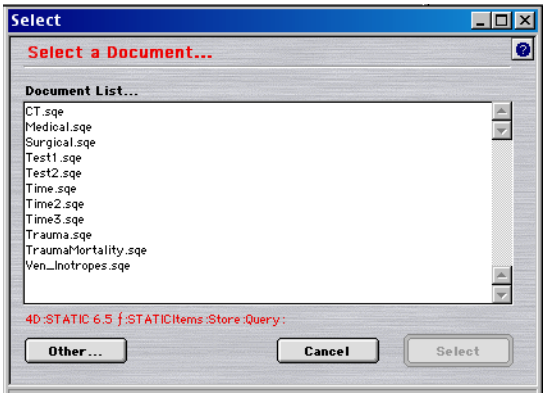
2 Click the Save Button if you want to save the document.
Note that the path to the saved Document is as stated in the red text at the top of this Dialog and is always into the STATICItems folder. This makes it easy to find and store saved Documents.

3 If you want to save the Document elsewhere then click on the Other Button.
The Operating System's Save File... dialog appears. Make sure it is pointing to the folder where you want to save the Document and follow standard Operating System procedures for storage of documents.

4.1.11 Interface: Loading a Document

If you choose an option that will allow you to load a document, STATIC will usually give you the option to load the document from a predefined area within the STATICItems folder. See STATICItems Folder on page 31.

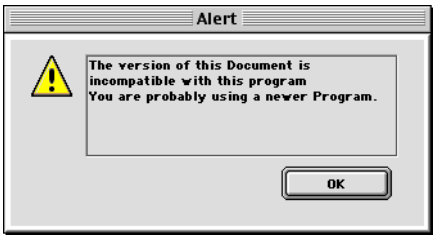
The following Dialog will appear:



Interface: Select a Document Dialog

1 Select the document you require and click the *Select* Button. The Document will load.
2 If you want to load a Query from somewhere else then click on the *Other* Button.
The Operating System's Open File... dialog appears. Navigate to and select the Document you require and follow standard operating procedures for opening of documents.

Note: If the document you selected and opened is not valid for the STATIC area from which you opened the document, then STATIC will warn you and will not process the document:



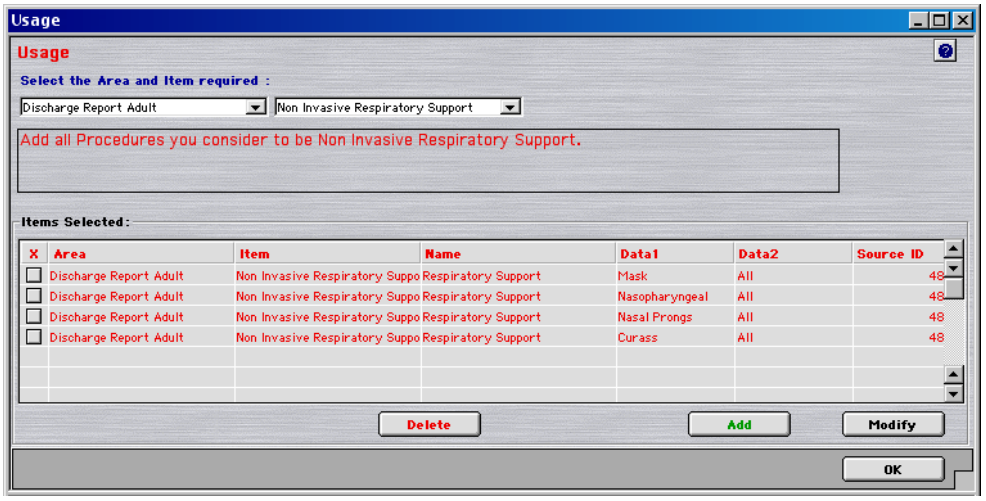
Interface: Invalid Document example

4.1.12 Interface: Usage

This area gives you the ability to define the usage of various items (such as Procedures and Complications) within the database when they need to be included in Special Reports or within Scoring Systems. For instance, there are many ways of classifying Respiratory Support and yet we still need to define these Respiratory Support items as Ventilation, Invasive and Non Invasive Respiratory Support. This area allows you to do just that.

4.1.13 Interface: Usage: Output Records

When the Usage button is clicked the following window will display:



Interface: Usage Output: Usage

Window Items	Purpose
Select the Area and Item required	The Drop Down lists will select the Items already defined for the various database areas. The first drop down selects the main database area while the second selects the subarea. Currently this facility is used for: Apache3 Organ Failure Discharge Report ANZ Central DB Report Paediatric The description field below the selection area provides instructions as to the type of data being collected within the selected area. Once an Area and an Item have been selected, you will see more specific information relating to the Item.
Items Selected	This area lists the items defined for the area selected in the drop down lists.

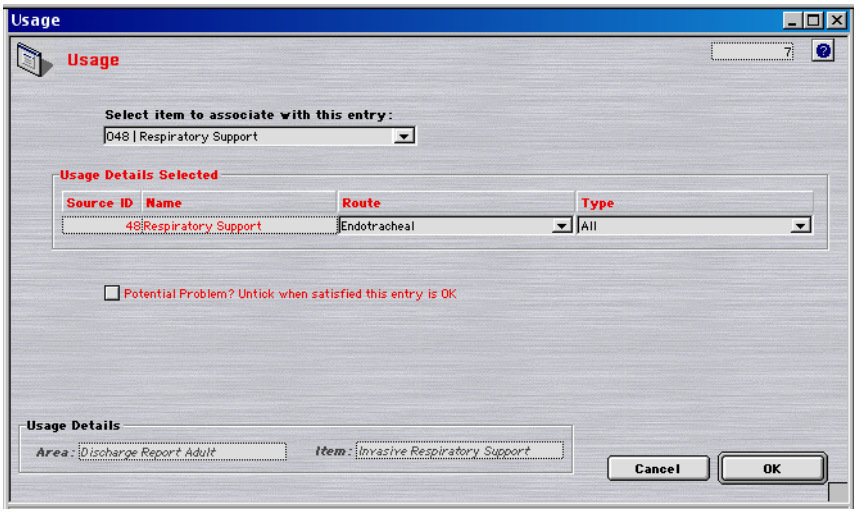
Window Items

Button Name	Action
Delete	Delete an Usage Item.
Add	Add an Usage Item. This button is only visible when a specific database area is selected in the drop down list. It is not visible if All has been selected for either drop down menu in the Select the Area and Item required: area.
Modify	Modify an Usage Item.
OK	This executes the selected query.

Buttons

4.1.14 Interface: Usage: Add Record

Click on *Add* button. The following window will display:



Interface: Usage Input Form

Window Items	Purpose
Select Item to associate with this entry	Select the Procedure Define or Complication Define record to use as a basis for this entry.
Usage Details Selected Source ID Name Data1 (Route) Data 2(Type)	If the Define record is simple, only the Source ID and the Name will be visible. For some Procedures there may be a Data 1 and Data2 option defined. If this is so, then additional drop down lists will display allowing for selection of these options. If the All option within these drop down lists is selected then all sub-options other than the ? will be deemed to have been defined for this Usage record. The use of the All option will mean you do not need to select every option individually.
Potential Problem?	If the Define record is edited in any way then the corresponding Usage record will be set as a Potential Problem. This does not mean that there is anything wrong with the Usage record, just that it may be wise to check the record before assuming that it is OK after edit.
Usage Details Area Item	Details of Database area and the Item for which this Usage Item has been defined.

Window Items

To add a Usage Record:

1. Select item to associate with this entry:
   Select the Define record which forms the basis of this Usage record from the drop down list.
2. Select other drop down items:
   If other drop down items are available under the Usage Details Selected area, make your selection. If all of a drop down list is to be used, select the All option. If a Procedure is to be used where there are many possible combinations of Data1 and Data2 and only some of these combinations are suitable then you cannot use the All option. In this case you need to specify several Usage records that contain the specific combinations of Data1 and Data2 required.
3. Click on the OK button to save the record.

Chapter 5
STATICItems Folder

5.1.0 Introduction

In this chapter, you will learn about the STATICItems folder.

THIS FOLDER IS SO IMPORTANT THAT IT DESERVES ITS OWN CHAPTER

The STATICItems Folder

5.1.1 STATICItems: The Folder

The STATICItems Folder is used by STATIC to store Reports, Information and any other STATIC generated output. The STATICItems Folder is located at the same level as the datafile that it uses to generate the contents of its output. We have centralized the output activity in order to make the location of any output consistent and easy to find.

This folder and its Subfolders is also the preferred source of Import documents. So if you need to import files into STATIC place them into the appropriate Subfolder in the STATICItems folder

NOTE: Remember that this folder is ALWAYS in the same directory as the datafile it refers to. It is not necessarily in the same folder as the Executable program (Application file).

5.1.2 STATICItems: Structure of the Folder

This folder is composed of 4 subfolders:

Folder	Purpose
Information	Contains the result of various operations that need to generate feedback that is best stored in a document. Within this folder is the: Activity Log - log of access by Users of the Datafile. Data Integrity - log of problems encountered when checking the Datafile. Speed Test - results of running the speed test for Client Server installations. See Administrator: Test Client Server Speed on page 501. Update log - log of changes made to the Datafile during update operations at Startup. Task log - log of operations performed such as reports that have been generated.
Reports	Contains the output of any Reports generated by STATIC. If a Report is composed of multiple documents then STATIC generates a folder into which these documents are stored.
Store	Contains the output of any data exported from the datafile. This includes Report definitions as well as data exported from the Admissions area.
Update	This is a folder checked by STATIC on startup for any documents that need to be imported automatically. The document is checked for suitability before the import is activated.

STATICItems Folder: Content

Chapter 6
Architecture of STATIC

6.1.0 Introduction

In this chapter we will give you a quick overview of the Architecture of STATIC before we go into specifics in the following chapters.

6.1.1 Architecture of STATIC

The architecture of STATIC looks quite simple but as with everything, what is simple on the outside hides a lot of complexity on the inside.

Preferences and Setup

Almost all the setup options are located in the Preferences of the File menu. This is where you need to go to when you are ready to customize STATIC for your particular Critical Care department.

Entering Admission Data

This is done from the Data Entry menu.

To view previously entered admissions, select the Admission Data Display menu item.

To enter new admissions you can either do this from the Admission Data Display window or by selecting one of the other menu items in the Data Entry menu: e.g. Adult ICU New or Paediatric ICU New etc.

Be aware that the admission records displayed in the Admission Data Display Window are NOT admission records. Rather they are Location records - there can be several locations for every admission if the patient was moved from one ICU area to another during his stay in ICU.

Bedstate

Bedstates are looked after from the Bedstate menu item in the Data Entry menu.

Reports/Exports

This is managed through the Reports menu. It is divided into several sections:

Section 1

Report Envelope- Allows you to bundle a selection of Summary and Detail reports to be executed and delivered together. You can schedule Report Envelope to run at predefined dates and times on multiple occasions. You can also determine if the Reports are to be calculated using Perfect Accuracy as well as the destination of the Reports (under Client Server allows the Transfer of the completed Report to a particular Client).

Section 2

Reports in STATIC are defined in the Detail and Summary Report areas.

Detail Report- Allows you to export any data from STATIC using the universal SYLK (MS Excel format), DIF and TEXT formats. It can export either as a Date Time Export or as a Hierachical or Flat file Export.

Summary Report- Allows you to create Summary (Statistical) style reports. Almost any conceivable report of a summary nature can be generated here. The design of this area had one objective - maximum flexibility. The final output can be exported to Text, Excel or a Graphic format (useful for Microsoft Powerpoint). You can also directly Print - in full colour if required

Special Report - This is where you create the reports for the ANZICS and ANZPICR Database projects.

There are also various reports that have been created over time that are too difficult to generate by the above options. If you have a report that falls into this category then please contact us.

Section 3

Query Store- This contains the definitions for the **Query** area. We have organized things in a very modular way so that items can be reused for other purposes in other areas of the database. For instance, a Query created for an Detail Report could also be used for a Query in the Admissions Window or in a Summary Report.

Section 3

Transfer from Server - All Reports are saved to a special folder called STATICItems. When a Report is executed by the Server, the completed Report is stored on the Server. Unless you have specified that the completed Report is to be immediately transferred to the Client, the items will remain on the Server until you Transfer them.

This makes sense in a Client Server environment. You may have scheduled a Report to run at a predefined time but when it is set to run, the Client may be logged off. In this case the Report can still run on the Server but instead of sending the result to the Client retains the result on the Server ready for later transfer - when you request it.

Administrator functions

These are managed through the Administrator menu. It is divided up into several sections:

Section 1

Maintain Patient Records - This is where you will delete all the Demo Patient data prior to creating your own. Deletion in this area will delete the ICU record and all dependent related records (such as Apache, Gas, Procedures, Locations etc.). When the last ICU record that is related to a Hospital record is deleted then the Hospital record is also deleted.

This is also the area where you Import and Export Patient records. This allows you to create special purpose databases that can be, for instance, be encrypted for identifying information before being given to a third party. The Import and Export is intelligent as far as Hospital records are concerned. For instance, if the Hospital record for a patient already exists, it is not recreated on Import.

Datafile Integrity - Error correction and verification of the datafile is an essential aspect of maintaining data integrity. STATIC provides a whole set of tools to achieve this. The tools fall into two categories: Datafile logical integrity and Datafile content integrity. If the datafile is suspect after an unexpected power cut for instance, run some or all of the tools here to check that the datafile is still intact.

Section 2

Command Centre - Allows the Administrator to control access to the database (for Client Server operation)

Task Centre - Allows the Administrator to check when/what processes such as Exports or Reports are scheduled and control their execution. This is the Nerve Centre for Client Server operation.

Section 3

Menu items in this section allow you to check activity logs, look up error codes, force mandatory fields to be updated, force the local cache to be recreated when you next startup the Clients and ensure that the datafile is functioning well and to test Client Server communication speed.

Import Files

This is managed through the Import menu:

Hospital Outcome File - Hospital Outcomes are often not available until some time after a patient has been discharged from Critical Care. To make things easier this item will allow you to Import a specially prepared Tab-Tab-Return file prepared by Medical Records that will allow you to complete your records.

This completes the VERY short overview of the architecture of STATIC.

6.1.2 What's Next?

It's time to get deeply into specifics.The next several chapters will tell you all that you need to know in order to become a Power User of STATIC!

We will sequentially describe every function in STATIC, menu item by menu item starting with the File menu.

Special Note: Because you now understand the basic architecture of STATIC, you can jump to any topic in the Manual and get started experimenting right now.

Chapter 7
File Menu

7.1.0 Introduction

This Menu includes an area in which you can record bugs and requests and an item that allows you to change the currently logged on User without restarting the database (or logging on again if using 4D Client). It also includes the Preferences. We will cover all of these now:

Change user

Preferences

Registration

Staff & Access

Workstation

Database

Backup

Mandatory data

Structure

Lists

ICU Area

Diagnosis

Procedure

Disch Problem

Complication

Custom

AD Code

Department

Ext Hospital

Referring Dr

Postcode

MET

Billing

Quit

Chapter 8
File: Change User

8.1.0 Change User

This option will allow you to change User while STATIC is already running or simply log off the Current User.

This may be useful if the Current User is a Medical User who does not have privileges to change Preferences and it is required for the Administrator to, say, add another item to Discharge Problems.

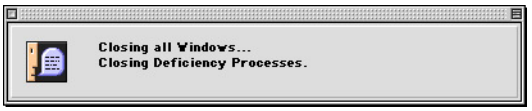
On most databases you would be forced to completely Exit and then launch again. This option makes the process of changing User possible without Exiting.

This option also allows a User to quickly log off the database and automatically save all the changes they have made, if, for instance, they are called away. They can subsequently log on again and continue data entry without having to launch the database again whilst maintaining security during their absence.

Select Change User from the File menu:

Change User: Menu Selection

and the following message will display:



Change User: Closing All Windows

This informs you that all current windows are being closed. This is exactly the same sequence as when you select the Quit command. It will automatically save data where required in an orderly fashion and finally display the Enter Password Window.

The Enter Password dialog Mac

The Enter Password dialog Win

Select the User you require, enter the password and click the *OK* Button.

That s it! The menu bar will change depending on the User you have selected and you may continue.

If the *Cancel* button is selected, STATIC will Quit the database.

Chapter 9
File: Preferences

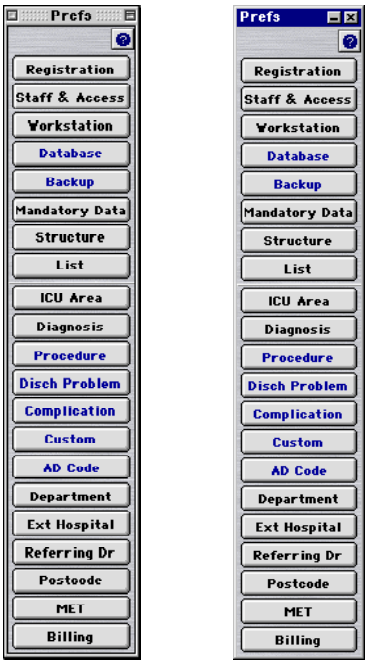
9.1.0 Introduction

This menu option allows you to set up and customize STATIC. Every Critical Care area has its own way of operating.

After selecting Preferences in the File menu:

Preferences: Menu Selection

You will see the following window:



Preferences Window

In order to select one of the options click on a button.

Note: A click on any button with BLUE text will require the Database to run in Single User mode before allowing access to the function selected. In order to enforce this in Client Server mode, all Clients are logged off - the one initiating this function will stay active. Once you have completed your changes, Clients will be allowed to Log On again, until then they are barred from Logging On.

We will discuss the function and use of all these options in the next sections.

Chapter 10
File: Preferences: Registration

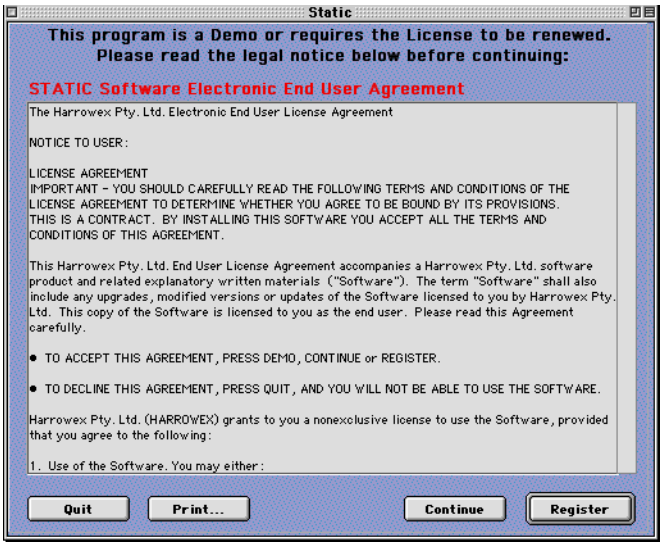
10.1.0 Introduction

This area will allow you to:

- Enter your personal and Hospital information.
- Choose what version of STATIC to run.
- Request an Unlock Code.
- Enter and Register an Unlock Code.

10.1.1 Registration: License

After clicking on the Registration icon you should see the following window.



License Window

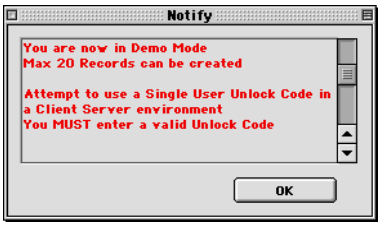
The window will display the Electronic End User License Agreement. If you have never read this document, we highly suggest you do so.

Button Name	Action
Quit	Clicking this button will exit you out of STATIC. You may wish to click on this option if you do not agree with the End User License Agreement.
Print...	This will allow you to print the Electronic End User License Agreement.
Continue	This is does the same as clicking the close box- see end of this section
Register	Click on this button if you are ready to request an Unlock Code, ready to enter an Unlock Code or need to edit any of your Registration details.

Buttons

Close box

If you do not want to choose any of the options in this window, you may click the Close box and continue. If this is a Demo program or a Timed Out version of the program, you will be warned by a Notification similar to this:

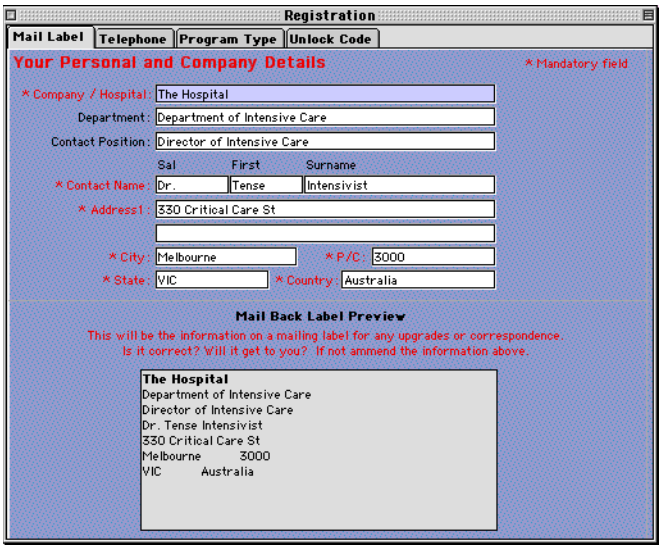


The Demo Dialog

We will now describe the registration process.

10.1.2 Registration: Registration Window

After clicking the Registration Button you will see the following window.



Registration Window

This window is arranged as four pages. You can move from page to page by clicking the Tab control at the top of the window.

In order to complete registration you must fill in all fields that are labeled as mandatory fields. These all begin with an * and have a red label.

10.1.3 Registration: Mail Label & Telephone

This information is important both to us and to you. It makes communication efficient and accurate. It also ensures that postal items sent to you reach the appropriate destination. Pay particular attention to the Mail Back Label Preview and ensure it is correct.

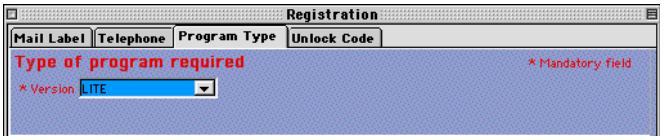
10.1.4 Registration: Program Type

When you reach the page called program type you will be required to make a choice as which version of STATIC you wish to use.

They are three versions of STATIC:

- STATIC Lite
- STATIC Pro Single User version
- STATIC Pro Client Server version

In order to select STATIC Lite your window should look like this:



Program Type: STATIC Lite

In order to select STATIC Pro Single User version your window should look like this:

Program Type: STATIC Pro Single User

In order to select STATIC Pro Client Server version your window should look like this. You may of course be requesting more or less users than indicated (in this case 7 users):

Program Type: STATIC Pro Client Server

Name and logo

This area allows you to specify a name for your hospital:

Program Type: Name of Hospital

The name entered here must not be changed after the Unlock code is issued. This name appears at the top of Discharge forms and other documentation created by STATIC. If you do require a change to the name then contact us and we will issue a new Unlock Code.

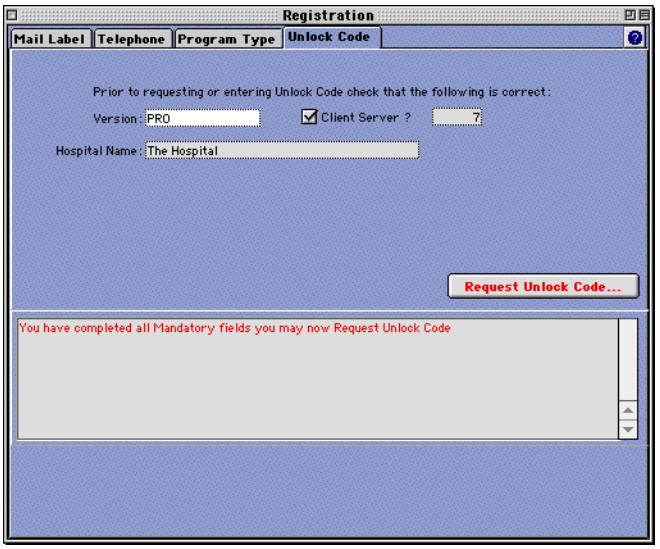
Copy and paste a logo directly into the provided field or use the Get Logo button to navigate to the document that contains the logo you require.

You will have to experiment with the logo and how it interacts with your printers. Every printer is different and you will have to choose a graphic that suits your particular installation. The Default and Registered Demo Logo will display if STATIC is running in demo mode.

If all your stationary already includes a preprinted logo, you can opt to have nothing in this area - select the Clear Logo button to ensure this.

10.1.5 Registration: Unlock Code

Once you have completed entry of all required information you can proceed to the Unlock Code page:



Unlock Code: Ready to request Unlock Code

If all mandatory information has been completed the Request Unlock Code button will be available otherwise it will be dimmed and there will be a message in the information box.

This is how you request and enter an Unlock code:

1 Click on the Request Unlock Code button

This will bring up the following confirm box:

Unlock Code: Fax or E Mail

2 Click either Fax or E Mail

You have a choice of either faxing or attaching the information we require to an E Mail.

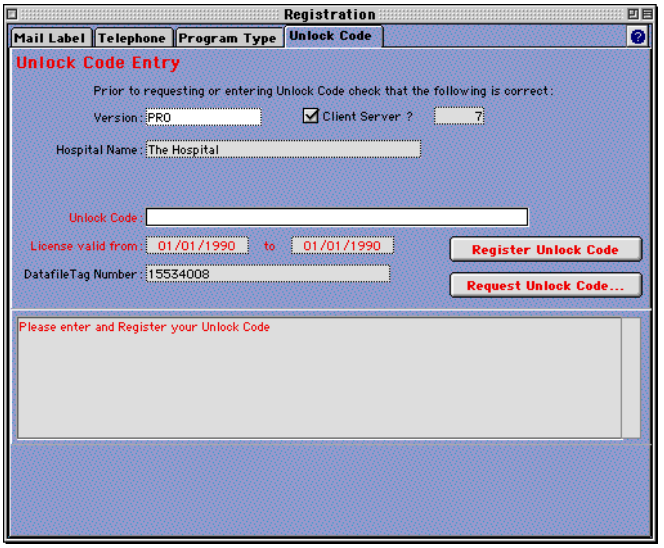
If you click Fax you will be requested to place some headed paper into your printer tray and STATIC will print a document that is ready to be faxed back to us.

Alternatively, clicking on E Mail will generate a document that you can attach to an E Mail and send to us.

We prefer to receive an E Mail:

- **Documents sent to us by fax have in the past been illegible.**
- **More seriously we have encountered hidden spaces or other characters within the hospital name, which we could not see on a fax.**
- **Finally, we have an automated system for reading the E Mail attachments.**

After the Unlock code has been successfully requested, this area will look like this:



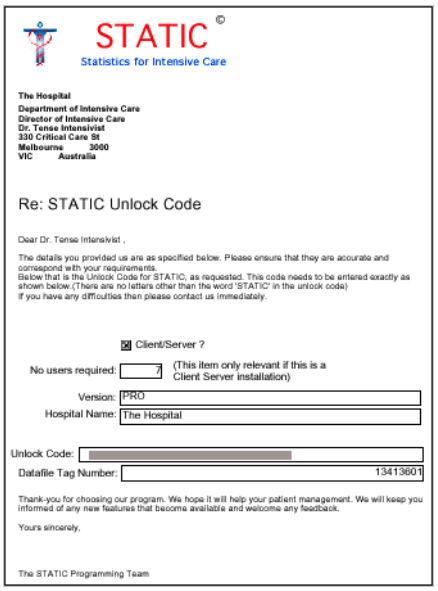
Unlock Code: Ready to enter Unlock Code

The area is ready for entry of the Unlock code. You can if you wish click on the Close box and continue setting up the database while you wait for us to return an Unlock Code to you. You will still be in Demo mode but all the information you have entered is retained.

If for some reason you need to generate the Fax or E Mail again, you can do so any time by repeating the sequence above.

10.1.6 Registration: Enter Unlock Code

Once we have received your Request for Unlock Code document we will send you back a document, in PDF format, that will look something like this:



STATIC ©

Statistics for Intensive Care

The Hospital
Department of Intensive Care
Director of Intensive Care
Dr. Tense Intensivist
330 Critical Care St
Melbourne 3000
VIC Australia

Re: STATIC Unlock Code

Dear Dr. Tense Intensivist ,

The details you provided us are as specified below. Please ensure that they are accurate and correspond with your requirements.
Below that is the Unlock Code for STATIC, as requested. This code needs to be entered exactly as shown below.(There are no letters other than the word 'STATIC' in the unlock code)
If you have any difficulties then please contact us immediately.

☒ Client/Server ?

No users required: 7 (This item only relevant if this is a Client Server installation)

Version: PRO

Hospital Name: The Hospital

Unlock Code:

Datafile Tag Number: 13413601

Thank-you for choosing our program. We hope it will help your patient management. We will keep you informed of any new features that become available and welcome any feedback.

Yours sincerely,

The STATIC Programming Team

Unlock Code Document

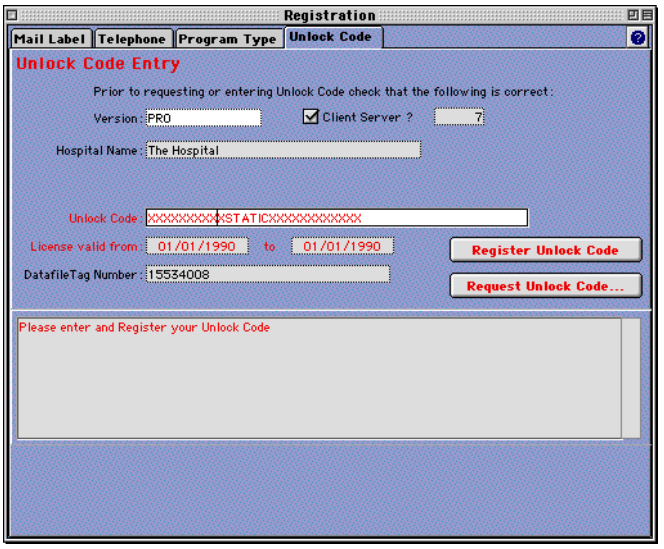
When you receive the document, check and compare it to the Registration area carefully:

- ¥ Is the Version of STATIC the one you require?
- ¥ Is it Client Server (if you are installing the Client Server version)?
- ¥ Are the number of Users you require correct (this is only relevant for a Client Server installation)?
- ¥ Is the Hospital Name (to appear in STATIC documentation) as you require it?
- ¥ Is the Datafile Tag Number on the Form the same as shown in the Registration area?

The Unlock Code must be entered exactly as supplied:

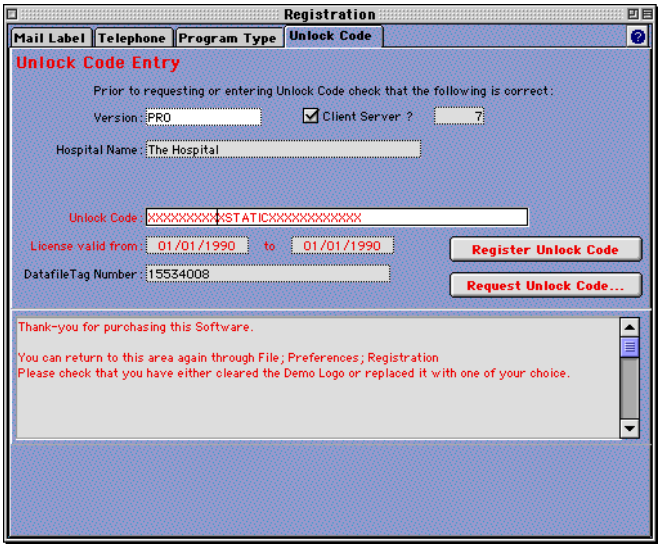
- ¥ It is always in the form of xxxxxxxxxSTATICxxxxxxxxx.
- ¥ The xxxxxx are a variable number of numeric digits.
- ¥ The name STATIC is in the middle of the code and is Alphanumeric.
- ¥ There are no letters in the xxxx part of the code. i.e. 0 is numeric Zero and not the letter O
- ¥ There are no numbers in the STATIC name. i.e. I is the letter I and not numeric One .

Enter the Unlock code into the area provided and click on the Register Unlock code button:



Unlock Code: Ready to Register Unlock Code

If all is well you should see the following:



Unlock Code: Registration Successful

If it did not work, carefully compare the Unlock code document and the information in the Registration area and ensure they match.

Ensure correct Logo shows

There is just one more thing you must do now. Return to the Program Type page of the Registration area and either paste your own logo into the Hospital Logo area or click on the Clear Logo button to clear the Demo Logo if you do not want any logo to be printed by STATIC. (You may require no logo if you have opted to use preprinted stationary that includes a logo).

Completion of Registration

Once Registration is complete, click on the Close Box of the window and STATIC will complete the Registration of your database.

Chapter 11
File: Preferences: Staff & Access

11.1.0 Introduction

This area controls Access to the Database and the Staff available to STATIC for data entry purposes.

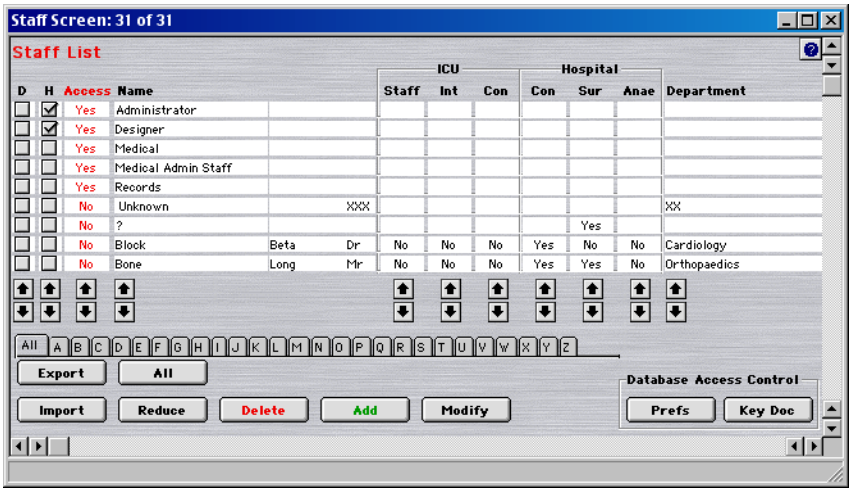
Every database needs security. STATIC is no exception.

Why we need security falls into three broad categories:

- Protect patient confidentiality
- Ensure Authorized Users can only access the parts of the database they are allowed to.
- Ensure that dangerous options available in the database are locked from use for inexperienced Users.

11.1.1 Staff: Output Records

Selection of the **Staff & Access** button will display the following:



Staff: List Window

Alphabetical Tab Control

Staff: Alphabetical Tab control

This is a quick way of displaying Staff that begin with a particular letter.

Window Items	Purpose
Staff List	Lists all the Staff available.
D	The Account is disabled if this is ticked - if the User has Database Access he will be able to log on but will be logged off again with a message.
H	The Account is Hidden in the Data Entry Areas if this is ticked - the Account may still be available for logging onto the Database but the Staff name will not appear in any lists during data entry.
Access	This is set to Yes if the User has Database Access.
Name	Name of Staff member including First name and Title
ICU Staff Int Con	This Staff member is part of the ICU Department as a: ICU Staff Intensivist Consultant
Hospital Con Sur Anae	This Staff member is part of the Hospital Staff as a: Consultant Surgeon Anaesthetist
Department	Primary Department of this Staff member
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

Window Items

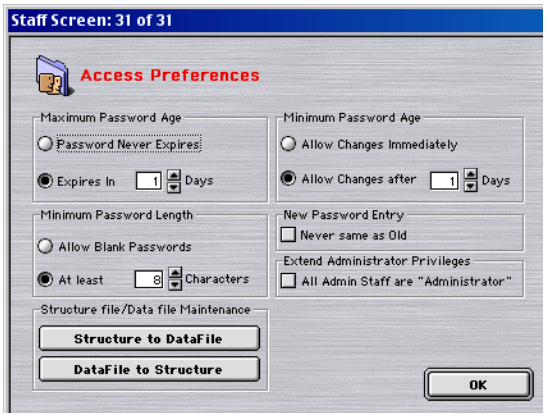
Button Name	Action
Export	You can export a list of Staff.
Import	You can import a list of Staff if it is prepared in the correct way.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Prefs	Edit the preferences for Data Access. See Access: Prefs on page 52.
Key Doc	Create Key document. See Access: Key Doc on page 54.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

11.1.2 Access: Prefs

This area will allow you to set various global options for the Password system. It will also allow you to maintain your passwords when you update the database.

Click on the *Prefs* Button. The following window will display:



Access: Prefs

Maximum Password Age

This specifies the maximum age a Password is allowed to reach before the User is required to change it. The age is calculated from the date the Password was entered or last altered.

Password Never Expires

Check this if you do not want this option to be active.

Expires In xx days

Set this to the number of days the passwords will be valid for.

Minimum Password Age

This specifies the minimum age a Password must be before the User is allowed to change it. The age is calculated from the date the Password was entered or last altered. This prevents Users from changing passwords too early preventing testing by the Administrator.

This option is currently inactive as we do not give the Current USer of the database an easy way of changing their Password when they want to. At the moment they can only change their Password through the Password Editor or when STATIC prompts them to do so.

Allow changes Immediately

Check this if you do not want this option to be active.

Allow Changes after xx days

Set this to the number of days before the User can edit the Password.

Minimum Password Length

This specifies the minimum length a Password must be. This has security implications as short Passwords are much easier to observe and thus crack.

Allow Blank Passwords

Check this if you want Passwords to be capable of being Blank. This will of course reduce your security to Nil.

At least xx Characters

Set this to the number characters you want all passwords to be. If the User enters less than this number then an Alert will show. If the correct length is not entered an Alert will display:

Access: Minimum Length

New Password Entry

Check Never Same As Old to force the User to enter a completely new password whenever asked to change the Password.

Extend Administrator Privileges

Note: This option is only visible to the Administrator. It cannot be seen by any other users even if they are part off the Admin Staff user group.

Check Admin Staff are Administrator to force all Users belonging to the Admin Staff Group to have almost the same Privileges as the actual Administrator. This effectively allows you to have several Administrators while using the database. This will allow all Administrators to edit passwords. However the Administrator password and this option is still only accessible by the actual Administrator.

Save changes

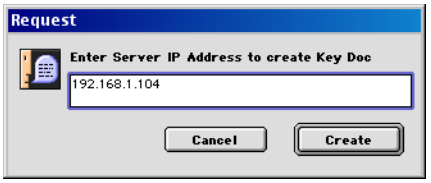
Click on the OK button when you have finished.

11.1.3 Access: Key Doc

This button allows you to store 4D Server database access settings in a 4D Client Key Doc.

To create this document do the following:

1 Click on the Key Doc button, the following Dialog will present:



Access: Entering IP Address for Key Doc

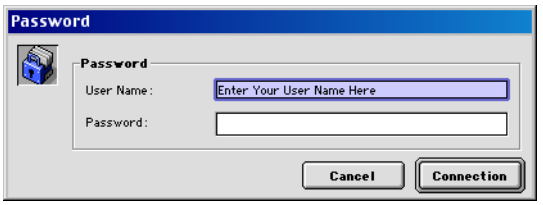
2 Enter the IP Address of the server you want to connect to and click the *Create* button.

3 A Key document for STATIC called *Start_STATC.pth* will be created in the same directory as the current 4D Client or STATIC application that you are using.

Access: Key Doc

To use this document do the following:

1 Drag and drop the Key Doc onto the 4D Client application (or double-click on the Key Doc).
2 The following dialog will present:

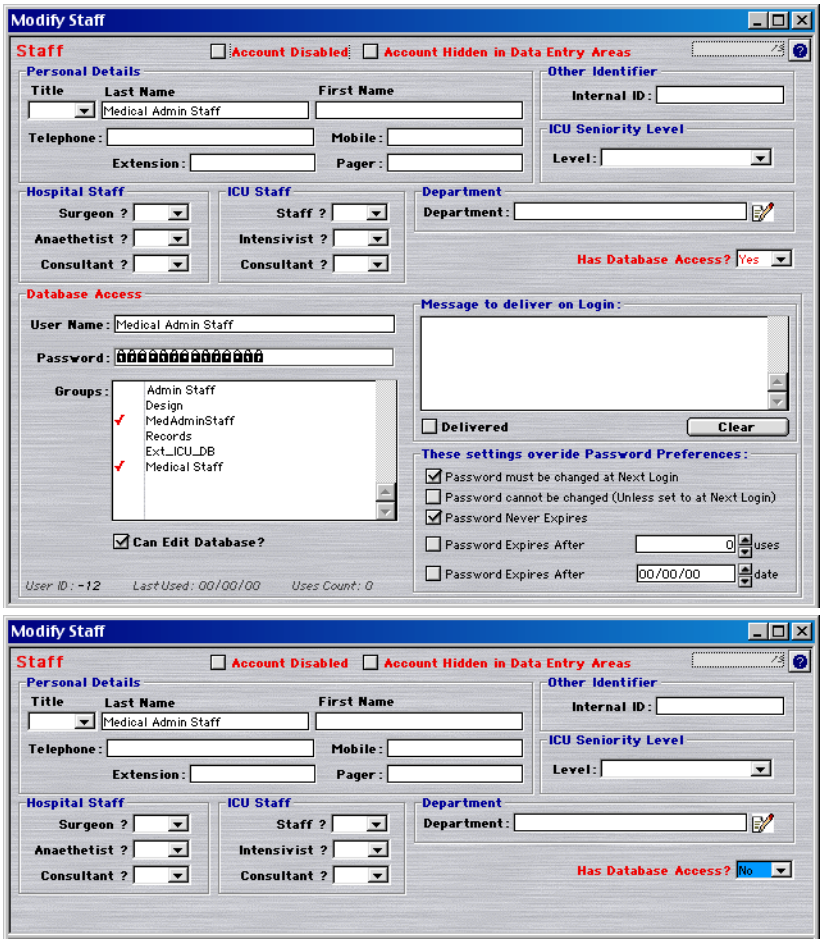


Access: Password Connection dialog

3 Enter the required logon data and click the *Connection* button to connect to STATIC Server.

11.1.4 Staff: Input Form

Click on a line in the **Staff list** and then either double click or click on **Modify**. The following window will display depending on whether the Staff member has Database Access:



Staff: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
Account Disabled	The Account is disabled if this is ticked - if the User has Database Access he will be able to log on but will be logged off again with a message. This keeps the Database Access account live with the USer unable to log on.
Account Hidden in Data Entry Areas	This Account will not appear within Data Entry areas if this is ticked. But they can still log on and perform any tasks that their privileges allow. This permits login on as, say, the Administrator without the name Administrator appearing in the lists used for completion of data entry forms.
Title	Honorific
Last Name	Last Name
First Name	First Name
Internal ID	Internal ID for this Staff member

Window Items

Window Items	Purpose
Telephone, Extension, Mobile, Pager	Contact options for this Staff member
ICU Seniority Level	Seniority Level of this Staff Member, implies expertise level
Department	Primary Department for this Staff member
Hospital Staff Surgeon, Anaesthetist, Consultant	This is a Hospital Staff member. Select if is a Surgeon, Anaesthetist or Consultant - can be more than one of these. These classifications are used by STATIC to only allow appropriate Staff to be selected for particular fields.
ICU Staff Staff, Intensivist, Consultant	This is a ICU Staff member. Select if is a ICU Staff, Intensivist or Consultant - can be more than one of these the other selections are forced by the program. For instance for Consultant, the Staff member would also have all other options set to Yes by the program. These classifications are used by STATIC to only allow appropriate Staff to be selected for particular fields.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

Window Items	Purpose
Has Database Access?	This Staff member has Database Access if this is ticked.
User Name	This is the name that will appear in the Connection Dialog box. Initially set to the Last Name and First Name but can be set to whatever you want as long as it is unique.
Password	The Password to use. See below for details
Groups	This displays the Groups currently active in the database. Click on the Group name to add the User to the Group. Click on the Group name again to remove the user from the selected Group. You cannot Add or Delete any Groups. These Groups are predefined to perform quite specific functions. You must assign a User to at least one Group in order for them to be able to access anything within STATIC. See Access: Groups on page 58
Can Edit Database	Ticking this checkbox gives the User rights to edit Admission source records. If this is NOT ticked, then they may still be able to view Admission data but if they edit data and subsequently try to Save , the changes are discarded. If this is NOT ticked, then the User may still be able to create Reports (depending on the other Groups they are members of).
Uses count	This will tell you how many times the database has been accessed using this password.
Last Used	This will tell you the date the database was last accessed using this password.
Message to deliver on Login	A message set here will be displayed to the User next time they try to log on. This is a very useful facility in a Client Server environment. IF a User is causing problems and needs to be seen, just set his Account to Disabled and post a message here to see the Administrator. Next time they log on, they will see the message and be logged off again. The time at which they received the message is displayed within their Staff record in the Delivered field.
Delivered	Provides a Data time stamp on which the User was shown the message.
Clear Button	Clear the message area.

Window Items	Purpose
These settings override Password Preferences	This area gives you the ability to override the Preferences for the Passwords for this User.
Password must be changed at Next Login	Check this box if you want to force the User to change their password next time they log onto the database.
Password cannot be changed	Check this box if you do not want the User to be able to change their password.
Password Never Expires	Check this box if the Password should never expire. This may be true for the lowest level of access. Be careful of setting this for the Administrator. Security is compromised if you do so as you will never be asked to change the password again. It is better to set the next options.
Password Expires After xx Uses	Check this box if the Password should expire after a number of uses. You may want to give a temporary user one time access to the database. This would allow you to do so.
Password Expires After xx/xx/xx date	Check this box if the Password should expire after particular date. You may want to give users such as HMO's temporary access with their own password for the duration of their rotation in the hospital.

11.1.5 Access: Groups

Once a User has been created and the Users parameters have been set, there is one more step before the User can actually do anything within STATIC. The User must be assigned to a Password Group. These Groups determine what the User can do.

Here are some general considerations:

a A User can be a member of several Groups simultaneously.
b The name of the User is totally irrelevant. It is the Group that they are a member of that determines the User s access.
c Unless a User has a tick in the *Can Edit Database?* checkbox, even if they have access to Admission records, they are unable to save changes to these records.
d Even the Administrator MUST be part of a Group in order to be able to do anything within STATIC.
e If you make a User part of the Admin Staff Group, also make them members of every other Group so they can by default go anywhere and do anything.

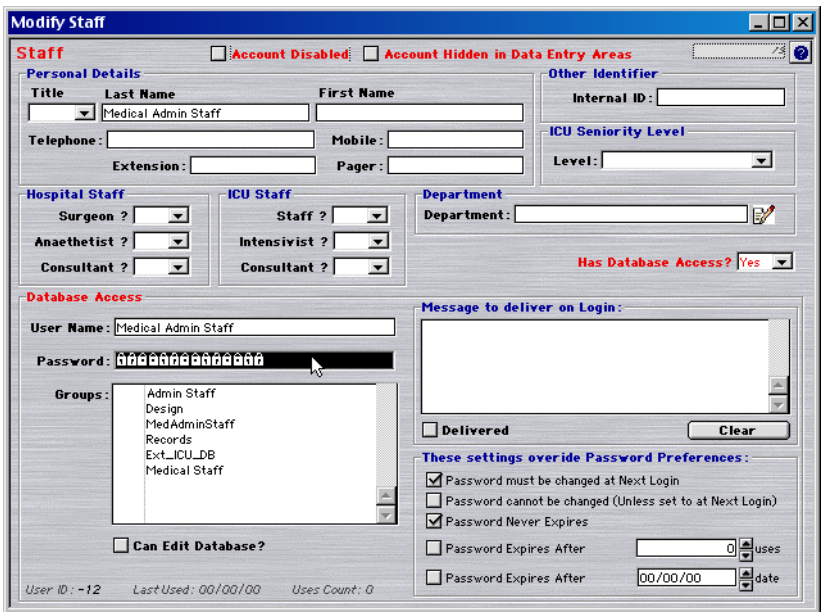
Here are the Groups in order of level of access to STATIC:

Group Name	Action
Admin Staff	This is the Highest Level of access to STATIC. Members in this Group can do almost anything that the actual Administrator can do. However there are some actions which are only available to the actual Administrator: See Extend Administrator Privileges on page 54. Note that the administrator MUST also be part of this Group.
MedAdminStaff	Members in this Group do not have access to the Prefs area and the Administrators area. They are restricted to being able to alter any Admission data.
Records	Members in this Group do not have access to the Prefs area, the Administrators area or the Import Files area. They are able to see any Admission data and create and execute Reports.
Medical Staff	Members in this Group are restricted to being able to alter any data that has to do with Admissions. They cannot generate Reports.
Ext_ICU_DB	Members of this Group have very limited access to STATIC. These Users are considered to be External to ICU Users. Currently they tend to be assigned this Group if they only need access to the Transport database. They cannot generate Reports.
Can Edit Database?	A tick in this checkbox gives the User the right to edit Admission data. If a User does NOT have this box ticked, then if they edit data and subsequently try to Save , the changes are discarded.

11.1.6 Access: Change Password

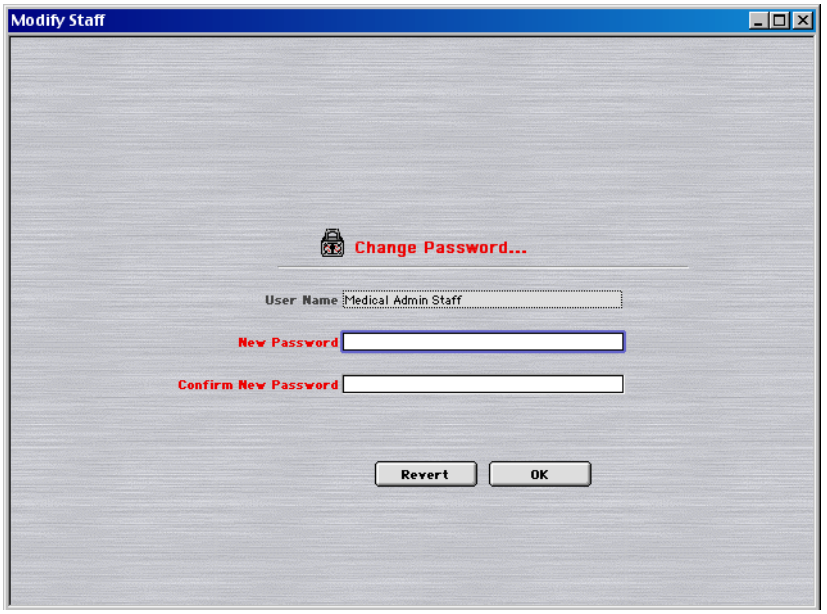
This is how you change a password:

1 In order to change a password for a user click in the Password field, this will activate a hidden button:



Access: Password field

The following screen will display:



Access: Edit Password

It is now just a matter of typing very accurately.

2 Type your password into the New Password area.
3 Then type it again into the Confirm New Password area.
4 Click on OK to register the new password.

Problems

If the passwords do not match you will be warned by an Alert. Try again, watching carefully that you do not accidentally enter too many characters or that the case of the characters match both times.

If the options are set to require a minimum length for a password you will see an Alert, make your password longer in this case or alter the options.

Why enter the Password twice?

To ensure that you have not made a mistake!

Password are case sensitive. So a password such as IntensiveCare is not the same as Intensivecare .

11.1.7 Access: Change Password initiated by STATIC

Occasionally STATIC will force the User to change their Password. This will happen if:

- The change at next login option is set for their Password
- Their Password has aged and needs to be changed

Due to Maximum age reached

Due to max number of Logins reached

Due to Specific Date passed as set for User

Due to Specific Number of Uses passed as set for User

When this happens the following window will display:

Access: Change Password

The User may need to take action when they see this window. They MUST respect any conditions that may be set for their account, such as:

- The password may need to be different to the old one
- It may not be blank
- It may need to be a minimum length

These conditions depend on the Password options and the User options settings.

If they do not respect the conditions set, they will be logged off the database.

They have 60 seconds in which to do this - the time out counter is displayed as a small counter.

11.1.8 Access: Error

If you see the following Alert there is almost certainly a mismatch between the Password system stored in the Datafile and the Structure file:

Passwords: Privilege error

This will show when you try to edit a password for a user. It is very rare and only documented for reference purposes.

We recommend that if you see this error to Quit and then launch the database again. Doing this will almost certainly solve your problem. If not, ring us for more instructions and help!

11.1.9 Staff: Import

For security reasons, this facility excludes importing Access data.

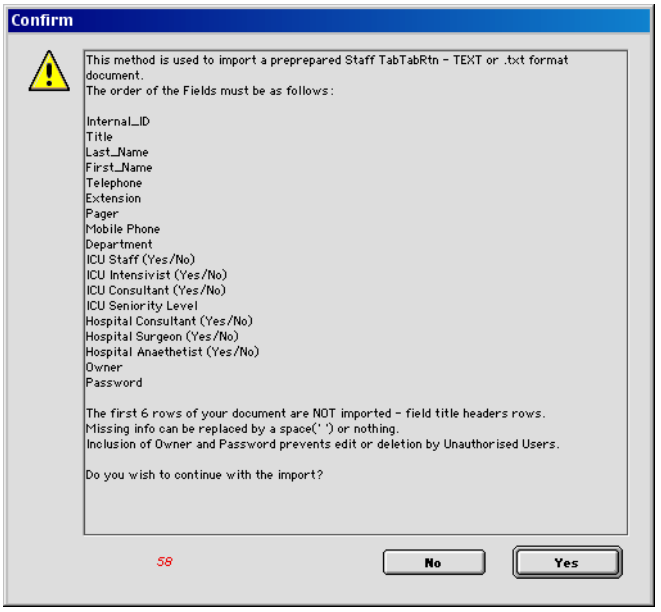
Process to Import Staff

This is how you import a list of Staff:

1 Ensure you have the Staff list you require in a text document on your Hard drive and click on Import.
Note the very strict format that has to be observed if the import is to be successful!

We recommend that you Export the Staff within STATIC and open the document in MS Excel' to examine the structure of the required document before creating your own.

The following dialog will display:



Staff: Import: Warning

2 Click on Yes to continue.
An Open Document Dialog will display.

3 Navigate to the Staff document you want to Import and click on Open.
The Staff document will be parsed and a series of records - one per Staff - created. This may take some time depending on the size of the Staff document.

11.1.10 Staff: Export

Process to Export Staff

This is how you export a list of Staff:

1 Select the Staff you want t export.
2 Click on **Export** to continue.
3 The Exported records will be saved to the specified location:

Staff: Export: Location of Document

Chapter 12
File: Preferences: Workstation

12.1.0 Introduction

This area is where you set the default behavior of STATIC for your workstation. This area is particularly important if you are running Client Server.

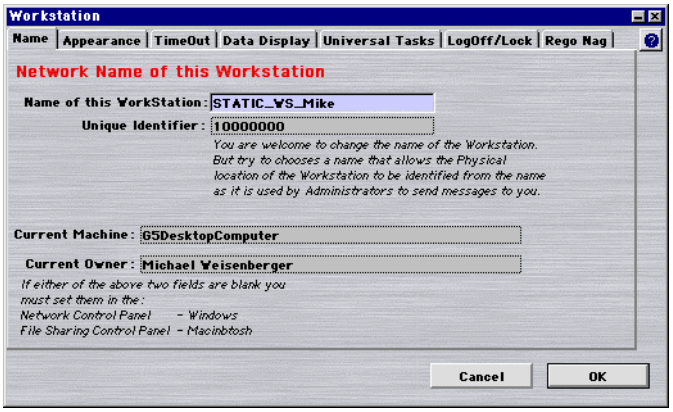
The Defaults fall into several categories and are handled on separate pages:

Page	Purpose
Name	Identifies your workstation and program.
Appearance	Set the operating system look, the background pattern/color and the highlight color.
TimeOut	Set the parameters that determine when an unattended program will automatically Quit.
Location	Set the default Ward locations to show for this workstation.
Task	Specify if this workstation can handle any tasks. Makes it into a Batch Workstation.
Forced Quit/Pause	Set the parameters that determine the delay when a Workstation is ordered to pause or quit.

Page

12.1.1 Workstation: Name

These parameters are only useful on Client Server setups:



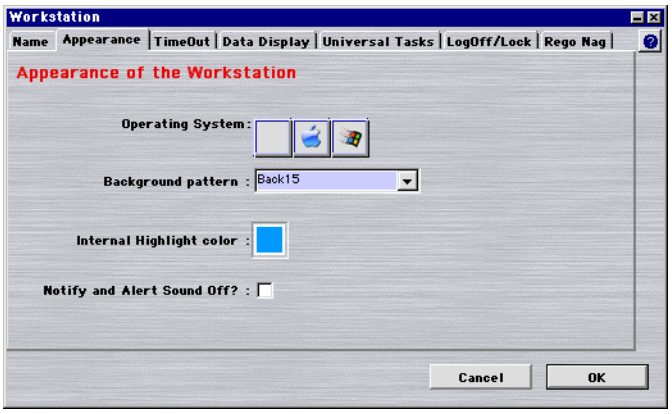
Workstation: Name

Page Items	Purpose
Name of this Workstation	A default name is automatically generated. You can change this to something else if you wish. This name is used by the Administrator to identify your Workstation. Tip: Try to use a name that gives the Administrator the physical location of your workstation. e.g. Ward Level_2_IC_2 This makes it easier to find a faulty unattended machine.
Unique Identifier	This is internally generated to identify your Workstation.
Current Machine and Current Owner	Generated by your OS. If these fields are blank it could indicate that your Network setup at the Operating System (OS) level is incomplete. Go to the following areas of your OS to complete the setup: Network Control Panel - Windows File Sharing Control Panel - Macintosh

Page Items

12.1.2 Workstation: Appearance

This area controls the appearance of STATIC on your Workstation:



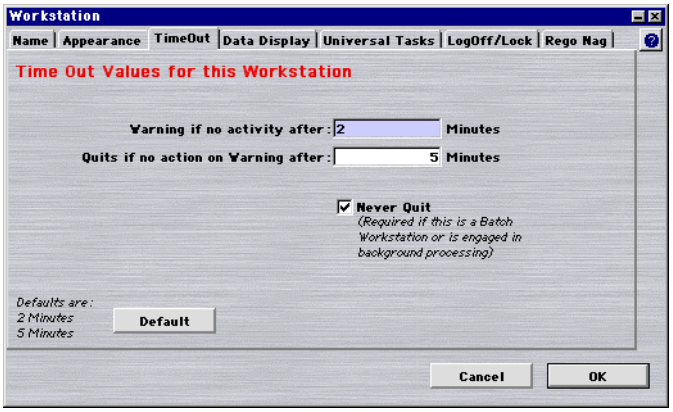
Workstation: Appearance

Page Items	Purpose
Operating System	STATIC is a fully cross platform program. You can force STATIC to look as if it is running on either Windows or Apple OS The change will only affect the individual objects in a window (buttons, check boxes, making buttons tab-able, drop down lists etc.) and not the windows or menu bars. We recommend that you use the Windows version of the interface even if you are on Apple OS if you are a Data Entry specialist. This is because using the Tab key to activate buttons and drop down lists is not supported by Apple OS. If you do not care about being able to use the keyboard to move from object to object (many Apple users are used to using a mouse for this purpose) then leave it on Apple OS.
Background pattern	All windows in STATIC have a background pattern. You can select a new one from the drop down list. Back44 is the one that ships as standard with STATIC.
Internal Highlight color	Some objects need to be colored when selected. We could not access the default highlight color of the OS for this purpose. This pop up window will allow you to select a highlight color that is active for STATIC only.
Notify and Alert Sound Off?	Alert and Notify events are accompanied by sound. This allows you switch this off. It does NOT affect operating system sounds.

Page Items

12.1.3 Workstation: TimeOut

This area controls the automatic shutdown of STATIC:



Workstation: TimeOut

Under Client Server if a workstation is left unattended, it is still using up a license that could be used by another user on your network. If that person has gone on holiday for a week and left his computer on, believe us this happens, then the license is unavailable for the whole duration. This area will automatically shutdown STATIC in order to free the license after a predetermined interval.

This DOES NOT affect the Server - ever.

This DOES affect STATIC Single User - set the values to impossibly high values to effectively disable this function if you do not want it to be active.

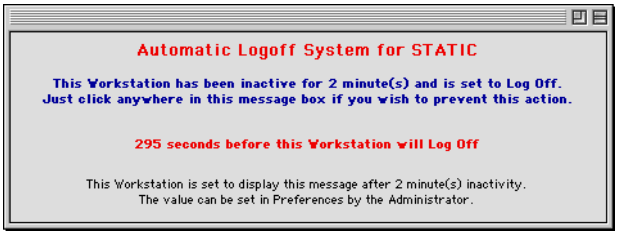
It works by monitoring ANY keyboard activity in STATIC. The activity prevents the system from activating the Quit function.

Delay before starts system at Startup

When STATIC starts it does some house checks. This delay allows this to finish unimpeded before this system becomes active. Leave it alone or set it to a higher value if required.

Delay before shows Warning if no activity

If there has been no activity for the specified number of seconds in this option the following Alert will show:



Workstation: TimeOut Will Quit after Delay

Delay before Quits if no action on Warning

If the user does not click anywhere in the window of the Alert shown above then the system will automatically Quit after the delay set in this option has passed. This is represented by the countdown in red in the above dialog.

Never Quit

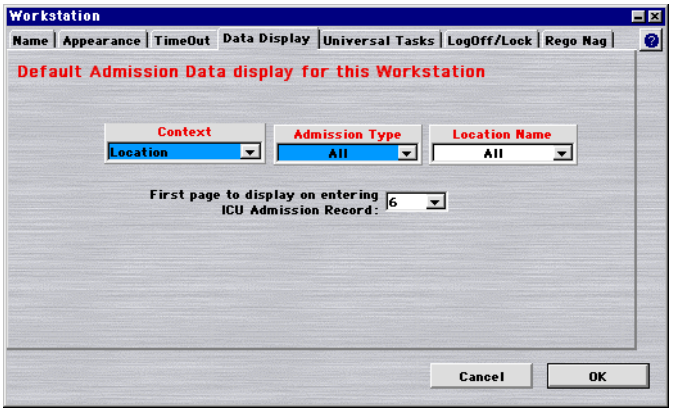
Sometimes you may want to set a Workstation to never Quit. This allows you to do this. This option does not affect the Forced Quit/Pause option. The Forced Quit/Pause option has override privileges.

Default

Resets the fields to what we think are reasonable settings

12.1.4 Workstation: Data Display

This area allows you to set the default Context, Admission type and Location visible when you go to the Admission Data Display area and the Bedstate area:



Workstation: Data Display

Context: You can choose to view Admissions by Location (several lines per admission if the patient has been in more than one location) or by Admission (one line per admission irrespective of how many Locations the patient has occupied) or for Management (special view to log management data for an Admission)

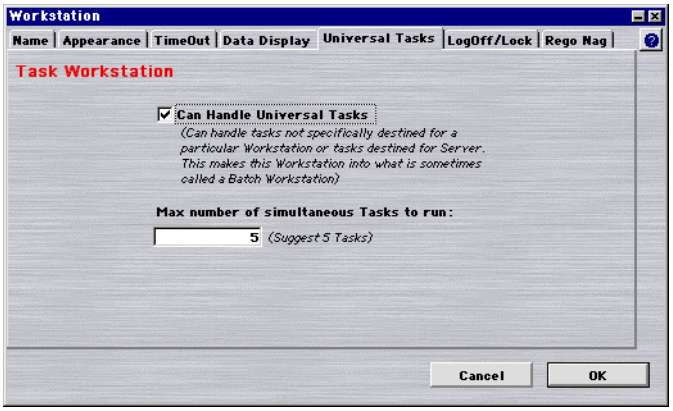
For Client Server it is useful to be able to designate a Workstation as belonging to a particular ICU Area (Context, Admission Type and Location) by always displaying patients and bedstates for that Area automatically. This option allows you to do this.

Select the All option in the Admission Type and Location lists to always display all locations.

When entering a form it is useful to preset the first page to display. This can be preset using the *First page to display on entering ICU Admission record checkbox*.

12.1.5 Workstation: Universal Tasks

Useful for Client Server only:



Workstation: Universal Tasks

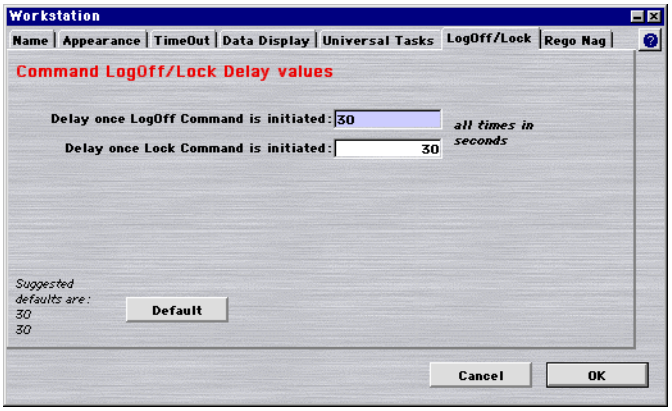
This option allows you to set this Workstation as being what is termed a Batch Workstation. It will handle any universal request sent to the Server by any other Workstation. This allows you to distribute the workload in a Client Server environment.

Printing should be handled from here as setting the Server to print is fraught with danger. For instance if the printer runs out of paper it may display an Alert informing you of this but also hang the Server until the Alert is dismissed. This would of course disrupt services to all other users logged on.

E Mail and Internet access as well as connections to other systems such as HL7 should always be done through a machine other than the Server for the same reason.

12.1.6 Workstation: LogOff/Lock

This area handles the delays before a LogOff or a Lock is initiated:



Workstation: LogOff/Lock

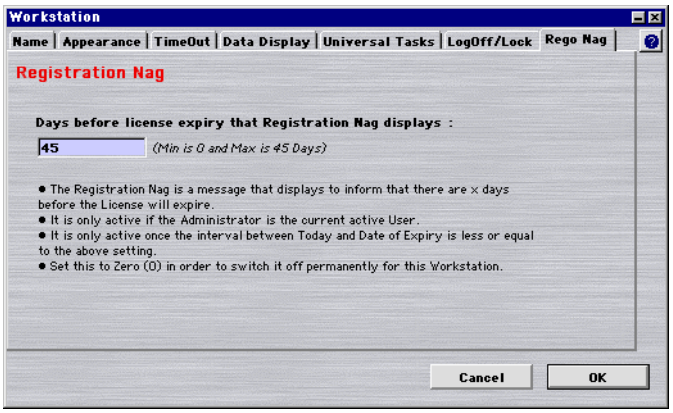
See Administrator: Command Centre on page 493 for more details.

12.1.7 Workstation: Rego Nag

STATIC is licensed rather than sold. In order to continue using the product, the license must be renewed every year.

If you choose not to renew your license, you can still fully access your existing admissions and create as well as run reports on this data. You can even update your legacy database as per usual to cope with the inevitable changes in operating systems for instance. What you cannot do is add any more new admissions after your expiry date has passed.

The Rego Nag is a simple message that displays a number of days before the license expires to remind the Administrator to renew it.



Workstation: Rego Nag

Set this area to Zero to no longer see the Rego Nag at all. The Rego Nag only appears when the Administrator logs on as the active User.

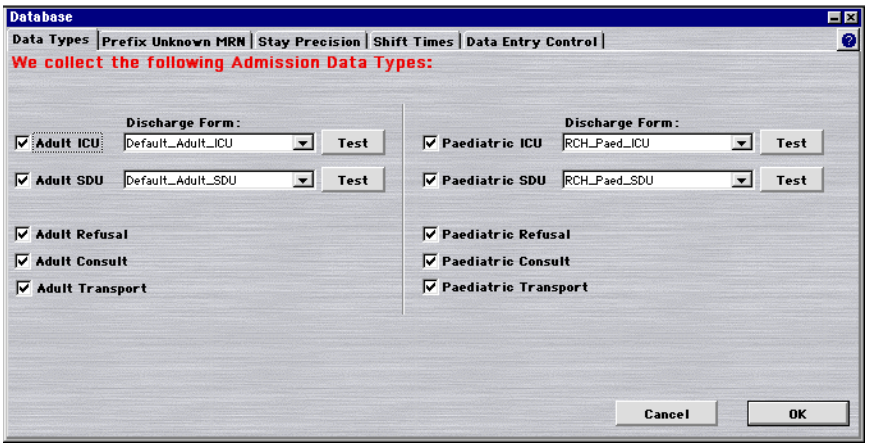
Chapter 13
File: Preferences: Database

13.1.0 Introduction

This area will allow you to edit various options for the database itself. Remember though that changes here affect EVERY user of STATIC if running the Client Server version.

Clicking on the Database icon will display the following window:

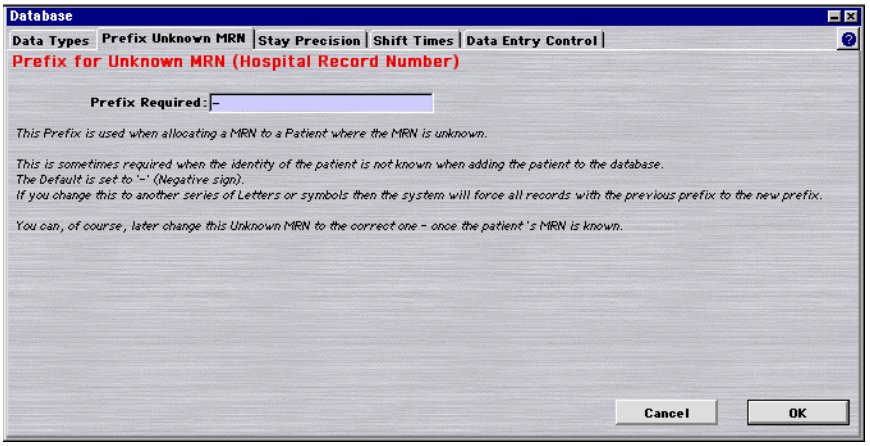
13.1.1 Database: Data Types



Database: Data types

In this area you define the Admission data types you will collect. This may be Adult or Paediatric data with the various subdivisions within those categories. For ICU and SDU data types you can also specify the Discharge form to be used.

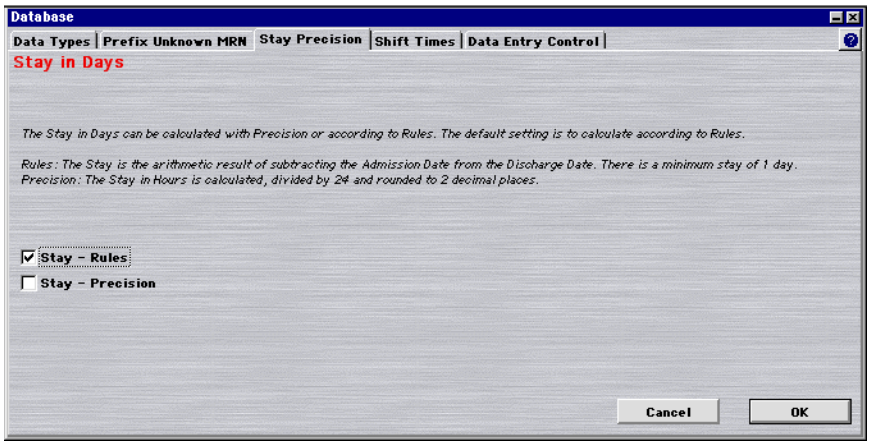
13.1.2 Database: Prefix Unknown MRN



Database: Prefix Unknown MRN

This area allows you to set the prefix for MRN's which are generated by STATIC. This will most likely occur when you are entering data for Refusals where the MRN is unknown. If you already have records within the database that fit this category, they will be reset using the new prefix. This may take some time depending on the number of records.

13.1.3 Database: Stay Precision



Database: Stay Precision

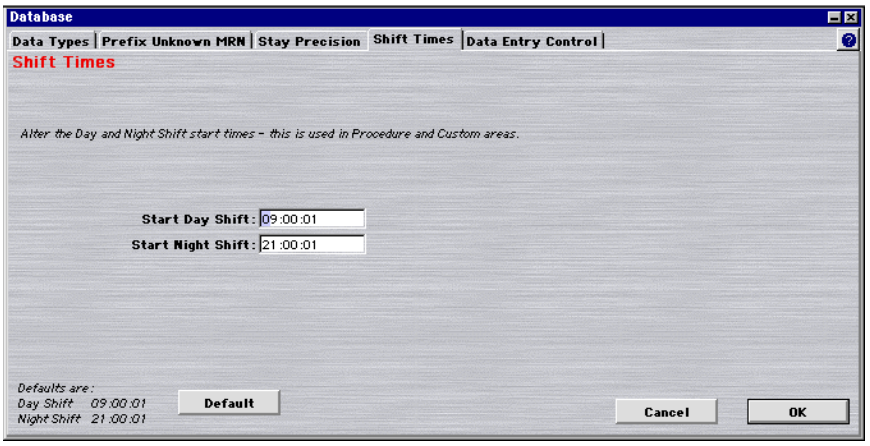
The Stay in Days can be calculated either by Rules or by normal arithmetic precision.

Rules: The Stay is derived by subtracting the Date of Admission from the Date of Discharge. If this results in a Stay of Zero, then the Stay is set to 1 Day.

Precision: The Stay is calculated from the Stay in Hours divided by 24. This is then rounded to 2 decimal places.

Once you have selected the method of calculation, STATIC will apply the new way of calculating to existing records in the `[HospitalRecords]`, `[ICURecords]`, `[Location]`, `[Transport]` and `[Consultation]` Tables. This may take some time depending on the number of records.

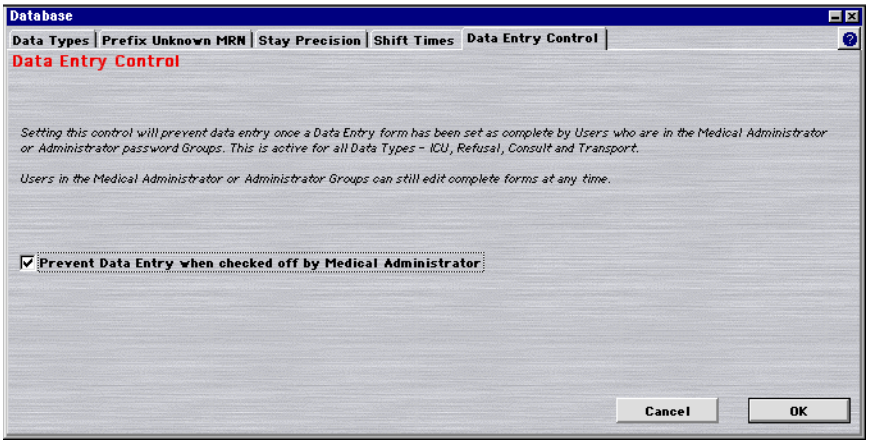
13.1.4 Database: Shift Times



Database: Shift Times

Shift start times are set here. These are used as Defaults in Custom and Procedure areas. Note the use of the extra second to distinguish these times as being set by these Defaults.

13.1.5 Database: Data Entry Control



Database: Data Entry Control

An Admission form that has been ticked as complete cannot be altered other than by a User in the Medical Administrator Group. Effectively it stops other Users editing completed and checked Admission records.

Chapter 14
File: Preferences: Backup

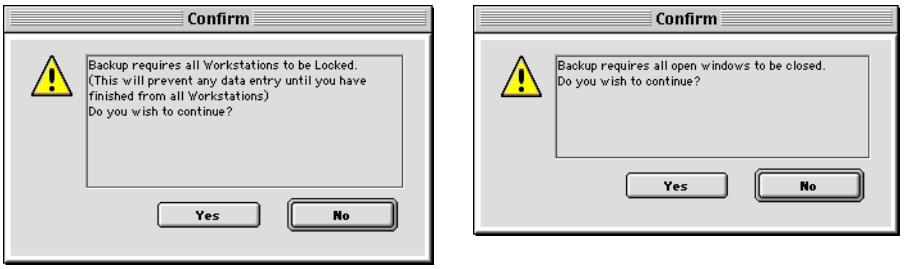
14.1.0 Introduction

Setting up and configuring Backup is an Administrator function. This section should be read in conjunction with the Administrator manual.

14.1.1 Backup: Configure Backup

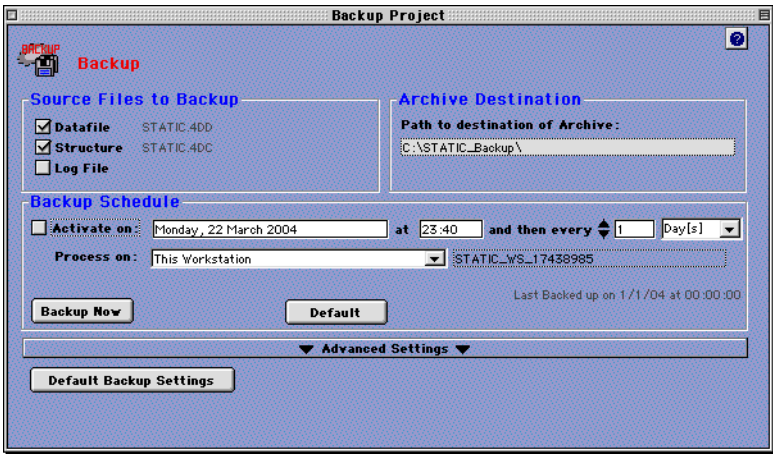
Backup is configured from the File: Prefs: Backup button.

To configure Backup, click on the Backup button in the Preferences window and the following window will display:



Backup: Confirm Lock DB

Click on Yes to proceed. STATIC will now close all windows and Log Off all Clients and eventually display the following window:

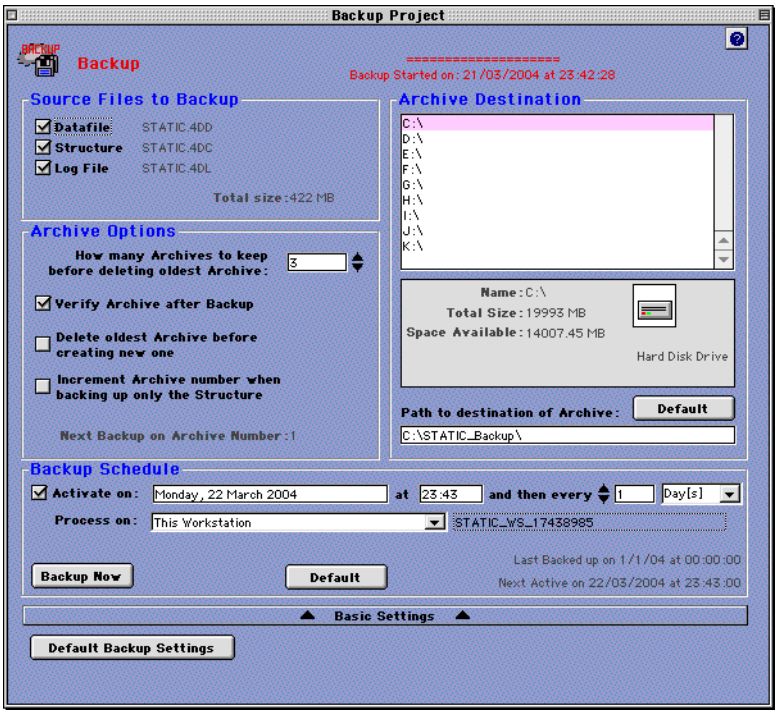


Backup: Basic Settings window

Window Items	Purpose
Source Files to Backup	Three check boxes to select what is to be backed up. Datafile and Structure file set to backup as default: Datafile - Tick this to enable backup of your Datafile. Displays the path to this file in Single user or the name of the file on Client. Structure file (contains the actual STATIC program) - Tick this to enable backup of your program file. This is useful for archival purposes. Displays the path to this file in Single user or the name of the file on Client. Log File. - Tick this to enable backup of your Log File. If a Log File is not currently active, ticking this box will initiate the generation of a Log File. Displays the path to this file in Single user or the name of the file on Client.
Archive Destination	Displays the path to the destination of the archive that will contain the files when backed up. The default path is the root of the startup drive in a folder called STATIC_Backup.
Backup Schedule	Contains the controls to activate backup and the schedule to determine when and where this is to occur. Activate on - Tick this box to activate the Backup Schedule. The date, time and the interval on which it repeats can be set from here also. Process on - The Backup is initiated and controlled by a client in Client server. This client can be any client you choose here. The name of the Client appears next to the choice. Backup Now button - Click this to initiate an immediate Backup. Default Button click this to set the Schedule to the default settings.
Advanced Settings	Click this to expand the window to set more options - see below.
Default Backup Settings Button	Click this to reset all the Backup settings to the defaults.
Close Box	To close the area just Click the close bow in the window.

Window Items

Clicking on Advanced Settings displays the following window:



Backup: Advanced Settings window

Window Items	Purpose
Source Files to Backup	Three check boxes to select what is to be backed up. Datafile and Structure file set to backup as default: Datafile - Tick this to enable backup of your Datafile. Displays the path to this file in Single user or the name of the file on Client. Structure file (contains the actual STATIC program) - Tick this to enable backup of your program file. This is useful for archival purposes. Displays the path to this file in Single user or the name of the file on Client. Log File. - Tick this to enable backup of your Log File. If a Log File is not currently active, ticking this box will initiate the generation of a Log File. Displays the path to this file in Single user or the name of the file on Client. The total size of the data to be backed up is also displayed here.
Archive Options	Set how many archives to keep before the oldest is deleted. This is set to a default of 3. Verify that the archive is complete and error free after Backup. Set as default. Delete oldest archive before creating new one. Important if your datafile is very large and there is limited disk space. Not set as default. Increment Archive number when backing up only the Structure file. Not set as default. Next archive number is displayed.

Window Item

Window Items	Purpose
Archive Destination	Displays the path to the destination of the archive that will contain the files when backed up. The default path is the root of the startup drive in a folder called STATIC_Backup. If a different volume is required then choose from the list of available volumes. You will be warned if the archive and the datafile are on the same volume - not a good idea from a data integrity point of view! Once the volume is chosen, you can edit the path to the destination folder. If the path does not exist, STATIC will create it for you when the backup is initiated. Default button - Click this in order to reset the path to the selected volume and STATIC_Backup folder.
Backup Schedule	Contains the controls to activate backup and the schedule to determine when and where this is to occur. Activate on - Tick this box to activate the Backup Schedule. The date, time and the interval on which it repeats can be set from here also. Process on - The Backup is initiated and controlled by a client in Client server. This client can be any client you choose here. The name of the Client appears next to the choice. Backup Now button - Click this to initiate an immediate Backup. Default Button click this to set the Schedule to the default settings. Details of the last and next backup are displayed here.
Basic Settings	Click this to contract the window to Basic options - see above.
Default Backup Settings Button	Click this to reset all the Backup settings to the defaults.
Close Box	To close the area just Click the close bow in the window.

Window Item

14.1.2 Backup: Creating a New Log File - Single User

To create a Log File follow these steps:

1 Click the Log File checkbox in the Source files to Backup area. A Dialog box will appear as follows:

Backup: Create Log File confirm

2 Clicking on Yes will initiate a full Backup with the settings as defined.
After this the Log File is created automatically in the appropriate location and is activated. If there is a problem the checkbox will revert to unchecked and the name of the Log File will not appear next to the checkbox.

3 Now you have a Log File running.
Every time any user makes a change to your data, the change will be recorded in the 4D Backup Log File.

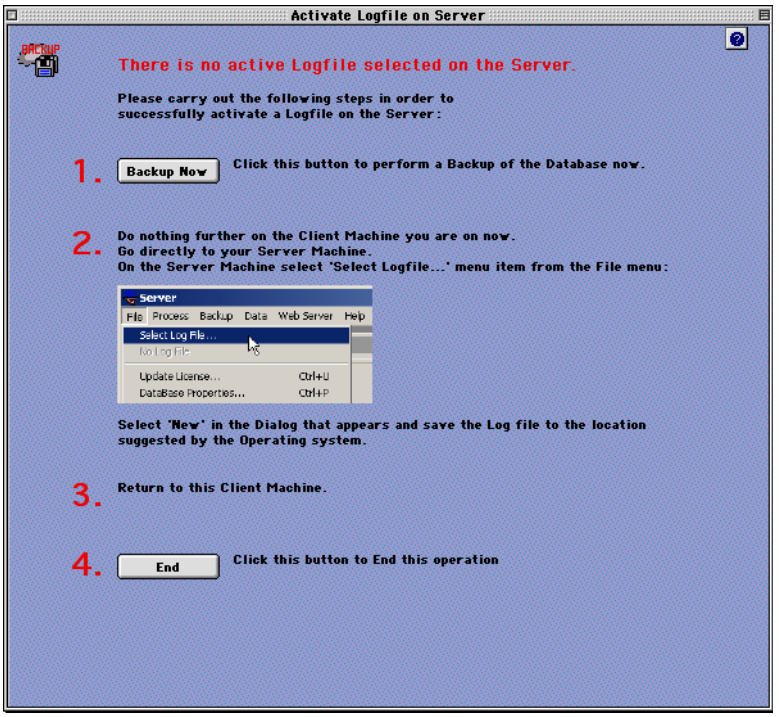
14.1.3 Backup: Creating a New Log File - Client Server

To create a Log File follow these steps:

1 Click the Log File checkbox in the Source files to Backup area. A Dialog box will appear as follows:

Backup: Create Log File confirm

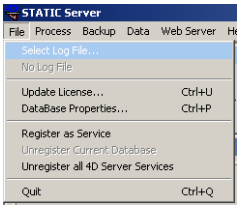
2 Clicking on Yes will take you to the following screen.



Backup: Create Log File steps

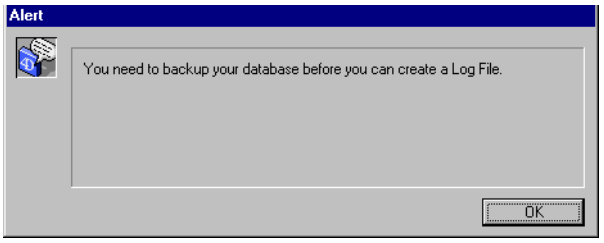
3 Follow the steps as indicated in the dialog:
Click on Backup Now to initiate a full backup.

When this has concluded, go to the Server and create a Log File from the File> Select Log File menu item. Follow the prompts and save the Log File **WITHOUT CHANGING THE SUGGESTED NAME OR LOCATION**.



Backup: Create Log File on Server

If there is a problem, the following dialog is most likely to appear:

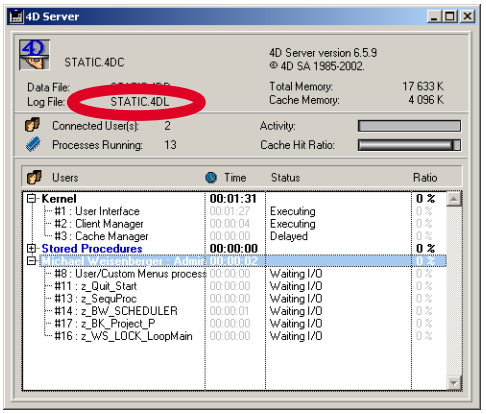


The need to backup before create Log File Alert

If it does, return to the Client and click on Backup Now button again (this will only occur if you have not complied with the instructions NOT to do anything else on the Client before going to the Server).

4 Ensure the Log File is active on the Server

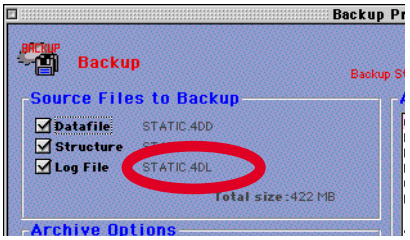
Look at the Server information window and ensure there is a Log File name displayed under the Data file name:



Log File is active on the Server

5 Return to the Client and click the End Button in the open Dialog.

After a few seconds the Backup Project screen will appear. To ensure that the Log File is still active check that the Log File name now appears next to the ticked Checkbox:



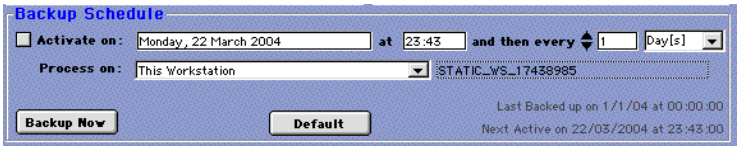
Log File is active on the Server - confirm on Client

6 Now you have a Log File running.
Every time any user makes a change to your data, the change will be recorded in the 4D Backup Log File.

14.1.4 Backup: Activating Backup

To activate Backup follow these steps:

1 Enter a Date and Time on which you want the Backup to occur:

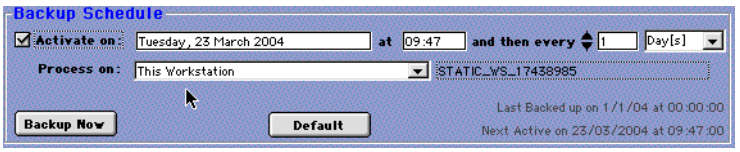


Backup: Setting the Schedule

2 Select the frequency with which you want the backup to occur.
The backup will occur with respect to the Date and Time specified.

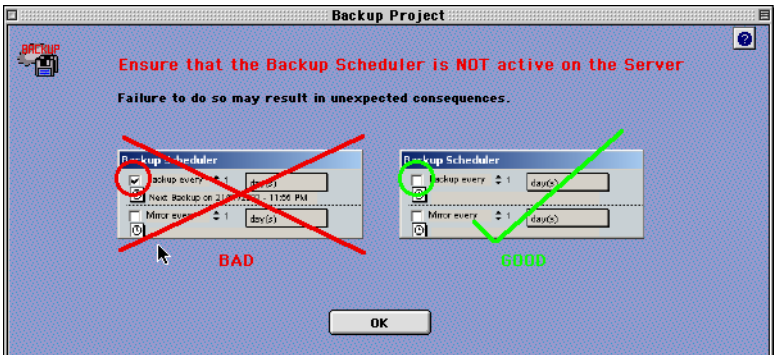
3 Select the Client from which the Backup will be controlled.
Unless you have chosen Any Workstation the selected workstation MUST be running when the backup process is to run in order for the backup to proceed.

4 Tick the Checkbox to activate the backup:



Backup: Setting the Schedule

The following warning screen will display for Client Server:



Backup: Warning on Client Server

Ensure that the Server is set as specified in the window.

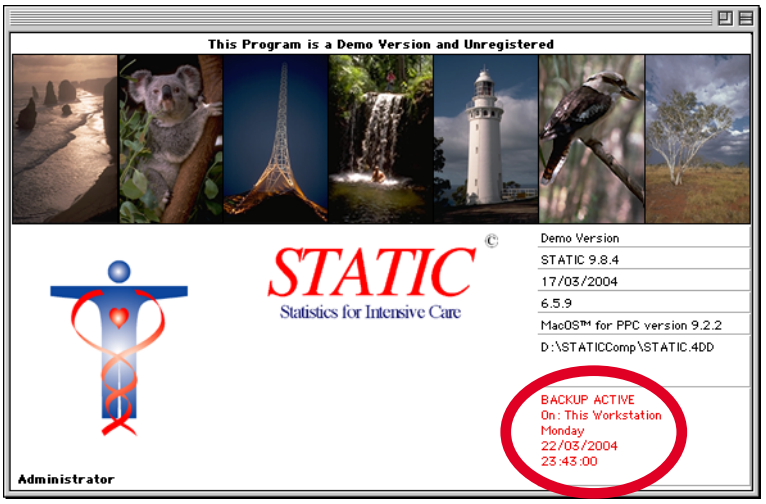
5 Close the Backup Project window and return to the splash screen.

14.1.5 Backup: Backup status

Backup is not active when the Client or Single User Splash screen looks like this:

Backup: Not Active

And is active when it looks like this:



Backup: Active

Chapter 15
File: Preferences: Mandatory Data

15.1.0 Introduction

In a large Client Server system it is sometimes difficult to ensure that all data has been completed for an Admission. STATIC has a unique system for enforcing data entry. completion

Using this area you can specify which fields in the Admission Data entry area you consider to be mandatory. If these fields are not filled with data then the system will flag the User and will not allow completion until the data is complete.

Some data will not be available until later - Hospital Discharge date and time - so these fields can be set as non mandatory even though the record has clearly not been completed.

If you have transferred data to STATIC from another program, you may never have collected some data points. In this case you can specify that the data point is only mandatory after a specified date. This allows you to designate historical data as complete even though a lot of data is missing.

In short this is a management tool that allows the Administrator to visually check that data is complete with one glance.

This does not check quality of data or even whether correct data has been entered. That is beyond the scope of STATIC except where indicated in this manual.

If you need to ensure the quality of the data, then you will need a Data Entry Clerk to check the data after entry.

The system for Mandatory data has several components:

a Display of completion for a displayed selection of records
See Data Display: Modify Admissions: Top of Form on page 189.

b Automatic Goto incomplete page when opening a specific record
See Data Display: Modify Admissions: Top of Form on page 189.

c Display of completion for a specific record
See ICU: General Features on page 207

d Setup of the Mandatory Data system.
See next section

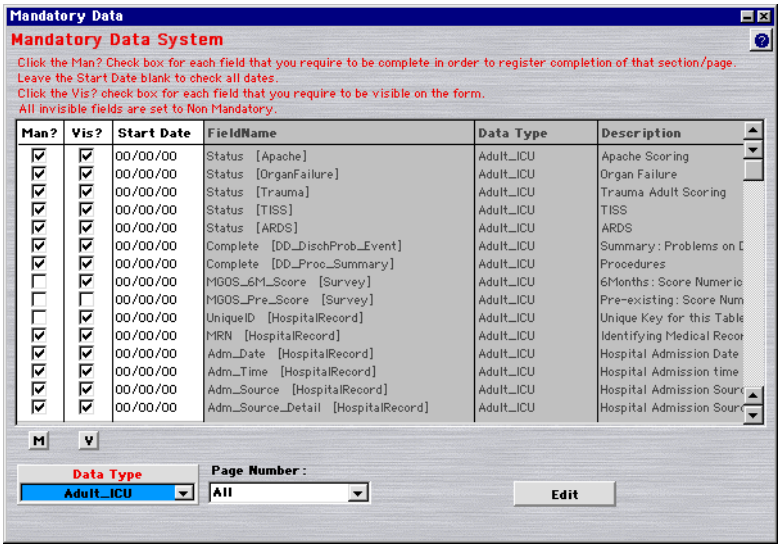
STATIC ships with all Data Visible and Non Mandatory.

It is up to you to set this area up as you require it.

Setting all data as Non Mandatory results in every Form being reported as being complete - this is because no Data is actually being checked and as a result no problems are being found.

15.1.1 Mandatory Data: Setup

A Click on the Mandatory Data icon in the Preferences window will display the following:



Mandatory Data: Setup Window

This will display the fields which can be declared Mandatory. The selection of fields displayed is controlled by the Data Type and the Page Number.

Window Items	Purpose
Man?	Click the box if you want the field to be mandatory
Vis?	Click the box if you want the field to be visible on the Input form. Allows you to hide the field if you have no intention of filling it. Deselecting this will set the field to be Non Mandatory.
Start Date	Leave the date as 00/00/00 if you want all fields to be checked or change the date to some other value if you want checking to commence after this date.
Field Name	This is a short name of the field to be checked. You can change this to something else if it is not clear to you. Just click in the filed and an insertion point will appear. Edit it as you require.
Data Type	The Admission Area that the field refers to.
Description	Alternatively you can give this field a description. You can change this to something else if it is not clear to you. Just click in the field and an insertion point will appear. Edit it as you require.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Deficiencies area. This will also close any open detail records.

Window Items

Button Name	Action
Page Number	Each Admission area has several pages. To make it easier to find a particular Data point you can select a particular page to only display the datapoints on that page.
Data Type	STATIC has many distinct admission areas which require checking. Each of these areas has slightly different requirements and so the fields displayed are unique to each area.

Buttons and Controls

Chapter 16
File: Preferences: Structure

16.1.0 Structure

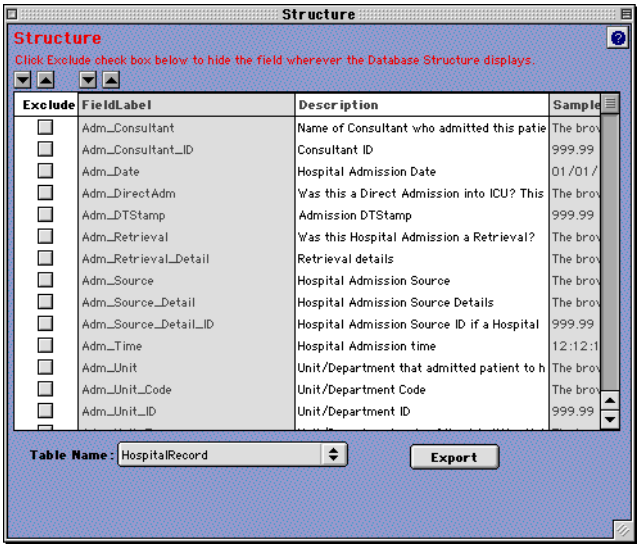
This area has 3 main functions:

a Provides a list of all fields available for Queries and Reports with their Descriptions.
b Provides a means to restrict the fields visible whenever the Database Structure (Database Schema) is displayed.
c Provide a means of changing the Descriptions of the fields when that Description appears on STATIC forms.

The Structure is usually displayed using Drop down lists as in the Query and Reports areas. We do not think you will need to edit this area unless you are fed up seeing fields that have no meaning to you when selecting fields when, say, creating a Query.

Be aware that changes here affect EVERY user of STATIC when running the Client Server version.

Clicking on the Structure button will display the following window:



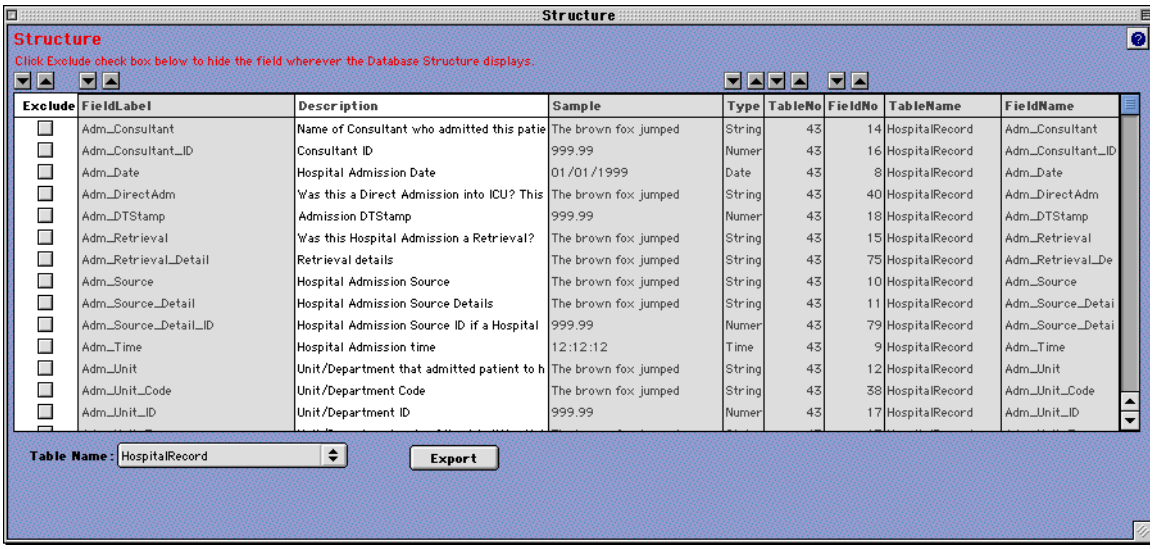
Structure: List Form Normal

Exclude

Click the check box to exclude the field from display. A blank box means the field will display.

Field Label

This is generally the label in the data input form that identifies the field. It is inevitable that this will sometimes not be very informative. To see more identifying information expand the window by click and drag on the lower right corner:



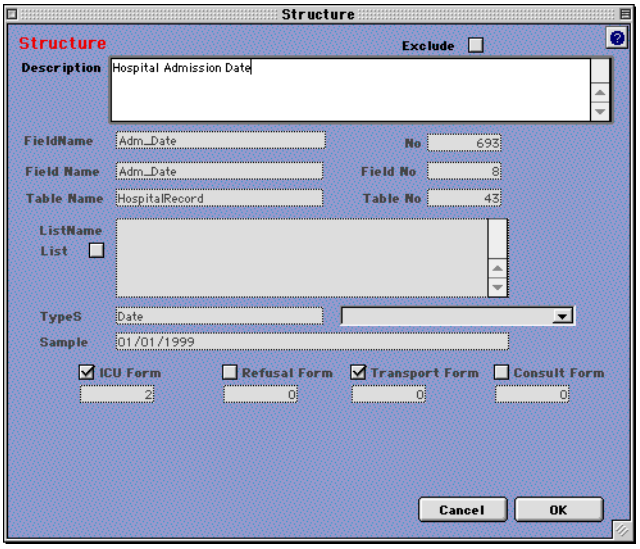
Exclude	FieldLabel	Description	Sample	Type	TableNo	FieldNo	TableName	FieldName
	Adm_Consultant	Name of Consultant who admitted this patie	The brown fox jumped	String	43	14	HospitalRecord	Adm_Consultant
	Adm_Consultant_ID	Consultant ID	999.99	Numer	43	16	HospitalRecord	Adm_Consultant_ID
	Adm_Date	Hospital Admission Date	01/01/1999	Date	43	8	HospitalRecord	Adm_Date
	Adm_DirectAdm	Was this a Direct Admission into ICU? This	The brown fox jumped	String	43	40	HospitalRecord	Adm_DirectAdm
	Adm_DTStamp	Admission DTStamp	999.99	Numer	43	18	HospitalRecord	Adm_DTStamp
	Adm_Retrieval	Was this Hospital Admission a Retrieval?	The brown fox jumped	String	43	15	HospitalRecord	Adm_Retrieval
	Adm_Retrieval_Detail	Retrieval details	The brown fox jumped	String	43	75	HospitalRecord	Adm_Retrieval_De
	Adm_Source	Hospital Admission Source	The brown fox jumped	String	43	10	HospitalRecord	Adm_Source
	Adm_Source_Detail	Hospital Admission Source Details	The brown fox jumped	String	43	11	HospitalRecord	Adm_Source_Detai
	Adm_Source_Detail_ID	Hospital Admission Source ID if a Hospital	999.99	Numer	43	79	HospitalRecord	Adm_Source_Detai
	Adm_Time	Hospital Admission time	12:12:12	Time	43	9	HospitalRecord	Adm_Time
	Adm_Unit	Unit/Department that admitted patient to h	The brown fox jumped	String	43	12	HospitalRecord	Adm_Unit
	Adm_Unit_Code	Unit/Department Code	The brown fox jumped	String	43	38	HospitalRecord	Adm_Unit_Code
	Adm_Unit_ID	Unit/Department ID	999.99	Numer	43	17	HospitalRecord	Adm_Unit_ID

Structure: List Form Large

This will display much more information for the fields displayed allowing you to better identify the fields function.

Description

This will allow you to add your own description to the field. You can do this in 2 ways: Either edit directly within the form or Double click the Field description you want to edit and the following form will display:



Structure: Detail Form

Note that you can only edit the Description and Exclude fields - the rest are for information only.

Sample

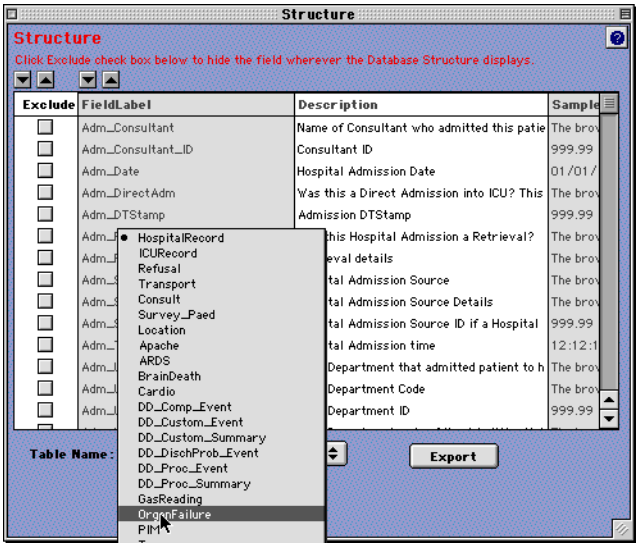
This sample will be used as dummy data for reports in order to show the type of data being used when creating reports.

Export

This allows you to easily Export the Structure Descriptions.

Table Name

Select a table from the pop up menu in order to show a the fields from a particular table or select All to show all fields:



Structure: Table menu

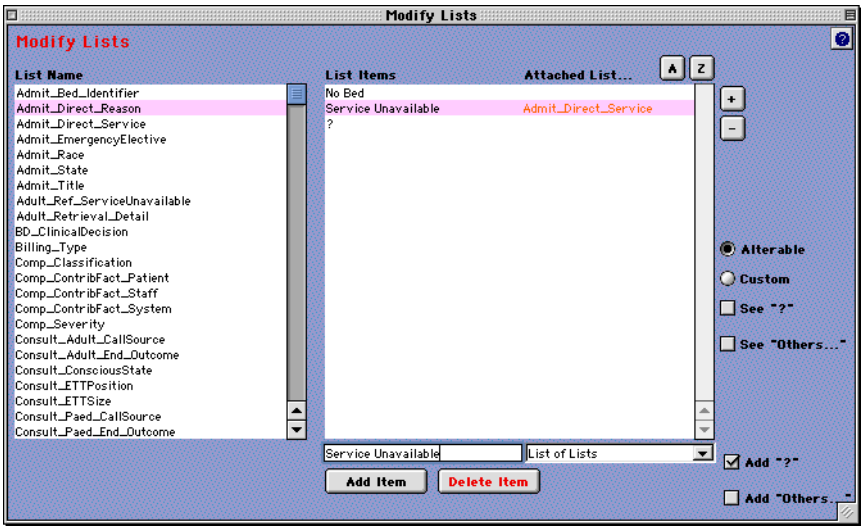
Chapter 17
File: Preferences: Lists

17.1.0 Introduction

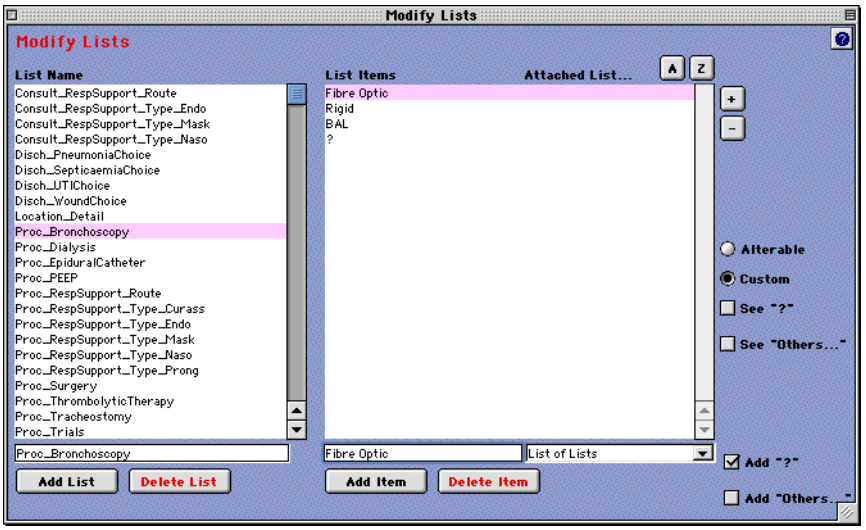
This area will allow you to modify all lists items designated by STATIC as being modifiable. It must be said here that there are many more lists than this in use by STATIC. If you come across a list that you feel you should be able to edit then inform us and we will add it to the lists available here.

17.1.1 Lists: Modify Lists

After clicking on the Lists icon you should see the following window:



Lists: Main screen - Alterable



Lists: Main screen - Custom

Window Items	Purpose
Lists Name	The name of the list used internally to tag the List Items displayed. Click on a name to select a list. The Items of the list will then be displayed in the List Items pane as shown above.
List Items	The actual list of Items that you will see when you use the list.
Attached List...	Another list which is attached to the selected List Item. When this Item is selected on forms, a second field will be available with the contents of the Attached List ready for selection.
Edit String	This is where you edit the List Item
List of Lists	Select a List available from this drop down menu that you want to attach to the selected List Item.
Close Box	To close the Modify List area just Click the close bow in the window.
Resize the window	You can resize the window by dragging the lower right corner

Window Items

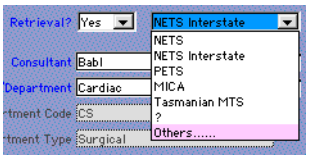
Button Name	Action
A	Permanently sorts the list in the A to Z direction.
Z	Permanently sorts the list in the Z to A direction.
+	Move a selected Item up one level in the list
-	Move a selected Item down one level in the list
Alterable	These are Lists which cannot be deleted and whose name cannot be altered but whose contents can be edited.
Custom	These are Lists which can be deleted and which can be edited. When this type of list is selected, extra buttons below the List name scrollable list will allow you to Add and Delete Lists. See above.
See ?	Display lists that contain the ? list item within the current Alterable or Custom selection.
See Others...	Display lists that contain the Others... list item within the current Alterable or Custom selection.
Add ?	Allows you to add a ? to the end of a list as an item. Gives the Users the option of choosing a ? as their selection.
Add Others...	Allows you to add a Others... to the end of a list as an item. Gives the Users the option of adding more Items to the list. See later in this section.
Add Item	Add an Item to the list
Delete Item	Delete an Item from the list
Add List	Add a Custom List to the Database and Edit its name
Delete List	Delete a Custom List from the Database

Buttons

17.1.2 Lists: Edit during data entry

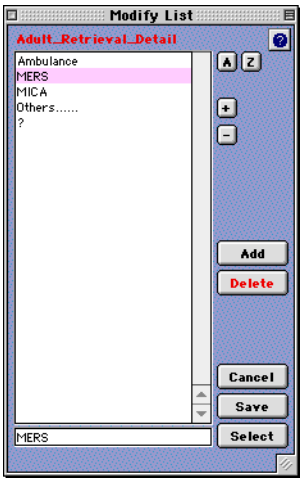
Users can be given the option of adding to a particular list if the Administrator has ticked the *Add Others...* item for the list in the Modify Lists area.

As an example, if during data entry the Others... Item is selected:



List: Select Others...

The following window will display:



List: User Edit window

Button Name	Action
+ Button	Move a selected Item up one level in the list
- Button	Move a selected Item down one level in the list
A	Permanently sorts the list in the A to Z direction.
Z	Permanently sorts the list in the Z to A direction.
Add	Add an Item to the list A blank line will appear below the currently selected Item. The cursor will move to the entry area at the foot of the list. You can now edit the blank line. Your keystrokes are immediately reflected in the line created in the list.
Delete	Delete an Item from the list
Cancel	To close the Window and Cancel all changes to the List. A click anywhere other than the List window will close this List window automatically.
Save	Save the changes to the list but do not select an item. i.e. no item is inserted into the calling field.
Select	Save the changes to the list and enter the currently selected item into the calling field.

Buttons

17.1.3 Lists: Fields that use Lists

The following table displays the Fields that use Lists that can be modified by the Administrator. There are many other Lists used internally by STATIC to which the Administrator has no access. There are two types of lists, Alterable (A) and Custom (C) - see above.

Table Name	Field Name	List Name	List Type	Description
Cardio	Contractility_Grade	CT_ContracGrade	A	Contractility grade
Cardio	Operation_Status	CT_Status	A	Operation Status
Cardio	Operation_Surgeon	CT_Surgeon	A	Operation Surgeon
Cardio	Operation_Type	CT_OpType	A	Operation Type
Consult	Call_Airway_ConsciousState	Consult_ConsciousState	A	Airway: Conscious State
Consult	Call_Airway_ETT_Position	Consult_ETTPosition	A	Airway: ETT Position
Consult	Call_Airway_ETT_Size	Consult_ETTSize	A	Airway: ETT Size
Consult	Call_Breathing_O2_Route	Consult_RespSupport_Route	C	Breathing: O2 Route
Consult	Call_Breathing_O2_Type	Consult_RespSupport_Route	C	Breathing: O2 Type
Consult	Call_Circulation_Perfusion	Consult_Perfusion	A	Circulation: Perfusion
Consult	Call_Source	Consult_Adult_CallSource Consult_Paed_CallSource	AA	Start Call: Source
Consult	End_Outcome	Consult_Adult_End_Outcome Consult_Paed_End_Outcome	AA	End Action: Outcome
DD_Comp_Define	Classification	Comp_Classification	A	System that this complication belongs to
DD_Comp_Define	Severity	Comp_Severity	A	Severity level of Complication
DD_Comp_Event	Classification	Comp_Classification	A	System that this complication belongs to
DD_Comp_Event	Event_ContribFact_Patient	Comp_ContribFact_Patient	A	Factors that may have contributed to the Complication - Patient related.
DD_Comp_Event	Event_ContribFact_Staff	Comp_ContribFact_Staff	A	Factors that may have contributed to the Complication -Staff related.
DD_Comp_Event	Event_ContribFact_System	Comp_ContribFact_System	A	Factors that may have contributed to the Complication - System related.
DD_Comp_Event	Location	Location_Detail	A	Location of this Event
DD_Comp_Event	Severity	Comp_Severity	A	Severity level of Complication
DD_Custom_Event	PerformedBy_Level	Staff_SeniorityLevel	A	Staff seniority level
DD_Custom_Event	Performed_Location	Location_Detail	A	Location at which this Custom Event was occurred
DD_DischProb_Define	Classification	DischProb_Classification	A	System that this complication belongs to

Table Name	Field Name	List Name	List Type	Description
DD_DischProb_Event	Classification	DischProb_Classification	A	System that this complication belongs to
DD_Proc_Event	PerformedBy_Level	Staff_SeniorityLevel	A	Staff seniority level
DD_Proc_Event	Performed_Location	Location_Detail	A	Location at which this Proc Event was performed
Death	Clinical_CauseOfDeath	Death_Clinical_CauseOfDeath	A	Cause of Death related to clinical decision
Death	Clinical_MannerOfDeath_Hos	Death_Clinical_Manner_Hos	A	Manner of Death Hospital - Anticipated, Unexpected, preventable
Death	Clinical_MannerOfDeath_ICU	Death_Clinical_Manner_ICU	A	Manner of Death ICU - Anticipated, Unexpected, preventable
Death	Death_Mode	Death_Death_Mode	A	Death in relation to level of therapy provided
Death	Donor_Options_Selected	Death_Donor_Notasked	A	Entries from a variety of lists giving Organ Donation Status. Use 'Contains' Query.
Diagnosis	Category	Dx_Adult_NonOp_Cat_Custom Dx_Adult_PostOp_Cat_Custom	AA	Dx Category - Lists for Adult and Paed Dx - Lists depend on the area of use
GasReading	Dis_DataSource	GasReading_DataSource	A	Data Source for Gas Reading - Ward, Home Scene etc
GasReading	GasType	GasReading_GasType	A	Gas Type provided - Arterial, Venous, Capillary
HospitalRecord	Demog_State	Admit_State	A	Patient: Address: State
HospitalRecord	Demog_Title	Admit_Title	A	Patient: Title
ICURecord	Adm_DirectAdm_Reason	Admit_Direct_Reason	A	DirectAdmission: Reason
ICURecord	Adm_DirectAdm_Service	Admit_Direct_Service	A	DirectAdmission: Service
ICURecord	Adm_EmergencyElec	Admit_EmergencyElective	A	Admission: Emergency or Elective?
ICURecord	Billing_Type	Billing_Type	A	Personal: Billing Type
ICURecord	Disch_DirectTransfer_Reason	Disch_DirTrans_Reason	A	Discharge: Direct Transfer Reason
ICURecord	Disch_DirectTransfer_Service	Disch_DirTrans_Service	A	Discharge: Direct Transfer Service
ICURecord	Dx_PastHistory	Diag_PastHistory	A	Past History of this patient
ICURecord	Dx_ReasonAdm	Diag_ReasonAdmit	A	Primary reason for Admission, may have many items selected - separated by ';'
ICURecord	Therapy_Limited_OrganSys	Therapy_Limited_OrganSys	A	Organ System responsible for limitation

Table Name	Field Name	List Name	List Type	Description
ICURecord	Therapy_Withdrawn_Organ Sys	Therapy_Withdrawn_OrganSys	A	Organ System responsible for withdrawal
Location	Current_Bed_Identifier	Admit_Bed_Identifier	A	Current Bed ID
Location	In_Area_Name	Consult_Adult_CallSource Consult_Paed_CallSource Transport_Adult_CallSource	AAA	Origin of the admission to the current location. Can be from the Source of Adm to ICU or a Ward.
Location	Out_Area_Name	Consult_Adult_End_Outcome Transport_Adult_Dest_Outcome Transport_Paed_Dest_Outcome	AAA	Can be the Ward that this patient is to be transferred to or the ICU Outcome - final Destination
ReferringDr	State	Admit_State	A	State or County
ReferringDr	Title	Admit_Title	A	Title
Refusal	Billing_Type	Billing_Type	A	Personal: Billing Type
Staff	Staff_Level_Status	Staff_SeniorityLevel	A	Staff seniority level
Staff	Staff_Title	Admit_Title	A	Title
Survey	Consent_Factors	Survey_Consent_Factors	A	Factors affecting Consent Status and nature of follow-up.
Survey	Consent_FormGivenOut	Survey_ConsentForm_Status	A	Consent Form Given Out status
Survey	Consent_Status	Survey_Consent_Status	A	Follow up status
Survey	Contact_6M_Outcome	SurveyPaed_Outcome	A	Contact after 6 Months: Outcome
Survey	MGOS_6M_Display	SurveyPaed_MGOS	A	6Months: Score Descriptive
Survey	MGOS_Pre_Display	SurveyPaed_MGOS	A	Pre-existing: Score Descriptive
Transport	Call_Adm_Action	Transport_Call_Action	A	Call: Action
Transport	Call_Airway_ConsciousState	Transport_ConsciousState	A	Airway: Conscious State
Transport	Call_Airway_ETT_Position	Transport_ETTPosition	A	Airway: ETT Position
Transport	Call_Airway_ETT_Size	Transport_ETTSize	A	Airway: ETT Size
Transport	Call_Breathing_O2_Route	Transport_RespSupport_Route	C	Breathing: O2 Route
Transport	Call_Breathing_O2_Type	Transport_RespSupport_Route	C	Breathing: O2 Type
Transport	Call_Circulation_Perfusion	Transport_Perfusion	A	Circulation: Perfusion
Transport	Call_Source	Transport_Adult_CallSource Transport_Paed_CallSource	AA	Call Source
Transport	Destination_Outcome	Transport_Adult_Dest_Outcome Transport_Paed_Dest_Outcome	AA	Destination Arrival: Outcome
Transport	Retrieval_Doctor	Transport_Retrieval_Doctor	A	Retrieval Doctor
Transport	Retrieval_Nurse	Transport_Retrieval_Nurse	A	Retrieval_Nurse
Transport	Retrieval_OtherPerso	Transport_Retrieval_Other	A	Retrieval Other Personnel

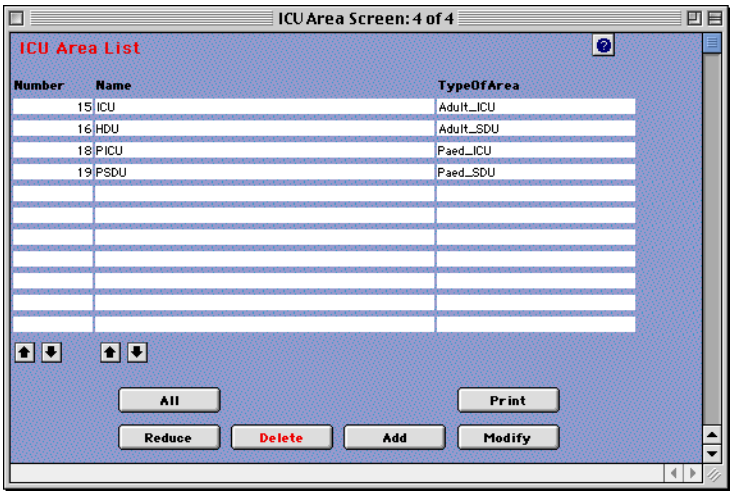
Table Name	Field Name	List Name	List Type	Description
Transport	Retrieval_TransModeToScene	Transport_Retrieval_TransportToScene	A	Transport Mode to Scene
Transport	Trans_TransferModeFromScene	Transport_Retrieval_TransportReturn	A	Mode of transport from Scene
Transport_Drug	Name	Transport_Drug_Name	A	Drug Name
Transport_Fluid	Additive	Transport_Fluid_Additive	A	Additive in fluid
Transport_Fluid	Name	Transport_Fluid_Name	A	Name of Fluid
Transport_Observation	Perfusion	Transport_Perfusion	A	Perfusion
Transport_Observation	Pupils	Transport_Obs_Pupils	A	Pupils

Chapter 18
File: Preferences: ICU Area

18.1.0 ICU Area

This section will allow you to set up the ICU Areas for your Critical Care Department.

Clicking on *ICU Area* Button will display the following window:



ICU Area: List

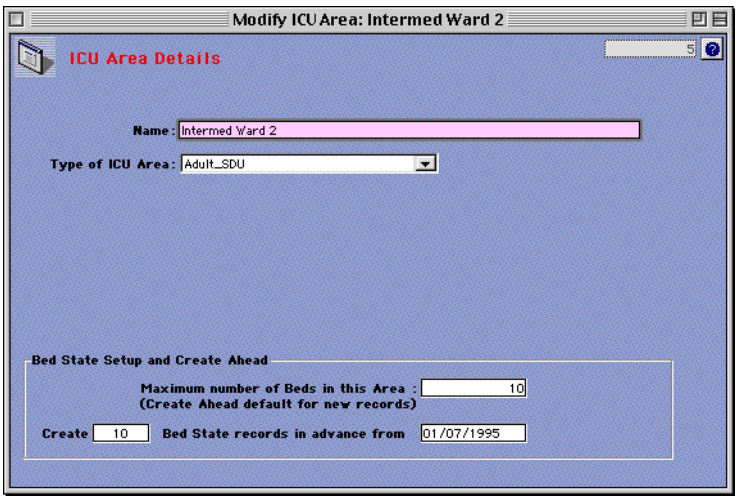
Window Items	Purpose
ICU Area List	This displays the current ICU areas entered into the database:
Number	The internal number of the record
Name	Name of the ICU Area
Type Of Area	Type of ICU Area - can be Adult or Paed and ICU or SDU
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete selected records.
Add	Add a record.
Modify	Modify a selected record
Print	Print the selected records as a list or as detail reports (you will be given the option)
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

Select an ICU Area from the list and double click or click on Modify will bring up the following display:



ICU Area: Input Form

Window Items	Purpose
Name	Set this to the Name of the ICU Area you want to display in any list or field in STATIC.
Type of ICU Area	Select the type of ICU Area you would like to assign from the popup menu. The choice can be Paed or Adult and ICU or SDU.
Bed State Setup and Create Ahead	Each ICU Area is internally associated with a Bedstate tracking table. This system allows the Bedstate records to be created and preset from a specified start date. This area allows you to set how many days ahead to set the beds and the number of beds which are normally open. You will be required to edit the bedstate records (See Bedstate) only on the occasions on which there is a change in the number of beds open (staff shortage etc.) If you do not want to create bedstate records automatically then set the Create xx... to zero. this may be required if you are running a legacy datafile or a special purpose datafile with a limited selection of records. Under these conditions you would clearly not want to continue adding new bedstate records.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

Window Items

Chapter 19
File: Preferences: Diagnosis

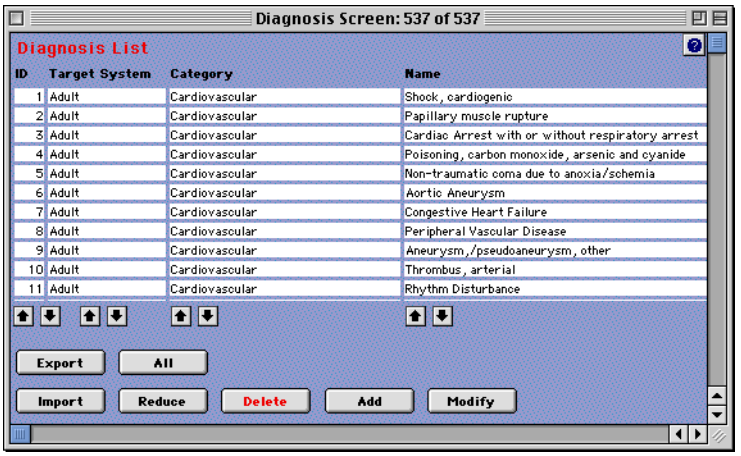
19.1.0 Introduction

Various scoring systems (like Apache and PIM) as well as Diagnosis fields rely on a selection of Diagnoses. This area allows you to Modify these lists. It also allows you to Import a predefined list of records. This may be useful if the weightings change in the future and require modification.

BUT BE WARNED: If you require consistency and comparability with regard to Scoring System outcome comparisons, then do NOT edit this area unless you are VERY sure about what and why you are doing this.

19.1.1 Diagnosis: Output records

Click on the Diagnosis button and the following window will display:



Diagnosis: List Window

Window Items	Purpose
ID	The internal number of the record
Target System	The scoring system that the record belongs to. Paediatric or Adult
Category	Diagnosis category
Name	Diagnosis name
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

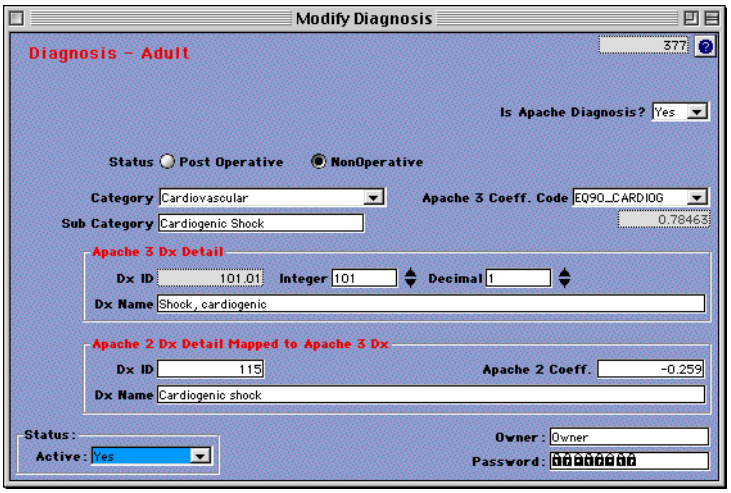
Window Items

Button Name	Action
Export	Export a document that contains Scoring System Diagnosis records.
Import	Import a document that contains Scoring System Diagnosis records.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete selected record(s).
Add	Add a Diagnosis record. The form that displays will allow you to choose whether to add an adult or Paediatric record. Once you have chosen and saved this record, it will then open only as the type of record you have set this to be - Adult or Paediatric. You will not be able to change from one to the other.
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

19.1.2 Diagnosis: Adult Diagnosis

Select a record from the list that is labelled as being Adult and double click or click on Modify to display the following:



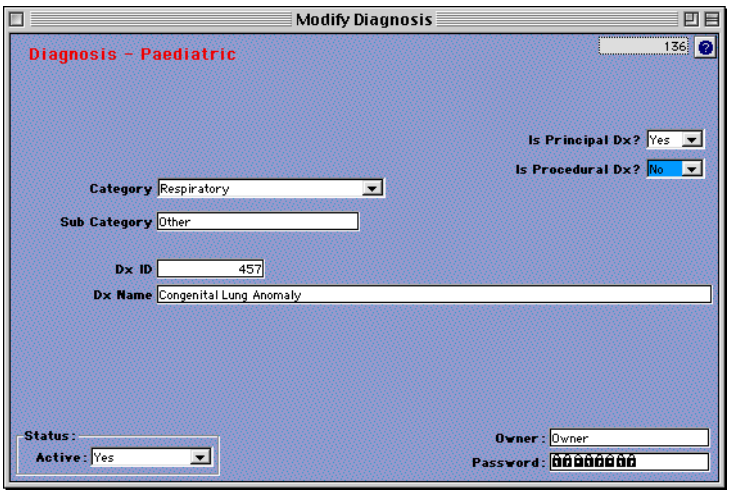
Diagnosis: Adult Detail Window

Window Items	Purpose
Is Apache Diagnosis	Set to Yes if this ia an Apache Dx. If this is an Apache Dx then additional fields will display specific for Apache purposes. If set to No then this Dx will NOT appear in the Apache lists, but will appear in lists used for Diagnosis fields.
Status	Either PostOperative or NonOperative.
Category	Diagnosis category. These are predetermined for Apache 3 and therefore cannot be altered. If you are adding a custom Non Apache Dx, then you can add additional Categories. Do this by adding the required Categories using File> Prefs> List and look for Dx_Adult_NonOp and Dx_Adult_PostOp lists using the Alterable radio button. Alternatively, you can add the Category directly by selecting the Others... option from the drop down Category list.
Sub Category	Diagnosis sub category. This is a Subdivision of the Category. If you are adding an Apache 3 Dx, check the existing entries for a suitable Subcategory. If this is a Dx on its own, make the Subcategory the same as the Dx Name. If you are adding a Custom Dx, you can choose not to define anything for this field.
Apache 3 Coeff. Code	The selected item determines the Apache 3 coefficient used by the algorithm. Nothing else on the form is actually used by the Apache 3 algorithm. The field below displays the coefficient for the selected drop down list item. Drop down list item choice is determined by the Dx Category and Subcategory classification - not by the name of the Dx.
Dx ID (3)	If Is Apache Diagnosis then is set to Apache 3 Dx ID. The Format of this field is composed of an Integer number (that is allied to the Category) and a decimal extension if there are several Diagnoses for this Category. You will be forced to use numbers between 1.00 and 9999.99. If this is NOT an Apache Dx you will be forced to use a number that is >= 10000.00. To make this process easier we have separated the Integer and decimal portions so that they are completed individually.
Dx Name (3)	Diagnosis name.
Dx ID (2)	Internal identifier for Apache 2. Mapped to the selected Apache 3 Dx.
Apache 2 Coeff.	Weighting given to the apache 2 Dx.
Dx Name (2)	Diagnosis name - Apache 2.
Active	If the Status of this Dx is set to Active=No, then this Dx will not show in any lists used within STATIC.
Owner	The record can be protected from unauthorized editing
Password	The record can be protected from unauthorized editing
Close Box	Once you have completed this area, use the close box of the window to Save or Cancel your changes through a Dialog.

Window Items

19.1.3 Diagnosis: Paediatric Diagnosis

Select a record from the list that is labelled as being Paediatric and double click or click on Modify to display the following:



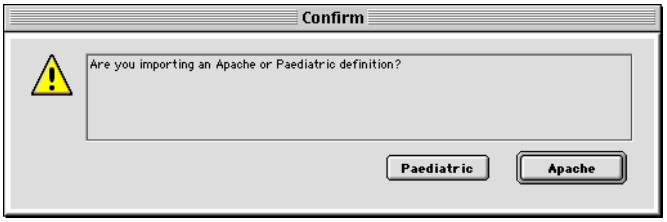
Diagnosis: Paediatric Detail Window

Window Items	Purpose
Category	Diagnosis Category.
Sub Category	Diagnosis Sub Category
Dx ID	Internal identifier.
Dx Name	Diagnosis name.
Is Principal Dx	Is this a Principal Diagnosis? If this is set to No , then this Dx will not display in the drop down list for the Principal ICU Dx or Principal Underlying Dx fields.
Is Procedural Dx	Is this a Procedural Diagnosis?
Active	If the Status of this Dx is set to Active=No, then this Dx will not show in any lists used within STATIC.
Owner	The record can be protected from unauthorized editing
Password	The record can be protected from unauthorized editing
Close Box	Once you have completed this area, use the close box of the window to Save or Cancel your changes through a Dialog.

Window Items

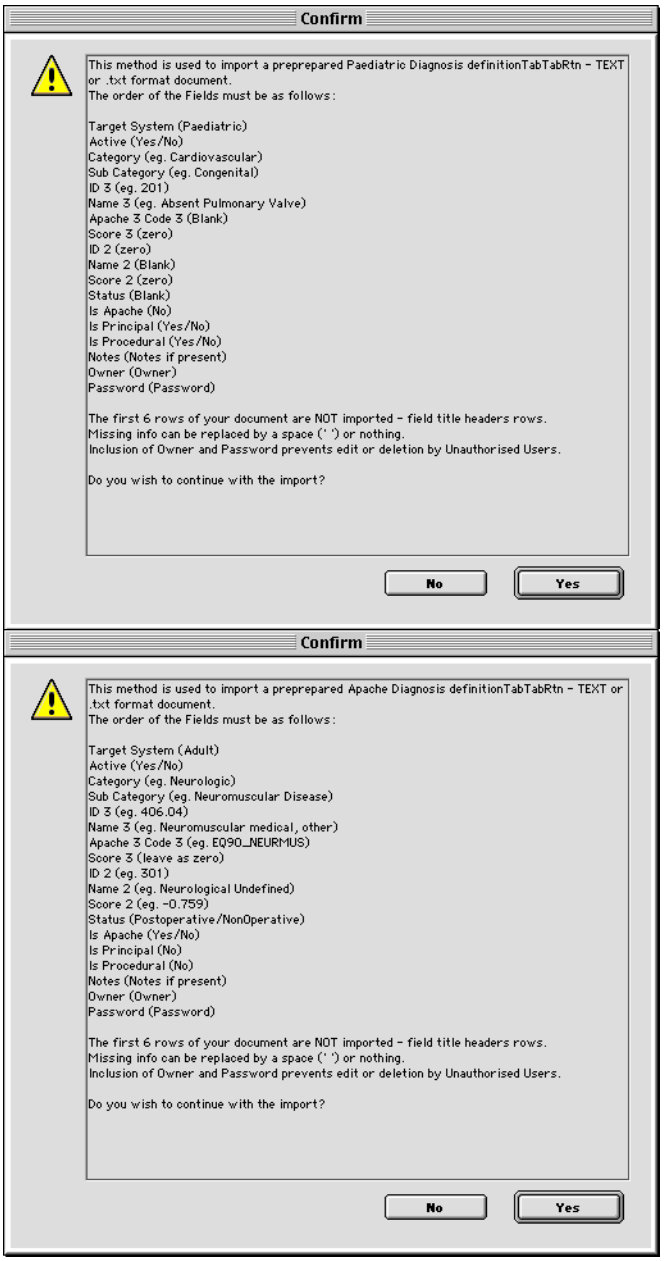
19.1.4 Diagnosis: Importing Diagnosis records

Click on Import button to display the following:



Diagnosis: Import confirm dialog

Depending on which button has been selected the following Dialog will display:



Diagnosis: Import definition

Selecting Yes will present you with a dialog to enable selection of the document containing the Diagnosis records to be imported.

Note the very strict format that has to be observed if the import is to be successful!

Chapter 20
File: Preferences: Procedure

20.1.0 Introduction

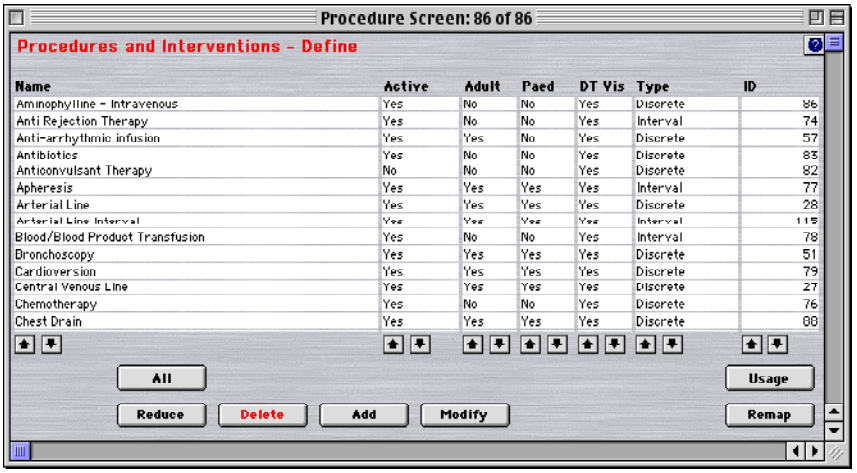
In this area you will define all ICU Procedures that are in use within your ICU Complex.

IF YOU RENAME OR EDIT A PROCEDURE DEFINITION RECORD ALL EXISTING PROCEDURE EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

When creating Value type of Procedure records, be aware that the Units for the value collected does matter. Once the Value to be collected has been defined and data collected, it will be very difficult to change the already collected values if you change your mind on what Units the value should be collected with. Thus in STATIC you will find there are two different Procedure records for Creatinine for instance. One is for Paediatric and the other for Adult Admissions. The reason for this is that the two areas of ICU have a convention of collecting in mmol and mol respectively .

20.1.1 Procedure: Output Records

Selection of the Procedure button will display the following:



Name	Active	Adult	Paed	DT Vis	Type	ID
Aminophylline - Intravenous	Yes	No	No	Yes	Discrete	86
Anti Rejection Therapy	Yes	No	No	Yes	Interval	74
Anti-arrhythmic infusion	Yes	Yes	No	Yes	Discrete	57
Antibiotics	Yes	No	No	Yes	Discrete	83
Anticonvulsant Therapy	No	No	No	Yes	Discrete	82
Apheresis	Yes	Yes	Yes	Yes	Interval	77
Arterial Line	Yes	Yes	Yes	Yes	Discrete	28
Arterial Line Interval	Yes	Yes	Yes	Yes	Interval	115
Blood/Blood Product Transfusion	Yes	No	No	Yes	Interval	78
Bronchoscopy	Yes	Yes	Yes	Yes	Discrete	51
Cardioversion	Yes	Yes	Yes	Yes	Discrete	79
Central Venous Line	Yes	Yes	Yes	Yes	Discrete	27
Chemotherapy	Yes	No	No	Yes	Discrete	76
Chest Drain	Yes	Yes	Yes	Yes	Discrete	80

Procedure: List Window

Window Items	Purpose
Procedure List	Lists all the Procedure available.
Name	Name of Procedure
Active	Set to Yes if is an active item
Adult	Adult Procedure
Paed	Paediatric Procedure
DT Vis	Set to Yes if this item requires Date Time data to be entered.
Type	Type of Procedure - Discrete, Interval or Value
ID	ID of this item
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

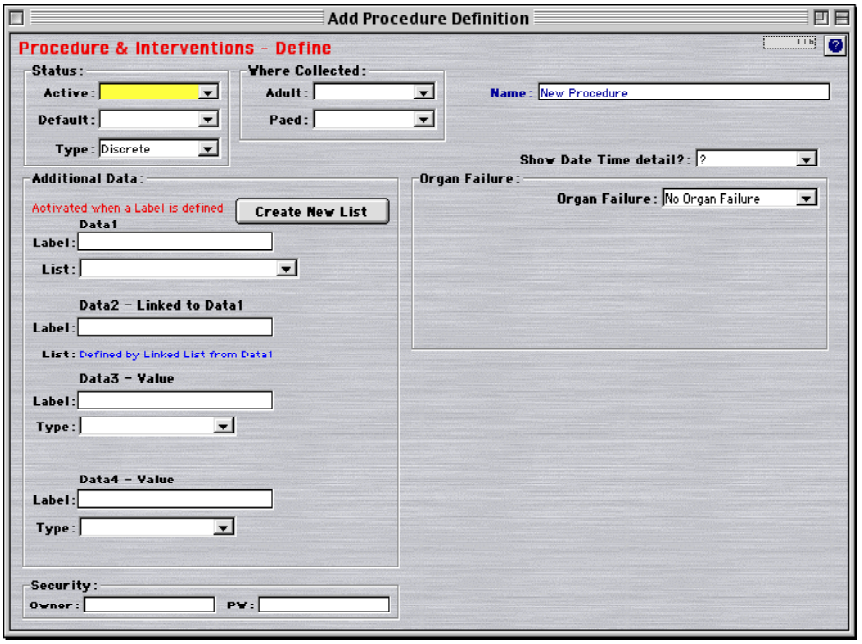
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Usage	Define Usage of various procedures within other Database areas. See Interface: Usage on page 27
Remap	Remap already defined and used Procedures within the Database. See Procedure: Remap on page 118
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

20.1.2 Procedure: Add Record

Click on **Add** button. The following window will display:



Procedure: Input Form

Window Items	Purpose
Active	Procedure is in use - can be deactivated by setting to No
Default	Procedure will always display ready for selection in ICU Forms, if set to Yes or Mandatory. If set to Mandatory this Event will also be created automatically when a new Admission is created.
Type	Type of Procedure - Discrete, Interval or Value
Adult	Adult Procedure
Paed	Paediatric Procedure
Name	Name of the Procedure
Show Date Time detail?	If set to Yes requires Date Time details to be completed before a Procedure Event record is complete.
Create New List	Button to define a new list that may be required here.
Data1 Label	Identifying Label for the list selected in Data1 List
Data1 List	List to display here.
Data2 Label	Identifying Label for the attached list selected in Data1 List
Data2 List	Defined by the attached lists in Data1 List
Data3 Label	Identifying Label for the data defined in Data3

Window Items

Window Items	Purpose
Data3 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Data4 Label	Identifying Label for the data defined in Data4
Data4 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Organ Failure	Define organ failure for each item and combination of items that can be selected from Data1 List and Data2 List.
Owner	Security
Password	Security
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

We will now take you through the creation of a complex Procedure - Respiratory Support:

1 Status:
Respiratory Support is a currently used Procedure (Active=Yes), always available for selection (Default=Yes; selection of Mandatory=Yes would also mean that this Procedure is automatically created when a new Admission is created) and we must log the time interval it is used for (Type =Interval).

2 Where Collected
In this instance it is collected for Adults (Adult=Yes) and for Children (Paed=Yes).

3 Name
The name of this Procedure is Respiratory Support2. The reason for the 2 at the end of the Name is because the Procedure area does not allow you to define a Name that is the same as an already existing saved Procedure if that Procedure is also defined as the same When (Prior or During ICU).

4 Show Date Time detail?
This is set to Yes as we will be collecting date and time data for this Procedure.

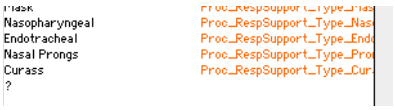
Once this data has been entered, the top of the form should look like this:

Procedure: Input Form - Status, When/where, Name

For many Discrete Procedures this is all you need to do to define the Procedure.

5 Additional Data
Each Additional Data area will become active when a Label has been defined - if there is no Label then the Data is not active. In the case of this example we need to define the Route and the Type of Respiratory Support. A little thinking will reveal that what determines the Respiratory Support given is the Route first and then the Type through that Route.

We define a List that looks as follows:

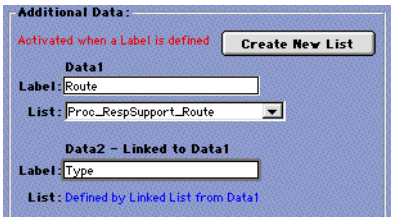


Procedure: List

Note that every Route has an extra List attached. These extra lists define the Type of Respiratory Support available through that Route. For instance the list Proc_RespSupport_Type_Endo has the following Types defined: No Ventilation, Conventional Ventilation, CPAP, JET, HFOV.

By setting up the Lists in this way, when in an ICU Form and when you select Route=Endotracheal, the Types defined in this list will become available for selection. This makes for a great deal of flexibility: You can add other routes and add new types of support when they become available.

To activate this, set the fields to look like this:



Procedure: Additional Data

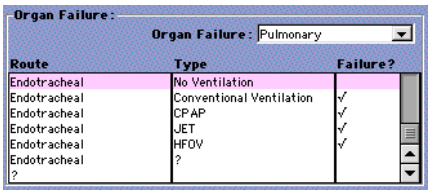
Now we also want to collect the PEEP value for this area. We set the Label= PEEP and the Type=Numeric. Selecting the Type to be Numeric gives us the option to define the Units=cm, the Dec. places=0 as we want to collect whole numbers only and to define the max=100 and the min=0

We could also collect a fourth data point here.

6 Organ Failure

You may have noticed that when we set the List in Data1 to Proc_RespSupport_Type_Endo, there was suddenly more information visible in this area. This is because every combination of Route and Type of Respiratory support can be associated with an Organ Failure. This Organ Failure is added by Default when within the ICU Forms but can be overridden there.

Organ Failure here would be classified as Pulmonary failure when the Endotracheal route is taken. A simple click within the Failure? column will place a tick for every combination that is deemed to be a failure:



Procedure: Organ Failure

7 Interval Calculation - Hours and Days

Respiratory Support requires the calculation of intervals, There are different rules in use by different Health Departments for the calculation of these intervals with regard to rounding and addition of individual Respiratory Support events. This area gives you the control to define how an individual event is treated and how the addition of events for the generation of a total interval is handled.

Rounding Options	Action
Interval Overlap	When calculating totals for intervals, this determines what to do when there is an overlap between one or more events with the same name: None - Data1&2 tested: No overlap is ever allowed for any events that bear the same Name. Partial - Data1 tested: Overlap is allowed when Data1 for two events are different even though the Name of the events are the same. The value of Data2 is ignored completely. For instance Respiratory Support; if two events are both Route=Endotracheal then there may be a Overlap error if the intervals coincide. On the other hand if one has Route=Nasopharyngeal and the other is Route=Endotracheal and the intervals overlap then the system will allow this even though it is an overlap. Partial - Data2 tested: Overlap is allowed when Data2 for two events are different even though the Name of the events are the same. The value of Data1 is ignored completely. For instance Respiratory Support; if two events are both Type=CPAP then there may be a Overlap error if the intervals coincide. On the other hand if one has Type=CPAP and the other is Type=JET and the intervals overlap then the system will allow this even though it is an overlap. Complete: Overlap is always allowed. May be required when two events need to be tracked separately and are exactly the same.
Precise	The value is stored at the maximum precision
Rounded	The value is rounded using arithmetic rounding - to the number of Dec places 23.04 -> 23.0 to 1 Dec. place 23.05 -> 23.1 to 1 Dec. place
Rounded Up	The value is rounded up - to the number of Dec places 23.04 or 23.05 -> 23.1 to 1 Dec. place 23.005 -> 23.0 to 1 Dec. place
Rounded Up Absolute	The value is rounded up - to the number of Dec places; but ANY fractional part will cause a Round up to the next value 23.04 or 23.05 -> 23.1 to 1 Dec. place 23.005 -> 23.1 to 1 Dec. place
Rounded Down	The value is rounded down - to the number of Dec places 23.04 or 23.05 -> 23.0 to 1 Dec. place 23.005 -> 23.0 to 1 Dec. place
Rounded; but if <1 then =1	After arithmetic rounding, the value is tested - if it is less than 1 but more than zero then the value is set to 1

Rounding Option

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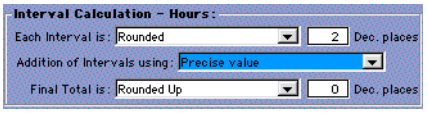
Addition Options	Action
Precise value	The precise interval values are used to create the total
Rounded value	The rounded interval values are used to create the total
Present on Day, equal to 1 Day	If there is one or more intervals on a Day (however short) then it counts as 1 Day towards the total.

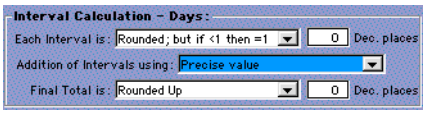
Addition Option

In this case we want Each Interval to be Rounded to 2 decimal places and these Intervals added using the Precise values to derive a Total in Hours that will be Rounded Up to the nearest whole Hour (0 Dec. places):



Procedure: Interval Calculation - Hours

For the Days calculation, we want Each Interval to be Rounded to (0 Dec. places) but if this is less than a whole day then force the Interval to a minimum of 1 Day. These Intervals are added using the Precise values to derive a Total in Days that will be Rounded Up to the nearest whole Hour (0 Dec. places):

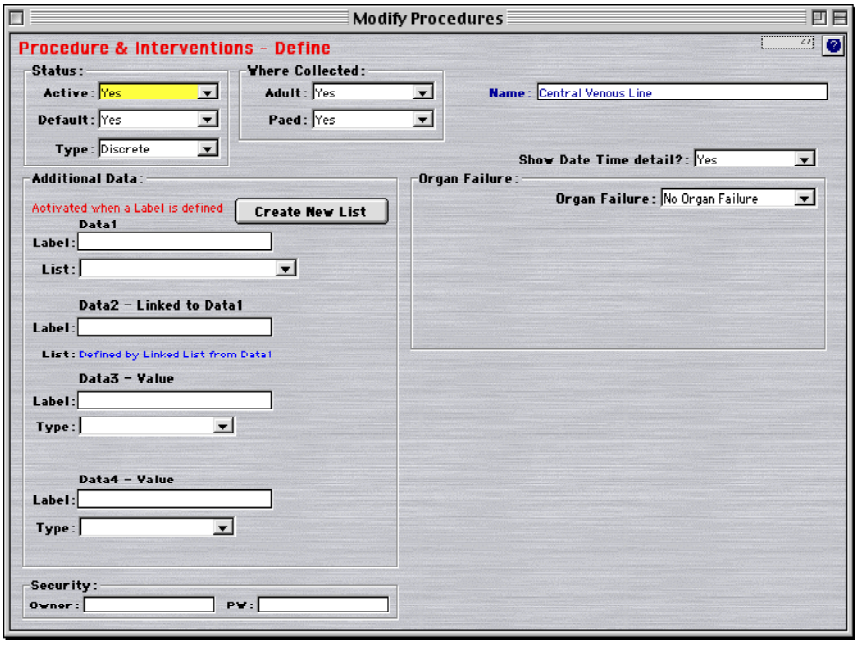


Procedure: Interval Calculation - Hours

We have tried to anticipate all the option required for the calculation of these Intervals. If these options do not fulfill your requirements, let us know and we will add others.

20.1.3 Procedure: Modify Record

Click on a line in the **Procedure list** and then either double click or click on **Modify**. The following window will display:



Procedure: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

The system will now update all Procedure records with the amended information as defined in the Definition record.

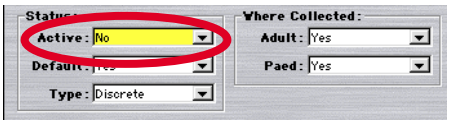
IF YOU RENAME OR EDIT A PROCEDURE DEFINITION RECORD ALL EXISTING PROCEDURE EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

20.1.4 Procedure: Delete Record

If you try to delete a Definition record that is currently defining an Event for an Admission, you will not be able to delete the Definition record. You will see the following Dialog:

Procedure: Delete Record

If you still want to deactivate this Event then set the Status to Inactive:

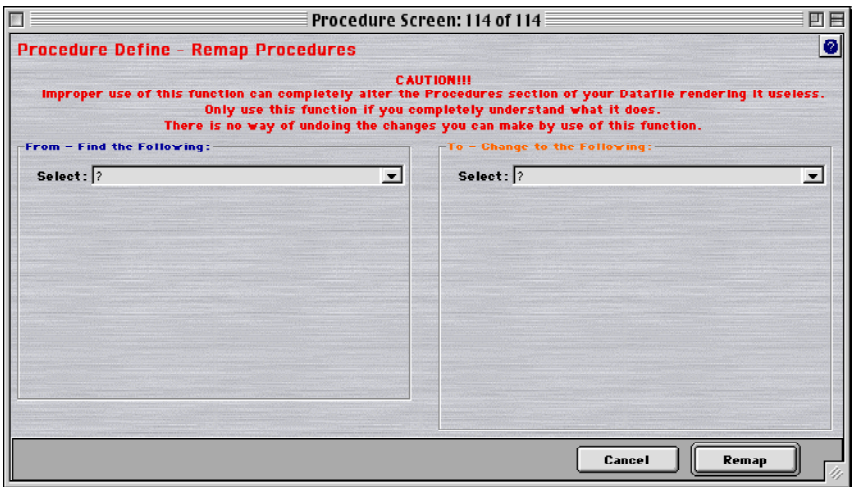


Procedure: Status Inactive

This will prevent this Event from being available for any Admissions.

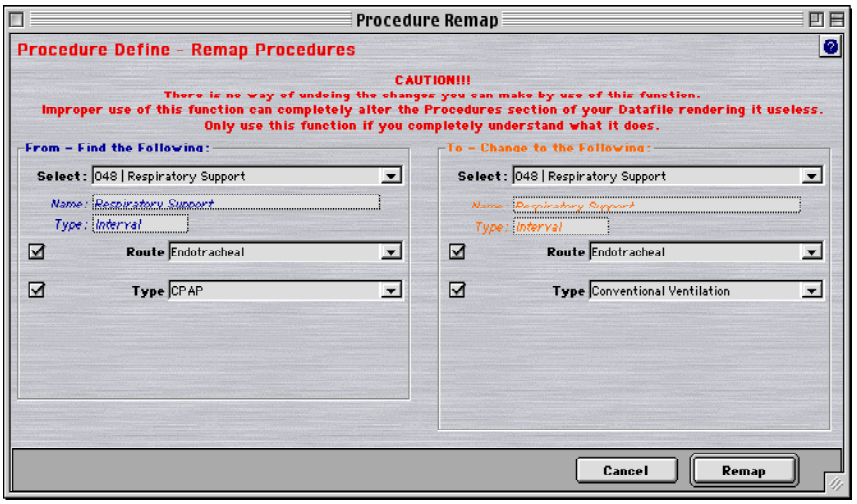
20.1.5 Procedure: Remap

You may have defined a Procedure only to find much later that the way the Procedure was defined did not suit your purposes. Unfortunately, data has been collected and there is no way of easily undoing the mistake. This facility, if correctly used, should give you this ability. To enter this function click the *Remap* button and the following window will display:



Procedure: Output: Remap

To use this area select the Procedure Define record you want to use to find Procedure Events to convert in the FROM section. Then select a Procedure Define Record in the TO section that you will use to convert the contents of the found records. After selection the window may look like this:



Procedure: Output: Remap

FROM - Find the following	Purpose
Select	Select one of the available Procedure Define records from the drop down list. The Procedures designated as Adult will appear first followed by the Paediatric items. If a Procedure is set as being both Adult and Paediatric, it will appear twice within the list.
Name	Name of Procedure
Type	Type of Procedure - Discrete, Interval or Value
Route and Type	These will only appear for some Procedure Define records if there are sub options defined for these. By selecting these and by setting the Check boxes next to them, you will instruct STATIC to find those Procedure Events that comply with all the selected sub options. In the above example, STATIC will find all records that are Respiratory Support: Endotracheal: CPAP. If we had left out the last check box then we would have found a larger number of records because it would have included all Type: CPAP as well as Type: BiPap and Type: ? records.

TO - Change the Following	Purpose
Select	Select one of the available Procedure Define records from the drop down list. The Procedures designated as Adult will appear first followed by the Paediatric items. If a Procedure is set as being both Adult and Paediatric, it will appear twice within the list.
Name	Name of Procedure
Type	Type of Procedure - Discrete, Interval or Value
Route and Type	These will only appear for those Procedure Define records for which there are sub options defined. By selecting these and by setting the Check boxes next to them, you will instruct STATIC change the found Procedure Event fields to the specified text. In the above example, STATIC will alter found records to Respiratory Support: Endotracheal: Conventional Ventilation. If we had left out the last check box then whatever was present in the last Type field would have been left alone - this may create unwanted Route and Type combinations in this case.

This function is Dangerous

This option can, for instance, change every Arterial Line to a Dialysis event. Not something that you would want to do! Take great care in the use of this area. It is powerful, and in the hands of the unwary can make very unfortunate changes to your datafile that would be difficult or even impossible to rectify.

Log file of changes

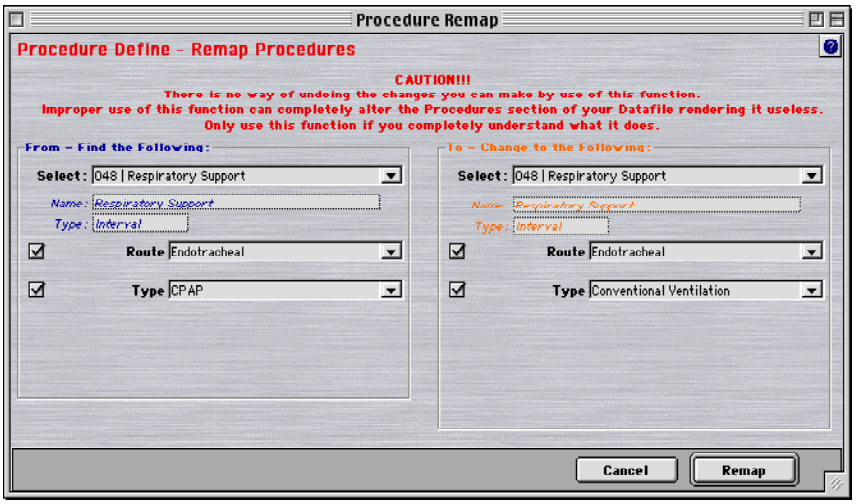
Whenever this function is used a log of all Procedure Events changed is made to a document stored in the STATICItems folder.

The path to this document is STATICItems/Information/Update_Log/Update_yyymmddhhmmss.txt

Use of this area

To understand the use of this area, it is easier to work with examples:

Example1: We want to convert all Respiratory Events which are designated as Route: Endotracheal and Type: CPAP to Route: Endotracheal Type: Conventional Ventilation. To do this set the screen as follows:

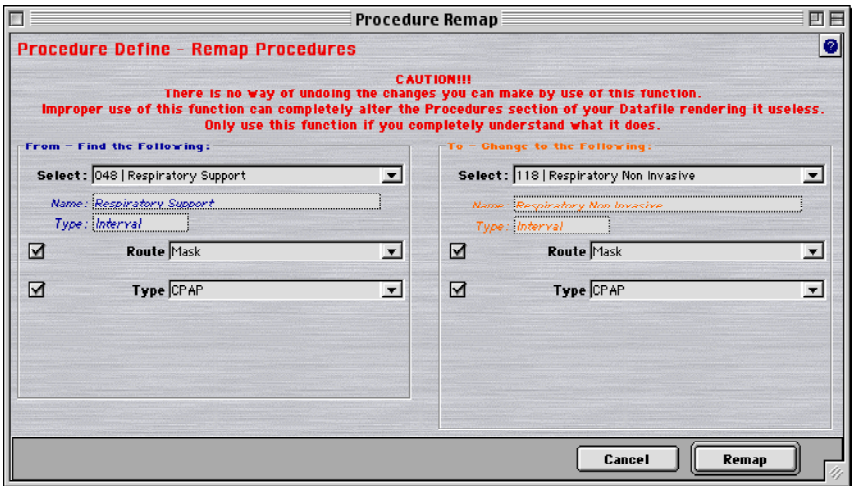


Procedure: Output: Remap

To run the conversion click the *Remap* button and after a confirm dialog the function performs the following action:

Find every Procedure Event that is Respiratory Support: During ICU: Endotracheal: CPAP and convert them to Type: Conventional Ventilation. After this update all Procedure Summary records and Admission records.

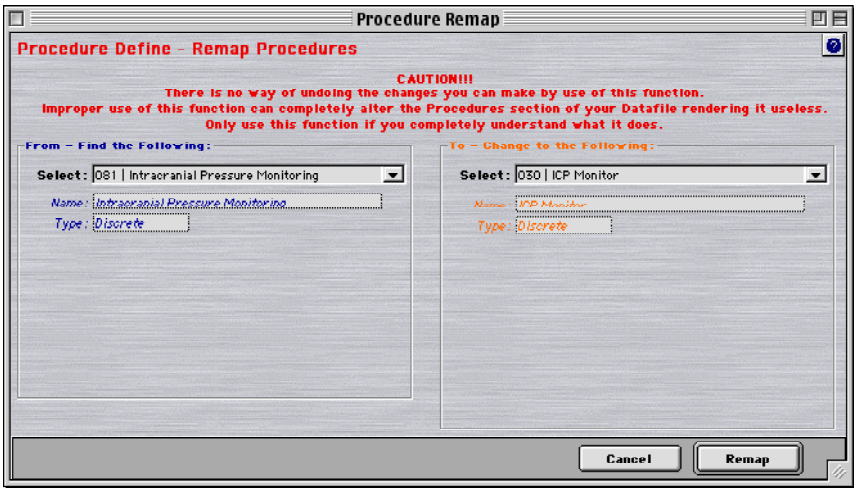
Example2: We find that having all types of Respiratory Support in the same section is no longer suitable for subsequent Reports. We want to separate Invasive from Non Invasive Respiratory Support. To do this we first create a new Procedure Define record called Respiratory NonInvasive . Now all we need to do is to Remap all the combinations of Respiratory Support from the Respiratory Support to the Respiratory NonInvasive area. To do this we set the screen as follows:



Procedure: Output: Remap

This will move all the Mask: CPAP events to the NonInvasive area. We would need to repeat this action again for the Mask: BiPap and for Mask: ? options also. After this handle the other Non Invasive events in a similar way. Tedious, yes, but think of the alternative! This type of action would only be required very rarely.

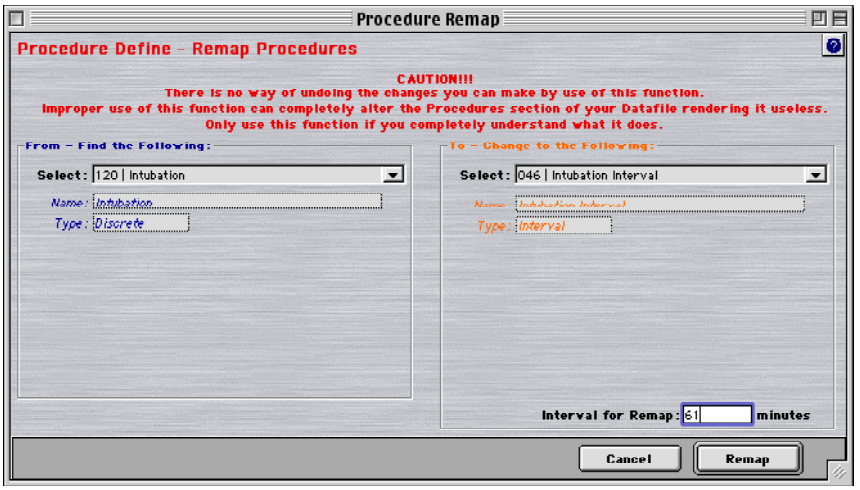
Example3: ICP Monitor has been defined twice. We wish to remove one of the definitions:



Procedure: Output: Remap

Running this screen by clicking the *Remap* button will remove the more verbose option from use. To prevent future use, we would then need to inactivate or delete the verbose Procedure Define record.

Example4: Intubation has been defined as a Discrete Event. We wish to convert all Intubation Events to Interval type events and give them all a default value of 61 minutes so that the database registers at least some duration for these converted events. We choose 61 minutes so we can later distinguish these artificially created durations from real ones for reporting purposes. To do this we first define a new Procedure Define record called Intubation Interval . We set up the Remap screen to look as follows. Note the *Interval for Remap* is set to 61 minutes.:



Procedure: Output: Remap

Execute this screen by clicking the *Remap* button and every Intubation event in the database will be converted to Intubation Interval and set to 61 minutes.

To prevent future use, we would then need to inactivate or delete the Intubation Procedure Define record. The name Intubation Interval can be altered back to Intubation if we have deleted the current Intubation procedure Define record (but not if we have merely inactivated it.

Chapter 21
File: Preferences: Discharge Problem

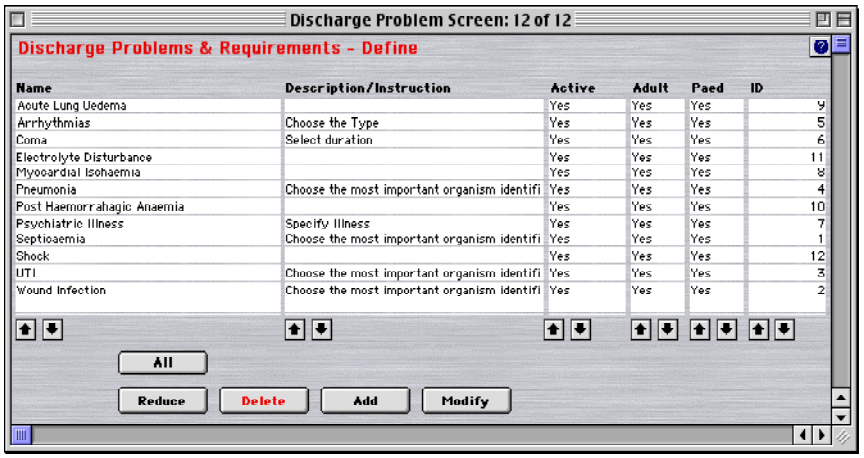
21.1.0 Introduction

In this area you will define all ICU Discharge Problems that are in use within your ICU Complex. This area defines the Discharge Problems available in an Admission form under the Report Tab.

IF YOU RENAME OR EDIT A DISCHARGE PROBLEM DEFINITION RECORD ALL EXISTING DISCHARGE PROBLEM EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

21.1.1 Discharge Problem: Output Records

Selection of the *Disch. Problem* button will display the following:



Discharge Problem: List Window

Window Items	Purpose
Discharge Problem List	Lists all the Discharge Problem available.
Name	Name of Discharge Problem
Description/ Instruction	Description or Instruction for the discharge Problem
Active	Set to Yes if this item is active.
Adult	Adult Discharge Problem
Paed	Paediatric Discharge Problem
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

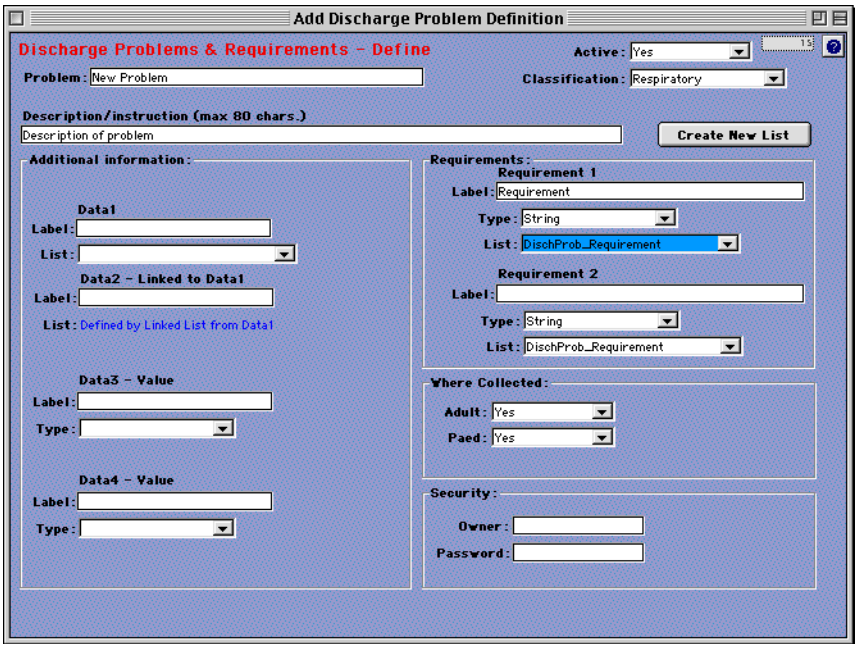
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

21.1.2 Discharge Problem: Add Record

Click on **Add** button. The following window will display:



Discharge Problem: Input Form

Window Items	Purpose
Problem	Name of the Discharge Problem
Active	Discharge Problem is in use - can be deactivated by setting to No
Classification	Discharge Problem classification category.
Description/ Instructions	Description or Instruction for the discharge Problem
Create New List	Button to define a new list that may be required here.

Window Items

Window Items	Purpose
Data1 Label	Identifying Label for the list selected in Data1 List
Data1 List	List to display here.
Data2 Label	Identifying Label for the attached list selected in Data1 List
Data2 List	Defined by the attached lists in Data1 List
Data3 Label	Identifying Label for the data defined in Data3
Data3 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Data4 Label	Identifying Label for the data defined in Data4
Data4 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Requirements1 Label	Identifying Label for the data defined in Requirements1
Requirements1 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Requirements2 Label	Identifying Label for the data defined in Requirements2
Requirements2 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Adult	Adult Discharge Problem
Paed	Paediatric Discharge Problem
Owner	Security
Password	Security
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

We will now take you through the creation of a complex Discharge Problem - UTI:

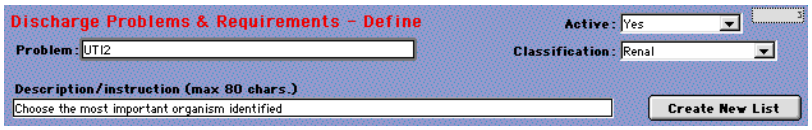
1 Problem
The name of this Discharge Problem is UTI2. The reason for the 2 at the end of the Name is because the Discharge Problem area does not allow you to define a Name that is the same as an already existing saved Discharge Problem.

2 Status:
UTI is a currently used Discharge Problem (Active=Yes). It is classified under Renal Classification=Renal

3 Description/ instruction

We want to tell the user what to do with the List we will add in a moment. Description=Choose the most important organism identified.

Once this data has been entered, the top of the form should look like this:

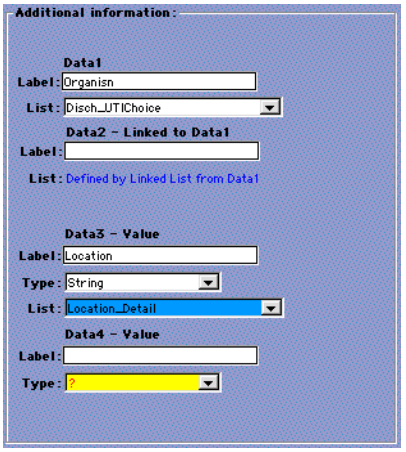


Discharge Problem: Input Form - Problem, Status, Description

For many Discrete Discharge Problems this is all you need to do to define the Discharge Problem.

4 Additional Information

The Additional information area will become active when a Label has been defined - if there is no Label then the Data is not active. In the case of this example we need to define the Organism for this UTI. This is done in a List called Disch_UTIChoice. This List could have been created using the **Create New List** button. To activate this, set the fields to look like this:

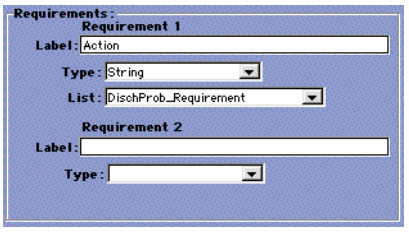


Discharge Problem: Additional Information

Now we also want to collect the Location of the Organism for this area. We set the Label= Location and the Type=String. Selecting the Type to be String gives us the option to define the location at which this Organism was collected by selection of the List called Location_Detail.

5 Requirements

The Requirements area will become active when a Label has been defined - if there is no Label then the Data is not active. In the case of this example we need to define the actual requirement options for UTI. This is done in a List called DischProb_Requirement. This List could have been created using the **Create New List** button. To activate this, set the fields to look like this:



Discharge Problem: Requirements

If we had selected Type=Numeric, then we could have captured the usage of, say, a particular antibiotic - max, min, dec places and units of use can all be defined here.

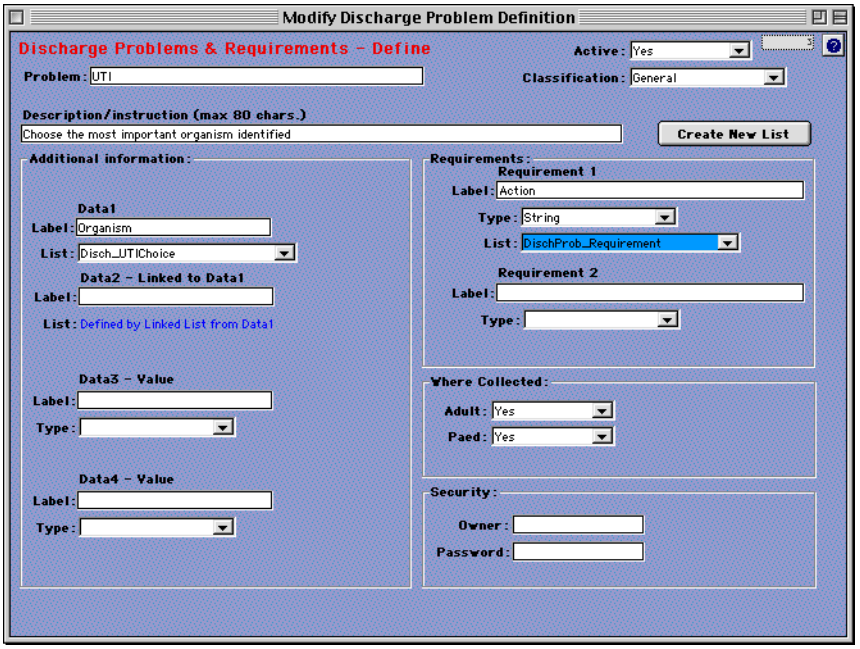
We could also have defined a second Requirement

6 Where Collected

It is collected for Adults (Adult=Yes) and for Children (Paed=Yes).

21.1.3 Discharge Problem: Modify Record

Click on a line in the **Discharge Problem list** and then either double click or click on **Modify**. The following window will display:



Discharge Problem: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

The system will now update all Discharge Problem records with the amended information as defined in the Definition record.

IF YOU RENAME OR EDIT A DISCHARGE PROBLEM DEFINITION RECORD ALL EXISTING DISCHARGE PROBLEM EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

21.1.4 Discharge Problem: Delete Record

If you try to delete a Definition record that is currently defining an Event for an Admission, you will not be able to delete the Definition record. You will see the following Dialog:

Discharge Problem: Delete Record

If you still want to deactivate this Event then set the Status to Inactive (Active-No):

Discharge Problem: Status Inactive

This will prevent this Event from being available for any Admissions.

Chapter 22
File: Preferences: Complication

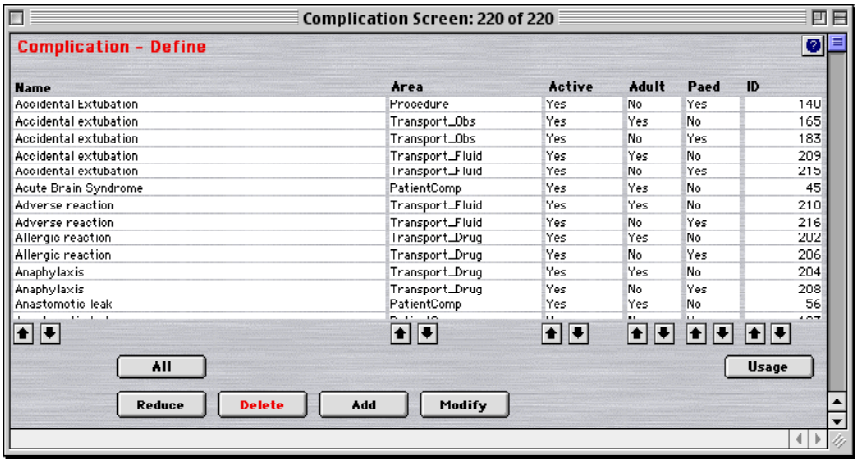
22.1.0 Introduction

In this area you will define all ICU Complications that are in use within your ICU Complex. This area defines the Complications available in an Admission form under the Discharge Tab.

IF YOU RENAME OR EDIT A COMPLICATION DEFINITION RECORD ALL EXISTING COMPLICATION EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

22.1.1 Complication: Output Records

Selection of the **Complication** button will display the following:



Complication: List Window

Window Items	Purpose
Complication List	Lists all the Complication available.
Name	Name of Complication
Area	Database data collection area that this complication is used in.
Adult	Adult Complication
Paed	Paediatric Complication
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

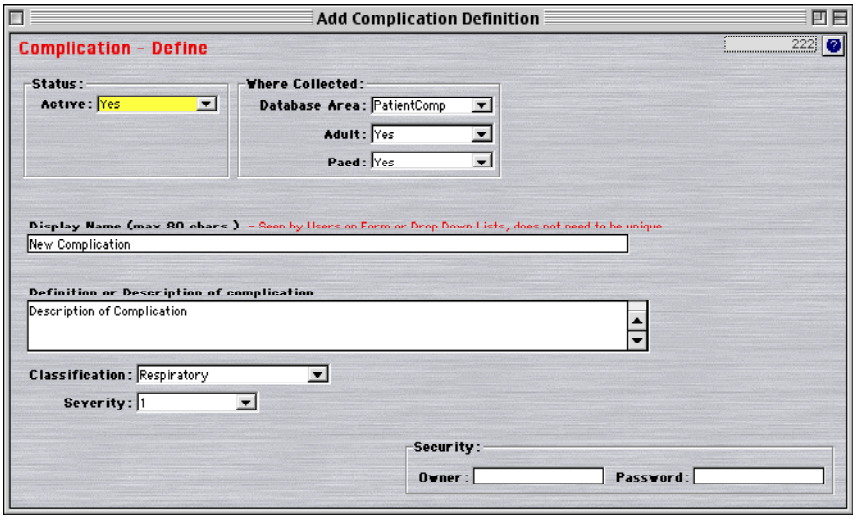
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Usage	Define Usage of various Complications within other Database areas. See Interface: Usage on page 27
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

22.1.2 Complication: Add Record

Click on **Add** button. The following window will display:



Complication: Input Form

Window Items	Purpose
Active	Complication is in use - can be deactivated by setting to No
Database area	Database area within which this Complication is used. This cannot be edited once the complication has been used anywhere within the database.
Adult	Adult Complication
Paed	Paediatric Complication
Display Name	The display name of the Complication - does not need to be unique. This is what is seen by Users on the Form or in Drop down lists.

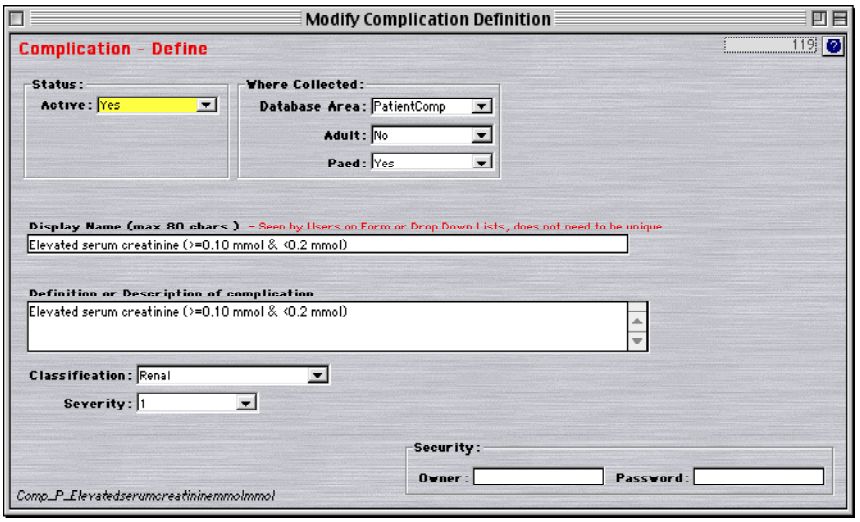
Window Items

Window Items	Purpose
Definition or Description	Used for PatientComp area only. Optional extra text to guide the user in the use of this Complication - for instance: limits that define the complication.
Classification	Used for PatientComp area only. Complication classification category.
Severity	Used for PatientComp area only. Categorize the Complication according to a severity score - higher score will sort the item higher up in the list of possible choices.
Owner	Security
Password	Security
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

22.1.3 Complication: Modify Record

Click on a line in the **Complication list** and then either double click or click on **Modify**. The following window will display:



Complication: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

The system will now update all Complication records with the amended information as defined in the Definition record.

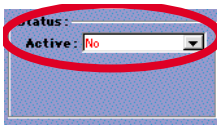
IF YOU RENAME OR EDIT A COMPLICATION DEFINITION RECORD ALL EXISTING COMPLICATION EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

22.1.4 Complication: Delete Record

If you try to delete a Definition record that is currently defining an Event for an Admission, you will not be able to delete the Definition record. You will see the following Dialog:

Complication: Delete Record

If you still want to deactivate this Event then set the Status to Inactive (Active-No):



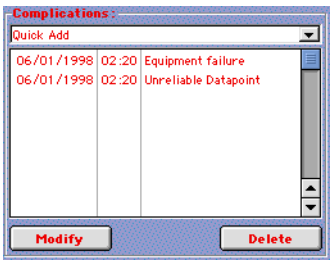
Complication: Status Inactive

This will prevent this Event from being available for any Admissions.

22.1.5 Complication: Selection of Complications Interface

The complications defined here are selected using a common interface in various placed within STATIC.

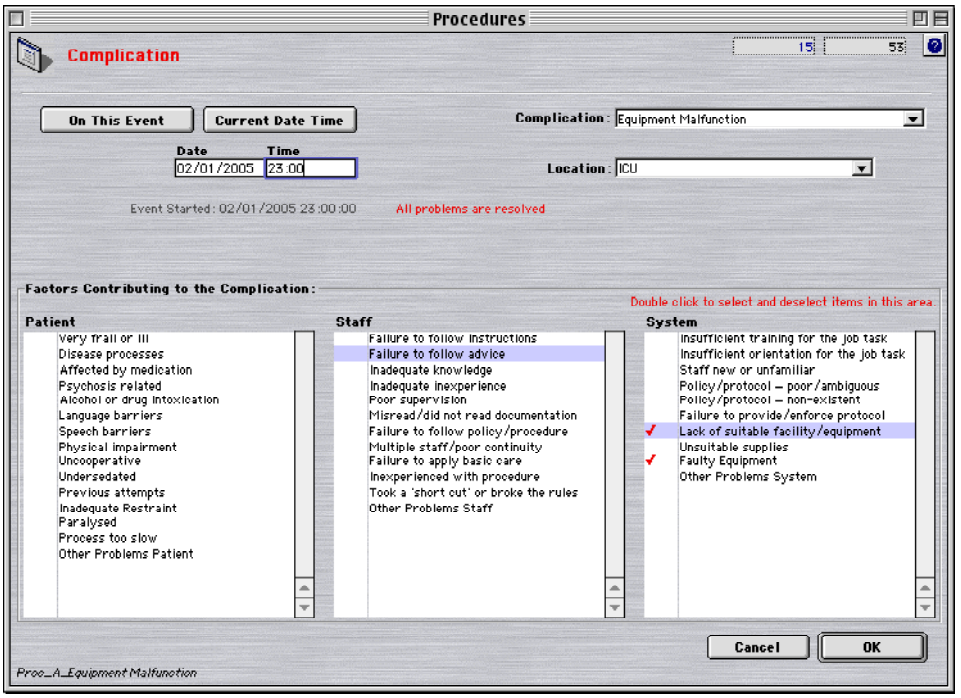
The complications selection area always appears as follows:



Complication: Selection area

Use the Quick Add drop down list to select the Complication required. This list differs for the various areas that this Complications selection area appears in. It is also different for Adult and Paed admissions. This difference is controlled by the appropriate selection of the drop down lists in the Where Collected theme above - see Complication: Add Record on page 130.

Once an item is selected, the following window will appear:



Complication: Specification detail area

This area allows for the editing of the date time at which this complication occurred as well as Factors that contributed to the Complication.

The lists for the Factors are all Alterable lists named Comp_ContribFact_Patient , Comp_ContribFact_Staff and Comp_ContribFact_System . These can be altered by the Administrator if you do not wish to collect this information. Some Institutions may not wish to collect this information. In this case, setting the lists to have no entries will prevent users from entering information in this area. To do this, go to File> Prefs> Lists button.

The Location drop down list allows you to specify where the complication actually occurred.

Chapter 23
File: Preferences: Custom

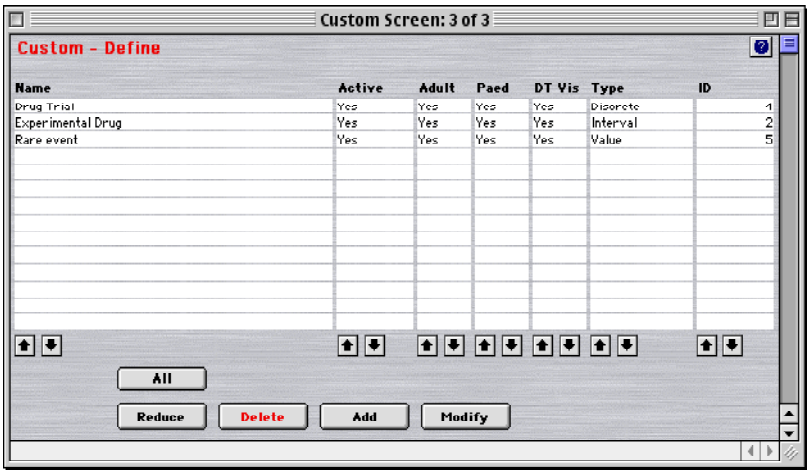
23.1.0 Introduction

In this area you will define all ICU Custom Events that are in use within your ICU Complex.

IF YOU RENAME OR EDIT A CUSTOM EVENT DEFINITION RECORD ALL EXISTING CUSTOM EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

23.1.1 Custom: Output Records

Selection of the Custom button will display the following:



Custom: List Window

Window Items	Purpose
Custom List	Lists all the Custom Event available.
Name	Name of Custom Event
Active	Set to Yes if is an active item
Adult	Adult Custom Event
Paed	Paediatric Custom Event
DT Vis	Set to Yes if this item requires Date Time data to be entered.
Type	The Type of the Custom Event: Interval, Discrete or Value
ID	Internal ID of the Custom Event
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

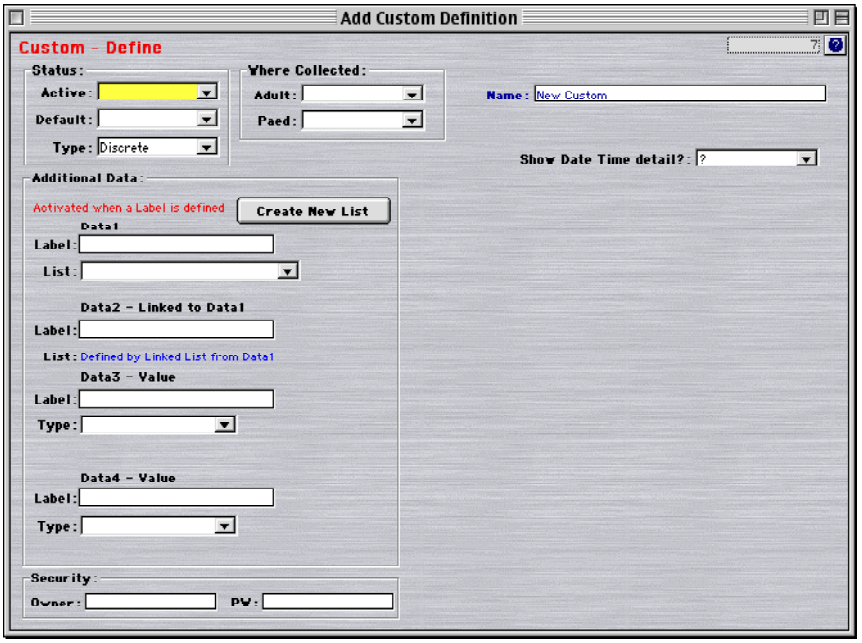
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

23.1.2 Custom: Add Record

Click on **Add** button. The following window will display:



Custom: Input Form

Window Items	Purpose
Active	Custom Event is in use - can be deactivated by setting to No
Default	Custom Event will always display ready for selection in ICU Forms, if set to Yes or Mandatory. If set to Mandatory this Event will also be created automatically when a new Admission is created.
Type	Type of Custom Event - Discrete, Interval or Value
Adult	Adult Custom Event
Paed	Paediatric Custom Event
Name	Name of the Custom Event
Show Date Time detail?	If set to Yes requires Date Time details to be completed before a Custom Event record is complete.
Create New List	Button to define a new list that may be required here.
Data1 Label	Identifying Label for the list selected in Data1 List
Data1 List	List to display here.
Data2 Label	Identifying Label for the attached list selected in Data1 List
Data2 List	Defined by the attached lists in Data1 List
Data3 Label	Identifying Label for the data defined in Data3

Window Items

Window Items	Purpose
Data3 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Data4 Label	Identifying Label for the data defined in Data4
Data4 Type	Can be Numeric, String, Date, Time or Boolean Numeric: Will allow you to define Units, Dec places, Max and Min values String: Will allow the use of a List if you choose to.
Owner	Security
Password	Security
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

We will now take you through the creation of a complex Custom Event - Experimental Drug:

1. Status:
   Experimental Drug is a currently used Custom Event (Active=Yes), always available for selection (Default=Yes) and we must log the time interval it is used for (Type =Interval).
2. When and Where Collected
   It is collected for Adults (Adult=Yes) and for Children (Paed=Yes).
3. Name
   The name of this Custom Event is Experimental Drug2. The reason for the 2 at the end of the Name is because the Custom Event area does not allow you to define a Name that is the same as an already existing saved Custom Event if that Custom Event is also defined as the same When (Prior or During ICU).
4. Show Date Time detail?
   This is set to Yes as we will be collecting date and time data for this Custom Event.

   Once this data has been entered, the top of the form should look like this:

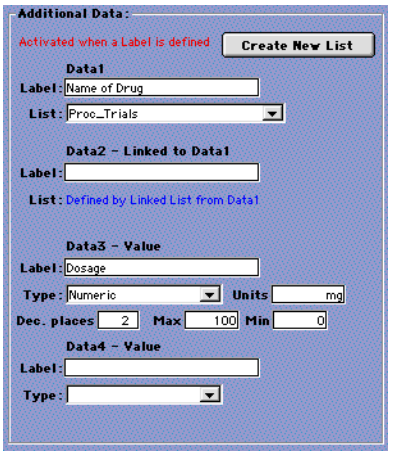
Custom: Input Form - Status, Were, Name

For many Discrete Custom Event this is all you need to do to define the Custom Event.

5. Additional Data
   Each Additional Data area will become active when a Label has been defined - if there is no Label then the Data is not active. In the case of this example we need to define the Name of the Experimental Drug. This is achieved by creating a List called Proc_Trials and populating it with the names of the Experimental Drugs currently being trialed.

   We also want to collect the Dosage. We set the Label=Dosage and the Type=Numeric. Selecting the Type to be Numeric gives us the option to define the Units=mg, the Dec. places=2 as we want to collect up to 2 Dec. places and to define the max=100 and the min=0

To activate this, set the fields to look like this:



Custom: Additional Data

We could also collect a fourth data point here.

6 Interval Calculation - Hours and Days

Experimental Drug requires the calculation of intervals, There are different rules in use for the calculation of these intervals with regard to rounding and addition of individual Experimental Drug events. This area gives you the control to define how an individual event is treated and how the addition of events for the generation of a total interval is handled.

Rounding Options	Action
Interval Overlap	When calculating totals for intervals, this determines what to do when there is an overlap between one or more events with the same name: None - Data1&2 tested: No overlap is ever allowed for any events that bear the same Name. Partial - Data1 tested: Overlap is allowed when Data1 for two events are different even though the Name of the events are the same. The value of Data2 is ignored completely. For instance Respiratory Support; if two events are both Route=Endotracheal then there may be a Overlap error if the intervals coincide. On the other hand if one has Route=Nasopharyngeal and the other is Route=Endotracheal and the intervals overlap then the system will allow this even though it is an overlap. Partial - Data2 tested: Overlap is allowed when Data2 for two events are different even though the Name of the events are the same. The value of Data1 is ignored completely. For instance Respiratory Support; if two events are both Type=CPAP then there may be a Overlap error if the intervals coincide. On the other hand if one has Type=CPAP and the other is Type=JET and the intervals overlap then the system will allow this even though it is an overlap. Complete: Overlap is always allowed. May be required when two events need to be tracked separately and are exactly the same.
Precise	The value is stored at the maximum precision
Rounded	The value is rounded using arithmetic rounding - to the number of Dec places 23.04 -> 23.0 to 1 Dec. place 23.05 -> 23.1 to 1 Dec. place

Rounding Option

Rounding Options	Action
Rounded Up	The value is rounded up - to the number of Dec places 23.04 or 23.05 -> 23.1 to 1 Dec. place 23.005 -> 23.0 to 1 Dec. place
Rounded Up Absolute	The value is rounded up - to the number of Dec places; but ANY fractional part will cause a Round up to the next value 23.04 or 23.05 -> 23.1 to 1 Dec. place 23.005 -> 23.1 to 1 Dec. place
Rounded Down	The value is rounded down - to the number of Dec places 23.04 or 23.05 -> 23.0 to 1 Dec. place 23.005 -> 23.0 to 1 Dec. place
Rounded; but if <1 then =1	After arithmetic rounding, the value is tested - if it is less than 1 but more than zero then the value is set to 1

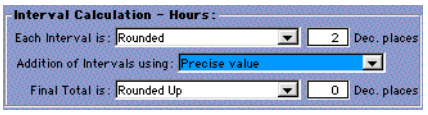
Rounding Option

.

Addition Options	Action
Precise value	The precise interval values are used to create the total
Rounded value	The rounded interval values are used to create the total
Present on Day, equal to 1 Day	If there is one or more intervals on a Day (however short) then it counts as 1 Day towards the total.

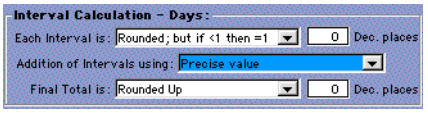
Addition Option

In this case we want Each Interval to be Rounded to 2 decimal places and these Intervals added using the Precise values to derive a Total in Hours that will be Rounded Up to the nearest whole Hour (0 Dec. places):



Custom: Interval Calculation - Hours

For the Days calculation, we want Each Interval to be Rounded to (0 Dec. places) but if this is less than a whole day then force the Interval to a minimum of 1 Day. These Intervals are added using the Precise values to derive a Total in Days that will be Rounded Up to the nearest whole Hour (0 Dec. places):

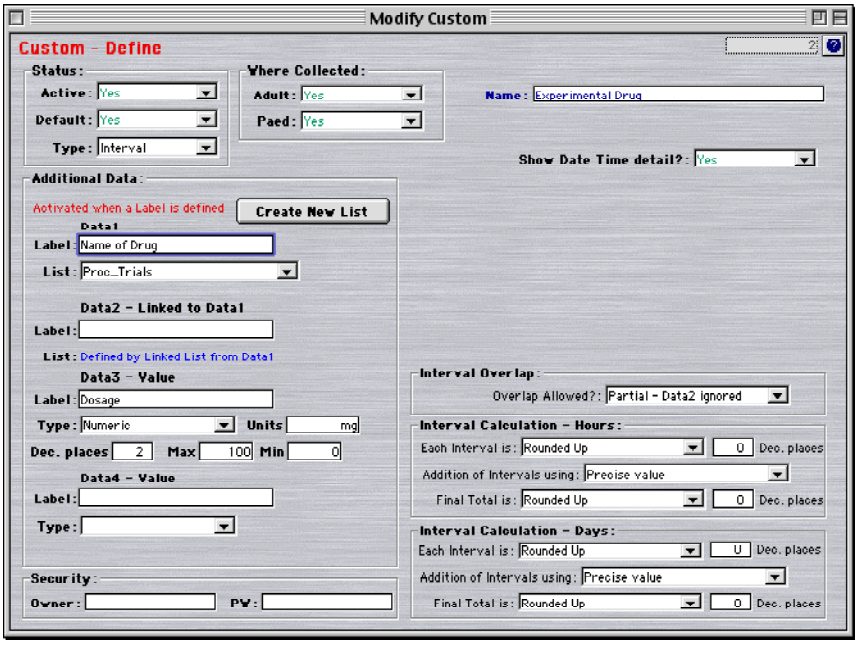


Custom: Interval Calculation - Hours

We have tried to anticipate all the options required for the calculation of these Intervals. If these options do not fulfill your requirements, let us know and we will add others.

23.1.3 Custom: Modify Record

Click on a line in the **Custom Event list** and then either double click or click on **Modify**. The following window will display:



Custom: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

The system will now update all Custom Event records with the amended information as defined in the Definition record.

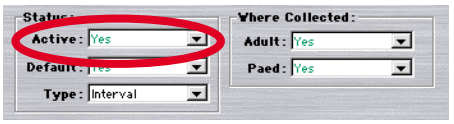
IF YOU RENAME OR EDIT A CUSTOM EVENT DEFINITION RECORD ALL EXISTING CUSTOM EVENTS LINKED TO THIS DEFINITION RECORD FOR EVERY ADMISSION IN THE DATABASE WILL ALSO BE CHANGED.

23.1.4 Custom: Delete Record

If you try to delete a Definition record that is currently defining an Event for an Admission, you will not be able to delete the Definition record. You will see the following Dialog:

Custom: Delete Record

If you still want to deactivate this Event then set the Status to Inactive:



Custom: Status Inactive

This will prevent this Event from being available for any Admissions.

Chapter 24
File: Preferences: AD Code

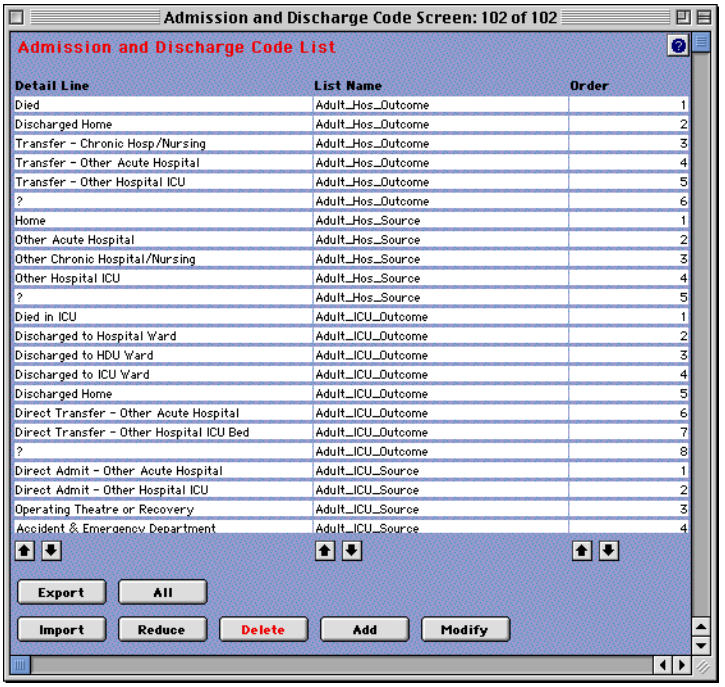
24.1.0 Introduction

This area controls the AD Codes available in STATIC. These are used when entering Admission information. These codes form the Drop Down Lists for Admission and Discharge (AD) Lists.

This arrangement allows for the addition and subtraction of new List Items. More importantly it also allows individual List Items to be designated with special additional function - such as signifying a Death or requiring the selection of additional information such as the name of a hospital. This and other functions can be defined in this section.

24.1.1 AD Code: Output Records

Selection of the AD Code button will display the following:



AD Code: List Window

Window Items	Purpose
Admission and Discharge List	Lists all the AD Code available.
Detail Line	List Item Line
List Name	List that the Line belongs to
Order	Position of the Line in the List
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

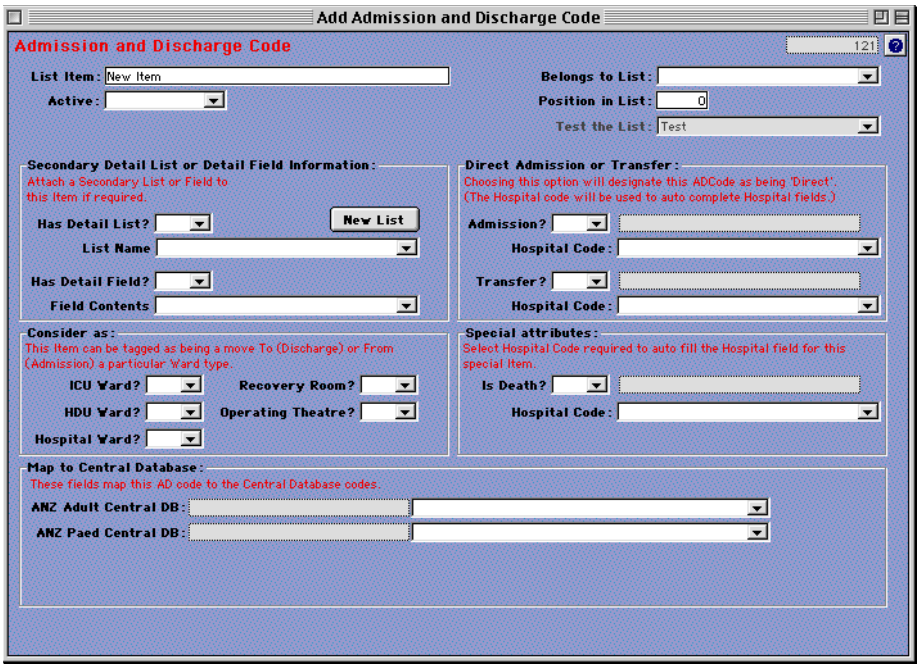
Window Items

Button Name	Action
Export	You can Export the currently selected AD Codes.
Import	You can import a AD Code document if it is prepared in the correct way. See next section AD Code: Import on page 149
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

24.1.2 AD Code: Add Record

Click on **Add** button. The following window will display:



AD Code: Input Form

Window Items	Purpose
List Item	AD Code text
Active	AD Code is in use - can be deactivated by setting to No
Belongs to List	List that this AD Code belongs to - this is defined by Adult, Paed; Ref, ICU, Hos; Source, Reason, Outcome, Disposal and the various logical combinations between these.
Position in List	Position of AD Code in the List - 1 is the top of the list
Test the List	Allows for a quick visual check with the current AD Code inserted
Secondary Detail List or Detail Field Information	Define a linked data item to fill or select once the AD Code currently being defined is selected.
New List	Button to define a new list that may be required here.
Consider as	Consider the AD Code currently being defined as being a particular Ward Type - ICU, HDU, Hospital Ward, Recovery Room or Operating Theatre.
Direct Admission or Transfer	Choosing this option will designate this AD Code as being Direct . The selected Hospital code will be used to auto complete Hospital fields.
Special attributes	The AD Code currently being defined has a special meaning - e.g. Death. The Hospital code will be used to auto complete Hospital fields.
Map to Central Database	Map this AD Code to the central Database Codes. Currently the ANZ Adult and Paed Central databases - others can be added for other countries relatively easily - please ask if this is a requirement.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

To understand how this section works, we strongly suggest that you examine the AD Codes already defined.

We will now take you through the creation of an AD Code:

1. List Item:
   This is where we enter the text for the Item - in this case Test Item .
2. Active
   It is a current active item (Active=Yes).
3. Belongs to List

There are a fixed number of Lists that this system can populate:

Adult_Hos_Source
Adult_Hos_Outcome
Adult_ICU_Source
Adult_ICU_Outcome
Adult_Ref_Source
Adult_Ref_Reason
Adult_Ref_Disposal
Paed_Hos_Source
Paed_Hos_Outcome
Paed_ICU_Source
Paed_ICU_Outcome
Paed_Ref_Source
Paed_Ref_Reason
Paed_Ref_Disposal

AD Code: Input Form - Possible Lists

The choice of List here will determine what other relevant information below this section will become active.

We will create an Adult_ICU_Outcome item - because it illustrates most of the possible options.

4 Position in List

We set the position to 1 in order for it to appear near the top of the list. It will not appear right at the top because there is already another item defined, Died in ICU , that sorts alphabetically above T est Item . To force this item to be above, we could set the position to 0 or edit all the other items already defined to give us a contiguous series with the current item set to 1.

5 Test the List

We can test the effect of editing the various fields here on the List by clicking on the **Test** drop down field.

Once this data has been entered, the top of the form should look like this:

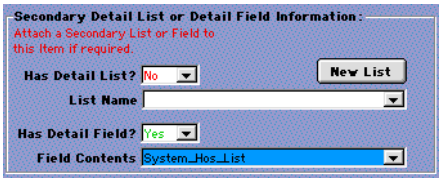
AD Code: Input Form - Top of Form

For some AD Codes this is all you need to do to define the AD Code.

6 Secondary Detail List or Detail Field Information

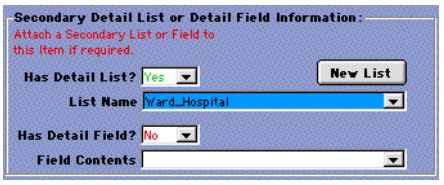
Here you can either specify a List or a Field (but not both) to collect secondary information for an Admission.

Say the AD Code is Direct Transfer to Other Hospital , you might want to collect the name of the Hospital. There are two special Lists that contain the ICU and Non ICU Hospitals from the External Hospital database in STATIC, see Ext Hospital: Output Records on page 155. These Lists are called - System_Hos_List and System_ICU_List. To do this set the area as follows:



AD Code: Input Form - Secondary Information

On the other hand if the AD Code were Dischar ge to Hospital Ward , we might want to collect the name of the Hospital Ward. There is a List in STATIC that is used for the Hospital Wards - W ard_Hospital . Note that you could also create your own List and attach it by name. To do this set the area as follows:

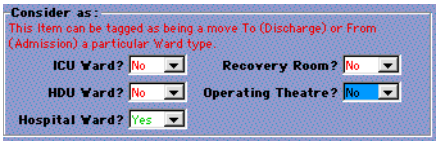


AD Code: Input Form - Secondary Information

7 Consider as

This AD Code can be tagged to be a particular Ward Type. These Ward Types are ICU, HDU and Hospital. This information is required for some National Databases e.g. ANZ Paediatric Central Database. Without this tag it would be difficult to determine the Ward Type just from the AD Code itself. - this makes it explicit. If the AD Code were called Dischar ge to Hospital Ward we might want to tag this code as Hospital Ward.

To activate this, set the fields to look like this:

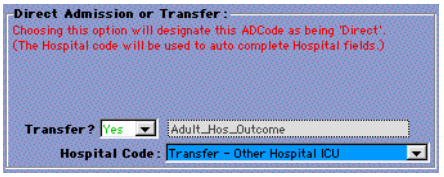


AD Code: Input Form - Consider as

8 Direct Admission or Transfer

Choosing an option here will designate this AD Code as being Direct .

Say the AD Code is Direct Transfer to Other Hospital , then the patient was transferred from ICU directly to the Other Hospital. To tag the Code with this option set Transfer=Yes. We also force the use of a particular Adult_Hos_Outcome List item to keep things consistent. This is done by choosing an appropriate AD Code in the Hospital Code drop down list:

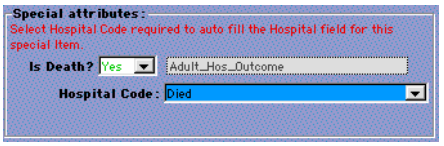


AD Code: Input Form - Direct admission or Transfer

9 Special attributes

Choosing an option here will designate this AD Code as having a special attribute not covered in the other sections - for instance if the AD Code signifies Death , As before we force the use of a particular Adult_Hos_Outcome List item.

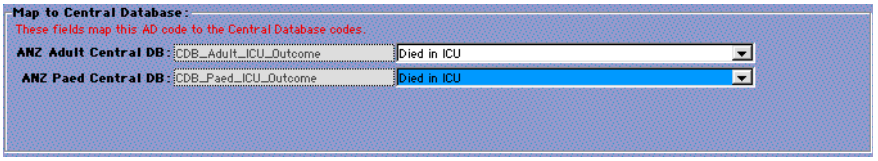
To set the AD Code to signify this do the following:



AD Code: Input Form - Special Attributes

10 Map to Central Database

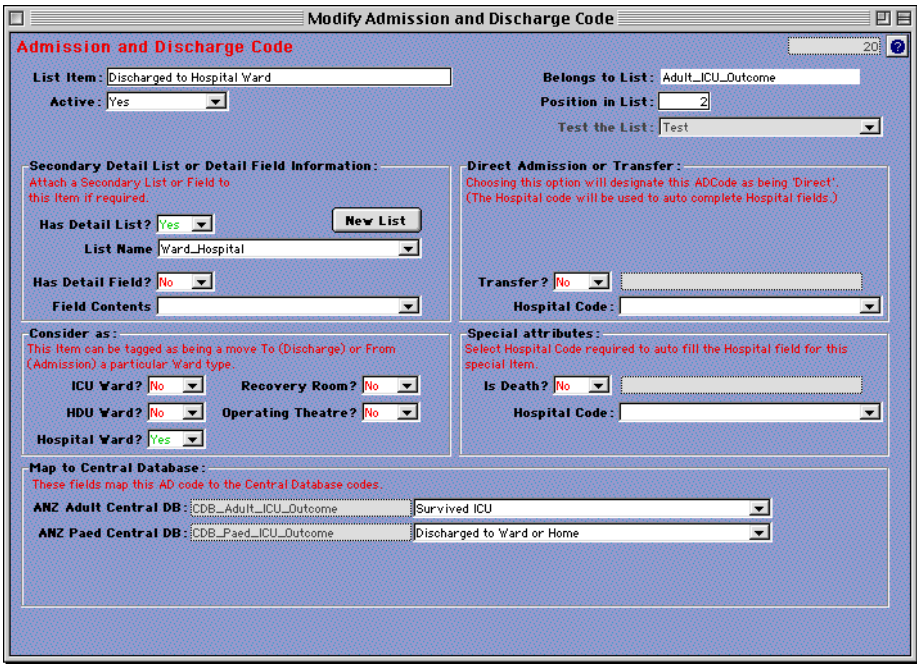
Every AD Code must be mapped to a Central Database List item. These Central Database Lists are fairly restrictive and sometimes you will have to use your judgement as to which item to map the AD Code to. In the current case if we have designated the AD Code to be Death , we would do the following:



AD Code: Input Form - Map to Central Database

24.1.3 AD Code: Modify Record

Click on a line in the **AD Code list** and then either double click or click on **Modify**. The following window will display:



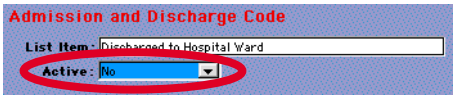
AD Code: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

The system will now update the appropriate AD Code List with the amended information.

24.1.4 AD Code: Delete Record

You can either delete an AD Code item or deactivate it:



AD Code: Status Inactive

This will prevent this AD Code from being made available in a List.

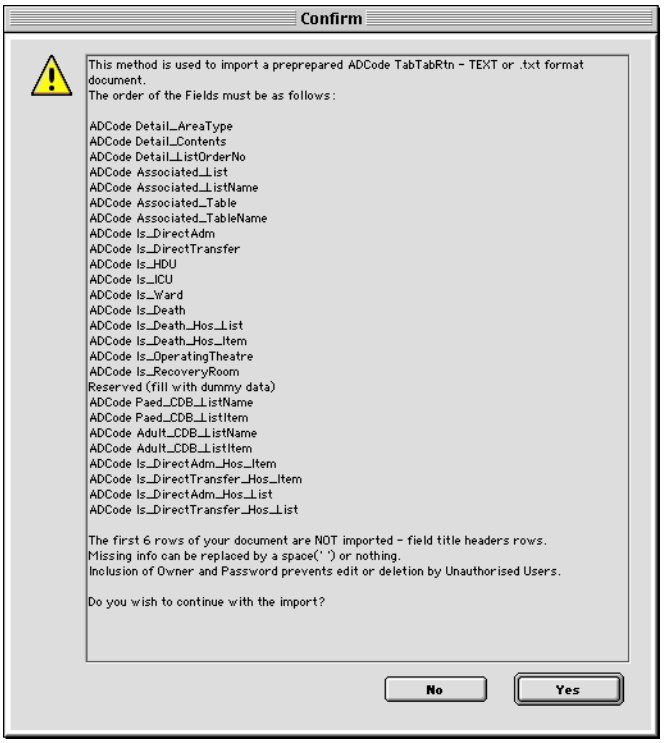
24.1.5 AD Code: Import

Process to Import AD Codes

This is how you import a list of AD Codes:

1 Ensure you have the AD Code list you require on your Hard drive and click on Import.

The following dialog will display:



AD Code: Import: Warning

2 Click on Yes to continue.
A Open Document Dialog will display.

3 Navigate to the AD Code document you want to Import and click on Open.
The AD Code document will be parsed and a series of records - one per AD Code - created. This may take some time depending on the size of the AD Code document.

24.1.6 AD Code: Export

Process to Export AD Codes

This is how you export a list of AD Codes:

1 Select the AD Codes you want t export.
2 Click on **Export** to continue.
3 The Exported records will be saved to the specified location:

AD Code: Export: Location

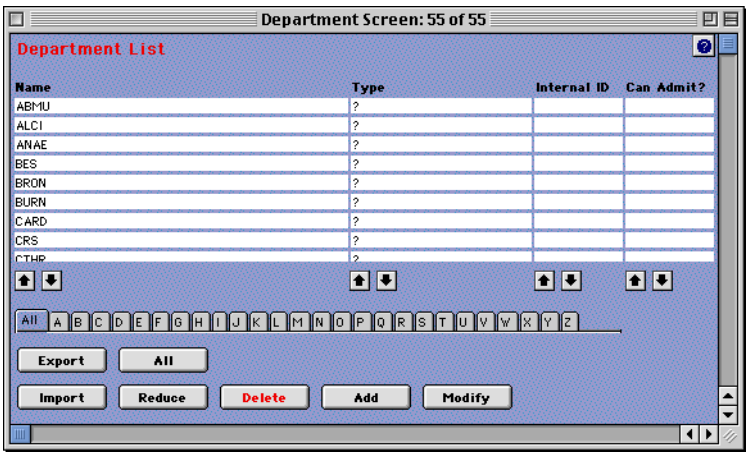
Chapter 25
File: Preferences: Department

25.1.0 Introduction

This area controls the Departments available in STATIC. These are used when entering Admission information.

25.1.1 Department: Output Records

Selection of the **Department** button will display the following:



Department: List Window

Alphabetical Tab Control

Department: Alphabetical Tab control

This is a quick way of displaying Department that begin with a particular letter.

Window Items	Purpose
Department List	Lists all the Department available.
Name	Name of Department
Type	Medical or Surgical Department
Internal ID	Internal ID code for this Department
Can Admit	Is this a Hospital Admission Department?
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

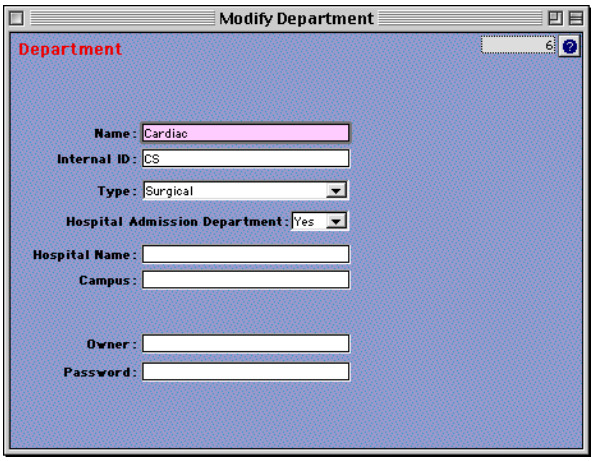
Window Items

Button Name	Action
Export	You can export a list of Department.
Import	You can import a list of Department if it is prepared in the correct way.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

25.1.2 Department: Input Form

Click on a line in the **Department list** and then either double click or click on **Modify**. The following window will display:



Department: Input Form

Edit the fields as required and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
Name	Name of the Department
Internal ID	Internal ID for this Department
Type	Type of Department - Medical or Surgical
Hospital Admission Department	If Yes this is a Hospital Admission Department.
Hospital Name	Name of the Hospital for this Department

Window Items

Window Items	Purpose
Campus	Name of the Campus of this Department
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

25.1.3 Department: Import

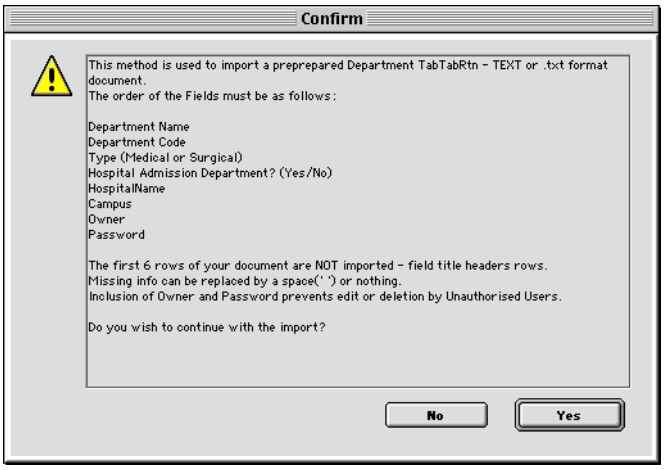
Process to Import Department

This is how you import a list of Department:

1 Ensure you have the Department list you require in a text document on your Hard drive and click on Import.
Note the very strict format that has to be observed if the import is to be successful!

We recommend that you Export the Department within STATIC and open the document in MS Excel' to examine the structure of the required document before creating your own.

The following dialog will display:



Department: Import: Warning

2 Click on Yes to continue.
A Open Document Dialog will display.

3 Navigate to the Department document you want to Import and click on Open.
The Department document will be parsed and a series of records - one per Department - created. This may take some time depending on the size of the Department document.

25.1.4 Department: Export

Process to Export Department

This is how you export a list of Department:

1 Select the Department you want t export.
2 Click on **Export** to continue.

3 The Exported records will be saved to the specified location:

Department: Export: Location of Document

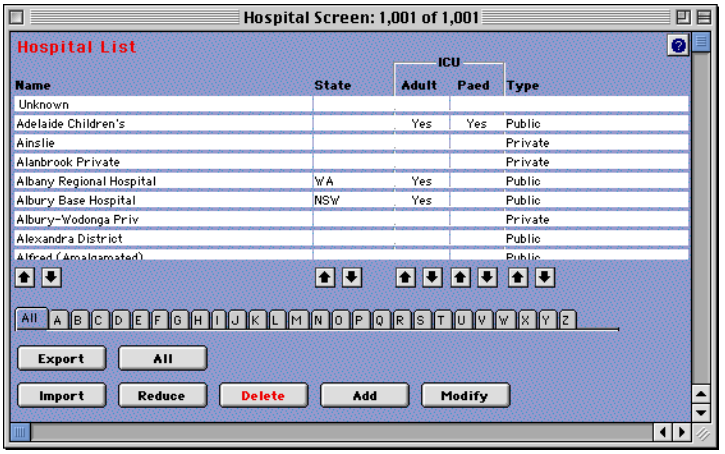
Chapter 26
File: Preferences: Ext Hospital

26.1.0 Introduction

This area controls the External Hospitals available in STATIC. These are used when entering Admission information.

26.1.1 Ext Hospital: Output Records

Selection of the **Ext Hospital** button will display the following:



Ext Hospital: List Window

Alphabetical Tab Control

Ext Hospital: Alphabetical Tab control

This is a quick way of displaying Ext Hospital that begin with a particular letter.

Window Items	Purpose
Hospital List	Lists all the External Hospitals available.
Name	Name of Hospital
State	Geographical State of the Hospital
ICU - Adult Paed	Does this Hospital have an Adult and/or Paed ICU?
Type	Public or Private Hospital
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

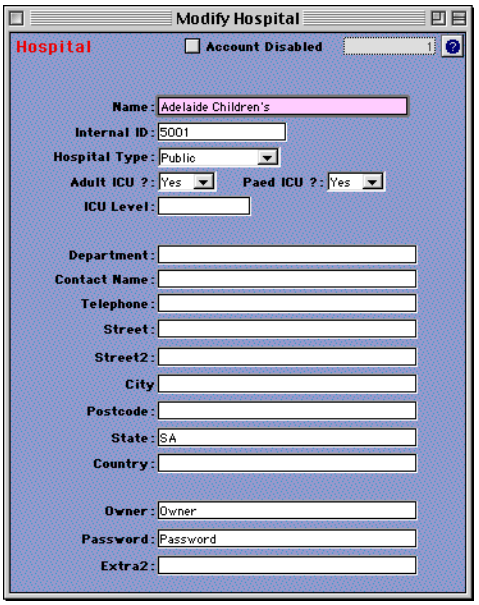
Window Items

Button Name	Action
Export	You can export a list of Hospitals.
Import	You can import a list of Hospitals if it is prepared in the correct way.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

26.1.2 Ext Hospital: Input Form

Click on a line in the **Hospital list** and then either double click or click on **Modify**. The following window will display:



Ext Hospital: Input Form

Edit the fields as required and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
Name	Name of the Hospital
Internal ID	Internal ID for this Hospital
Hospital Type	Type of Hospital - Public or Private

Window Items

Window Items	Purpose
Adult ICU	If Yes this is Hospital has a Adult ICU.
Paed ICU	If Yes this is Hospital has a Paed ICU.
ICU Level	Level of the ICU
Contact Details of Hospital	Various fields that can be filled to provide more details for the Hospital.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

26.1.3 Ext Hospital: Import

Process to Import Ext Hospital

This is how you import a list of Hospitals:

1 Ensure you have the Hospital list you require in a text document on your Hard drive and click on Import.
Note the very strict format that has to be observed if the import is to be successful!

We recommend that you Export the Ext Hospitals within STATIC and open the document in MS Excel' to examine the structure of the required document before creating your own.

The following dialog will display:

Ext Hospital: Import: Warning

2 Click on Yes to continue.
A Open Document Dialog will display.

3 Navigate to the Ext Hospital document you want to Import and click on Open.
The Ext Hospital document will be parsed and a series of records - one per Hospital - created. This may take some time depending on the size of the Hospital document.

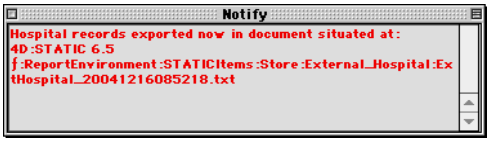
4 When the import has completed, you will be asked Do you want to update existing entries in the DB? . If you select *Yes*, every External Hospital entry in the DB will be updated with the new corresponding ID of that External Hospital.

26.1.4 Ext Hospital: Export

Process to Export Ext Hospital

This is how you export a list of Hospitals:

1 Select the Hospital you want t export.
2 Click on **Export** to continue.
3 The Exported records will be saved to the specified location:



Ext Hospital: Export: Location of Document

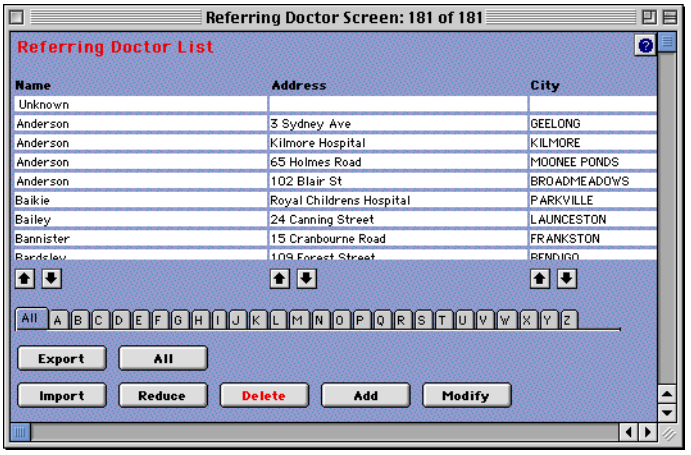
Chapter 27
File: Preferences: Referring Dr

27.1.0 Introduction

This area controls the Referring Drs available in STATIC. These are used when entering Admission information.

27.1.1 Referring Dr: Output Records

Selection of the **Referring Dr** button will display the following:



Referring Dr: List Window

Alphabetical Tab Control

Referring Dr: Alphabetical Tab control

This is a quick way of displaying Referring Dr that begin with a particular letter.

Window Items	Purpose
Referring Dr List	Lists all the Referring Dr available.
Name	Name of Referring Dr
Address	Address
City	City
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

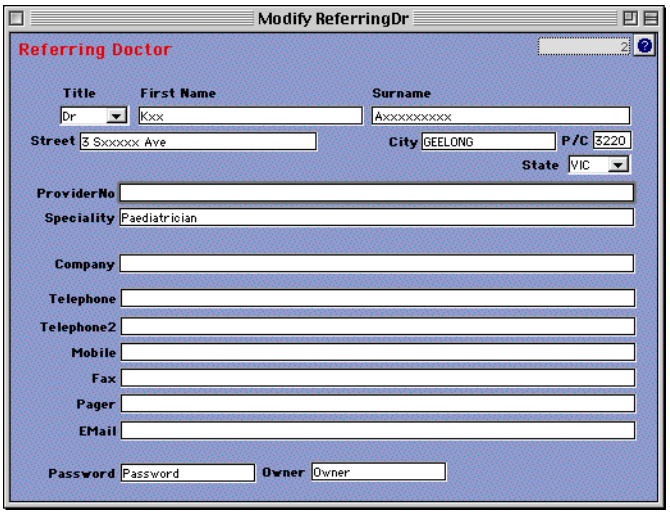
Window Items

Button Name	Action
Export	You can export a list of Referring Drs.
Import	You can import a list of Referring Drs if it is prepared in the correct way.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

27.1.2 Referring Dr: Input Form

Click on a line in the **Referring Dr list** and then either double click or click on **Modify**. The following window will display:



Referring Dr: Input Form

Edit the fields as required and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
Title	Honorific
First Name	First Name
Surname	Surname

Window Items

Window Items	Purpose
Other Identifying Information	Various other fields that may be filled for further information for this Doctor
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

27.1.3 Referring Dr: Import

Process to Import Referring Dr

This is how you import a list of Referring Dr:

1 Ensure you have the Referring Dr list you require in a text document on your Hard drive and click on Import.
Note the very strict format that has to be observed if the import is to be successful!

We recommend that you Export the Referring Drs within STATIC and open the document in MS Excel' to examine the structure of the required document before creating your own.

The following dialog will display:

Referring Dr: Import: Warning

2 Click on Yes to continue.
A Open Document Dialog will display.

3 Navigate to the Referring Dr document you want to Import and click on Open.
The Referring Dr document will be parsed and a series of records - one per Referring Dr - created. This may take some time depending on the size of the Referring Dr document.

27.1.4 Referring Dr: Export

Process to Export Referring Dr

This is how you export a list of Referring Dr:

1. Select the Referring Dr you want t export.
2. Click on **Export** to continue.
3. The Exported records will be saved to the specified location:

Referring Dr: Export: Location of Document

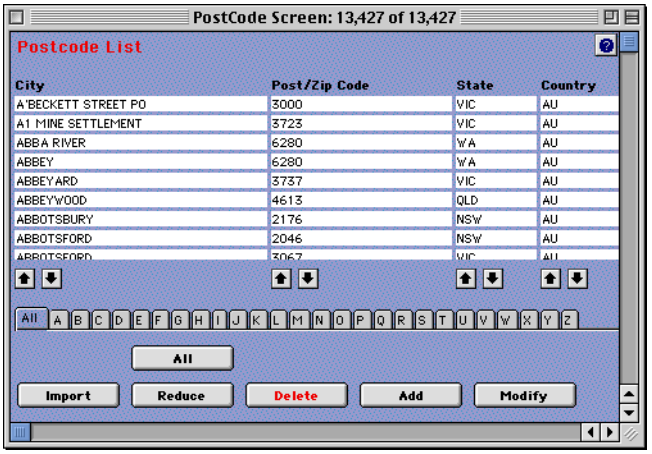
Chapter 28
File: Preferences: Postcodes

28.1.0 Introduction

This area controls the Postcodes available in STATIC. These are used when entering Patient demographic information.

28.1.1 Postcodes: Output Records

Selection of the Postcodes button will display the following:



Postcodes: List Window

Alphabetical Tab Control

Postcodes: Alphabetical Tab control

This is a quick way of displaying postcodes that begin with a particular letter.

Window Items	Purpose
Postcode List	Lists all the Postcodes available.
City	Name of City
Postcode/Zip	Postcode or Zip number
State	State of the location
Country	Country of the location
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

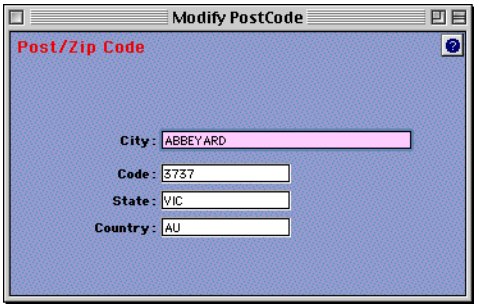
Window Items

Button Name	Action
Import	You can import a Postcodes document if it is prepared in the correct way. See next section Postcodes: Import on page 164
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

28.1.2 Postcodes: Input Form

Click on a line in the **Postcodes list** and then either double click or click on **Modify**. The following window will display:



Postcodes: Input Form

Edit the fields as you require and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

28.1.3 Postcodes: Import

We have supplied a Postcode list for the following countries:

United Kingdom

New Zealand

Australia

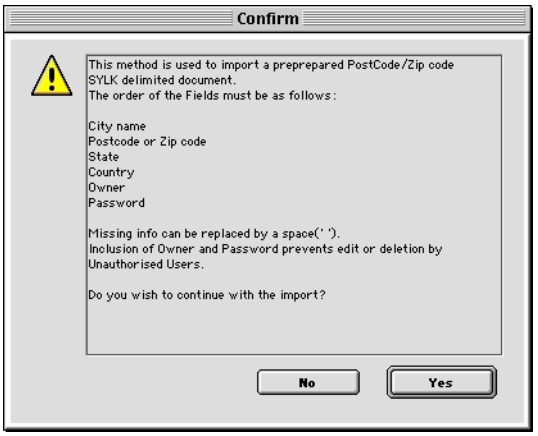
If required, we can also obtain the list of postcodes for other countries. For some countries we will probably have to find some other way of supplying the required information because the possible list is so large e.g. USA. You can also create your own document to import, just note the format of the document as outlined in the Confirm Dialog below.

The Postcode lists can be found in an installer called STATICPostcodes.hqx or STATICPostcode.EXE on our Web site or on the CD.

Process to Import Postcodes

This is how you import a Postcode list:

1. Delete the existing postcodes
   Select all the existing postcodes and then click on Delete.
2. Ensure you have the postcode list you require on your Hard drive and click on Import.
   The following dialog will display:



Postcodes: Import: Warning

3. Click on Yes to continue.
   A Open Document Dialog will display.
4. Navigate to the Postcode document you want to Import and click on Open.
   The Postcodes document will be parsed and a series of records - one per postcode - created. This may take some time depending on the size of the Postcodes document.

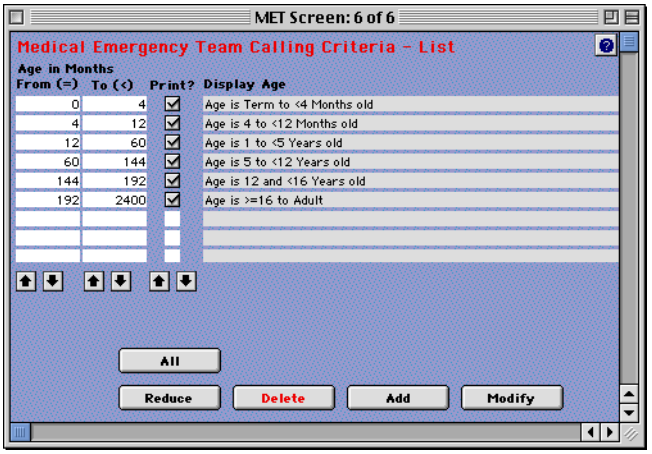
Chapter 29
File: Preferences: MET

29.1.0 Introduction

This area controls the MET callout criteria available in STATIC. These are used when entering Admission information.

29.1.1 MET: Output Records

Selection of the **MET** button will display the following:



MET: List Window

Window Items	Purpose
MET List	Lists all the MET criteria available.
Age in Months	Age in Months for which this MET is applicable - From /To
Print	If ticked and if this MET is selected in an Admission form it is set to Print by Default
Display Age	Descriptive Age Header for this MET
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

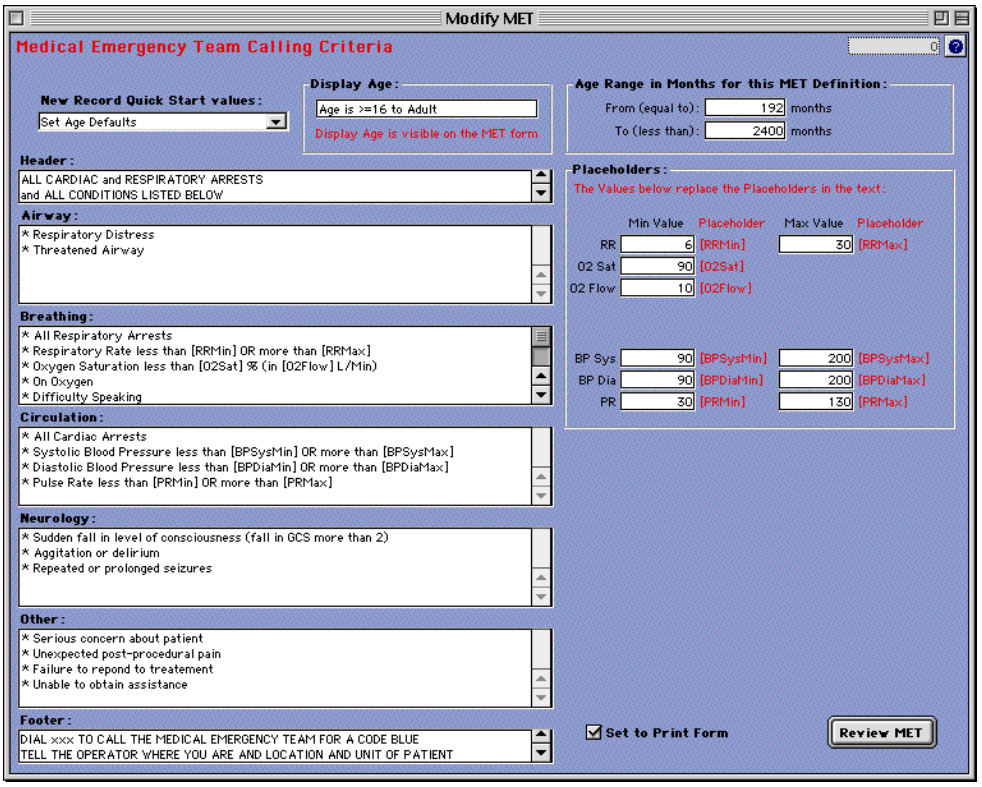
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

29.1.2 MET: Input Form

Click on a line in the **MET list** and then either double click or click on **Modify**. The following window will display:



MET: Input Form

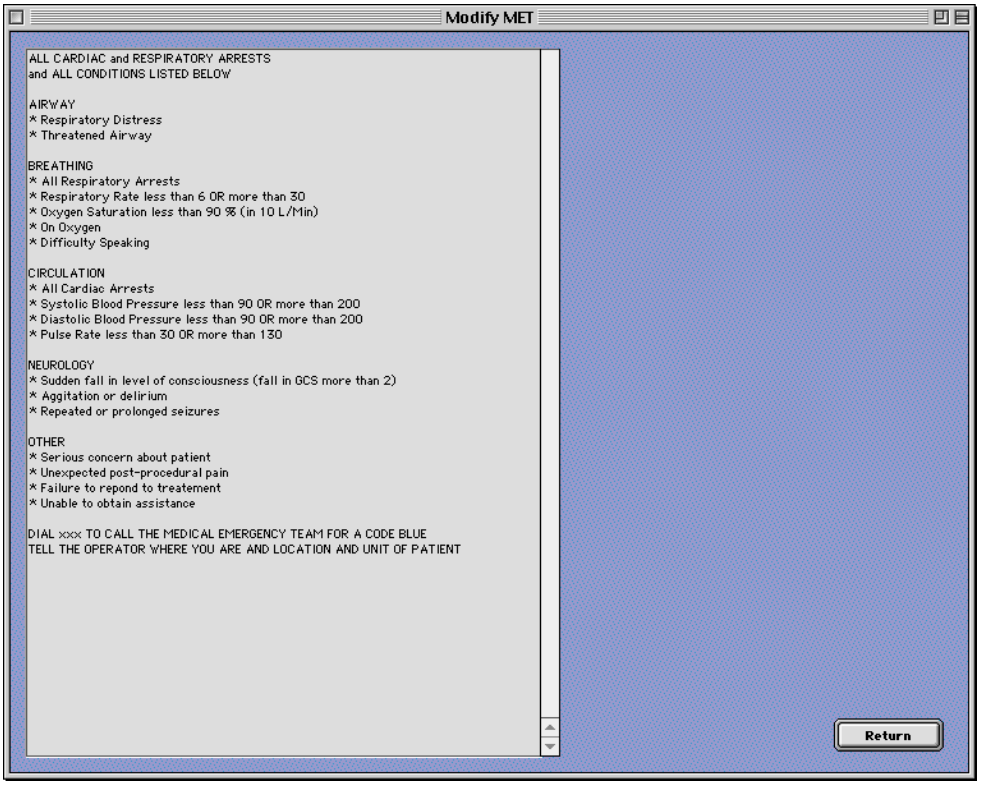
Edit the fields as required and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
New Record Quick Start Values	A list of predefined values and text that can be used as a starter to create a new MET record. The wording was taken from major public hospitals in Australia.
Display Age	Descriptive text of the Age range represented by this MET record. Used in the MET form when printed.
Header	Header information for the printed MET form - usually a set of instructions.
Airway, Breathing, Circulation, Neurology, Other	Detail criteria for MET callout.
Footer	Final instructions for this MET form.
Age Range in Months for this MET Definition	Actual age range used to calculate which MET records definition to use for a particular admission. The age range is given in Months.
Placeholders	The text in Header, Airway, Breathing, Circulation, Neurology, Other and Footer can contain placeholders instead of the actual values. This allows for the creation of customised MET forms where the values can be modified for a particular patient. You can of course also define values directly instead of using these placeholders. The Placeholders need to be exactly as specified in Red beside the placeholder field.
Set to Print Form	If ticked, this MET form will be set to Print as Default - this can be suppressed from the Admission form.
Review MET	To review what the MET form will look like click this Button. See below.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

29.1.3 MET: Review MET Button

Click the Review MET button in order to see what the MET form text as specified here will look like after editing the fields. The actual MET form will be similar but not the same as it will include other details such as the Patient Name etc., but it is useful to see the Placeholders substituted by the default values in order to check for syntax and typographical errors:



MET: Review page

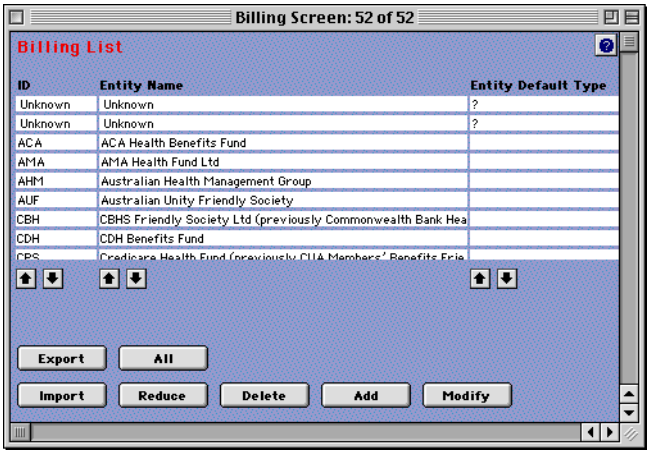
Chapter 30
File: Preferences: Billing

30.1.0 Introduction

This area controls the Billing entities available in STATIC. These are used when entering Admission information.

30.1.1 Billing: Output Records

Selection of the **Billing** button will display the following:



Billing: List Window

Window Items	Purpose
Billing List	Lists all the Billing available.
ID	Internal ID code for this Billing entity
Name	Name of Billing entity
Entity Default Type	Types could be Transport Accident Commission (TAC), Workcover (WC), Veteran Affairs (VA) etc. Set in Billing Type list.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

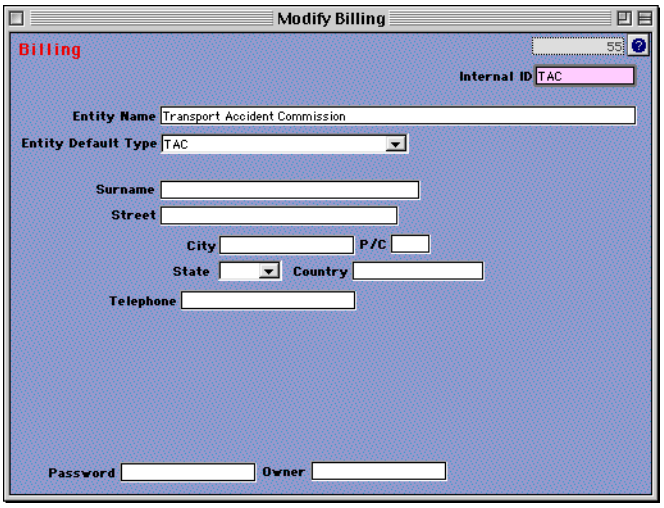
Window Items

Button Name	Action
Export	You can export a list of Billing entities.
Import	You can import a list of Billing entities if it is prepared in the correct way.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

30.1.2 Billing: Input Form

Click on a line in the **Billing list** and then either double click or click on **Modify**. The following window will display:



Billing: Input Form

Edit the fields as required and then click on the Close Window control. If you have made changes you will be asked if you want to save these.

Window Items	Purpose
Internal ID	Internal ID for this Billing entity
Entity Name	Name of the Billing entity
Entity Default Type	Type of Billing - VA, WC TAC etc. Set from list called Billing_Type.

Window Items

Window Items	Purpose
Contact details of entity	Contact information for entity.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

30.1.3 Billing: Import

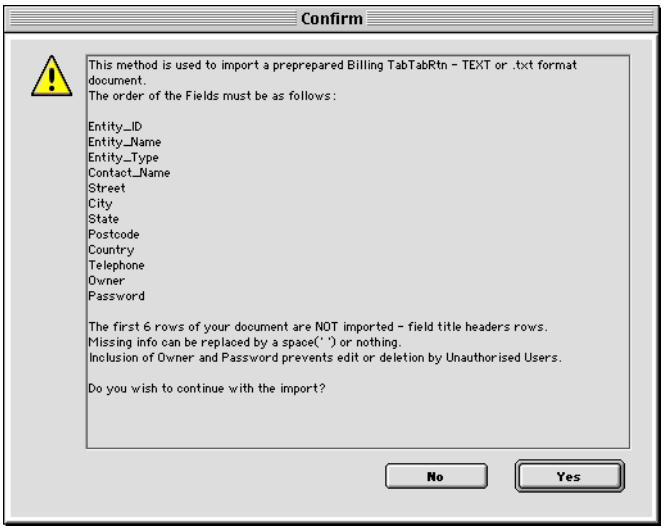
Process to Import Billing

This is how you import a list of Billing:

1 Ensure you have the Billing list you require in a text document on your Hard drive and click on Import.
Note the very strict format that has to be observed if the import is to be successful!

We recommend that you Export the Billing within STATIC and open the document in MS Excel' to examine the structure of the required document before creating your own.

The following dialog will display:



Billing: Import: Warning

2 Click on Yes to continue.
A Open Document Dialog will display.

3 Navigate to the Billing document you want to Import and click on Open.
The Billing document will be parsed and a series of records - one per Billing - created. This may take some time depending on the size of the Billing document.

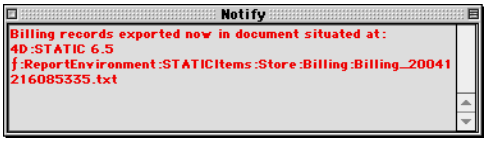
30.1.4 Billing: Export

Process to Export Billing

This is how you export a list of Billing:

1 Select the Billing you want t export.
2 Click on **Export** to continue.

3 The Exported records will be saved to the specified location:



Billing: Export: Location of Document

Chapter 31
File: Preferences: Quit

31.1.0 Quit

When you select Quit from the File menu, STATIC does not just disappear. It gracefully closes all windows and appropriately Saves or Cancels any changes depending on the context of the open window.

You will see a Message Window at the bottom of your screen showing you what is being closed as STATIC does this.

When it has completed it then Quits the database.

Chapter 32
Data Entry Menus

32.1.0 Introduction

We will now tackle the creation of Admission records, and all the functions associated with that:

Admission Data Display

ICU

Refusal

Consult

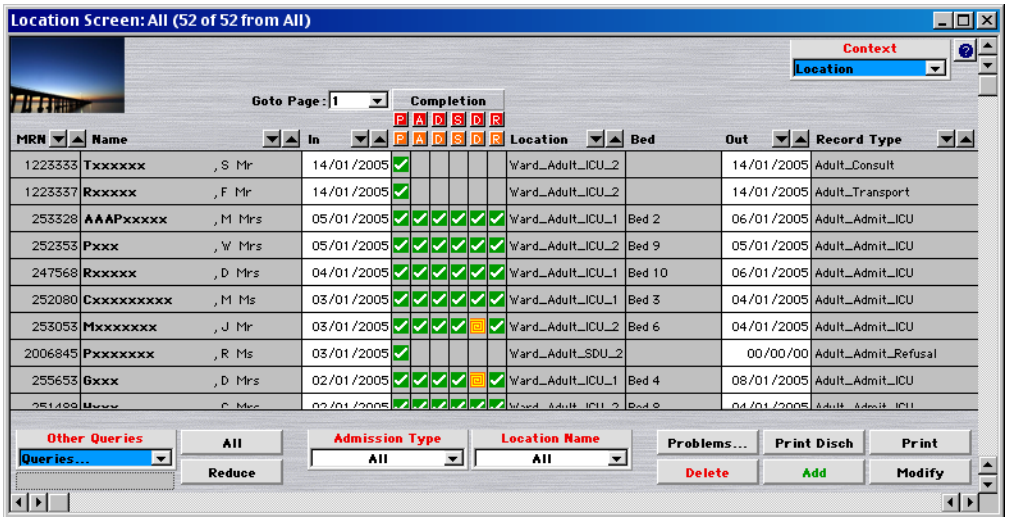
Transport

Bedstate

STATIC Lite

Chapter 33
Data Entry: Location Data Display

33.1.0 Introduction



Location Data Display: Modify Admissions window

This is the area you will use in order to navigate to an Admission record based on Location.

Only Location Records are displayed here

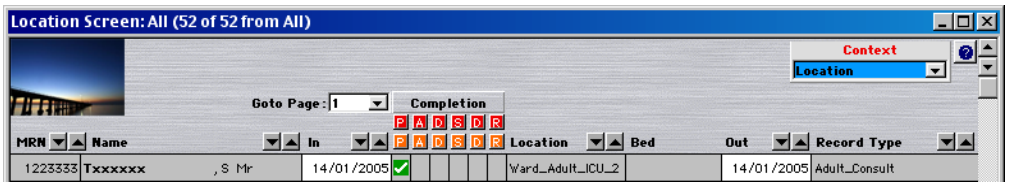
The records displayed here are **NOT** the actual Admission Records - they are Location records.

This area is designed to be viewed in a Client Server environment. Each Workstation is probably located in its own ICU Area and is designed to display the patients that are or have been in that ICU Area. This design would be impossible if this area displayed Admission records.

When you select an Admission record here, the system uses the selected Location record to point to an Admission record. This Admission record is then opened.

You can choose which Admission Type to display by use of the *Admission Type* drop down control and the Location of the Admissions chosen using the *Location Name* drop down control.

33.1.1 Data Display: Modify Admissions: Top of Form



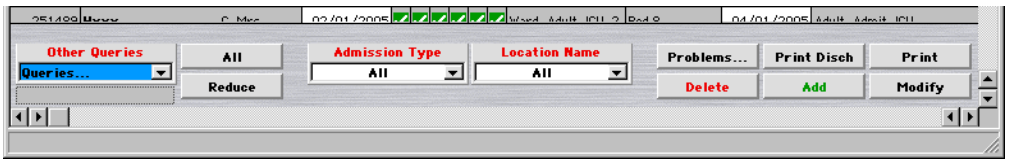
Location Data Display: Modify Admissions window: Top of Form

This area contains various controls:

Controls	Action
Sort Buttons	Sort the list of records in Ascending and Descending order. The buttons sit on top of the fields they sort.
Completion P, A, D, S, D, R	Click on the Completion button to display records that are incomplete for the area indicated by the text in the button. The areas are P (Personal), A (Admission), D (Diagnosis), S (Scoring), D (Discharge), R (Report). For instance a click on the D (Diagnosis) button will display records that are incomplete for Diagnosis. There top row will present records which are incomplete based on the settings in Mandatory Data. See Mandatory Data: Setup on page 84 The bottom row will present records which are incomplete based on whether the record has been ticked as complete by the Administrator within the Admission record itself.
Goto Page	The *Goto Page* control will automatically take you to the page indicated when you modify one of the displayed records. The initial value is set as a Preference in Workstation: Data Display on page 66
Context	This control will take you to the various views available for Admission data.

Controls

33.1.2 Data Display: Modify Admissions: Base of Form



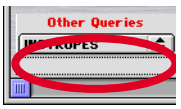
Location Data Display: Modify Admissions window: Base of form

This contains many controls:

Controls	Action
Other Queries Query...	This will allow you to Query for a selection of Admission records. Queries in the Query Store area (see Reports: Query Store on page 441) that are tagged as belonging to the `[Location]` table or are tagged as Location will automatically appear by name in this drop down menu. To perform a query, just select the required query in the drop down menu. If a new query or a query that has not been tagged is required, select the *Others...* option in the list and a dialog will display that will allow you to select other queries and create new ones without opening the Query Store area. See Interface: Select Query window on page 24. The Admission area displays `[Location]` records therefore the Query must return a selection of `[Location]` records - make sure there is a command used at the end of the query selected that creates a `[Location]` record selection otherwise the query will return zero records.
Quick Select Field	See below
All	Returns all the patients for the current setting of **Admission Type** and **Location Name**.
Reduce	Reduce the displayed selection to the currently selected records.
Admission Type	See below
Location Name	See below
Problems...	See Data Display: Modify Admissions: Problems... Button on page 182.
Delete	Delete the selected record. You must be in the MedAdmStaff group to be able to do this.
Print Discharge	This will print the Discharge forms for all currently selected records - if they are ICU type records. You must be in the MedAdmStaff group to be able to use this.
Add	Will open the New Admission window. The type of New Admission window is controlled by the current status of the *Type* drop down list.
Print	Will send the current selection of Admission records to the printer.
Modify	Select an Admission record in the list display and click Modify or double click to open the Admission record. The actual Admission record pointed to by the Location record in this list will display.

Controls

Quick Select Field



High ICU: Modify Admissions window: Quick selection field

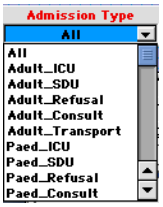
You can start typing the name of a patient and STATIC will find and display all patients that have a Last Name that starts with the letters typed. This has been extended to also search for the MRN and the Admitting ICU Staff.

Because there is so little overlap between Last Name, Admitting ICU Staff name and MRN, it will tend to only find patients based on one or other criterion automatically.

This area uses Type Ahead - as you type in more letters the system continuously runs a query selecting records that conform with what you have typed. If you stop typing for more than a few seconds, the system resets itself and is ready for new input and starts the process again.

To see all records, just click the All button.

Admission Type



High ICU: Modify Admissions window: Admission type

Here you select the Admission Type to display.

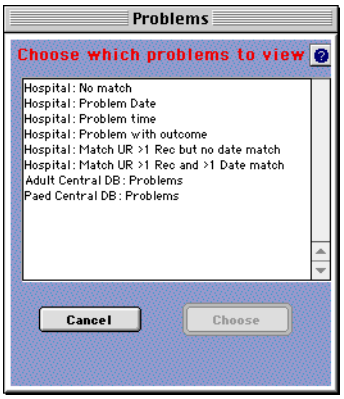
Location Name

High ICU: Modify Admissions window: Location Name

Which ICU Area is automatically displayed is set in Workstation: Data Display on page 66. Here you select the Name of the ICU Area to display. The Names available depends on the Location Type selected.

Data Display: Modify Admissions: Problems... Button

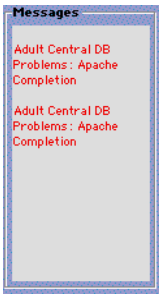
This *Problems* button will allow you to display records with particular Problem tags. These problem tags are generated during operations involving the Adult and Paed Central Database Report area and the **Hospital Outcome File** area (see Import Files: Hospital Outcome File on page 505). The following window allows you to choose which problem tagged records to display:



High ICU: Modify Admissions window: Problems...

Choose a problem and click on Choose. The records with this particular problem will display in the Output Form.

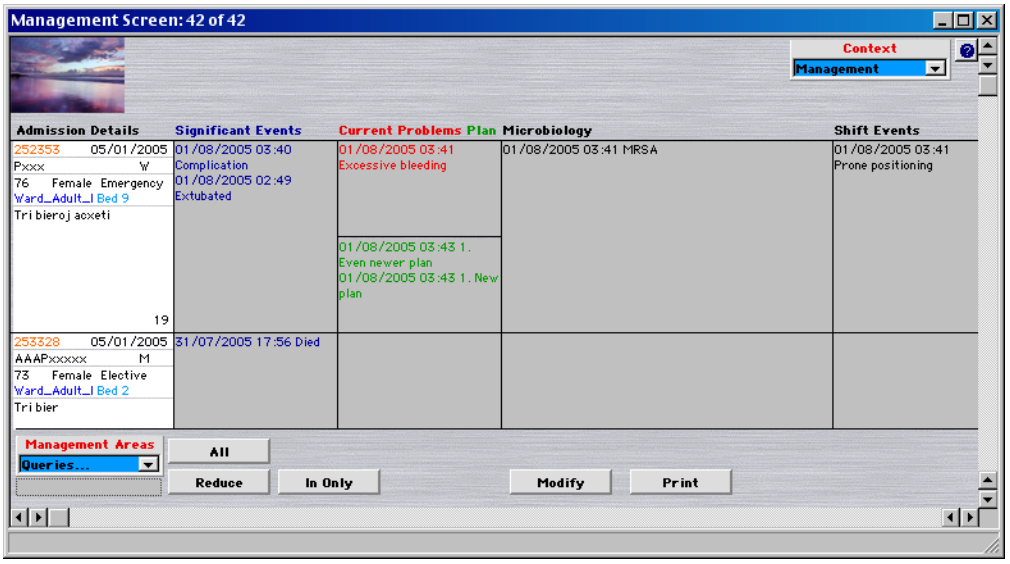
Open a record to view details on the specific problem in the messages area:



High ICU - Input Form - Messages area

Chapter 34
Data Entry: Management Data Display

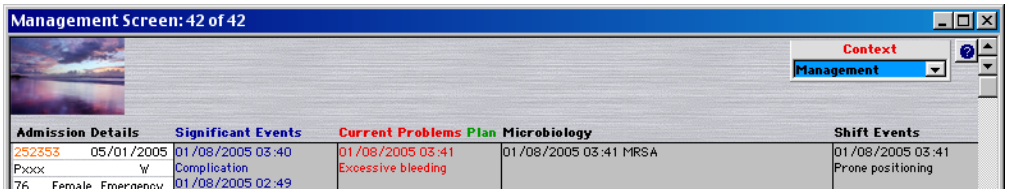
34.1.0 Introduction



Management Data Display: Modify Admissions window

Use this area to collect data useful for Management of ICU Admissions.

34.1.1 Data Display: Modify Admissions: Top of Form

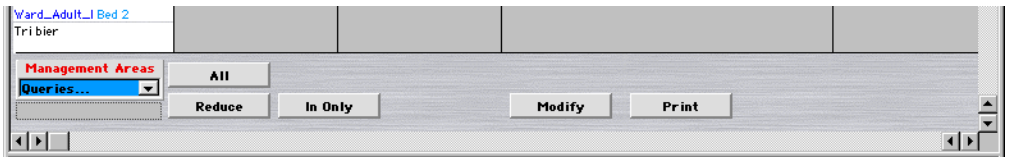


Management Data Display: Modify Admissions window: Top of Form

Controls	Action
Context	This control will take you to the various views available for Admission data.

Controls

34.1.2 Data Display: Modify Admissions: Base of Form



Management Data Display: Modify Admissions window: Base of form

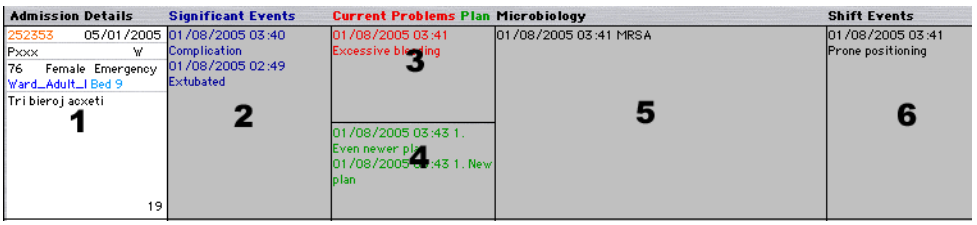
This contains many controls:

Controls	Action
Management Area Query...	This will allow you to Query for a selection of ICU records. Queries in the Query Store area (see Reports: Query Store on page 441) that are tagged as belonging to the `[ICURecord]` table or are tagged as Management will automatically appear by name in this drop down menu. To perform the query, just select the required query in the drop down menu. If a new query or a query that has not been tagged is required, select the *Others...* option in the list and a dialog will display that will allow you to select other queries and create new ones without opening the Query Store area. See Interface: Select Query window on page 24. The Management area displays `[ICURecord]` records therefore the Query must return a selection of `[ICURecord]` records - make sure there is a command used at the end of the query selected that creates a `[ICURecord]` record selection otherwise the query will return zero records.
All	Returns all the Admissions.
Reduce	Reduce the displayed selection to the currently selected records.
In Only	Click this button to display the current *In* Admissions only.
Modify	Select a record in the list display and click Modify or double click to open the ICU record in a special Management view. See Management: Summary on page 301
Print	This will print the currently displayed records with all the contents visible.

Controls

34.1.3 Data Display: Modify Admissions: Entry from List

You can enter information directly from the displayed selection of records. To do so Double click within the area of interest for a particular record. The areas of interest are as follows:



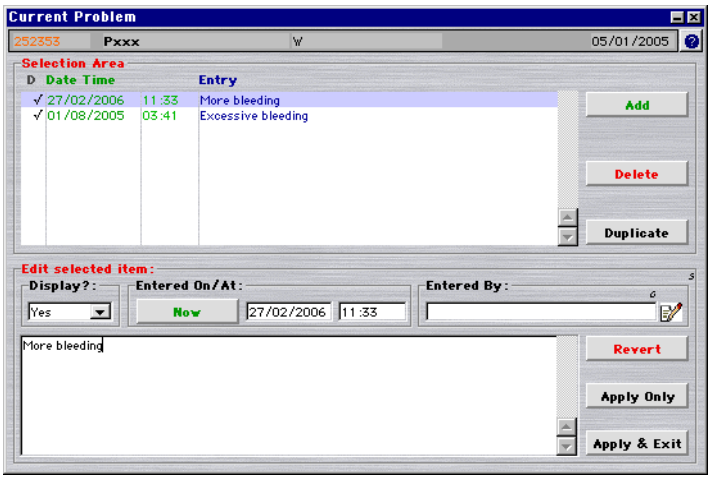
Management Data Display: Entry from List

Area	Action
1 Demographics	This area provides you with Demographic data on the Admission. A double click in this area will take you to a Input form that is described in Data Entry: Management on page 301.
2 Significant Events	This area logs any significant events that have occurred within this Admission. A double click in this area will take you to a dialog that is described in Data Display: Modify Admissions: Data entry Dialog on page 187.
3 Current Problems	This area logs any Current Problems. This only displays the last entry. The last entry provides a complete description of all Problems at the time of creating the entry. As new problems arise or old ones are solved, a new entry is created that represents the new situation. A Duplicate command within the record creation dialog is provided to expedite this process. A double click in this area will take you to a dialog that is described in Data Display: Modify Admissions: Data entry Dialog on page 187.
4 Plan	This area displays the Current Plan. This only displays the last entry. The last entry provides a complete description of the Current Plan at the time of creating the entry. When the Plan is changed, a new entry is created that represents the new Plan. A Duplicate command within the record creation dialog is provided to expedite this process. A double click in this area will take you to a dialog that is described in Data Display: Modify Admissions: Data entry Dialog on page 187.
5 Microbiology	This area logs Microbiology events that have occurred within this Admission. A double click in this area will take you to a dialog that is described in Data Display: Modify Admissions: Data entry Dialog on page 187.
6 Shift Events	This area logs any Shift Events. This only displays the last entry. The last entry provides a complete description of all Events within the current Shift. As new Events occur they are added to the record. Only one record is created per shift. A double click in this area will take you to a dialog that is described in Data Display: Modify Admissions: Data entry Dialog on page 187.

Controls

34.1.4 Data Display: Modify Admissions: Data entry Dialog

Whichever area you double click on, the following dialog will appear:



Management Data Display: Data entry dialog

The dialog is divided into a Selection area and an Edit area. It stays in front of other activity within the program and disables all menus until it is dismissed.

Previous entries are displayed in the *Selection Area*.

Changes are made in the *Edit selected item* area.

To save changes you must click either the *Apply Only* or *Apply & Exit* buttons.

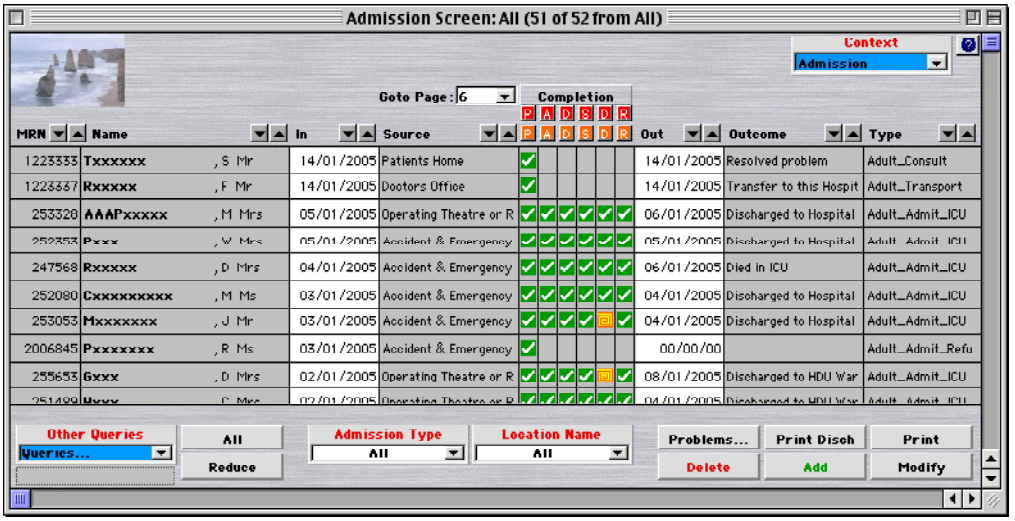
Controls in the Selection Area	**Action**
Add Delete Duplicate	Click the Add button to add a new event. You can then edit the new event in the Edit selected item area. Click the Delete button to delete an entry. Click the Duplicate button to duplicate an existing entry - useful for events that are list based and which have few changes from one shift to the next.
D	If the item is ticked it will be considered for display in any Summary area and for printing.
Date Time	Date and Time for this entry.
Entry	First line of text for the entry - subsequent lines cannot be displayed.

Controls

Controls in the Edit selected item Area	**Action**
Revert Apply Only Apply & Exit	Click the Revert button to discard any changes made to the selected item. Click the Apply Only button Save the changes made but stay in the Dialog - to add or modify other events. Click the Apply & Exit button to save changes made and exit the dialog.
Display?	If the item is set to Yes it will be considered for display in any Summary area and for printing.
Entered On/At Now Date Time fields	Date and Time for this entry. Click the Now button to enter the Current Data and Time or type the date and time required into the fields.
Entered By	Type the name of the person making the entry.
Entry area	Enter the text you require into the scrollable entry area.

Chapter 35
Data Entry: Admission Data Display

35.1.0 Introduction



Admission Data Display: Modify Admissions window

This is the area you will use in order to navigate to an Admission record based on Admission.

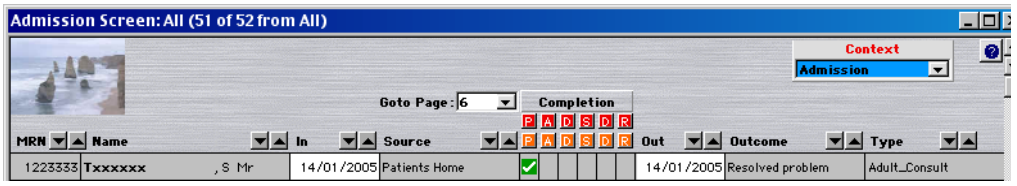
Only Location Records are displayed here

The records displayed here are **NOT** the actual Admission Records - they are Location records. However unlike the Location area, there is only ever one Location record per Admission displayed here - effectively giving you a list of Admissions.

When you select an Admission record here, the system uses the selected Location record to point to an Admission record. This Admission record is then opened.

You can choose which Admission Type to display by use of the *Admission Type* drop down control and the Location of the Admissions chosen using the *Location Name* drop down control.

35.1.1 Data Display: Modify Admissions: Top of Form



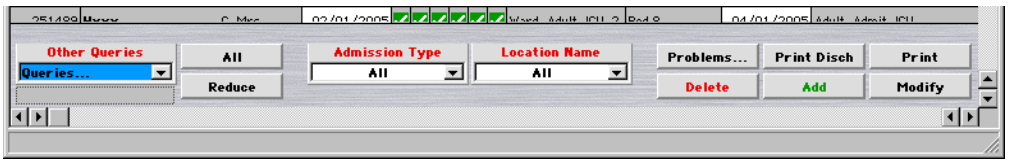
Admission Data Display: Modify Admissions window: Top of Form

This area contains various controls:

Controls	Action
Sort Buttons	Sort the list of records in Ascending and Descending order. The buttons sit on top of the fields they sort.
Completion P, A, D, S, D, R	Click on the Completion button to display records that are incomplete for the area indicated by the text in the button. The areas are P (Personal), A (Admission), D (Diagnosis), S (Scoring), D (Discharge), R (Report). For instance a click on the D (Diagnosis) button will display records that are incomplete for Diagnosis. There top row will present records which are incomplete based on the settings in Mandatory Data. See Mandatory Data: Setup on page 84 The bottom row will present records which are incomplete based on whether the record has been ticked as complete by the Administrator within the Admission record itself.
Goto Page	The *Goto Page* control will automatically take you to the page indicated when you modify one of the displayed records. The initial value is set as a Preference in Workstation: Data Display on page 66
Context	This control will take you to the various views available for Admission data.

Controls

35.1.2 Data Display: Modify Admissions: Base of Form



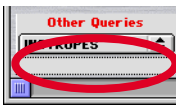
Admission Data Display: Modify Admissions window: Base of form

This contains many controls:

Controls	Action
Other Queries Query...	This will allow you to Query for a selection of Admission records. Queries in the Query Store area (see Reports: Query Store on page 441) that are tagged as belonging to the `[Location]` table or are tagged as Admission will automatically appear by name in this drop down menu. To perform a query, just select the required query in the drop down menu. If a new query or a query that has not been tagged is required, select the *Others...* option in the list and a dialog will display that will allow you to select other queries and create new ones without opening the Query Store area. See Interface: Select Query window on page 24. The Admission area displays `[Location]` records therefore the Query must return a selection of `[Location]` records - make sure there is a command used at the end of the query selected that creates a `[Location]` record selection otherwise the query will return zero records.
Quick Select Field	See below
All	Returns all the patients for the current setting of **Admission Type** and **Location Name**.
Reduce	Reduce the displayed selection to the currently selected records.
Admission Type	See below
Location Name	See below
Problems...	See Data Display: Modify Admissions: Problems... Button on page 192.
Delete	Delete the selected record. You must be in the MedAdmStaff group to be able to do this.
Print Discharge	This will print the Discharge forms for all currently selected records - if they are ICU type records. You must be in the MedAdmStaff group to be able to use this.
Add	Will open the New Admission window. The type of New Admission window is controlled by the current status of the *Type* drop down list.
Print	Will send the current selection of Admission records to the printer.
Modify	Select an Admission record in the list display and click Modify or double click to open the Admission record. The actual Admission record pointed to by the Location record in this list will display.

Controls

Quick Select Field



High ICU: Modify Admissions window: Quick selection field

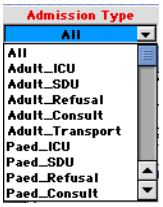
You can start typing the name of a patient and STATIC will find and display all patients that have a Last Name that starts with the letters typed. This has been extended to also search for the MRN and the Admitting ICU Staff.

Because there is so little overlap between Last Name, Admitting ICU Staff name and MRN, it will tend to only find patients based on one or other criterion automatically.

This area uses Type Ahead - as you type in more letters the system continuously runs a query selecting records that conform with what you have typed. If you stop typing for more than a few seconds, the system resets itself and is ready for new input and starts the process again.

To see all records, just click the All button.

Admission Type



High ICU: Modify Admissions window: Admission type

Here you select the Admission Type to display.

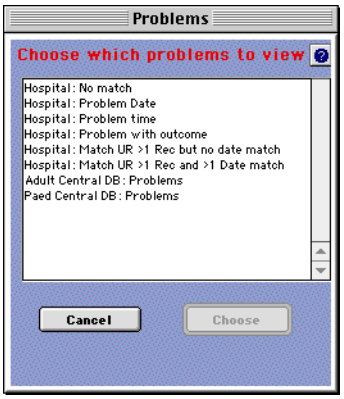
Location Name

High ICU: Modify Admissions window: Location Name

Which ICU Area is automatically displayed is set in Workstation: Data Display on page 66. Here you select the Name of the ICU Area to display. The Names available depends on the Location Type selected.

Data Display: Modify Admissions: Problems... Button

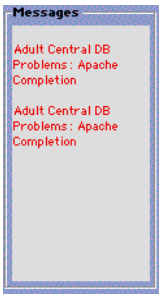
This *Problems* button will allow you to display records with particular Problem tags. These problem tags are generated during operations involving the Adult and Paed Central Database Report area and the **Hospital Outcome File** area (see Import Files: Hospital Outcome File on page 505). The following window allows you to choose which problem tagged records to display:



High ICU: Modify Admissions window: Problems...

Choose a problem and click on Choose. The records with this particular problem will display in the Output Form.

Open a record to view details on the specific problem in the messages area:



High ICU - Input Form - Messages area

Chapter 36
Data Entry: General Features

36.1.0 Introduction

There are many repeating themes within the Data Entry area. this section will present many of them and will be referred to when appropriate in the other Data Entry chapters.

36.1.1 General Features: Admission Types

Currently STATIC is set up to collect Admission Data for the following types:

ICU - Intensive Care Unit admissions

SDU - Step Down Unit Admissions

Refusal - Refusal to ICU Complex

Consult - Consultations not performed in ICU Complex. Usually advice given to outside agency by ICU Consultant.

Transport - Transport of Admissions from Call to Destination.

All these types are collected for Paediatric and Adult patients separately. The collection forms are customised to display relevant information for Paediatric and Adult Admissions. these forms can be further customised by hiding fields that you do not want to enter.

SDU is NOT the same as HDU. Many Hospitals have a distinct HDU department that is distinct from the ICU department. On the other hand, many ICU departments prefer to designate admissions into at least 2 levels of care, SDU and ICU - both levels are still considered to be full ICU levels by their Health Department - but from an internal point of view they are distinct patient populations with different care requirements. This is why we have given you the ability to capture admission data for ICU and SDU.

36.1.2 General Features: SDU and ICU Forms

When we ship STATIC there is absolutely NO DIFFERENCE between ICU and SDU Admission types in terms of the fields available for entry.

The difference between an ICU and SDU Admission is determined solely by the fields that you designate as being visible and Mandatory.

STATIC ships with all fields available for entry. To restrict entry, use the Mandatory Fields area in the Preferences area to set the Fields and/or areas that you do not want available to Invisible. See Mandatory Data: Setup on page 84.

36.1.3 General Features: Concept of the ICU Complex

**********MOST IMPORTANT**********

IF YOU READ NOTHING ELSE READ THE FOLLOWING!!!

CONCEPT OF THE ICU COMPLEX

We use a concept that we call the ICU complex. Our definition for this is:

The ICU Complex comprises any ICU Areas in which the patient may be located. It also includes Operating Theatres as long as they go straight there and come straight back with no intervening stay in another Hospital Ward. The patient is deemed to have remained within their last ICU Location during the Operating Theatre event.

The stays in the different ICU Areas are collected in Location records. A single ICU Admission could comprise several internal transfers from ICU Area to ICU Area within the ICU complex resulting in multiple Location records. The total stay within these Location records will give the stay within the ICU Complex for this ICU Admission.

****

36.1.4 General Features: Admission forms runs in a Transaction

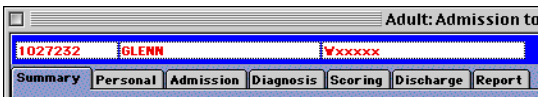
This is a special way of creating records were all changes are stored in memory and the changes are committed only on validation of the WHOLE set of changes. This means that there is less likelihood of corruption of data as either ALL the changes are saved or NONE of the changes are saved. A form may access over 20 Tables dynamically and transparently to you, so if it did not function this way you could imagine there could be problems!

36.1.5 General Features: Incomplete Fields

All incomplete fields that are mandatory, (criteria set in File: Preferences: Mandatory data,) appear with a yellow background and if they are drop down lists display a ? . This makes it very easy to visually see incomplete information.

36.1.6 General Features: Moving from page to page

You can move from page to page by using the Tab control at the top of a page:



Admission General Features: Tab Control

36.1.7 General Features: Save Only, Save Exit, Cancel Buttons

Admission General Features: Save only, Save Exit, Cancel Buttons

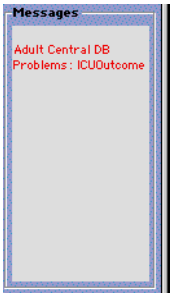
From Left to Right above:

Save Only - Saves the changes but keeps the form open for further changes

Save Exit - Saves the changes and then closes the form

Cancel - Discards all changes made during the current editing session and closes the form.

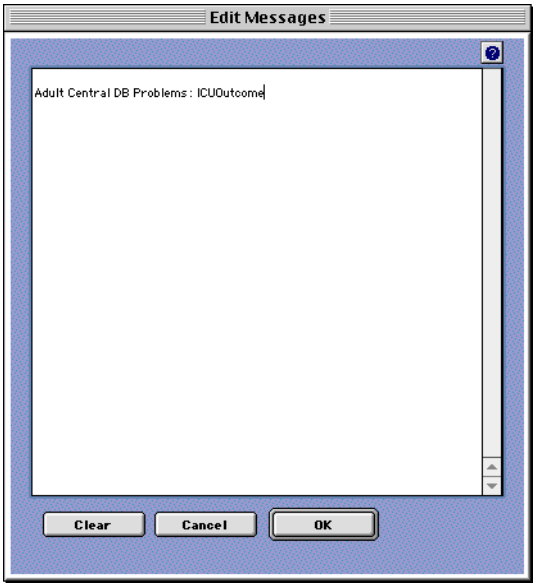
36.1.8 General Features: Problem Messages



Admission General Features: Messages area

After some processes have completed there may be a message here that informs you of some errors or problems present in this record. For instance after operations involving the **Central Database Export** area (see Special Reports: ANZ Adult Central DB Report on page 436 and Special Reports: ANZ Paediatric Central DB Report

on page 437) and the **Hospital Outcome File** area (see Import Files: Hospital Outcome File on page 505) the checking system may have identified some missing information for this record. The problem type is displayed here. In the case below there is a problem with ICU Outcome completion. After correcting the problem you can delete the message by clicking anywhere in the message display area, the following window will display:



Admission General Features: Messages area edit

If there are multiple messages, and you have only partially completed correcting the problems, you can selectively edit the contents.

36.1.9 General Features: Completion Status

The completion status for Admission is displayed like this:

Admission General Features: Completion

The left hand Check boxes are completed automatically by STATIC according to the criteria set in File: Preferences: Mandatory data.

The right hand check boxes are completed by the Administrator or Data Entry Clerk.

In this case the Personal, Admission and Diagnosis areas are complete as far as STATIC is concerned. The Personal and Diagnosis area has been checked by the Administrator. The Admission area is yet to be checked. The Scoring, Discharge and Report areas are incomplete.

36.1.10 General Features: Completed by

Most pages have a **Completed by** field. This ensures that the last person who completed the data has taken responsibility for the accuracy and completeness of the data before Signing off the page:

Admission General Features: Completed By

36.1.11 General Features: Record Locking

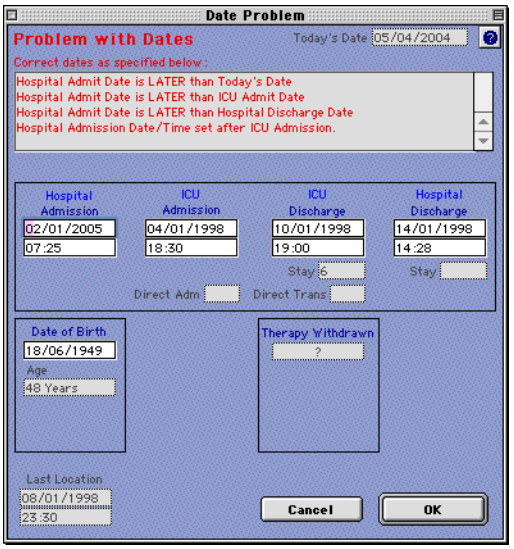
There may be occasions where you want to access an Admission that is associated with another Admission which is currently open and being accessed (either on your own machine or on another workstation).

Because the two Admissions share records, the two cannot be open at the same time. The one that you are trying to open will be closed automatically with the following Alert:

Admission General Features: Locked Records Alert

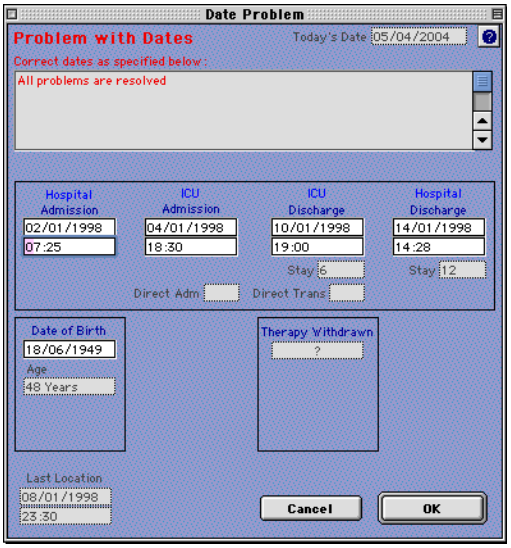
36.1.12 General Features: Date Problems

STATIC has extensive checking to ensure valid data is entered. Date checking is one of the most problematic. If a date appears in error or unlikely then a window similar to this will display:



Admission General Features: Date Problem

As you can see the Hospital admission date is incorrect. This can be corrected within this form:



Admission General Features: Date Problem resolved

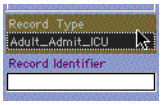
Checking includes:

What is checked	Comments
Check against today s date	
Fitting of Admission Event within the Hospital Event date slot.	
Prevention of overlap of two or more Admissions within the same Hospital Admission.	
Checking for reasonable Stay -	If more than 50 days will warn.
Check for unreasonable gap between Hospital Event and Admission.	If more than one year will warn.
Check for unreasonable gap between Hospital Discharge and Admission Discharge.	If more than one year will warn.
Impossible Date of Birth	Impossible when considering the other dates

Date Checking

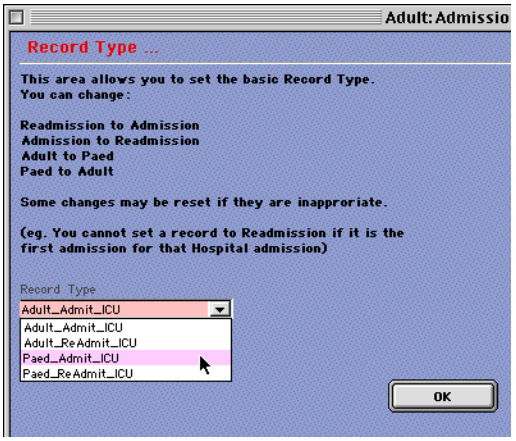
36.1.13 General Features: Hidden Button

If you are the Administrator you can change the underlying Record Type to another Record Type. This is useful if a mistake has been made in the original selection of the Admission Type. This change is usually limited to a change from a Paed to an Adult Admission. But for ICU Admissions includes changes to SDU and ICU also. In order to access this facility click on the Record Type field:



Admission General Features: Change Record Type Button

A Form similar to the following will appear:



Admission General Features: Change Record Type Form

Select the required *Record Type* and click *OK* button.

36.1.14 General Features: Further Information Button

If you click the following type of Icon button on a form, you will be presented by further information:

Admission General Features: Further Information Button

Sometimes this information is for display only, sometimes it will allow you to further edit the Admission data. If you do not have the required privileges to access this information, you will be presented with the following dialog:

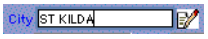
Admission General Features: - Security dialog

36.1.15 General Features: Type-ahead Field

Some fields are populated by a restricted selection of options derived from a database within STATIC. To enter data, just start typing the information into the field and STATIC will attempt to auto complete the field.

There are many fields that use this form of entry. You will always see the *Further Information button* next to this type of field.

We will use the City field to illustrate this type of field:



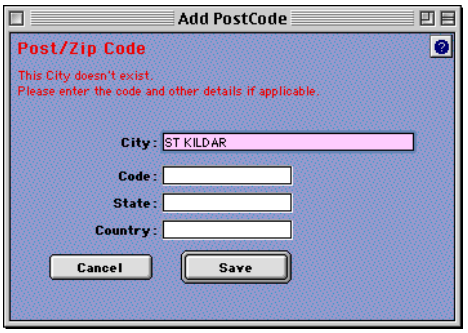
Admission General Features: Typeahead Field

New City/Town

If you are entering data into the form and you happen to enter a City which does not exist in the database. For instance we enter ST KILDAR - the following will display:

Admission General Features: - City does not exist

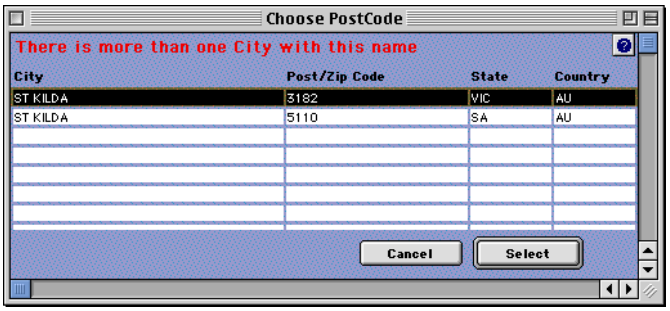
If you click OK you have the opportunity to enter this City:



Admission General Features: - Enter New Postcode

More than one City with this name

Some Cities exist in more than one State with the same name. If you have entered one of these the following will display:



Admission General Features: - More than one City with this name

Select the one that you require and click **Select**.

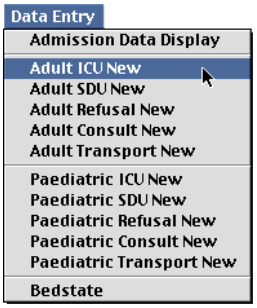
Chapter 37
Data Entry: New Admission

37.1.0 Introduction

A new admission event can be created either from the application menu or from the Admission Data Display area.

37.1.1 New Admission: Creating a New Event

You create a new event by selecting New from the menu bar:

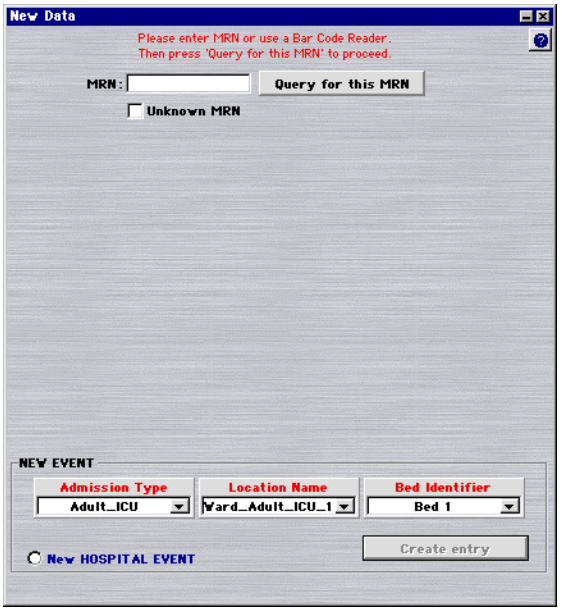


New Admission Event: New Admission menu

or clicking on the *Add* button on the Admission Data Display form. - see Data Display: Modify Admissions: Base of Form on page 190 and Data Display: Modify Admissions: Base of Form on page 180.

The Admission Types available in the menu is determined by the Admission Types selected in Database: Data Types on page 69.

The following dialog will display:



New Admission Event: New Admission window

Enter the MRN number for your patient in the MRN field and click the *Query for this MRN* button. STATIC will query its database and determine if the patients MRN has ever been entered into this database previously.

If the MRN is unknown, as it could be for Consultation or Refusal Events for instance, tick on the *Unknown MRN* checkbox - this will allow you to proceed as if there is a valid MRN number present. the MRN will be composed of a unique number generated within STATIC and will have a prefix determined by your settings in Database: Prefix Unknown MRN on page 69.

If this Patient has never been entered into STATIC, then you must create a New Hospital Event.

If this Patient has been entered previously into STATIC, then you can either create a New Hospital Event and add the required Admission Event to this automatically, or add the Admission Event to a Previous Hospital Event.

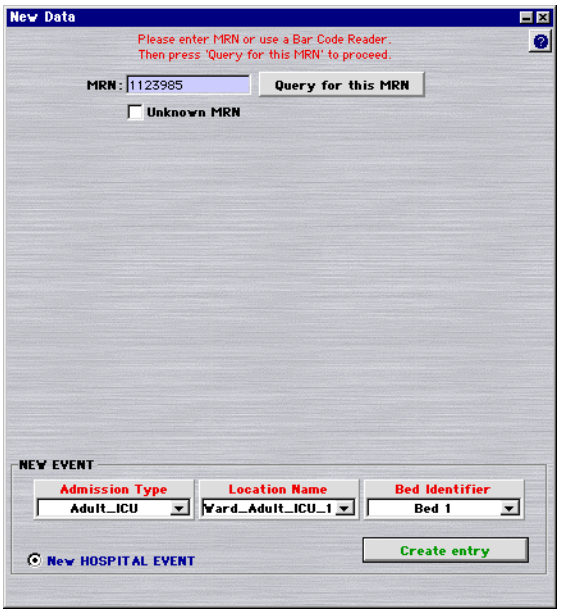
In short:

Hospital Event	Action
No Previous Hospital Event	Create New Hospital Event and add required Admission Event to this New Hospital Event
Previous Hospital Event	Create New Hospital Event and add required Admission Event to this New Hospital Event OR Add required Admission Event to Previous Hospital Event

New Admission Event: Possibilities

37.1.2 New Admission: New Hospital Event

If there is no previous MRN entry the following will display:



New Admission Event: New Hospital Event

Select the *Admission Type*, *Location Name* and *Bed Identifier* as required:

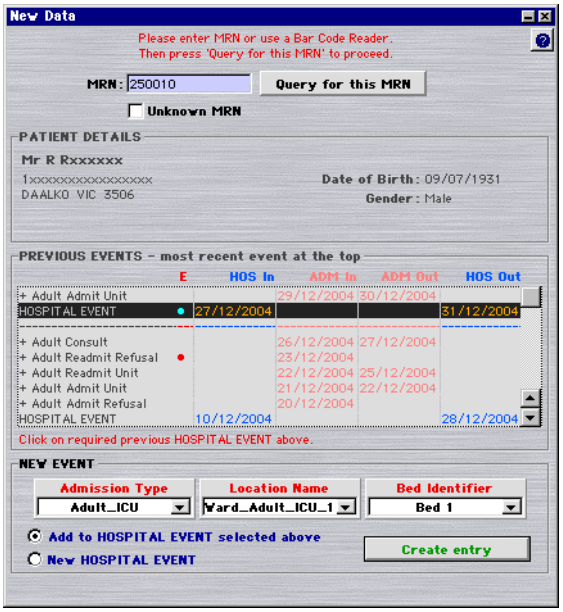
New Admission Event: Select Admission Type, Location Name and Bed ID

For some Admission Types, the Location Name and Bed Identifier is hidden as it is not relevant.

Then, to create the new Admission, click the *Create entry* button. The patient is now admitted into the database for the selected *Admission Type*, *Location Name* and *Bed Identifier*.

37.1.3 New Admission: Previous Hospital Event

If there are previous Hospital Events the following will display:



New Admission Event: Previous Hospital Event

Note the Previous Hospital Events and its associated Admission Events are displayed in the scrollable array. In this case there are two distinct previous Hospital Events with several Admission events each.

Note the *E* for Error column in the Admission display. This displays errors caused by Date Time mismatches which are difficult to see while within the actual Admission records themselves. In the above example, the most recent Hospital Event is set as having occurred before the previous one ended - clearly impossible and an error. There is also a Readmit Refusal that is set to have occurred within the previous Readmission - also impossible.

Select the Admission Type, Location Name and Bed Identifier as required:

New Admission Event: Select Admission Type, Location Name and Bed ID

For some Admission Types, the Location Name and Bed Identifier is hidden as it is not relevant.

Decide if this is a New Hospital Event or an Event part of a previous Hospital Event.

If the new Admission Event is not part of a Previous Hospital Event, click on the *New Hospital Event* radio button control

If the new Admission Event is part of a Previous Hospital Event, click on the *Add to Hospital Event selected above* radio button control

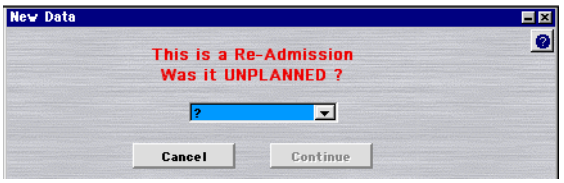
As you can see above the most recent Hospital Event is already selected. To select a different Hospital Event, click on it or any of its associated Admission Events.

If no Hospital Event is suitable, then STATIC will warn you and force you to create a New Hospital Event. This can happen if there is a Transport Event already present for all the Hospital Events displayed. - you cannot have more than one Transport Event per Hospital Event.

Then, to create the new Admission, click the *Create entry* button. The patient is now admitted into the database for the selected *Location Type*, *Location Name* and *Bed Identifier* and is associated with the selected Previous Hospital Event.

37.1.4 New Admission: Readmission

After clicking the *Create entry* button you may see the following screen:



New Admission Event: New Admission window Planned or Unplanned Readmission

For any Hospital Event there can be no more than one primary ICU Admission - all other ICU Admissions must be ICU Readmissions.

If the selected Admission is a Readmission because it is associated with a previous Hospital Event that already has an ICU Admission, we want to know if this Readmission is Planned or Unplanned:

Select Yes or No from the drop down list and click *Continue*.

Click on *Cancel* to abort the creation of the New Admission Event.

37.1.5 New Admission: Creation of Patient Records

Generating new Admission Event records

STATIC will now do the following:

- Generate all required records
- Create relations to old Hospital records if appropriate.
- Prefill Form fields where appropriate
- Set the type of Admission and whether it was Unplanned

And finally display a new Admission record form.

The admission forms that are possible are:

ICU

SDU

Refusal

Consult

Transport

... for both Paed and Adult.

Chapter 38
Data Entry: ICU: General Features

38.1.0 ICU: General Features

CONCEPT OF THE ICU COMPLEX

********** MOST IMPORTANT **********

IF YOU READ NOTHING ELSE READ THE FOLLOWING!!!

CONCEPT OF THE ICU COMPLEX

We use a concept that we call the ICU complex. Our definition for this is:

The ICU Complex comprises any ICU Areas in which the patient may be located. It also includes Operating Theatres as long as they go straight there and come straight back with no intervening stay in another Hospital Ward. The patient is deemed to have remained within their last ICU Location during the Operating Theatre event.

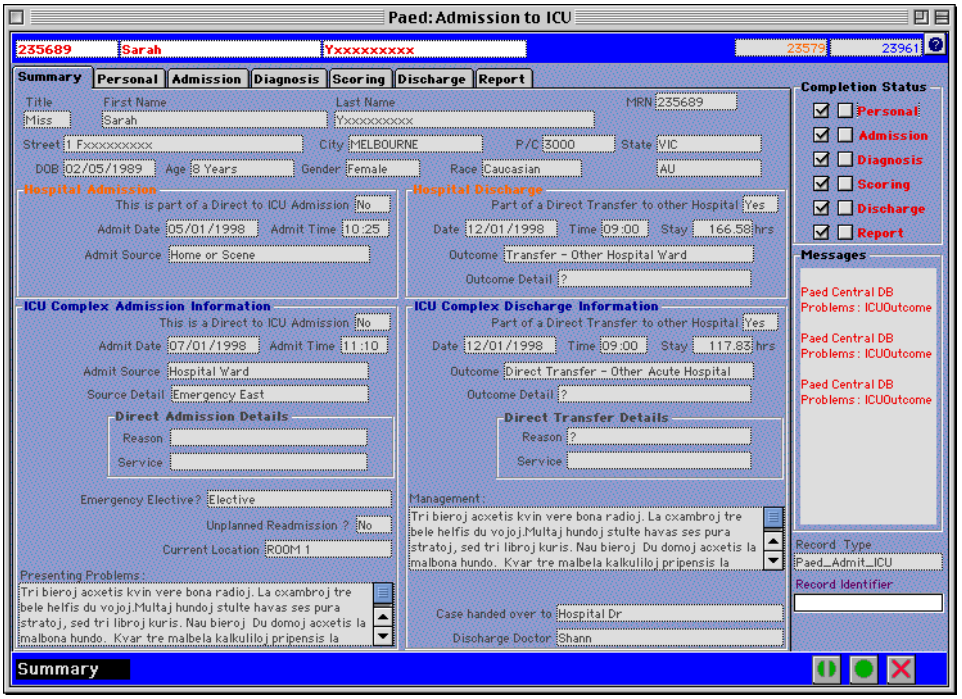
The stays in the different ICU Areas are collected in Location records. A single ICU Admission could comprise several internal transfers from ICU Area to ICU Area within the ICU complex resulting in multiple Location records. The total stay within these Location records will give the stay within the ICU Complex for this ICU Admission.

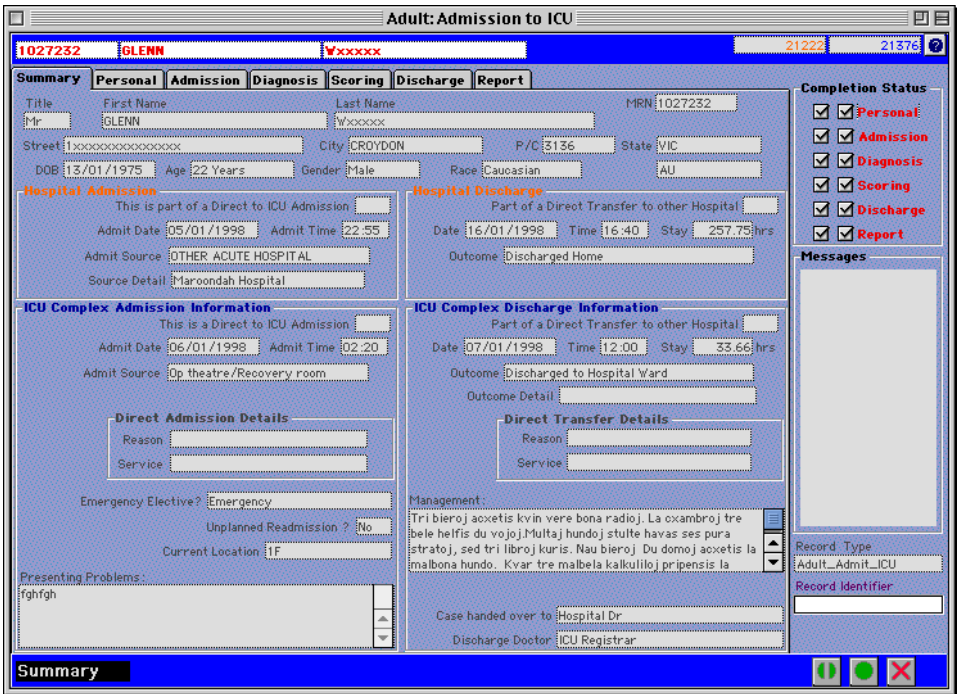
****

In this section, we will present the ICU and SDU forms used for Paediatric and Adult Admissions. SDU and ICU Forms are exactly the same - any differences are due to the effect of hiding fields and areas on the form. Making fields and areas Visible and Invisible is done in Mandatory Data: Setup on page 84. Where appropriate we will present a typical Paediatric and an Adult form of each page side by side.

Chapter 39
Data Entry: ICU: Summary

39.1.0 ICU: Summary





ICU: Summary

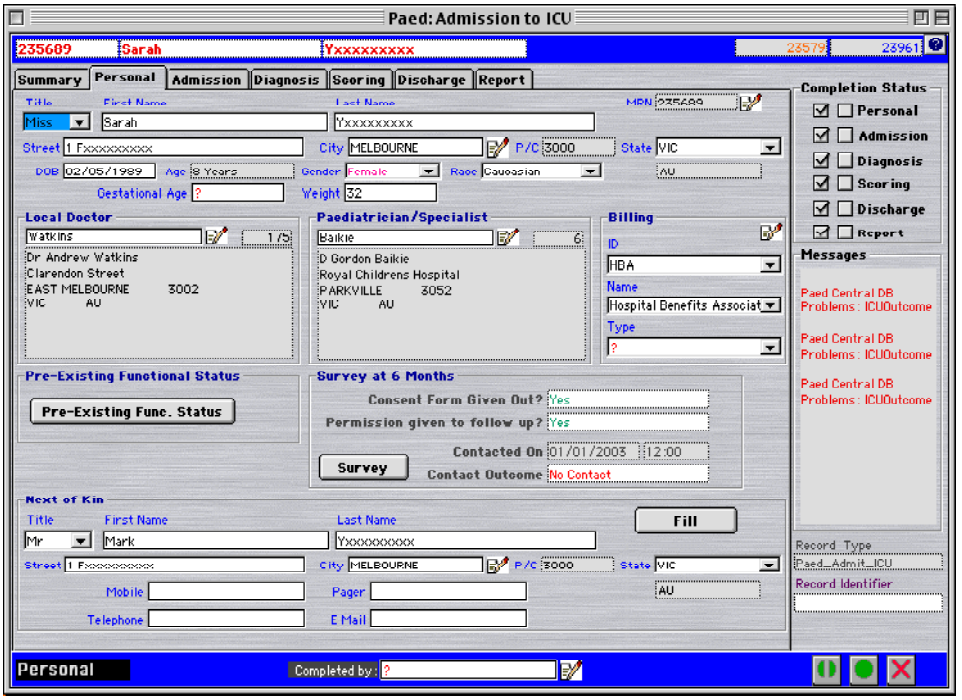
This page has no enterable fields.

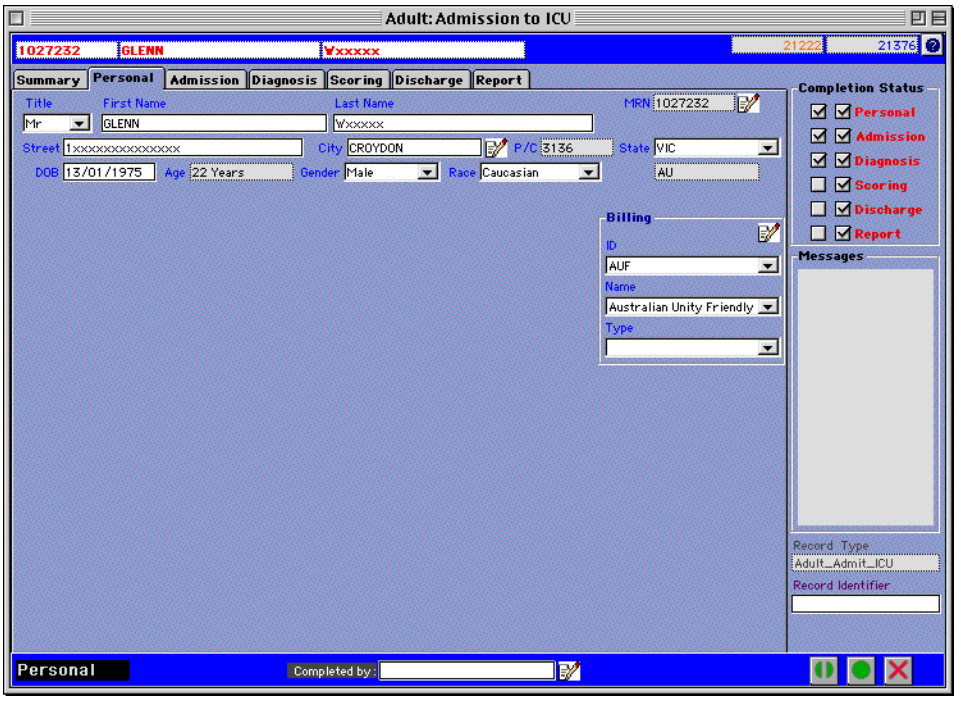
It displays a selection of fields taken from the other pages of this form. With one glance you can view the most important data already completed on this form.

You can click anywhere within the form to move on to the Personal section of the form.

Chapter 40
Data Entry: ICU: Personal

40.1.0 ICU: Personal





ICU: Personal

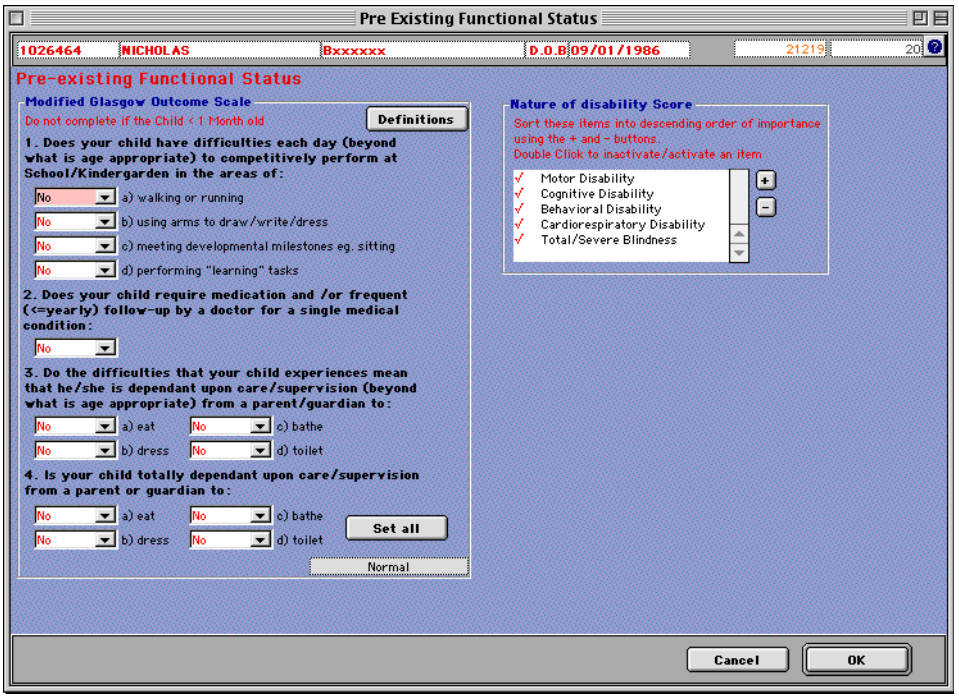
The Personal page comprises 5 different areas:

Area	Details
Personal Information	Age - Is calculated from the date of ICU Admission and the DOB. The age is stored internally in both days and years. City - This is a Type-ahead Field. See General Features: Type-ahead Field on page 200 for more information. The data accessed here is edited in File: Preferences: Postcodes on page 163. MRN - Can be changed by MedAdminStaff password group members by clicking on the Further Information button. See General Features: Further Information Button on page 200. All other fields are self explanatory.
Local Doctor Paediatrician/Specialist	These fields capture the referring Local doctor and the Specialist associated with this admission. These are Type-ahead Fields. See General Features: Type-ahead Field on page 200. The data accessed here is edited in File: Preferences: Referring Dr on page 159.
Billing	Set the billing details for this Admission here. You can select the by ID or Entity name. The Type is preset for some Billing entities such as TAC. The data accessed here is edited in File: Preferences: Billing on page 171.
Pre - Existing Functional Status	This area is only available to Peadiatric admissions. See ICU: Personal: Pre - Existing Functional Status on page 213 for details.
Survey at 6 Months	This area is only available to Peadiatric admissions. See ICU: Personal: Survey at 6 Months on page 215 for details.
Next of Kin	This area captures contact details of Next of Kin. The *Fill* button fills the Next of Kin fields from the patient personal information - useful if the two are from the same family and live in the same location.

ICU: Admission page

40.1.1 ICU: Personal: Pre - Existing Functional Status

This area is only available for Paediatric Admissions. Clicking on the *Pre - Existing Func. Status* Button will display the following form:



ICU: Personal: Pre - Existing Functional Status

Area	Details
Modified Glasgow Outcome Scale	This is a Modified GCS that is generated by answering questions. Note it is only completed for children >=1 Month old. You can see how answering these questions map to the Modified GCS by click on the *Definitions* button. See below.
Nature of disability Score	This is an ordered list of disabilities sorted in order of importance. See below.

ICU: Personal: Pre - Existing Functional Status

This area captures the status of the patient prior to admission to ICU.

Modified Glasgow Outcome Scale

Modified Glasgow Outcome Scale

Do not complete if the Child < 1 Month old

Definitions

1. Does your child have difficulties each day (beyond what is age appropriate) to competitively perform at School/Kindergarden in the areas of:

No a) walking or running

No b) using arms to draw/write/dress

No c) meeting developmental milestones eg. sitting

No d) performing "learning" tasks

2. Does your child require medication and /or frequent (<=yearly) follow-up by a doctor for a single medical condition:

No

3. Do the difficulties that your child experiences mean that he/she is dependant upon care/supervision (beyond what is age appropriate) from a parent/guardian to:

No a) eat No c) bathe

No b) dress No d) toilet

4. Is your child totally dependant upon care/supervision from a parent or guardian to:

No a) eat No c) bathe

No b) dress No d) toilet

Set all

Normal

ICU: Personal: Pre - Existing Functional Status: MGCS

This is a Modified GCS that is generated by answering questions.

Note it is only completed for children >=1 Month old.

You can see how answering these questions map to the Modified GCS by click on the *Definitions* button.:

Pre Existing Functional Status

1026464 NICHOLAS Bxxxxxx D.O.B 09/01/1986 21219 21

Modified Glasgow Outcome Scale

Go Back

Normal
a) Intellectually and physically

Functionally normal
a) Normal intellectually and physically
b) Requires regular medication or regular (< = yearly) follow-up by a doctor for a single medical condition

Mild disability
a) Likely to lead an independent existence
b) Some restriction of activity
c) Inability to perform competitively in school performance

Moderate disability
a) Likely to survive dependant on care/supervision eg. Down's syndrome child

Severe disability
a) Totally dependant upon care/supervision for all activities of daily living (eating, dressing/bathing/toileting)
b) Persistent vegetative state

1

Cancel OK

ICU: Personal: Pre - Existing Functional Status: MGOS

Nothing here can be edited, this is for your information only.

Nature of disability Score

To see how the questions map to the Modified Glasgow Outcome Scale, click on the *Definitions* button:

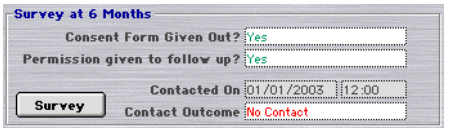
ICU: Personal: Pre - Existing Functional Status: Nature of disability Score

Double Click an item to Inactivate/Activate.

Move an item up or down in the list by use of the +/- Buttons. The most important item is at the top of the list.

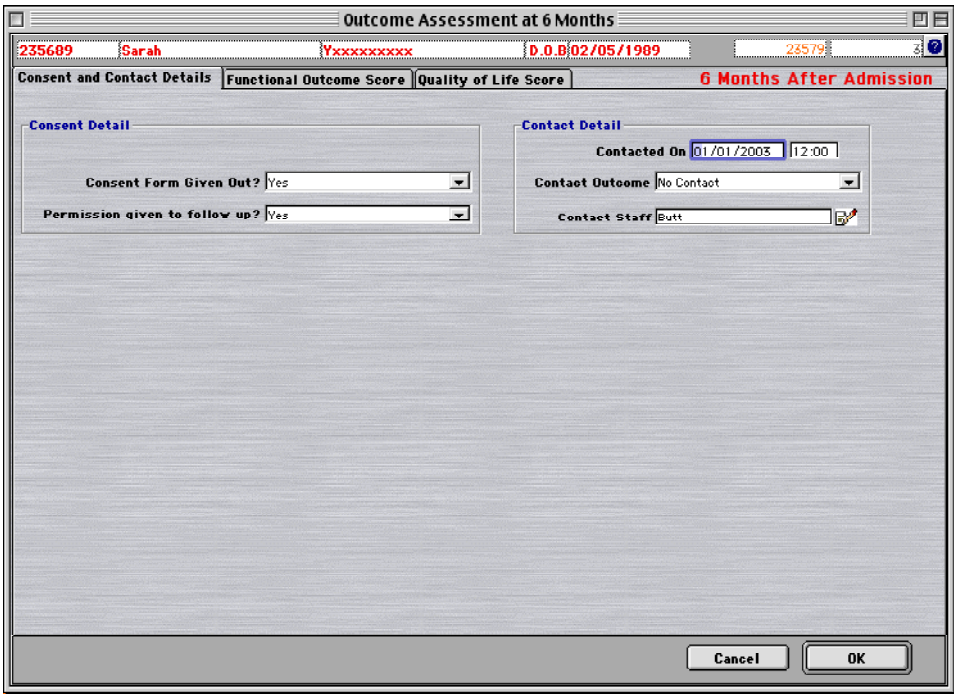
40.1.2 ICU: Personal: Survey at 6 Months

This area is only available on Paediatric forms:



ICU: Personal: Survey at 6 Months

Enter this area by clicking the *Survey* button. The following form will display:



ICU: Personal: Survey at 6 Months: After 6 Months: Consent and Contact Details

Data capture during Admission

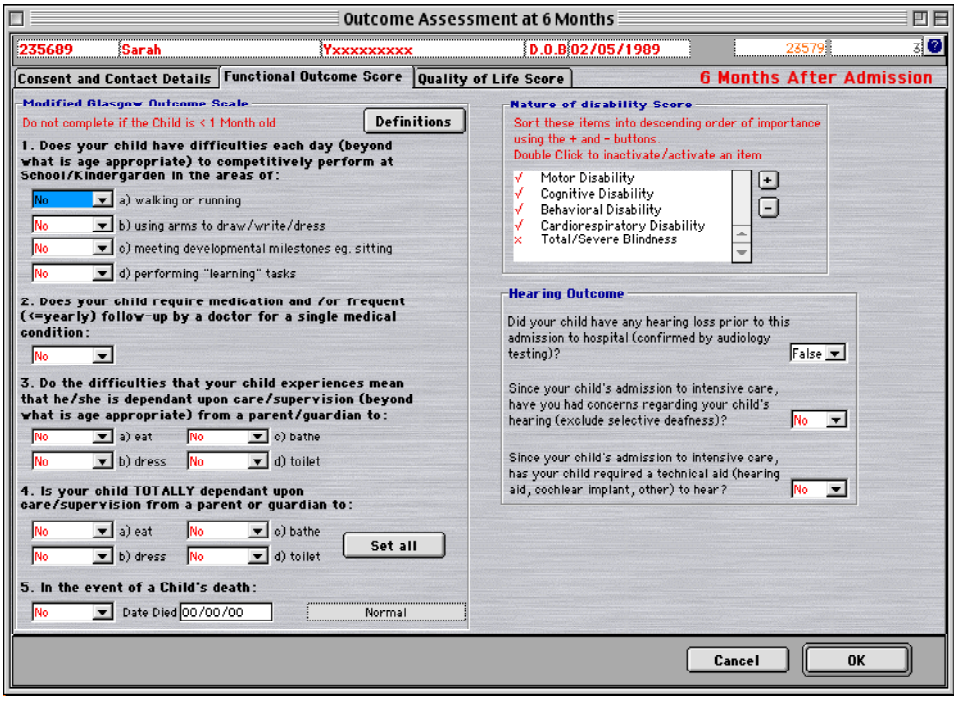
Initially we only capture the fact that a consent form has been given out and that permission to follow up after 6 months has been given. This data is entered in the *Consent Detail* Theme.

If this patient has had multiple admissions to this Hospital and the last admission was less than 5 weeks previously, then we do not ask to collect this information again.

Data Capture after 6 Months

If permission has been given, then after 6 Months more information will be collected by clicking on the *Survey* button again and filling the appropriate data.

40.1.3 ICU: Personal: Functional Outcome Score



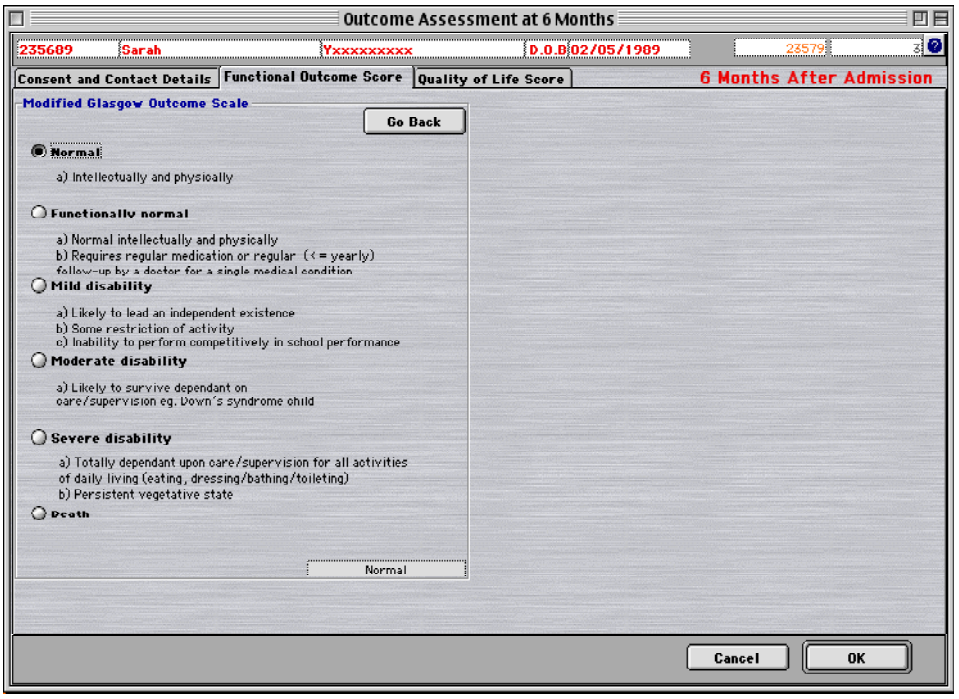
ICU: Personal: Survey at 6 Months: After 6 Months: Functional Outcome Score

Area	Details
Modified Glasgow Outcome Scale	This is a Modified GCS that is generated by answering questions. Note it is only completed for children >=1 Month old. You can see how answering these questions map to the Modified GCS by click on *Definitions* button. See below.
Nature of disability Score	This is an ordered list of disabilities sorted in order of importance. See below.
Hearing Outcome	Complete a series of questions that provide information on the child s hearing status.
Contact Detail	This is an ordered list of disabilities sorted in order of importance. This area captures the result of the follow up - Date, Time, Outcome and ICU Staff who made the contact.

ICU: Personal: Survey at 6 Months: After 6 Months: Functional Outcome Score

Modified Glasgow Outcome Scale

To see how the questions map to the Modified Glasgow Outcome Scale, click on the *Definitions* button:



ICU: Personal: Survey at 6 Months: After 6 Months: MGOS

Nothing here can be edited, this is for your information only.

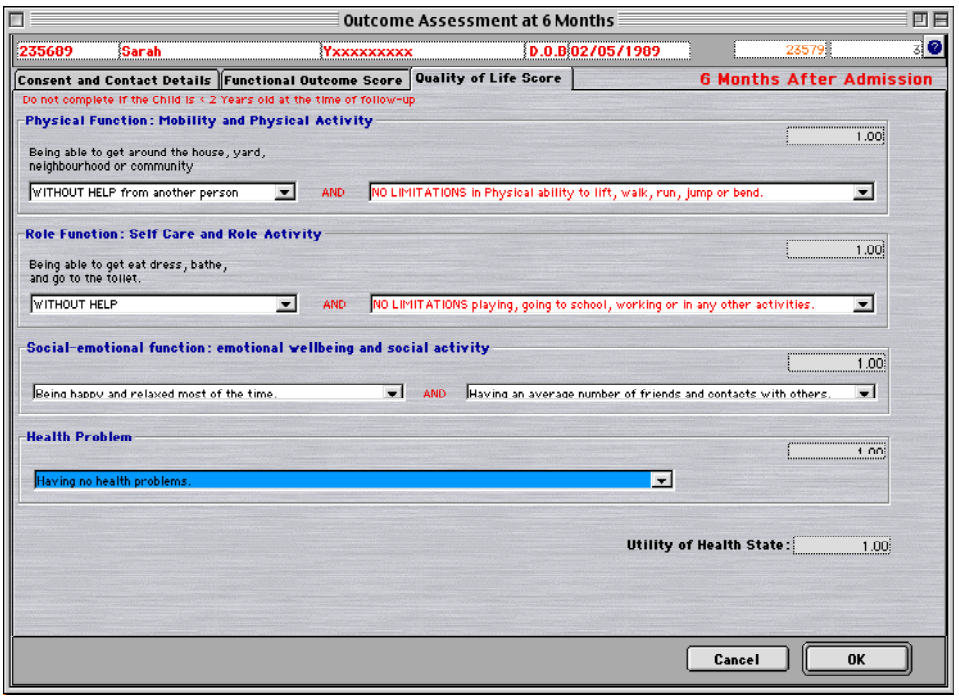
Nature of disability Score

ICU: Personal: Survey at 6 Months: After 6 Months: Nature of disability Score

Double Click an item to Inactivate/Activate.

Move an item up or down in the list by use of the +/- Buttons. The most important item is at the top of the list.

Quality of Life Score



ICU: Personal: Survey at 6 Months: After 6 Months: Quality of Life Score

This area is filled by selecting various options from the screen. The score is calculated automatically based on the selections.

Chapter 41
Data Entry: ICU: Admission

41.1.0 ICU: Admission

Paed: Admission to ICU

999 Sarah Yxxxxxxxxx 23579 23961

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Hospital Admission Information
Direct to ICU Admission data is edited from the ICU area
Part of a Direct to ICU Admission No
Date 05/01/1998 Time 10:25
Source Home or Scene
Retrieval? Yes PETS
Consultant Babl
Unit/Department Emergency
Unit/Department Code Em
Unit/Department Type Medical

ICU Complex Admission Information
Not modified when a patient is 'Moved' within the ICU Complex
Direct to ICU Admission No
Date 07/01/1998 Time 11:10
Source Hospital Ward
Source Detail Emergency East
Direct Admission Details
Reason
Service
ICU Intensivist Butt
ICU Specialist Butt
Anaethetist (Post Op) Barrowcliffe
Surgeon (Post Op) Berkowitz
Emergency Elective? Elective
Unplanned Readmission ? No
Is this a patient admitted to a general ward post-operatively who then required admission to ICU within the first 24 Hrs of surgery ? No
Is this admission to ICU the result of an unexpected intraoperative event in a patient who would not otherwise have gone to ICU? No
Delayed Admission (Previous Refusal) No hrs
Interval since previous Admission 0.00 hrs

Completion Status
Personal
Admission
Diagnosis
Scoring
Discharge
Report

Messages
Paed Central DB Problems : ICUOutcome
Paed Central DB Problems : ICUOutcome
Paed Central DB Problems : ICUOutcome

Location
Current Location ROOM 1

Location	Bed ID	Date In	Date Out
ROOM 1		07/01/1998	12/01/1998

Record Type Paed_Admit_ICU
Record Identifier

Admission Completed by: Shann

Adult: Admission to ICU

1027232 GLENN Yxxxxx 21222 21376

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Hospital Admission Information
Direct to ICU Admission data is edited from the ICU area
Part of a Direct to ICU Admission
Date 05/01/1998 Time 22:55
Source OTHER ACUTE HOSPITAL
Source Detail Maroondah Hospital
Retrieval? No
Consultant ICU CONSULTANT
Unit/Department UGIS
Unit/Department Code
Unit/Department Type Surgical

ICU Complex Admission Information
Not modified when a patient is 'Moved' within the ICU Complex
Direct to ICU Admission
Date 06/01/1998 Time 02:30
Source Op theatre/Recovery room
Direct Admission Details
Reason
Service
ICU Intensivist
ICU Specialist
Anaethetist (Post Op)
Surgeon (Post Op)
Emergency Elective? Emergency
Unplanned Readmission ? No
Is this a patient admitted to a general ward post-operatively who then required admission to ICU within the first 24 Hrs of surgery ? No
Is this admission to ICU the result of an unexpected intraoperative event in a patient who would not otherwise have gone to ICU? No

Completion Status
Personal
Admission
Diagnosis
Scoring
Discharge
Report

Messages

Location
Current Location 1F

Location	Bed ID	Date In	Date Out
High Ward 3		06/01/1998	07/01/1998

Record Type Adult_Admit_ICU
Record Identifier

Admission Completed by: ICU Registrar

ICU: Admission

The Admission area comprises 3 different areas:

Area	Notes
Hospital Admission Information	See ICU: Admission: Hospital Admission Information on page 220.
ICU Complex Admission Information	See ICU: Admission: ICU Complex Admission Information on page 220.
Location Information	See ICU: Admission: Location on page 222.

41.1.1 ICU: Admission: Hospital Admission Information

Area	Details
Date, Time	Enter the Date and Time of Admission to the Hospital. If this is a Readmission to ICU then this is already set. If there is an error with the Date Time entered you will be presented with a warning. See General Features: Date Problems on page 198
Source Source Detail Part of a Direct to ICU Admission	Select the Source of Admission to the Hospital. Depending on what is selected, you may also need to enter Source Details. The options for Source and Source Detail can be modified. See File: Preferences: AD Code on page 143. If this ICU Admission is a Direct to ICU Admission then the Hospital information cannot be edited - it is all set from the ICU Complex information area. In this case you will see *Part of a Direct to ICU Admission* set to *Yes*.
Retrieval	Is this a Retrieval? If it is enter the method used for Retrieval. You may want to cross check if you collect Transport data. See Data Entry: Transport on page 313
Consultant, Unit/Department Name, Code and Type	Enter the Name of the Hospital Admitting Consultant. Only Staff designated as *Hospital Staff: Consultant* can be entered into this field. This can be set in the Staff database. See File: Preferences: Staff & Access on page 51. A Consultant is associated with a default Department. If this Department is NOT set as a *Hospital Admission Department*, then even though the Consultant is a *Hospital Consultant*, the field will NOT be filled automatically. In this case you will have to manually select the Department in which the Admission actually occurred. The Department database can be modified. See File: Preferences: Department on page 151.

ICU: Admission: Hospital Admission Information

41.1.2 ICU: Admission: ICU Complex Admission Information

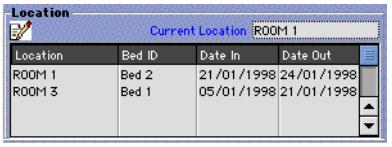
This area is NEVER altered if you are merely Moving a patient within your ICU Complex. In this case the Location within the ICU Complex has changed but IT IS NOT A NEW ADMISSION OR READMISSION TO THE ICU COMPLEX. To *Move* a patient see ICU: Discharge: Move to other ICU Complex location on page 285. If you are unsure about this see General Features: Concept of the ICU Complex on page 195.

Area	Details
Date, Time	Enter the Date and Time of Admission to the ICU. If there is an error with the Date Time entered you will be presented with a warning. See General Features: Date Problems on page 198
Source Source Detail Direct to ICU Admission Direct Admission Details	Select the Source of Admission to the ICU. Depending on what is selected, you may also need to enter Source Details. The options for Source and Source Detail can be modified. See File: Preferences: AD Code on page 143. If this is a Readmission, then the Direct Admit options in the drop down menus are not available - these options are not possible for this type of admission. If this ICU Admission is a Direct to ICU Admission then the Hospital information cannot be edited - it is all set from the ICU Complex information area. In this case you will see *Direct to ICU Admission* set to *Yes*. You will also need to enter *Direct Admission Details - Reason* and *Service*.
ICU Intensivist ICU Specialist Anaesthetist Surgeon	Enter the various ICU and Hospital Staff fields - the source data for this can be modified. See File: Preferences: Staff & Access on page 51. Only Staff designated with the appropriate attributes can be entered into these fields: ICU Intensivist - *ICU Staff: Intensivist* ICU Specialist - *ICU Staff: Consultant* Anaesthetist - *Hospital Staff: Anaesthetist* Surgeon - *Hospital Staff: Surgeon* These settings can be selected in the Staff database. See File: Preferences: Staff & Access on page 51.
Emergency Elective	This is a very important field. It is used by the various scoring systems.
Unplanned Readmission	This can only be set to Yes if this is a Readmission Record type.
Unplanned Post Operative admission Unexpected Intraoperative Event admission	Read the definition very carefully. If in doubt ask a Consultant.
Delayed Admission (Previous Refusal) Interval since previous Admission	Delayed Admission (Previous Refusal) - if there was a Refusal prior to this ICU Admission during the same Hospital admission, then STATIC will calculate the number of hours that have passed since the Refusal. Interval since previous Admission - if there was a previous ICU Admission during the same Hospital admission, then STATIC will calculate the number of hours that have passed since the previous ICU Admission.

ICU: Admission: ICU Complex Admission Information

41.1.3 ICU: Admission: Location

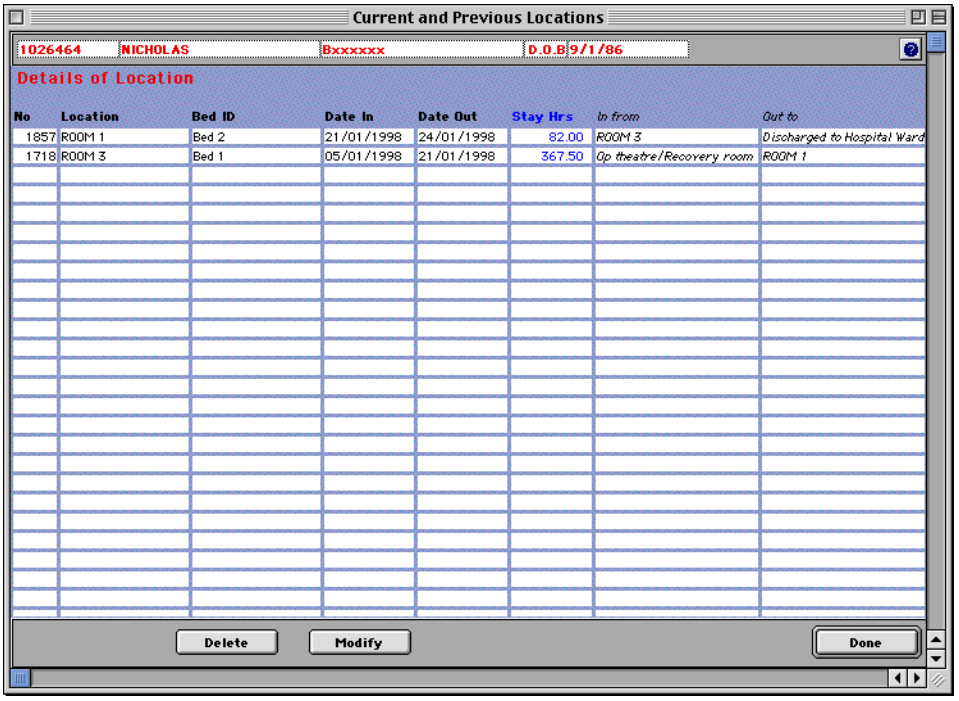
All patients entered into STATIC have an ICU location. This is stored in a record that collects information about their physical location:



ICU: Admission: Location

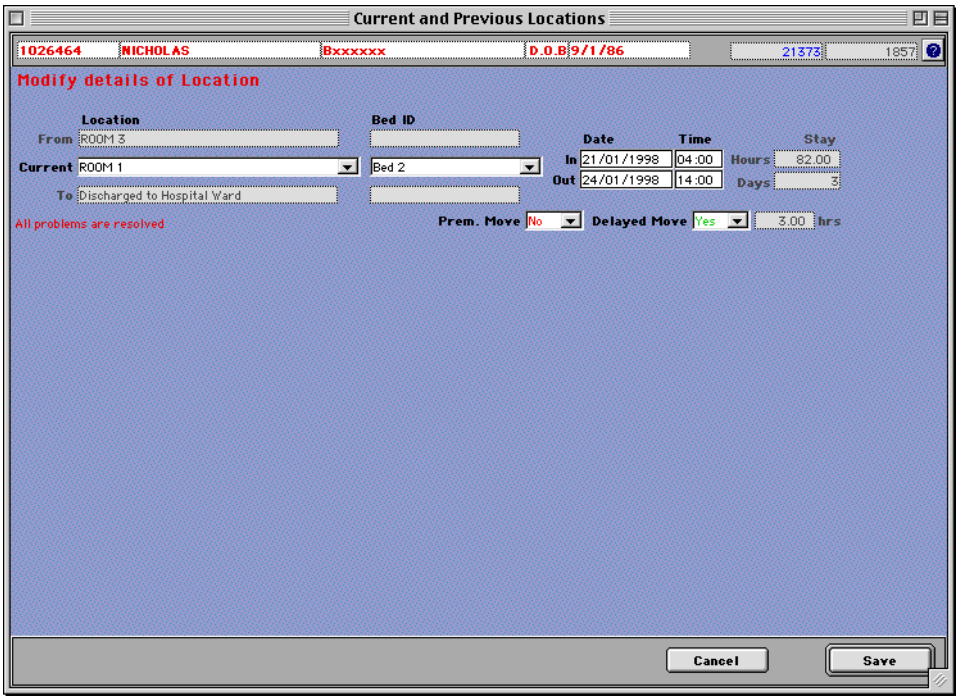
The Current Location of the Patient is always at the top of the list followed by any previous locations. The Current Location is also displayed within its own field.

If you are an Administrator, then clicking the *Further Information* Button will display the following window:



ICU: Admission: Location List

Selecting and double click or click on Modify will display an individual Location record:



ICU: Admission: Location record

You have limited ability to edit this record as most fields are non-enterable. This is deliberate. This section must be kept referentially correct with any previous or next Location record. You will be prevented from making changes which are impossible, such as overlapping location records in terms of Date and Time.

However by carefully choosing the order of records for editing, you should be able to correct most problems.

Chapter 42
Data Entry: ICU: Diagnosis

42.1.0 ICU: Diagnosis

Paed: Admission to ICU

999 Sarah Yxxxxxxxxx 23579 23961

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Presenting Problems: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura kalkuliloj. Du cxambroj kuris blinde, sed Denvero igxis nau malbela arboj, kaj multajvere bela auxtoj rapide skribas ses belega bildoj, sed Kolorado igxis tri tre pura kalkuliloj, kaj multaj rapida hundoj kuris vere bone. Tri bieroj batos du bela arboj, sed tri tre eta kalkuliloj veturas. LondonoTri

Comment: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre

Past History: 256 ,Endocarditis

Primary Reason for Admission: Cardiac Monitoring

FICANZCA Classification: 1. Cardiology

Central Database Diagnosis

Principal ICU Diagnosis	Cardiac Failure	251
Principal Underlying Diagnosis	Cardiomyopathy	253
Associated Diagnosis 1	Dysrhythmia - Ventricular	255
Associated Diagnosis 2		0
Associated Diagnosis 3		0
Associated Diagnosis 4		0
Associated Diagnosis 5		0

Completion Status: Personal, Admission, Diagnosis, Scoring, Discharge, Report

Messages: Paed Central DB Problems : ICUOutcome; Paed Central DB Problems : ICUOutcome; Paed Central DB Problems : ICUOutcome

Record Type: Paed_Admit_ICU

Record Identifier

Diagnosis — Completed by: Shann

Adult: Admission to ICU

1027232 GLENN Yxxxxx 21222 21376

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Presenting Problems: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura kalkuliloj. Du cxambroj kuris blinde, sed Denvero igxis nau malbela arboj, kaj multajvere bela auxtoj rapide skribas ses belega bildoj, sed Kolorado igxis tri tre pura kalkuliloj, kaj multaj rapida hundoj kuris vere bone. Tri bieroj batos du bela arboj, sed tri tre eta kalkuliloj veturas. LondonoTri

Comment: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre

Past History: None

Primary Reason for Admission: Mechanical Ventilation;General Management/Observ.

JFICM Classification: 19. General Surgical

Diagnosis

Principal ICU Diagnosis	GI Perforation/rupture	1401.00
Principal Underlying Diagnosis		0.00
Associated Diagnosis 1		0.00
Associated Diagnosis 2		0.00
Associated Diagnosis 3		0.00
Associated Diagnosis 4		0.00
Associated Diagnosis 5		0.00

Completion Status: Personal, Admission, Diagnosis, Scoring, Discharge, Report

Messages

Record Type: Adult_Admit_ICU

Record Identifier

Diagnosis — Completed by: ICU Registrar

ICU: Diagnosis

The admission area comprises 4 different areas:

Area	Details
Presenting Problems	Presenting Problems - Explanation of the condition. Be aware that the Discharge form can only show the area displayed - overflow may be truncated on printing. Comment - Allows for other information. Past History - See ICU: Diagnosis: Past History on page 226. Primary Reason for Admission - See ICU: Diagnosis: Primary Reason for Admission on page 229.
Classification	JFICM Classification - See ICU: Diagnosis: JFICM Classification on page 230.
Diagnosis Central Database Diagnosis	Adult Admissions - See ICU: Diagnosis: Adult Admissions on page 231. Paediatric Admissions - See ICU: Diagnosis: Paediatric Admissions on page 232.

ICU: Diagnosis page

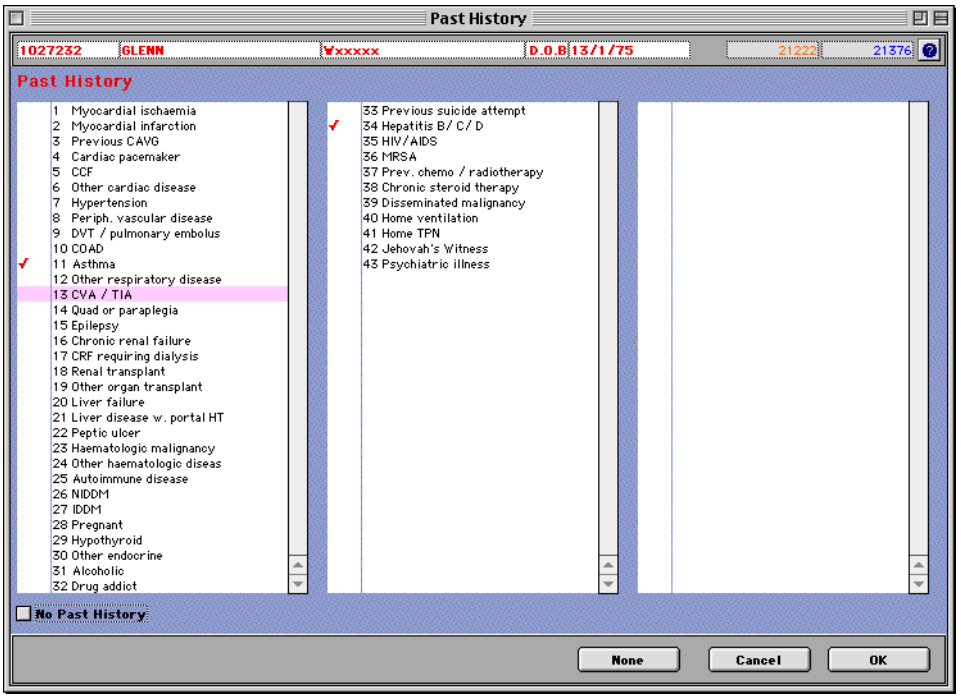
42.1.1 ICU: Diagnosis: Past History

ICU: Diagnosis area: Past History field

Navigating to this field

Use the Tab key to navigate to this field. Once you see the field highlight (internal highlight color set in Workstation: Appearance on page 64) press the Down Arrow key to open the window associated with this field. Or use the mouse to directly click in the field. Whichever method you use a different window will open for Paediatric and Adult admissions.

Adult Past History



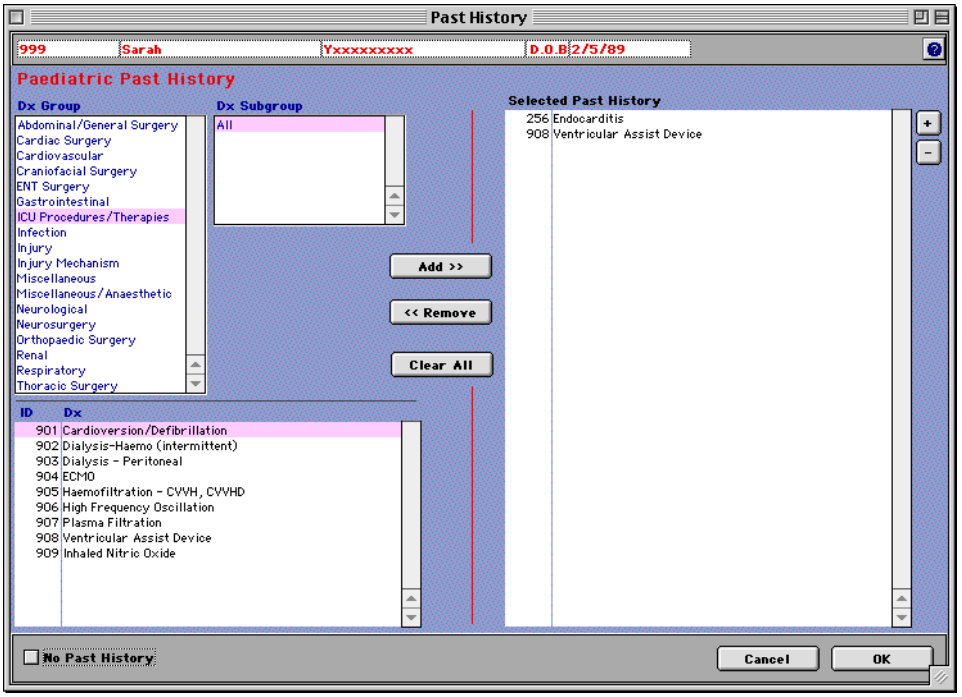
ICU: Diagnosis area: Adult Past History window

Window Items	Purpose
Selection of items	Click on the item required to set a tick in front of the item; click again to deselect.
None	Click the *None* button to deselect all items
No Past History	Will clear all items and complete this section as a validated entry.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

Window Items

The available items are part of a standard list called Diag_PastHistory . This can be edited in Lists: Modify Lists on page 91. Select Alterable lists.

Paediatric Past History



ICU: Diagnosis area: Adult Past History window

Window Items	Purpose
Dx Group	Click on the Dx Group to populate the selectable Dx items.
Dx Subgroup	Some Dx Groups are sub grouped - select the required subgroup to populate the Dx items
Dx	This is the list of selectable Dx items for the Dx Group (and subgroup) selected. Select an item, then click the *Add* button to move it to the Selected Past History list.
Selected Past History	List of selected Dx arranged in order of importance. Use the + and - buttons to change the order of importance of selected items.
Add>>	Click the *Add*>> button to add the selected Dx to the Selected Past History list.
<<Remove	Click the <<*Remove* button to remove a selected Dx in the Selected Past History list.
Clear All	Will clear all items and complete this section as a validated entry.
+ Button	Move a selected Dx in the Selected Past History list up.
- Button	Move a selected Dx in the Selected Past History list down.
No Past History	Will clear all items and complete this section as a validated entry. Will enter None .
Cancel	Cancel entry, do not accept any changes made.
OK	Accept changes made.
Close Box	Click the close box to close the Window.

Window Items

The data used to populate this window comes from File: Preferences: Diagnosis on page 103.

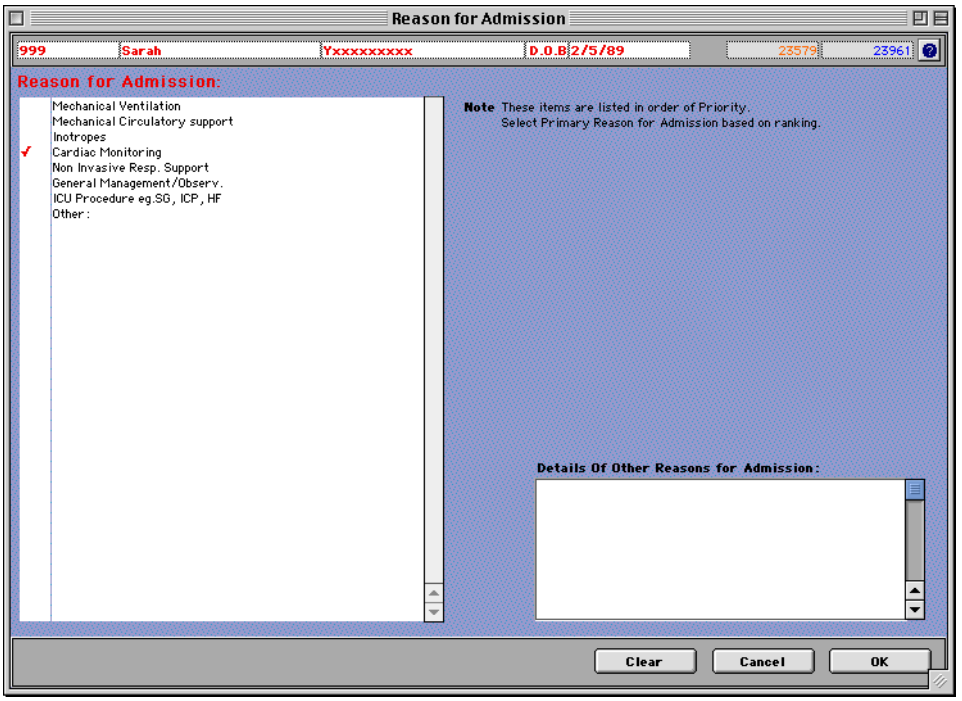
42.1.2 ICU: Diagnosis: Primary Reason for Admission

ICU: Diagnosis area: Primary Reason for Admission field

Navigating to this field

Use the Tab key to navigate to this field. Once you see the field highlight (color set in File: Preferences: Workstation: Appearance) press the Down Arrow key to open the window associated with this field. Or use the mouse to directly click in the field.

Whichever method you use the following window will open:



ICU: Diagnosis area: Primary Reason for Admission window

Select the items you require and a tick will appear in front of the item. Select the item again to remove the tick.

If you select the **Other:** item, the **Details of Other Reasons for Admission** will become active and allow you to enter information.

Clear - will clear all items already selected.

Cancel - will dismiss this dialog without saving your changes

OK - will dismiss this dialog and save your changes.

The available items are part of a standard list called Diag_ReasonAdmit . This can be edited in Lists: Modify Lists on page 91. Select Alterable lists.

42.1.3 ICU: Diagnosis: JFICM Classification

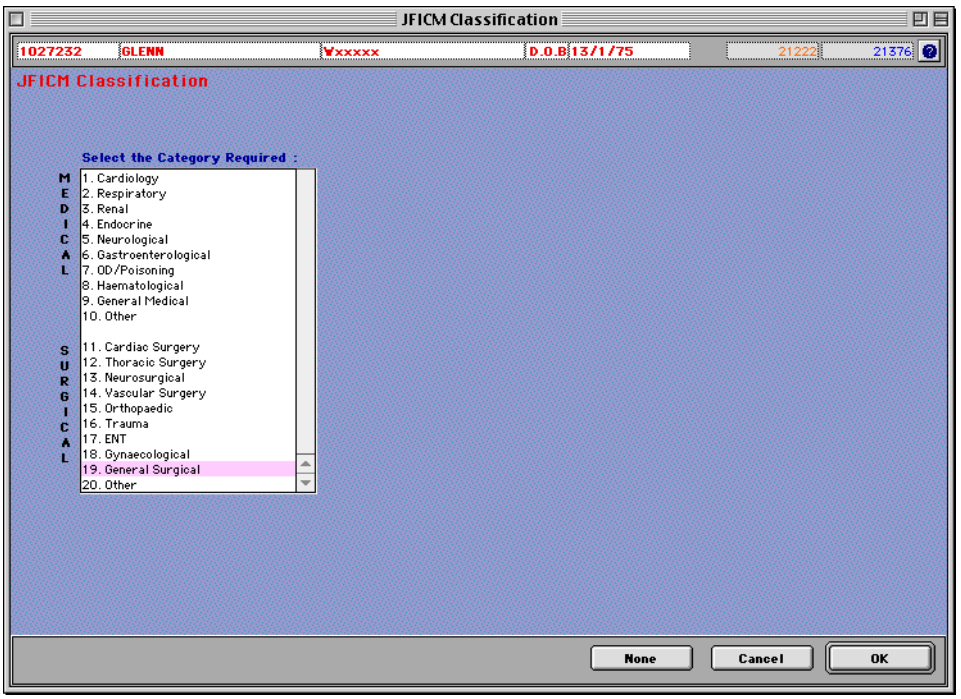
ICU: Diagnosis area: JFICM Classification field

Navigating to this field

Use the Tab key to navigate to this field. Once you see the field highlight (color set in File: Preferences: Workstation: Appearance) press the Down Arrow key to open the window associated with this field. Or use the mouse to directly click in the field.

Opening the window

Whichever method you use the following window will open:



ICU: Diagnosis area: JFICM Classification window

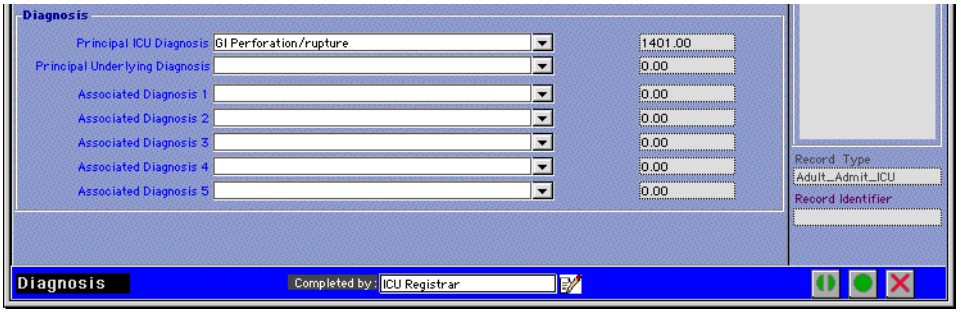
Select the item you require. The line will highlight. Only one item can be selected

None - will clear the selection

Cancel - will dismiss this dialog without saving your changes

OK - will dismiss this dialog and save your changes.

42.1.4 ICU: Diagnosis: Adult Admissions



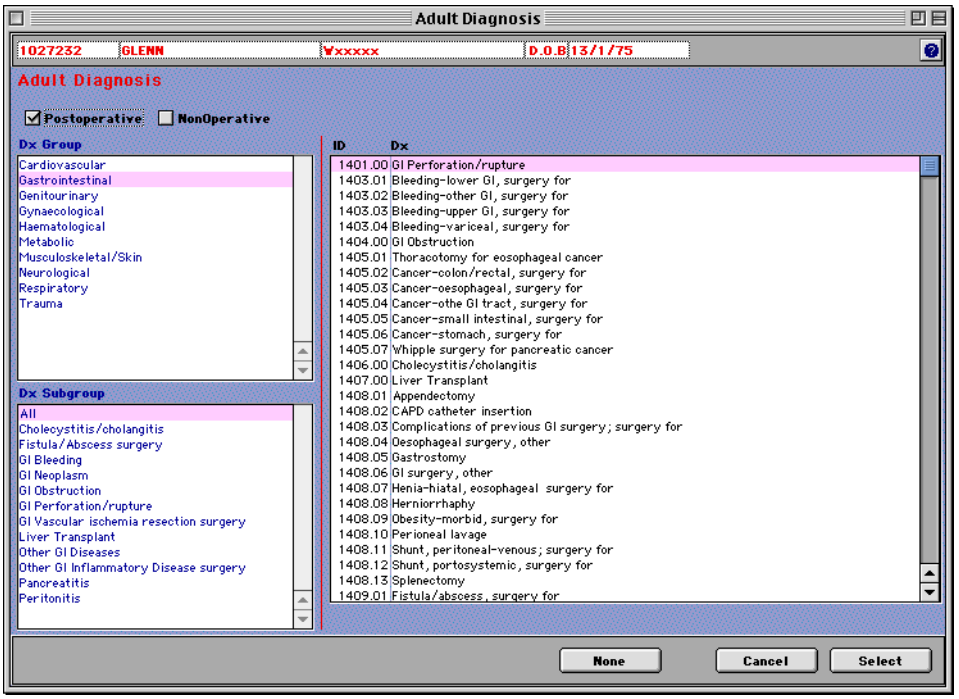
ICU: Diagnosis area: Adult Admissions

Navigating to this field

Use the Tab key to navigate to any of these fields. Once you see a field highlight (color set in File: Preferences: Workstation: Appearance) press the Down Arrow key to open the window associated with this field. Or use the mouse to directly click on a field. The numeric code is the Diagnosis ID as specified in File: Preferences: Diagnosis on page 103.

Opening the window

Whichever method you use the following window will open:

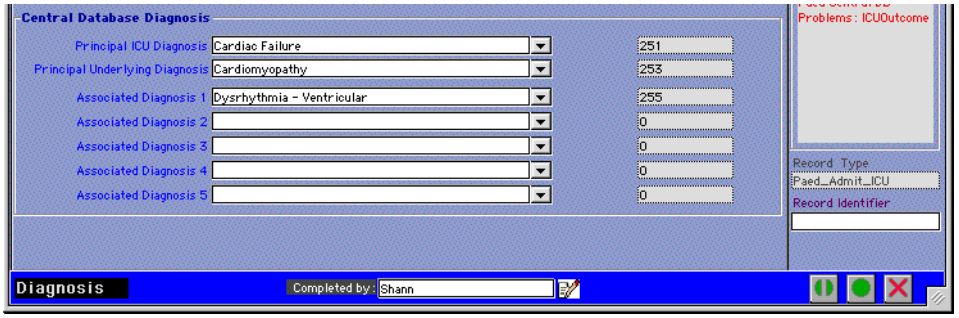


ICU: Diagnosis area: Adult Diagnosis window

Controls	Action
PostOperative and NonOperative	Click on either of these check boxes and the Dx Groups list will change.
Dx Group and Subgroup	Select the Dx Group item you require. The item will highlight. Next select from the Dx Subgroup if you wish or leave this set to All . Now select the Dx required from the available Dx that display. Only Apache 3 diagnoses will display when you select Principal ICU and Principal Underlying Diagnosis fields. For the Associated Diagnosis fields, all possible diagnoses will display.
Dx and ID	The selected Dx will highlight. The ID refers to the internal designation given to this Dx in File: Preferences: Diagnosis on page 103.
None	Will clear the selection
Cancel	Will return you to the previously saved state of this window.
Select	Will exit this window saving the changes

Controls

42.1.5 ICU: Diagnosis: Paediatric Admissions



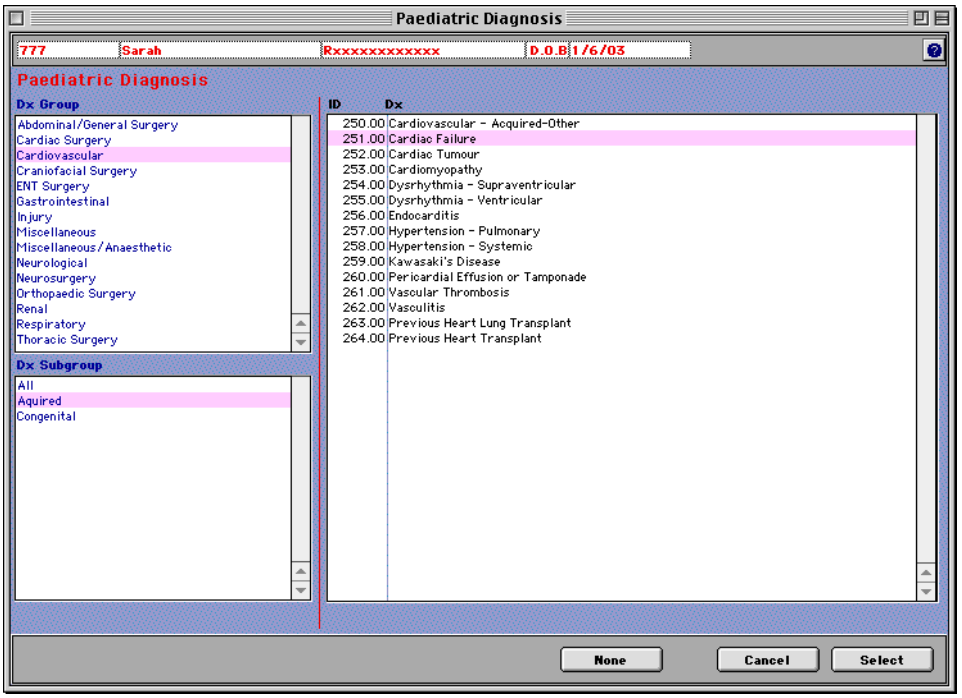
ICU: Diagnosis area: Central Database Diagnosis

Navigating to this field

Use the Tab key to navigate to any of these fields. Once you see a field highlight (color set in File: Preferences: Workstation: Appearance) press the Down Arrow key to open the window associated with this field. Or use the mouse to directly click on a field. The numeric code is the Diagnosis ID as specified in File: Preferences: Diagnosis on page 103.

Opening the window

Whichever method you use the following window will open:



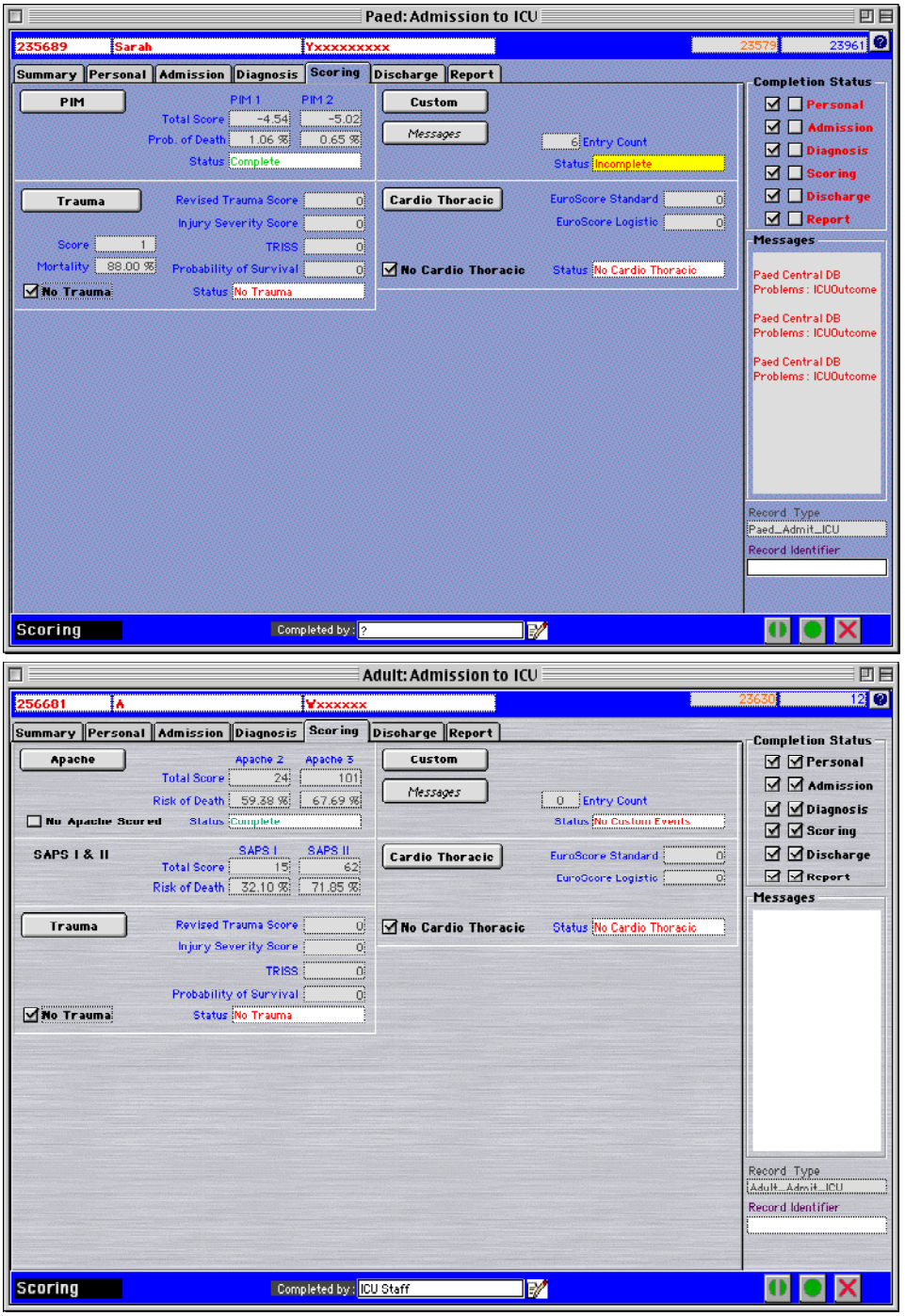
ICU: Diagnosis area: Paediatric Diagnosis window

Window Items	Purpose
Dx Group	Click on the Dx Group to populate the selectable Dx items.
Dx Subgroup	Some Dx Groups are sub grouped - select the required subgroup to populate the Dx items
Dx	This is the list of selectable Dx items for the Dx Group (and subgroup) selected. Select an item, then click the *Select* button to move it to the field clicked on to open this window.
None	Will clear selected item.
Cancel	Cancel entry, do not accept any changes made.
Select	Accept changes made.
Close Box	Click the close box to close the Window.

The data used to populate this window comes from File: Preferences: Diagnosis on page 103.

Chapter 43
Data Entry: ICU: Scoring

43.1.0 ICU: Scoring



ICU: Scoring

The Scoring area comprises several areas that allow you to complete the available scoring systems. The scoring systems available is controlled by settings in File: Preferences: Mandatory Data on page 83:

Area	Details
Apache II and III	See ICU: Scoring: Apache II & III and SAPS I & II on page 250.
SAPS I and II	This is automatically derived from the data collected for Apache 2 and 3. See ICU: Scoring: Apache II & III and SAPS I & II on page 250.
PIM I and II	See ICU: Scoring: PIM on page 260.
Custom	See ICU: Scoring: Custom on page 236.
Trauma	See ICU: Scoring: Trauma on page 242
Cardio-Thoracic	See ICU: Scoring: Cardio Thoracic on page 247.

ICU: Scoring page

43.1.1 ICU: Scoring: Custom

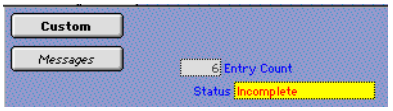
Introduction to this area - please read carefully

This area is intended for data collection of a temporary or experimental nature.

The area comprises 4 distinct parts.

1. Available Custom Events are defined in File: Preferences: Custom on page 135.
2. After entering the Custom area, a window will display all Custom Events that have been defined. This area allows for the addition of Custom Events to the current Admission. It also allows the review of Summary Records for the Custom Event.
3. There are 3 types of Custom Events: Discrete, Value and Interval Events. Each one has its own entry form that captures slightly different data.
4. There is also a Summary Record for each Custom Event that provides additional information such as errors due to overlapping Date time intervals and Totals.

These areas are very tightly bound to each other to ensure referential integrity. For instance changing the Custom Event Define record in any way will update all Custom Event and Custom Summary Event records within the database that used this definition. Changes to a Custom Event record (such as deletion) will automatically update the Custom Summary record and the Custom Display area.



ICU: Scoring: Custom

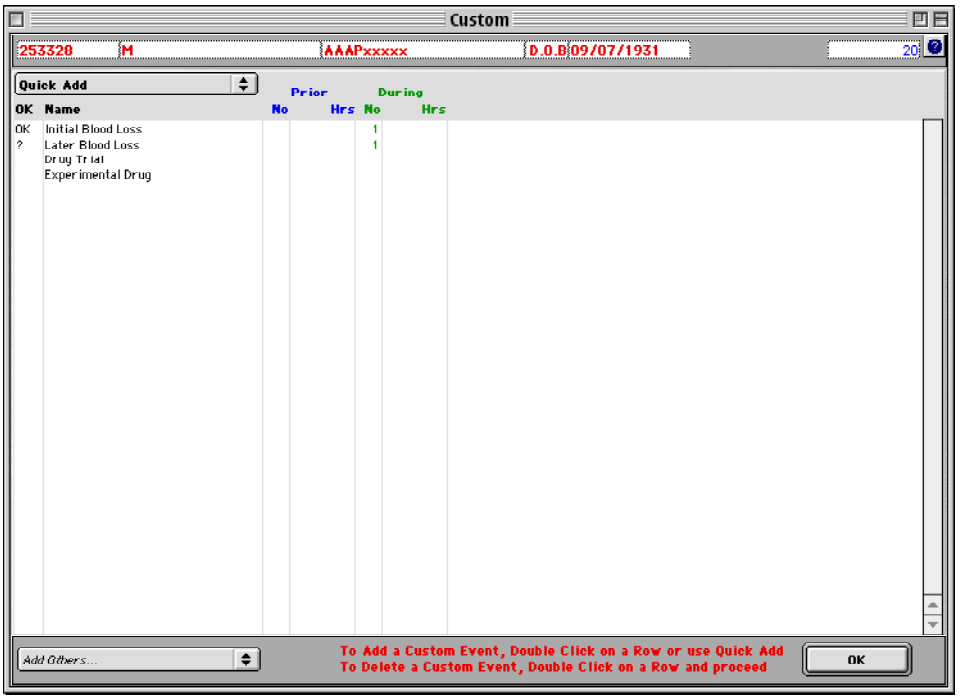
Window Items	Purpose
Custom	Button that takes you to the Custom event display and selection area

Window Items

Window Items	Purpose
Messages	Button that will display all Messages set for a Custom event in its own window. These messages are usually information related to the event such as a malfunction or side effect of the event. See below.
Entry Count	Number of entries for this Custom area defined.
Status	Can be *Incomplete*, *OK* or *No Custom Events*.

Window Items

Click on *Custom* button to enter this area:



ICU: Scoring: Custom: Custom display area

Window Items	Action
Main Display area	This is a summary area for the Custom events already added and for the possible Custom Events that could be added to this admission. All Custom events that were defined as *Default =Yes* or *Mandatory* in File: Preferences: Custom on page 135 are automatically displayed in this window. Events already added will have text in the *OK, No* or *Hrs for Prior or During* columns. These columns provide summary information. If there are incomplete events for a row then the *OK* column will display a *?* mark. You can access the Summary record by a double click on the row. See below. In the example above, there are 4 possible Custom items available for selection: The item *Experimental Drug* and *Drug Trial* has not yet had any events created for it. This is why there is no entry for this item in the *OK, No* or *Hrs for Prior or During* columns. The item *Initial Blood Loss* has 1 event created for it and it occurred *During* ICU. This is why there is a *1* in the *During No* column and because all items have been completed properly the *OK* entry for this item is set to *OK.* The item *Later Blood Loss* has 2 events created for it and they both occurred *During* ICU. One of these events is incomplete. This is why there is a *1* instead of a *2* in the *During No* column and the *OK* entry for this item is set to*?.*

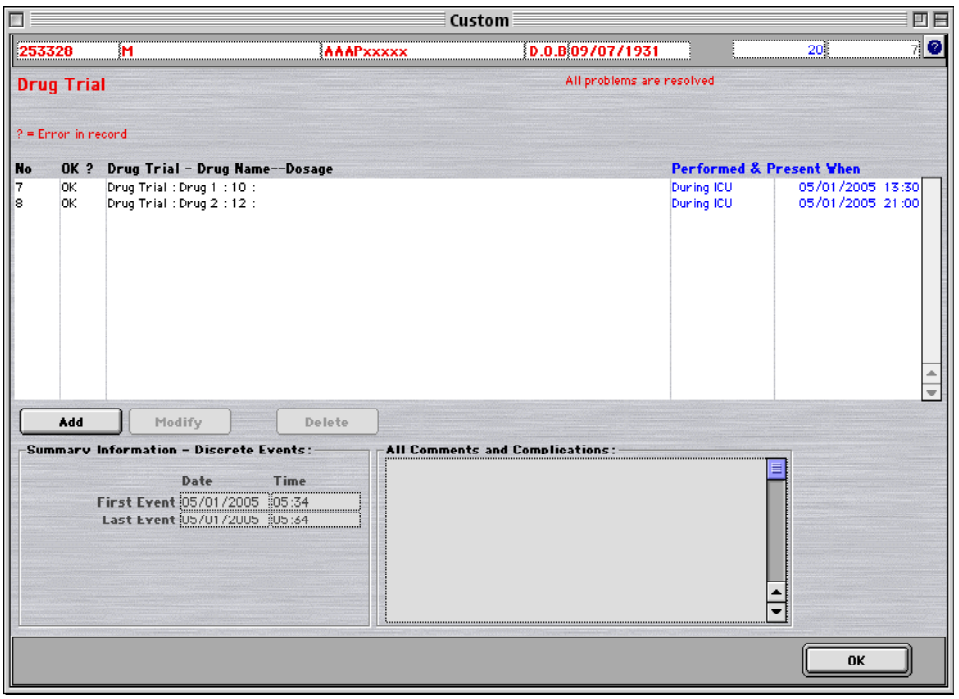
Window Items

Window Items	Action
Quick Add drop down list	Selection of a Custom Event from this list, will open a new entry form for the selected Event. See below.
Add Other...	Little used Events are set to be Default=No in Custom: Add Record on page 137 and are thus not available directly from the main display area. Once the item has been selected from the drop down menu it will appear within the display area for that admission even if no events are ever created for it. The reason for this arrangement is to reduce clutter and only show the most commonly selected items in the main display area. You can delete the added item by selecting it and clicking the *Delete* button as long as an event has not been created for that item within the Admission.
OK	Close window.

Window Items

Summary record for Events

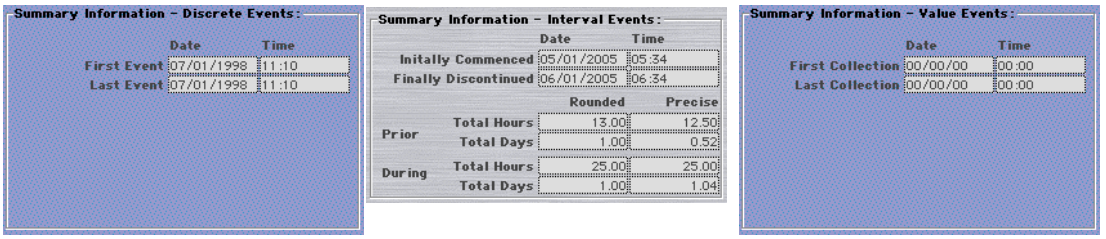
Double click on a row in the Main Display area to open its Summary record:



ICU: Scoring: Custom: Summary record of Events

The Main Display area shows the Events already created for this Custom item. The display differs depending on what type of event is displayed.

There are 3 Summary record forms - Discrete, Interval and Value forms. They are very similar in nature. In fact the main difference is in the Summary Information displayed:

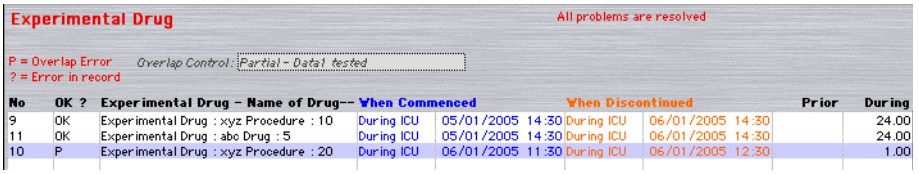


ICU: Scoring: Custom: Summary record of Events: Information

To edit a Custom Event displayed, Double Click on it or select and click *Modify* button.

To delete a Custom Event displayed, select it and click the *Delete* button.

Summary Errors



ICU: Scoring: Custom: Summary record of Events: Overlap Error

If there is an Overlap error, then the *OK?* column will display a *P;* see above. Note that the Overlap control for this Custom area is set to Data1 Tested. This means that as soon as there are 2 entries with the same Name of Drug there is an overlap error. if the Date Times overlap. In the example above this has happened for xyz Procedure

See We will now take you through the creation of a complex Custom Event - Experimental Drug: on page 138 for details on Overlap Errors.

The Overlap error is determined by the following settings:

None - Data1&2 tested: No overlap is ever allowed for any events that bear the same Name.

Partial - Data1 tested: Overlap is allowed when Data1 for two events are different even though the Name of the events are the same. The value of Data2 is ignored completely. For instance Respiratory Support; if two events are both Route=Endotracheal then there may be a Overlap error if the intervals coincide. On the other hand if one has Route=Nasopharyngeal and the other is Route=Endotracheal and the intervals overlap then the system will allow this even though it is an overlap.

Partial - Data2 tested: Overlap is allowed when Data2 for two events are different even though the Name of the events are the same. The value of Data1 is ignored completely. For instance Respiratory Support; if two events are both Type=CPAP then there may be a Overlap error if the intervals coincide. On the other hand if one has Type=CPAP and the other is Type=JET and the intervals overlap then the system will allow this even though it is an overlap.

Complete: Overlap is always allowed. May be required when two events need to be tracked separately and are exactly the same.

If there is an error within the actual Custom Event record then the *OK?* column will display a *?*. If there is an error such as these, then the record in error is not counted for statistical purposes.

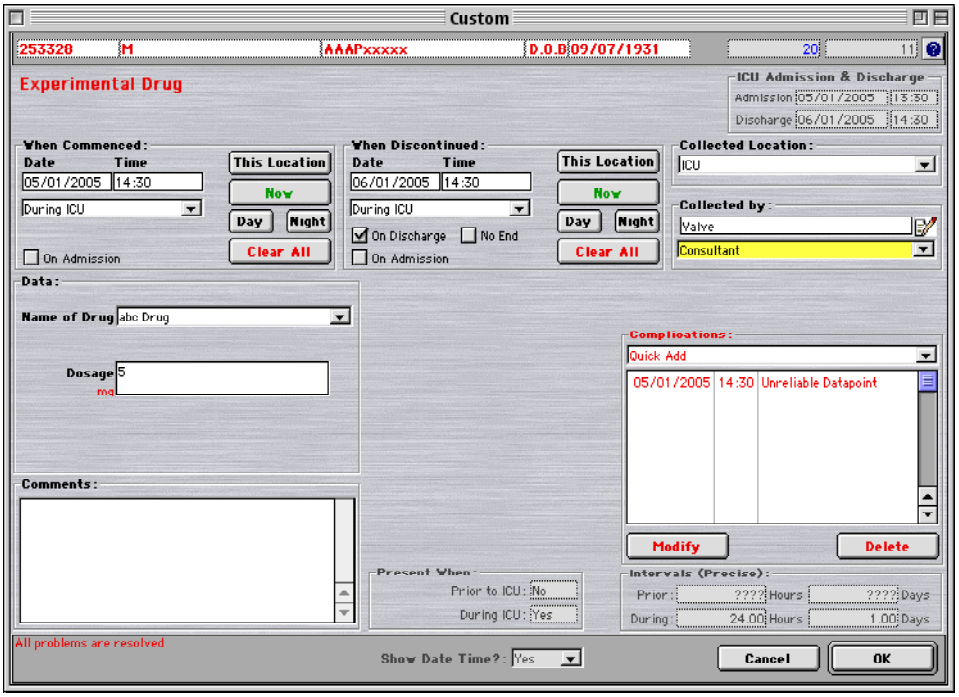
Adding a new Custom event record

There are two ways of adding a new Custom event:

a Select the item required from the *Quick Add* drop down menu
You will be presented with the appropriate new event form for the selected item.

b Add an item from the Main Display area.
Double click on the line required in the Main Display area. The Summary Record for the item will appear. Click the *Add* button to open the appropriate form for the selected item. See above.

Whichever method is used a form similar to the one below will display. What is displayed is determined by the type of Event and the details as specified in the Define record for that event:



ICU: Scoring: Custom: Detail record of Events

When Items	Action
When Commenced Discontinued Date Time and During/Prior Drop Down menu item	Collection of the Date Time data for this Event. What is collected here is determined by the type of record. If it is an *Interval* type record then both sections will be visible otherwise only *When Commenced* is visible. The program will automatically determine if an entry is valid and will determine if the event occurred Prior or During ICU. If you are not collecting Date Time details, you can still select the Prior and During status of the Event directly.
This Location button	Sets the Date and Time to the Date and Time of Admission (for When Commenced) and Discharge (for When Discontinued) to the Current Location.
Day and Night buttons	Sets the time to the defaults set in Database: Shift Times on page 70. Unless they have been altered, these are set 09:00:01 for Day and 21:00:01 for Night.
Now	Enters the Current Data and Time. However restricts the Date and Time to something that makes sense for the Admission in question.
Clear All	Clears all data entered for *When Commenced* or *When Discontinued*.

When Area Items

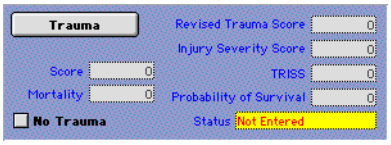
When Items	Action
On Admission checkbox On Discharge checkbox	Sets the Date and Time to the Date and Time of Admission/Discharge. Also forces the record to be updated if the Date or Time of Admission/Discharge is subsequently changed. You can select this checkbox in the absence of a Date or Time of Admission/Discharge and be confident that the Date and Time will be updated when it is available and entered.
No End checkbox	This has the same behaviour as the *On Discharge* checkbox but also indicates that the event continued after Discharge from ICU.
Show Date Time? drop down menu	This is preset to what is set in the Define record for this Event. Use this control to override the default set in the Define record. If set to *No*, all the Date Time controls become invisible and the *When* status is solely determined by the drop down menu in the *When* areas.
Present When	Automatically determined by the choices made in the *When* areas. There is also a corresponding *Performed When* field not displayed here.
Intervals	Display of intervals calculated from the Date Time data entered.

When Area Items

Data Items	Action
Data	Various fields that need to be completed. These fields are determined by the Define record for this Event. See File: Preferences: Custom on page 135 for details on how these are defined.
Collected/Performed Location	The location at which this Event occurred.
Collected/Performed By	The name of the staff member who performed the Event followed by the Level of Seniority. The Level is set automatically if set in the Staff database see File: Preferences: Staff & Access on page 51. Otherwise you can set this on the fly using the drop down control.
Complications	Add a complication to this Event from a drop down list. This list is generated from entries in File: Preferences: Complication on page 129. There is a separate list for Adult and Paediatric entries. See Complication: Selection of Complications Interface on page 132 for details on this area. Once a Complication is created, you can Delete it by use of the Delete button. Modify the Complication by double click of the item or select the item and click the Modify button.
Comments	Add any other comments that you wish within this area.
Cancel	Cancel all changes and close window.
Save	Save changes and close window.

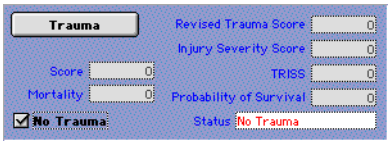
Data Items

43.1.2 ICU: Scoring: Trauma



ICU: Scoring: Trauma Scoring area

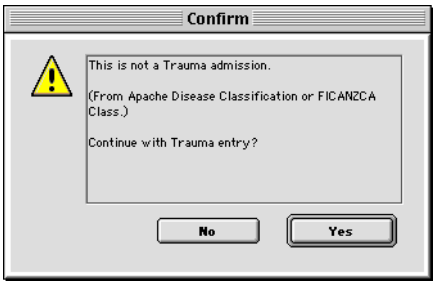
You can at this stage elect to set this area as No Trauma present. This would complete the area:



ICU: Scoring: NoTrauma Present

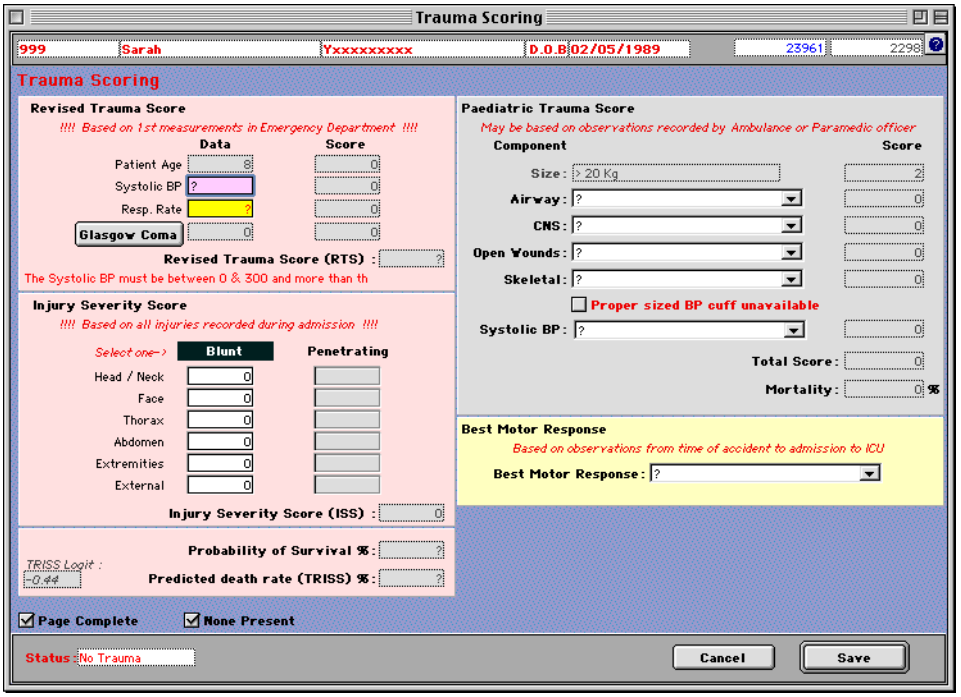
Opening the window

Click on *Trauma* button to open the Trauma Score window. If this is not a trauma patient as far as Diagnosis is concerned you will be warned:



ICU: Scoring: Not Trauma: Warning

The following window will open:



ICU: Scoring: Trauma Score window

Window Items	Action
Revised Trauma Score and Injury Severity Score	Scoring System as described in: Baker SP et al. The injury severity score: a method for describing patients with multiple injuries and evaluating emergency care. J Trauma 1974;14:187-96. Champion HR et al. A Revision of the Trauma Score. J Trauma 1989;29:623-9. Boyd CR et al. Evaluating Trauma Care: The TRISS Method. J Trauma 1987;27:370-8. Champion HR et al. Coefficients update. J Trauma 1995 Editorial Comment. 38:94-5.
Paediatric Trauma Score	Scoring System as described in: Tepas JJ et coll. The Pediatric Trauma Score as a predictor of injury severity in the injured child. J. Pediat. Surg. 1987;22:14-8. Ramenofsky M et coll. The Predictive Validity of the Pediatric Trauma Score. J. Trauma 1988;28:1038-42.
Best Motor Response	Paediatric: Set this drop down to the best motor response from scene of accident to admission to ICU.
None Present	Sets this area if there is no trauma
Page Complete	Check this when you have no more information to enter into this page
Cancel	Ignore all changes and Exit this window
Save	Record all changes and Exit this window

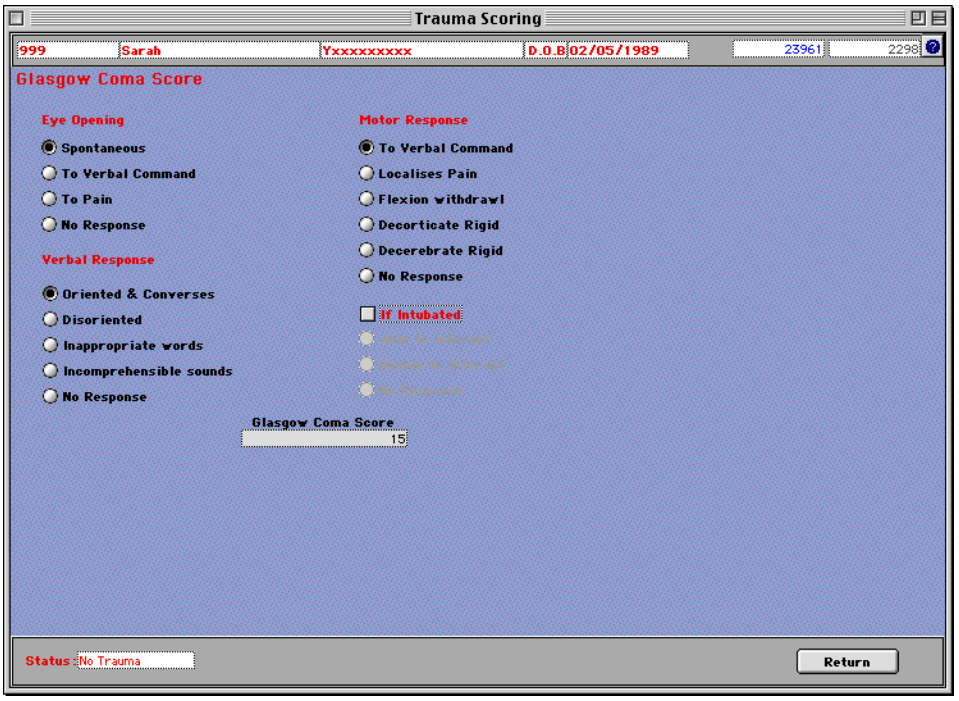
Other Controls

43.1.3 ICU: Scoring: Trauma: Revised Trauma Score

Systolic Blood Pressure - enter a value or N if the value was not measured but probably normal or ? if unknown value.

Resp. Rate - enter a value or N if the value was not measured but probably normal or ? if unknown value.

Glasgow Coma button - Clicking this will display this window:



ICU: Scoring: Glasgow Coma Score

Complete this area as required.

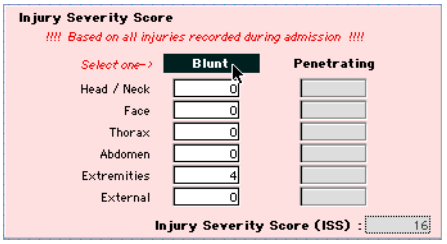
43.1.4 ICU: Scoring: Trauma: Injury Severity Score

Blunt or Penetrating

Blunt injury: Non-penetrating, but including crush, laceration, amputation and asphyxia.

Penetrating injury: Bullet, knife, or spike.

Select which type of injury it is by clicking on the title:



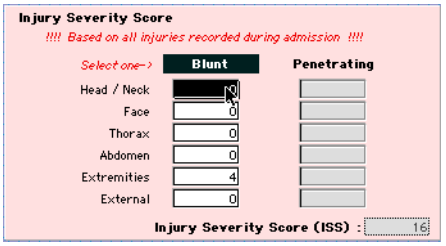
ICU: Scoring: Blunt Trauma

A confirm box will display:

ICU: Scoring: Blunt Trauma Confirm

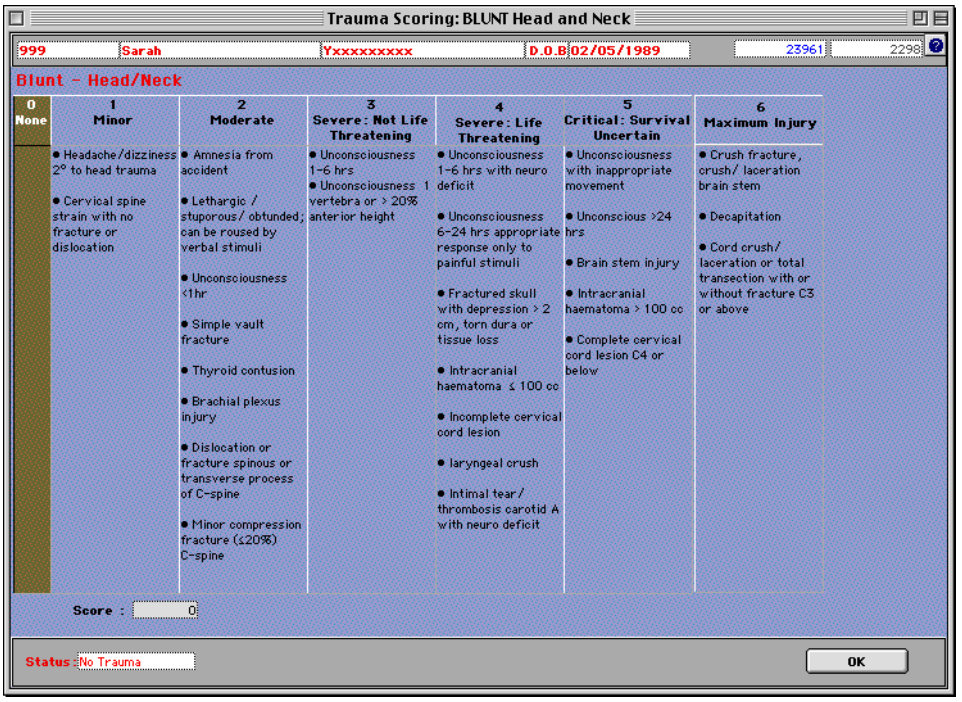
If you click the Penetrating title a corresponding Confirm box will show for that selection.

Click the score fields for each body area to select the score for that area:



ICU: Scoring: Click in Blunt score area

In this case the Head / Neck is selected and the following window will display:



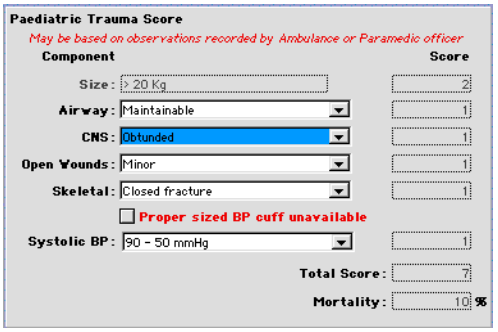
ICU: Scoring: Blunt Trauma Head /Neck

Select one of the columns and click **OK**.

Repeat this for all the body areas as required.

43.1.5 ICU: Scoring: Trauma: Paediatric Trauma Score

Paediatric forms only.



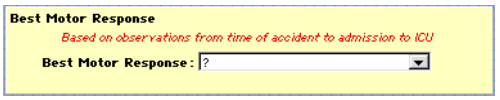
ICU: Scoring: Paediatric Trauma Score

Window Items	Action
Airway	Normal: A child whose airway is completely within normal limits and require no additional supportive measures. Maintainable: A child whose airway is partially obstructed and who requires simples measures for protection such as head positioning, oral airway or mask oxygen delivery. Unmaintainable: A child whose airway requires more definitive management and demands a degree of expertise that will allow intubation, cricothyroidotomy, or other invasive procedures.
CNS	Awake: The child who has sustained no loss of consciousness and is fully awake. Obtunded: The child who has any degree of obtundation or who has sustained a loss of consciousness no matter how transient. Comatose: The child who is totally nonresponsive.
Other fields	Complete as appropriate.

Other Controls

Best Motor Response

Paediatric forms only.



ICU: Scoring: Best Motor Response

Select the item from the drop down list that best describes the best response between site of accident and admission.

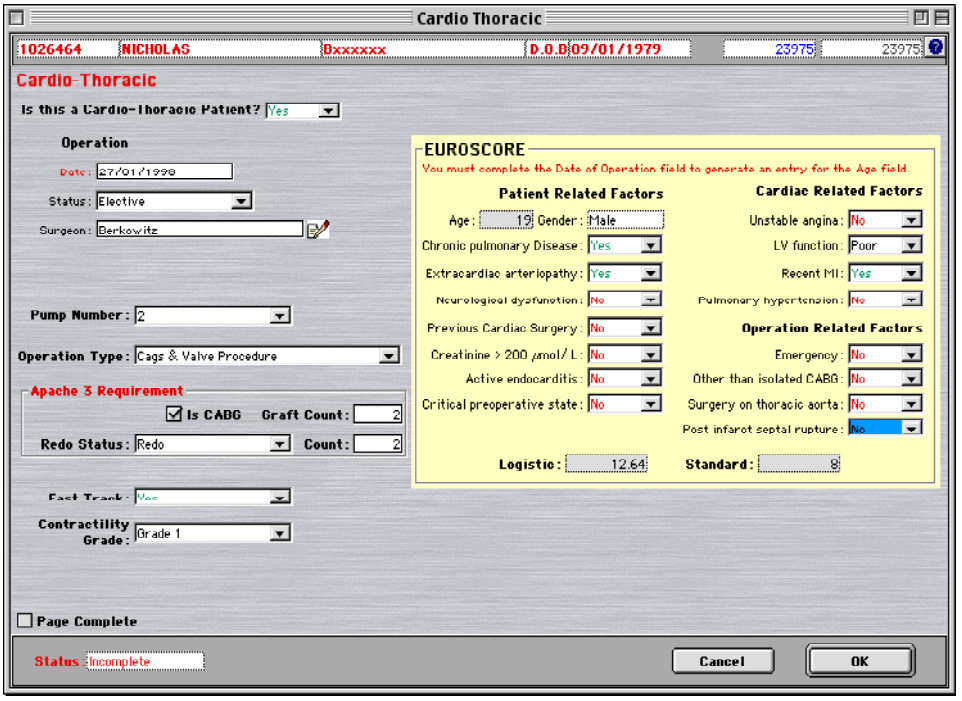
43.1.6 ICU: Scoring: Cardio Thoracic

ICU: Scoring: Cardio Thoracic area

Window Items	Action
Cardio Thoracic	Click the *Cardio Thoracic* button to enter the area. If the current admission details do not indicate that this is a CT admission, you will be warned.
Euroscore Standard Euroscore Logistic	Euroscore results
No Cardio Thoracic	Setting this checkbox completes the entry and sets CT to No Cardio Thoracic.
Status	Can be *Incomplete*, *Complete* or *No Cardio Thoracic*.

Other Controls

Click the *Cardio Thoracic* button to enter the area. The following window will display:



ICU: Scoring: Cardio Thoracic Window

Other Controls	Action
General CT fields	Most of the Fields are filled using Drop down lists and are self explanatory. Some of these fields are used by Apache 3 when the diagnosis is CABG. See below.
EUROSCORE	Scoring system as described in: Roques F, Michel P, Goldstone AR, Nashef SA. The logistic EuroSCORE. Eur Heart J. 2003 May;24(9):882-3 Nashef SA, Roques F, Hammill BG, Peterson ED, Michel P, Grover FL, Wyse RK, Ferguson TB.° Validation of European System for Cardiac Operative Risk Evaluation (EuroSCORE) in North American cardiac surgery. Eur J Cardiothorac Surg. 2002 Jul;22(1):101-5. Nashef S.A.M. et al. European system for cardiac operative risk evaluation (EuroSCORE). Eur J Cardiothorac Surg, 1999;16:9-13.
Page Complete	Check this when you have no more information to enter into this page and the page is considered complete.
Cancel	Discard all changes and Exit this window
Save	Save all changes and Exit this window

Other Controls

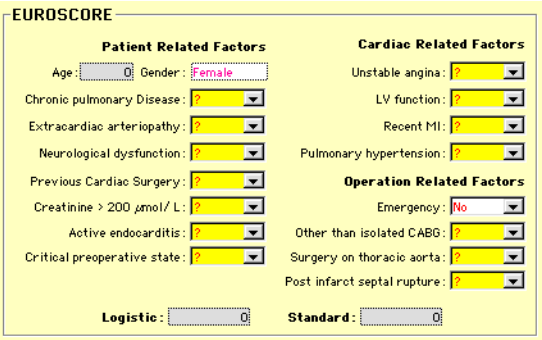
Fields relevant for Apache 3

Some fields collected here are important for Apache 3 data collection:

ICU: Scoring: Cardio Thoracic: Apache 3 fields

Some of these fields are only visible when appropriate. For instance *Graft Count* does not become visible until the *Is CABG* checkbox is selected.

43.1.7 ICU: Scoring: Cardio Thoracic: EUROSCORE



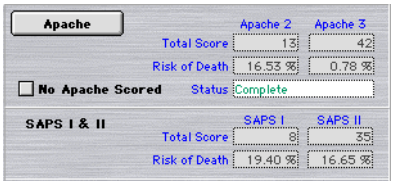
ICU: Scoring: Cardio Thoracic: EUROSCORE

Field Label	Instruction
Chronic pulmonary disease	Long term use of bronchodilators or steroids for lung disease.
Extracardiac arteriopathy	Any one or more of the following: claudication, carotid occlusion or > 50% stenosis, previous or planned intervention on the abdominal aorta, limb arteries or carotids.
Neurological dysfunction	Disease severely affecting ambulation or day-to-day functioning.
Previous cardiac surgery	Requiring opening of the pericardium.
Serum Creatinine	> 200 mmol/l preoperatively.
Active endocarditis	Patient still under antibiotic treatment for endocarditis at the time of surgery.
Critical preoperative state	Any one or more of the following: ventricular tachycardia or fibrillation or aborted sudden death, preoperative cardiac massage, preoperative ventilation before arrival in the anaesthetic room, preoperative inotropic support, intraaortic balloon counterpulsation or preoperative acute renal failure (anuria or oliguria, <10 mL/h).
Unstable angina	Rest angina requiring IV nitrates until arrival in the anaesthetic room.
LV dysfunction	Moderate or LVEF 30—50%; Poor or LVEF,30%
Recent myocardial infarction	<90 days
Pulmonary hypertension	Systolic PA pressure.60 mmHg
Emergency	Carried out on referral before the beginning of the next working day.
Surgery on thoracic aorta	For disorder of ascending, arch, or descending aorta.
Other than isolated CABG	Major cardiac procedure other than or in addition to CABG

Other Controls

43.1.8 ICU: Scoring: Apache II & III and SAPS I & II

Note: The Apache and SAPS scoring specification require you to fill values from the 1st 24 Hours after admission to ICU.



ICU: Scoring: Apache and SAPS area button

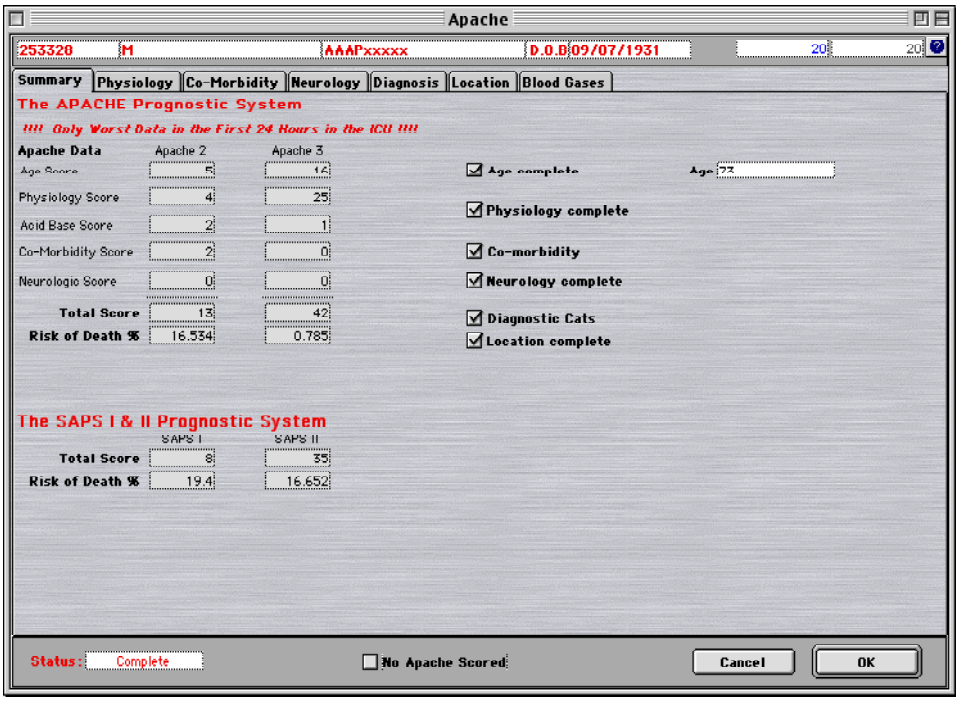
No Apache Scored

Tick this box if Apache is not to be scored for this Admission - you can still collect values within the form but the scores are all set to -1 and display as ?. This box can also be set within the Apache form itself. It is a nondestructive option that merely ignores the state of the data collected within the form and disallows Apache scoring.

Opening the window

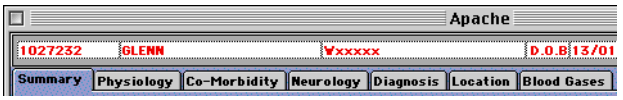
Click on *Apache* **button** to open the Apache Scoring window.

The following window will open:



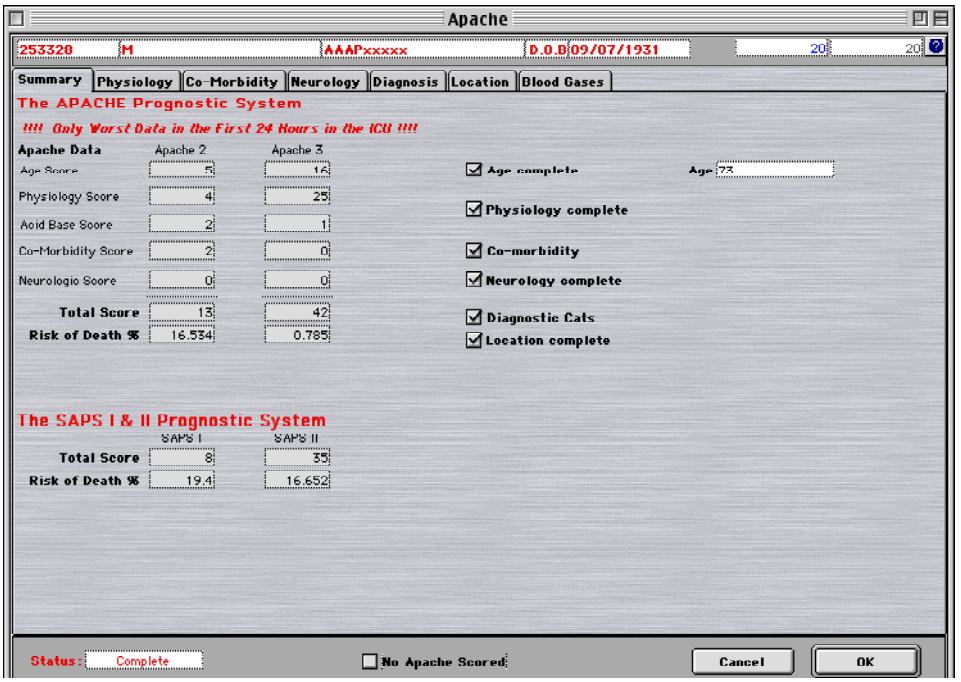
ICU: Scoring: Apache Scoring Window

This window has several areas. You move from area to area by using the Tab Control at the top of the window:



ICU: Scoring: Apache Scoring Tab Control

ICU: Scoring: Apache II & III and SAPS I & II: Summary

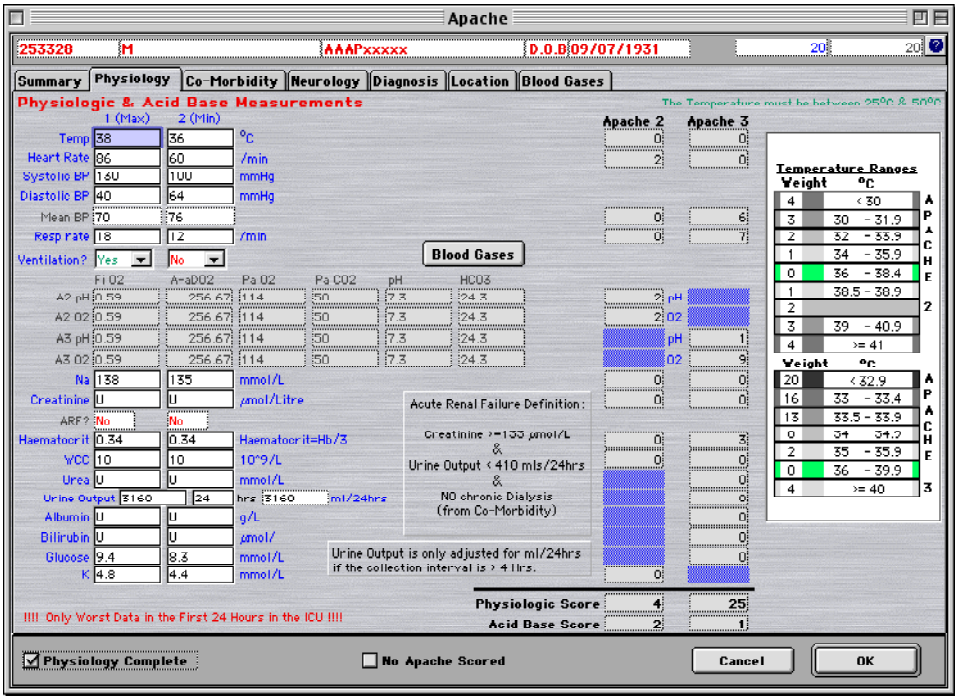


ICU: Scoring: Apache Scoring Window

The Summary page has no editable fields. It gives you a quick overview of the state of data entry and the scores generated for this Apache record.

Note that we calculate and display the SAPS I and II data here also.

Click on the Physiology Tab to move to the next section.



ICU: Scoring: Physiology

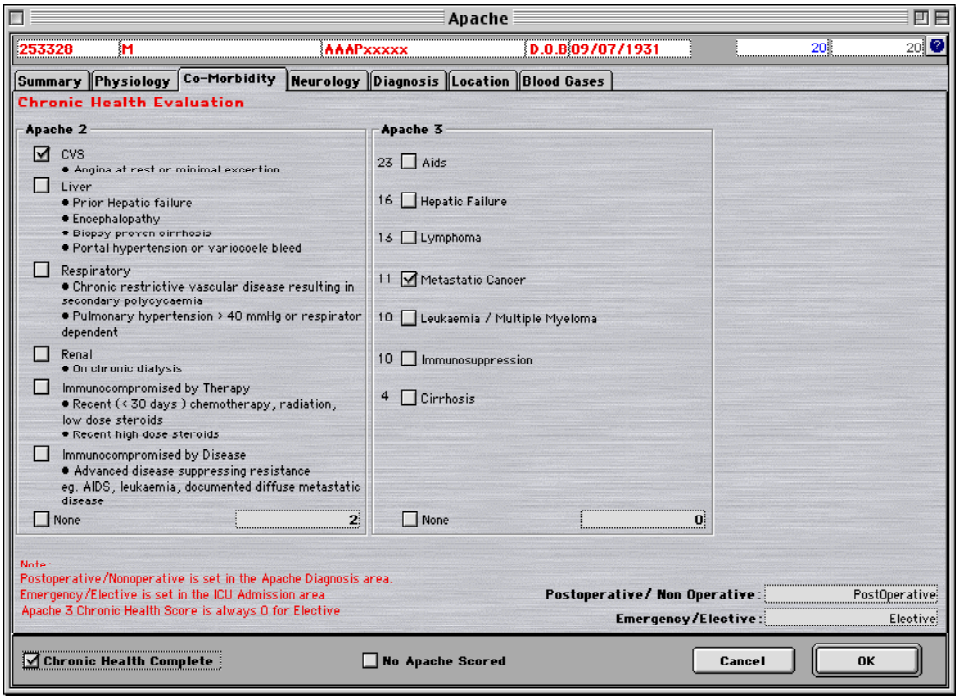
This section will collect the worst Physiologic data for this patient in the first 24 Hours.

Window Items	Purpose
Fields	The fields have a yellow background if incomplete. They accept either a valid value, U for Unknown N for normal or ? . The fields will not accept invalid values. The Help fields will inform you if the value entered is out of range. There are two columns for these fields to allow for the collection of the highest and lowest values within the first 24 hours. The algorithm will select the appropriate worst values for both Apache 2 and 3 as well as for SAPS 1 and 2 independently. You do not need to fill both columns in order to complete this area (although we do advise you to do so). You could just enter what you consider to be the worst value as a single entry and ignore the second column. Mean Blood pressure is automatically calculated from the Systolic and Diastolic values. For Urine Output, enter the collected volume and the time interval over which this volume was collected. How these values are subsequently handled depends on the Scoring system: Apache II and III: The Output is recalculated as a value over a 24 Hour period unless the collection period is less than a threshold value (currently 4 Hours) - in this case the volume collected is left unchanged. SAPS I and II: The Output is recalculated as a value over a 24 Hour period.
Drop down list	*Ventilation*? is selected via a drop down list.
Acute Renal Failure	This is calculated by data from this page and from the Co Morbidity page. The definition used for this is as displayed.
Blood gases	Clicking on the Blood Gases button will take you to the last Tab area automatically. You can also go there via the Tab Control at the top of the window. See ICU: Scoring: Apache II & III: Blood Gases on page 258. The Blood gases information is automatically checked. Worst scores are used to fill the physiology area.
Physiology Complete	Will be checked if this window is complete.

Window Items

Click on the *Co-Morbidity* Tab to move to the next section.

ICU: Scoring: Apache II & III: Co-Morbidity



ICU: Scoring: Apache: Co-Morbidity

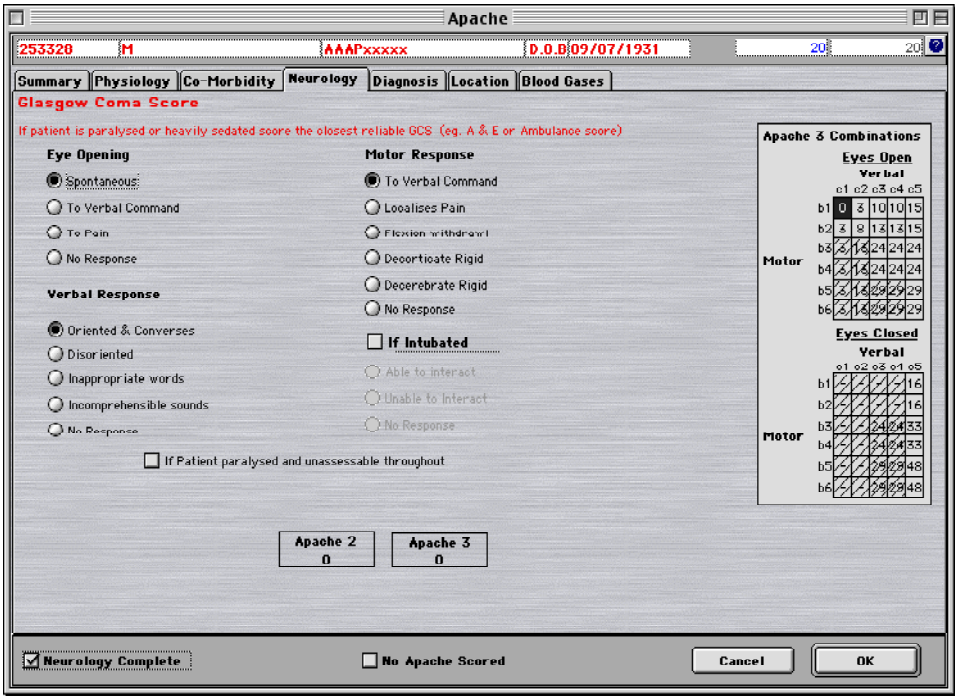
This section will accept the Co-Morbidity data for this patient.

Window Items	Purpose
Apache 2 and Apache 3	Select the Co-Morbidity factors as required or choose *None*.
Chronic Health Complete	Will be checked if this window is complete.

Window Items

Click on the **Neurology** Tab to move to the next section.

ICU: Scoring: Apache II & III: Neurology



ICU: Scoring: Apache: Neurology

This section will collect the Neurology data for this admission.

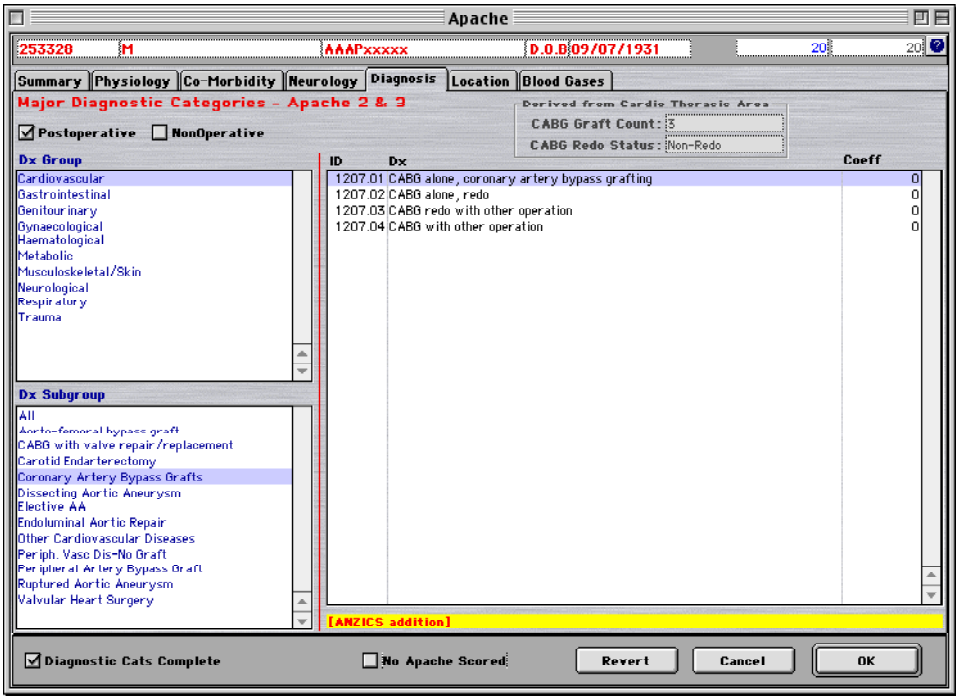
It uses the Glasgow Coma scoring system.

Window Items	Purpose
Feedback for errors	Note the graphic on the right that gives feedback as to why a particular combination of scores is unlikely.
Intubation	If the patient is intubated, click the Intubated check box to make the fields below this active.
Patient paralyzed and unassessable throughout	Clicking this check box sets the Glasgow coma score to Spontaneous, Orientated & Converses and To verbal Command.
Neurology Complete	Will be checked if this window is complete.

Window Items

Click on the **Diagnosis** Tab to move to the next section.

ICU: Scoring: Apache II & III: Diagnosis



ICU: Scoring: Apache: Diagnosis

This section will accept the Diagnosis data for this patient.

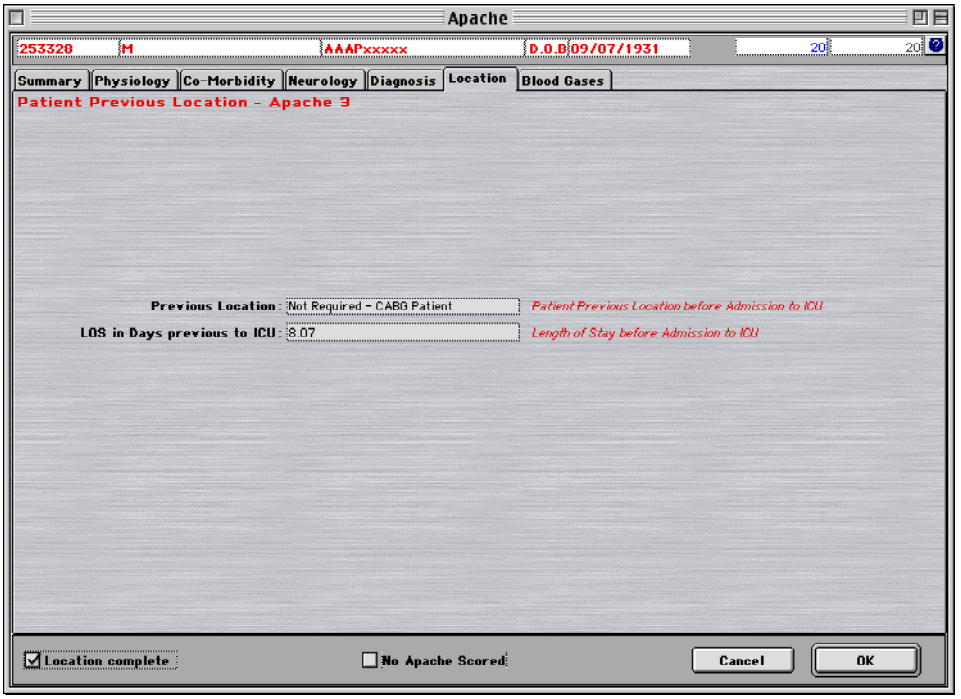
Note the *CABG Graft Count* and *CABG Redo coun*t. These are derived from the CT Area - ICU: Scoring: Cardio Thoracic on page 247. If this is a CABG admission please also complete the CT area in order to provide this data to the Apache 3 algorithm.

Controls	Action
PostOperative and NonOperative	Click on either of these check boxes and the Dx Groups list will change.
Dx Group and Subgroup	Select the Dx Group item you require. The item will highlight. Next select from the Dx Subgroup if you wish or leave this set to All . Now select the Dx required from the available Dx that display. Only Apache 3 Dx display.
Dx and ID	The selected Dx will highlight. The ID refers to the internal designation given to this Dx in File: Preferences: Diagnosis on page 103. The Apache 2 Dx associated with this selection is internally recorded but not displayed here. The coefficient for the selected Apache 3 Dx is displayed.
Revert	Will return you to the previously saved state of this window.
Diagnostic Cats Complete -	Will be checked if this window is complete.

Controls

Click on the **Location** Tab to move to the next section.

ICU: Scoring: Apache: Location



ICU: Scoring: Apache: Location

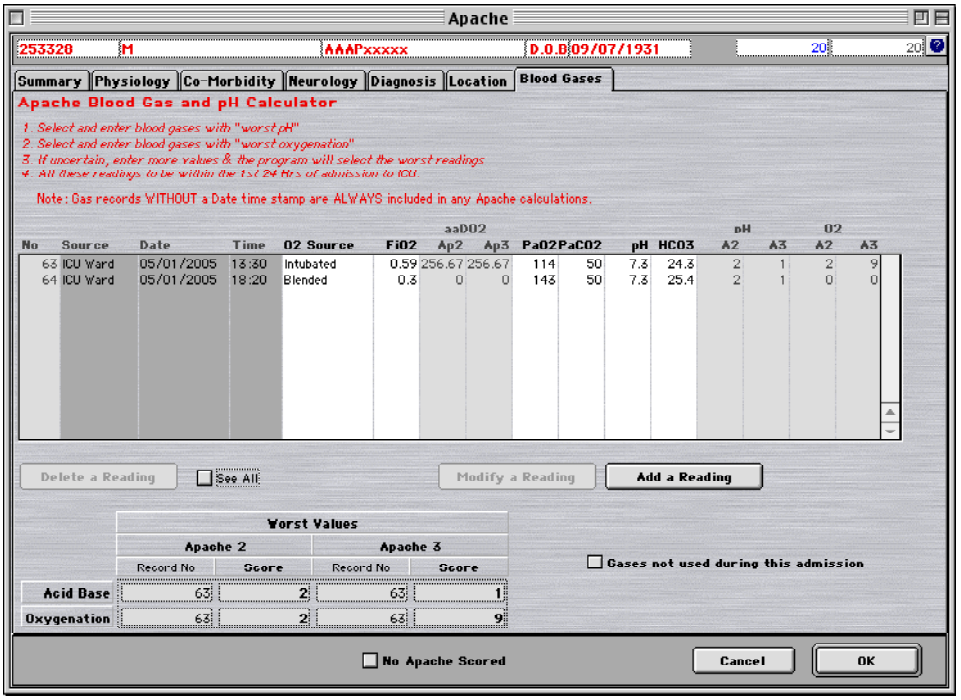
This section will auto fill the Location data for this patient.

Controls	Action
Previous Location	Derived from the Admission data
LOS in Days previous to ICU	Derived from the Admission data

Controls

Click on the **Blood Gases** Tab to move to the next section.

43.1.9 ICU: Scoring: Apache II & III: Blood Gases



ICU: Scoring: Apache: Blood Gases

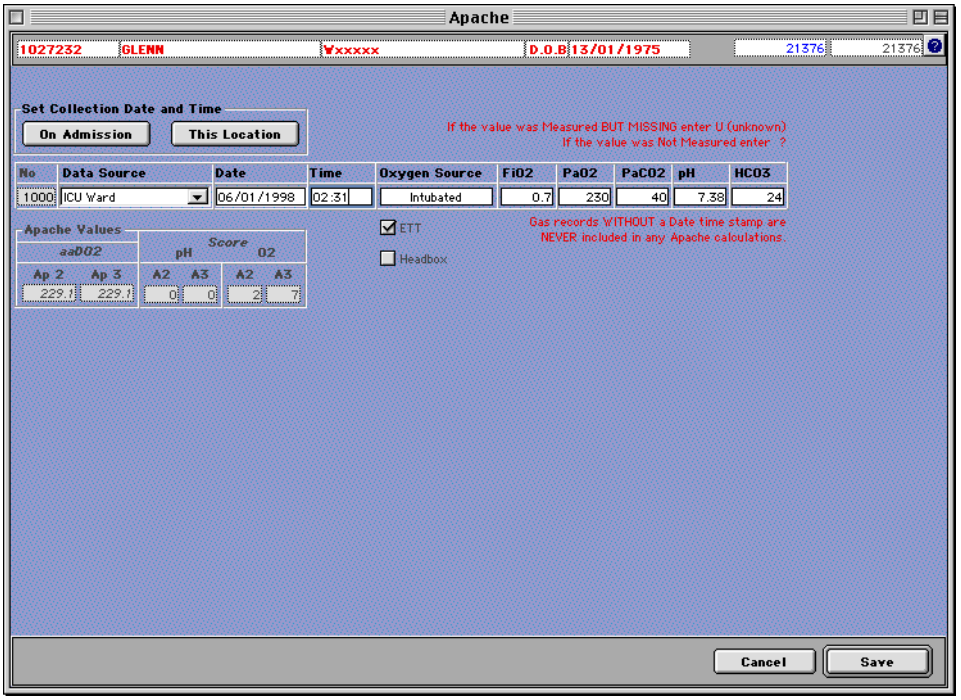
This section will accept the Blood Gases data for this patient.

Controls	Action
Blood Gas records List	This lists all the blood gases entered for this Apache record. You can add as many as you like. The system automatically selects the worst records for use in the Physiology calculation. The worst records are displayed at the bottom of the window.
Delete a reading Modify a Reading Add a Reading	These allow you to add, delete or modify Blood Gas records.
See All checkbox	By default only gas records within the first 24 hours are displayed in the Apache area. Tick this control to see all gas records for this Admission even if they are outside of the first 24 hours.
Gases are not used during this admission checkbox	If on the rare occasion this Admission did not require gases, tick this box to allow completion of Apache.

Controls

Add or Modify Gas Record

If you select and click *Modify*, select and Double click or click on *Add*, you will see the following window:

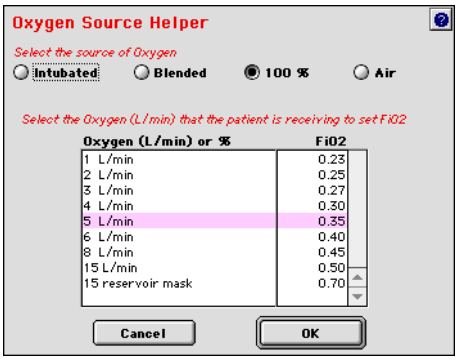


ICU: Scoring: Apache: Blood Gases Input window

There is extensive feedback to prevent inappropriate entries and to signal incomplete fields.

Oxygen Source

Clicked on this field will display the following window (in this case we have selected 100%:



ICU: Scoring: Apache: Blood Gases Oxygen source

This window gives a quick way of selecting FiO2 for the different sources of Oxygen.

Save or Cancel

Once you have finished editing the Gas Record click on *Save* to record you changes or on *Cancel* to discard your changes.

43.1.10 ICU: Scoring: PIM

Instructions for PIM Data collection

Please read the following before entering data into this area:

a PIM 1&2 is calculated from the information collected at the time a child is admitted to your ICU. Because PIM 1&2 describes how ill the child was at the time you started intensive care, the observations to be recorded are those made at or about the time of first fact-to-face (not telephone) contact between the patient and a doctor from your intensive care unit (or a doctor from a specialist paediatric transport team).

b Use the first value of each variable measured within the period from the time of first contact to one hour after arrival in your ICU (not the worst value). The first contact may be in your ICU, or your emergency department, or a ward in your own hospital, or in another hospital (e.g. on a retrieval).

c If information is missing (e.g. base excess is not measured) record U for Unknown. If Systolic blood pressure is set to U it is calculated as being 120.

d Include all children admitted to your ICU (consecutive admissions).

e Record SBP as 0 if the patient is in cardiac arrest, record 30 if the patient is shocked and the blood pressure is so low that it cannot be measured.

f Pupillary reactions to bright light are used as index of brain function. Do not record an abnormal finding if this is due to drugs, toxins or local eye injury.

g Mechanical ventilation includes mask or nasal CPAP or BiPAP or negative pressure ventilation. Record the FiO2 being given at the same time that the first PaO2 is measured (that is, both the FiO2 and PaO2 that you record must relate to the same time).

h Elective admission. Include admission after elective surgery, or admission for an elective procedure (e.g. insertion of a central line), or elective monitoring, or review of home ventilation. An ICU admission or an operation is considered elective if it could be postponed for more than 6 hours without adverse effect.

i Do not to over-diagnose the specified conditions - if there is any doubt, do not record a specified condition. For example: do not code cerebral haemorrhage for intracerebral bleeding associated with trauma; impaired cardiac function associated with sepsis or surgery should not be coded as cardiomyopathy; Downs Syndrome should not be coded as IQ <35; and a static disability should not be coded as neurodegenerative (even if it is severe) unless there is progressive ongoing loss of milestones.

j Recovery from surgery or procedure includes a radiology procedure or cardiac catheter. Do not include patients admitted from the operating theatre where recovery from surgery is not the main reason for ICU admission (e.g. a patient with a head injury who is admitted from theatre after insertion of an ICP monitor; in this patient the main reason for ICU admission is the head injury).

k Cardiac bypass. These patients must also be coded as recovery from surgery.

l Cardiac arrest preceding ICU admission includes both in-hospital and out-of-hospital arrests. Requires either documented absent pulse or the requirement for external cardiac compression. Do not include past history of cardiac arrest.

m Cerebral haemorrhage must be spontaneous (e.g. from aneurysm or AV malformation). Do not include traumatic cerebral haemorrhage or intracranial haemorrhage that is not intracerebral (e.g. subdural haemorrhage).

n Hypoplastic left heart syndrome. Include only cases where a Norwood procedure or equivalent is required to sustain life.

o Liver failure acute or chronic must be the main reason for ICU admission. Include patients admitted for recovery following liver transplantation for acute or chronic liver failure.

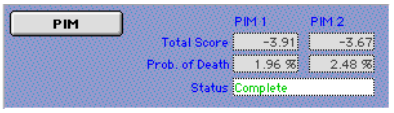
p Neurodegenerative disorder. Requires a history of progressive loss of milestones or a diagnosis where this will inevitably occur.

q Bronchiolits. Include children who present either with respiratory distress or central apnoea where the clinical diagnosis is bronchiolits.

r Obstructive sleep apnoea. Include patients admitted following adenoidectomy and or tonsillectomy in whom obstructive sleep apnoea is the main reason for ICU admission (and code as recovery from surgery).

s Randomly sample about every 20th admission to your ICU and get another person to collect the PIM data independently a second time, so that you can check the accuracy of your data.

Entering the PIM area

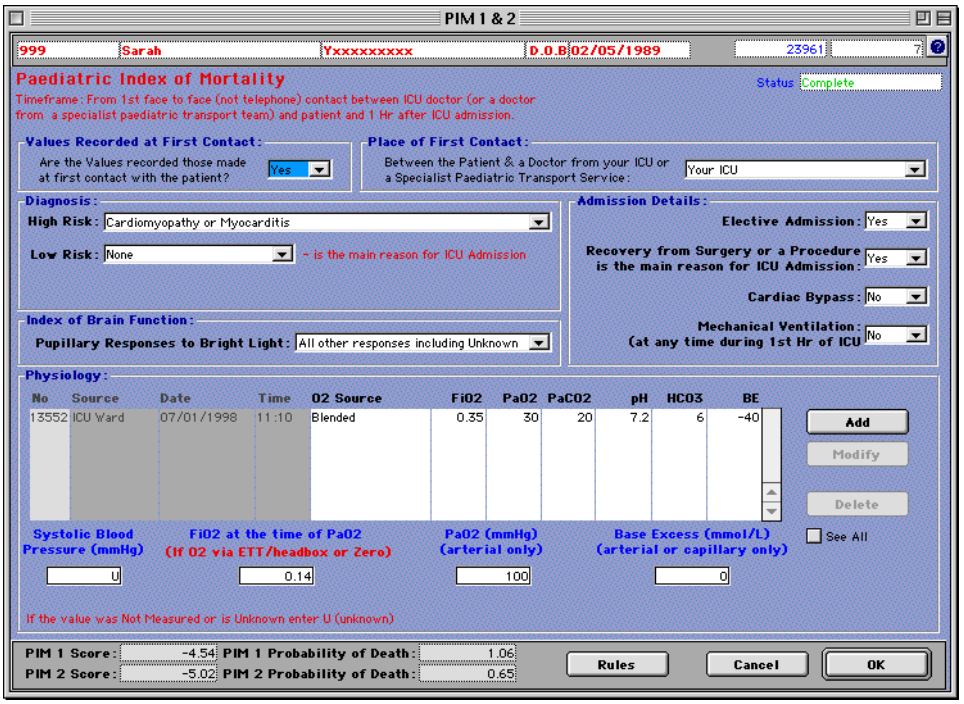


ICU: Scoring: PIM area

Window Items	Action
PIM	Click the *PIM* button to enter the area. If the current admission details do not indicate that this is a CT admission, you will be warned.
PIM 1 & 2 Scores and Prob. of Death	PIM 1 & 2 results. F. Shann et al. Paediatric index of mortality (PIM): a mortality prediction model for children in intensive care. Intensive Care Med. 1997;23:201-7. G.A. Pearson et al. Calibration of the paediatric index of mortality in UK paediatric intensive care units. Arch Dis Child. 2001;84:125-128.
Status	Can be *Incomplete*, *Complete* or *Not Entered*

Other Controls

Click the PIM button to enter the area. The following window will display:



ICU: Scoring: PIM Window

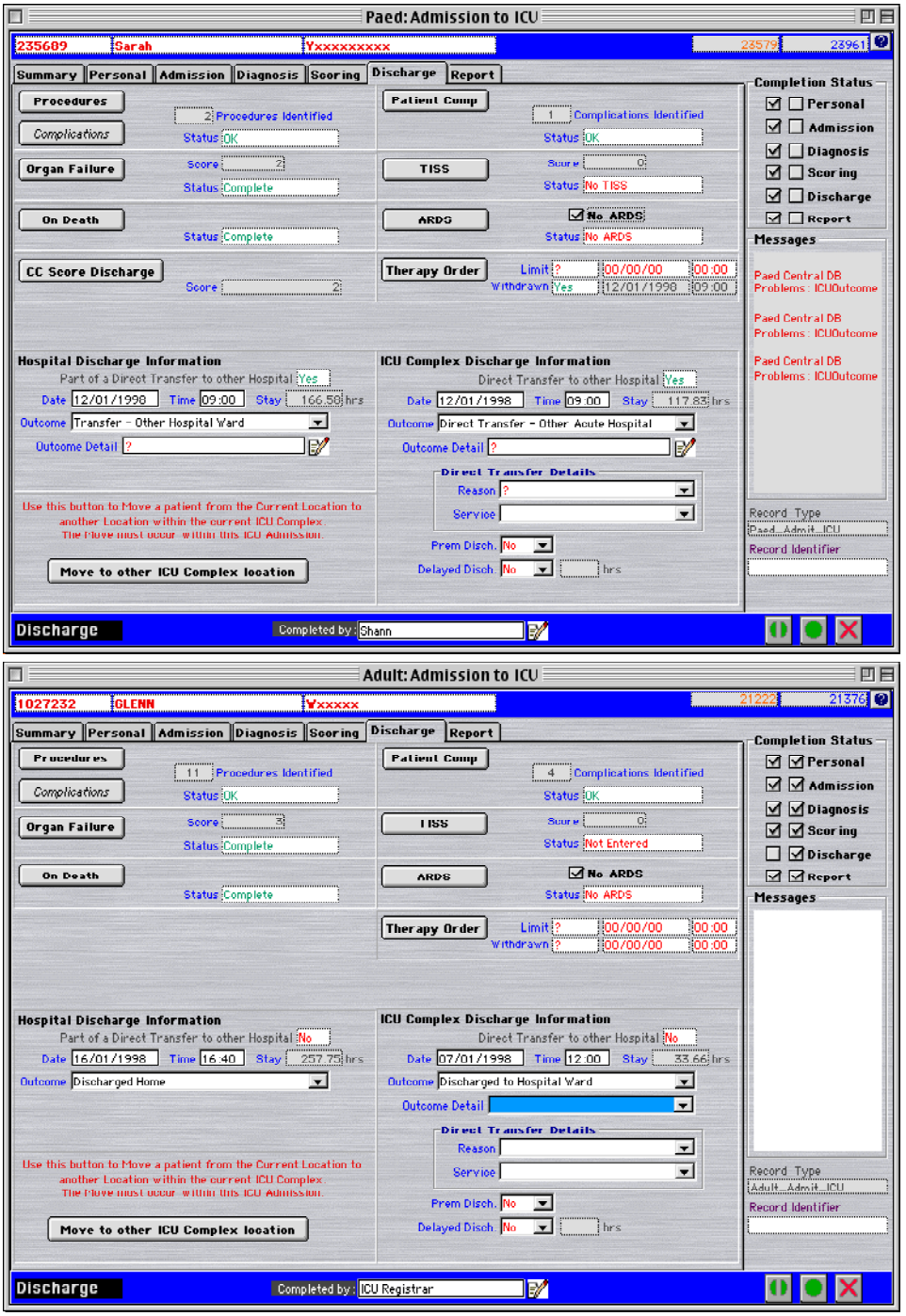
Before entering data in this area, please read the instructions above, Instructions for PIM Data collection on page 260.

Controls	Action
Values Recorded at First Contact	Set to Yes if values were made at first contact with the patient. This is for data quality control and does not directly affect the PIM scores.
Place of First Contact	This is between the Patient & a Doctor from your ICU or a Specialist Paediatric Transport Service. This is for data quality control and does not directly affect the PIM scores.
Diagnosis	Select both High and Low Risk diagnoses. Required for PIM Score.
Admission Details	Select the details. Required for PIM Score.
Index of Brain Function	Select from the drop down list. Required for PIM Score.
Physiology	The Gas records displayed are derived from records entered here and during transport to the ICU. Only records that were entered up to One Hour after admission are displayed here unless the *See All* checkbox is ticked. the Gas related fields must be filled manually. The Gas records are displayed here for reference only.
Rules button	Click this button to review data collection rules for the PIM area
Cancel button	Discard all changes and Exit this window
Save button	Save all changes and Exit this window

Other Controls

Chapter 44
Data Entry: ICU: Discharge

44.1.0 ICU: Discharge



ICU: Discharge

The Discharge area encompasses many areas:

Area	Notes
Procedures	See ICU: Discharge: Procedures on page 264.
Complications due to/during Procedures	See ICU: Discharge: Procedures Complications on page 271.
Patient Comp	See ICU: Discharge: Patient Complications on page 272.
Organ Failures	See ICU: Discharge: Organ Failure on page 273.
TISS	See ICU: Discharge: TISS on page 275.
On Death	See ICU: Discharge: On Death on page 276.
ARDS	See ICU: Discharge: ARDS on page 282.
CC Score Discharge	See ICU: Discharge: CC Score Discharge on page 283.
Therapy Order	See ICU: Discharge: Therapy Order on page 284.
Hospital Discharge Information	Information on final discharge from your Hospital. See ICU: Discharge: Hospital Discharge Information on page 289.
ICU Complex Discharge Information	This area is completed when a patient is discharged out of the ICU complex back into the ward or elsewhere. See ICU: Discharge: ICU Complex Discharge Information on page 287.
Move to other ICU Complex location	When a patient remains within the ICU Complex but is Moved to another ICU area. See ICU: Discharge: Move to other ICU Complex location on page 285.

Area

44.1.1 ICU: Discharge: Procedures

Introduction to this area - please read carefully

This area is intended for data collection of a temporary or experimental nature.

The area comprises 4 distinct parts.

1. Available Procedure Events are defined in File: Preferences: Procedure on page 109.
2. After entering the Procedure area, a window will display all Procedure Events that have been defined. This area allows for the addition of Procedure Events to the current Admission. It also allows the review of Summary Records for the Procedure Event.
3. There are 3 types of Procedure Events: Discrete, Value and Interval Events. Each one has its own entry form that captures slightly different data.
4. There is also a Summary Record for each Procedure Event that provides additional information such as errors due to overlapping Date time intervals and Totals.

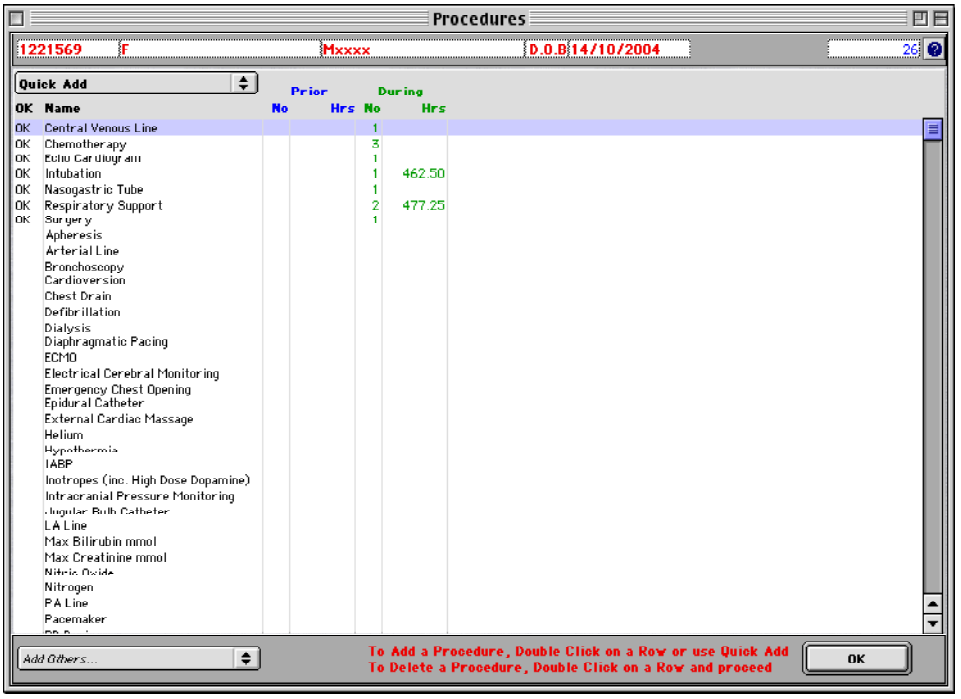
These areas are very tightly bound to each other to ensure referential integrity. For instance changing the Procedure Event Define record in any way (other than Show Date Time detail checkbox) will update all Procedure Event and Procedure Summary Event records within the database that used this definition. Changes to a Procedure Event record (such as deletion) will automatically update the Procedure Summary record and the Procedure Display area.

ICU: Discharge area: Procedure field

Window Items	Purpose
Procedures	Button that takes you to the Procedure event display and selection area
Complications	Button that will display all Complications set for a Procedure event in its own window. See below.
Procedures Identified	Number of Procedures identified during this admission.
Status	Can be *Incomplete*, *OK* or *No Procedures*

Window Items

Click on *Procedure* button to enter this area:



ICU: Discharge area: Procedures display area

Window Items	Action
Main Display area	This is a summary area for the Custom events already added and for the possible Custom Events that could be added to this admission. All Custom events that were defined as *Default =Yes* or *Mandatory* in File: Preferences: Procedure on page 109 are automatically displayed in this window. Events already added will have text in the *OK, No* or *Hrs for Prior or During* columns. These columns provide summary information. If there are incomplete events for a row then the *OK* column will display a *?* mark. You can access the Summary record by a double click on the row. See below. In the example above, there are 4 possible Custom items available for selection: The item *Experimental Drug* and *Drug Trial* has not yet had any events created for it. This is why there is no entry for this item in the *OK, No* or *Hrs for Prior or During* columns. The item *Initial Blood Loss* has 1 event created for it and it occurred *During* ICU. This is why there is a *1* in the *During No* column and because all items have been completed properly the *OK* entry for this item is set to *OK.* The item *Later Blood Loss* has 2 events created for it and they both occurred *During* ICU. One of these events is incomplete. This is why there is a *1* instead of a *2* in the *During No* column and the *OK* entry for this item is set to *?.*

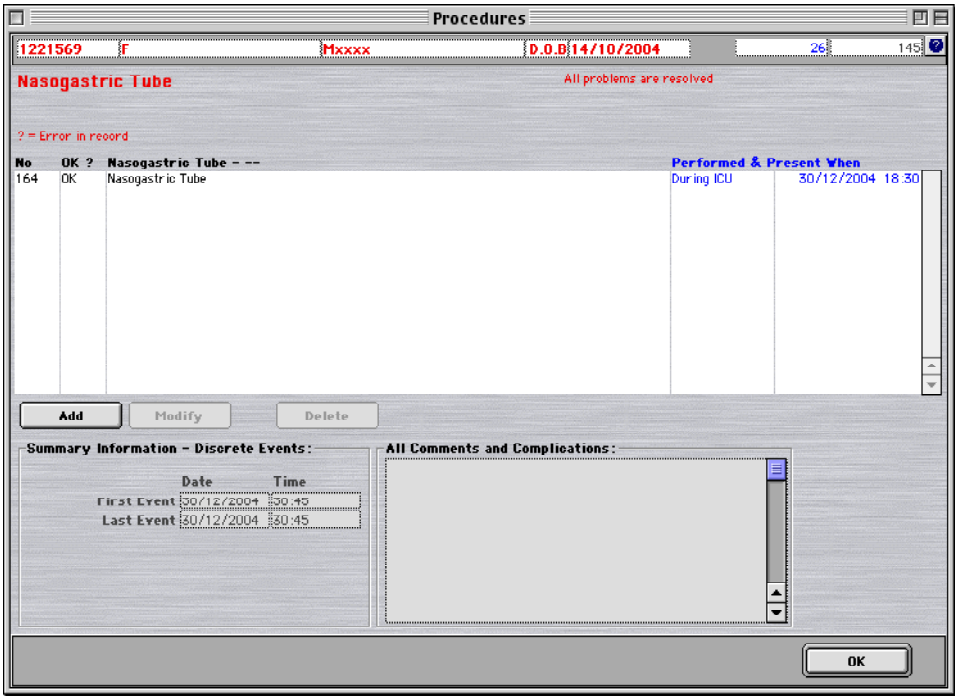
Window Items

Window Items	Action
Quick Add drop down list	Selection of a Procedure Event from this list, will open a new entry form for the selected Event. See below.
Add Others...	Little used Events are set to be Default=No in Procedure: Add Record on page 111 and are thus not available directly from the main display area. Once the item has been selected from the drop down menu it will appear within the display area for that admission even if no events are ever created for it. The reason for this arrangement is to reduce clutter for the most commonly selected items in the main display area. You can delete the added item by selecting it and clicking the *Delete Others...* button as long as an event has not been created for that item.
OK	Close window.

Window Items

Summary record for Events

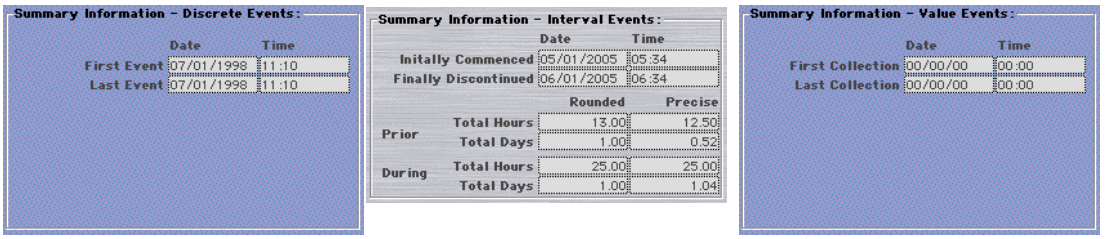
Double click on a row in the Main Display area to open its Summary record:



ICU: Discharge area: Summary record of Events

The Main Display area shows the Events already created for this Procedure item. The display is slightly different depending on what type of event is displayed.

There are 3 Summary record forms - Discrete, Interval and Value forms. They are very similar in nature. In fact the main difference is in the Summary Information displayed:

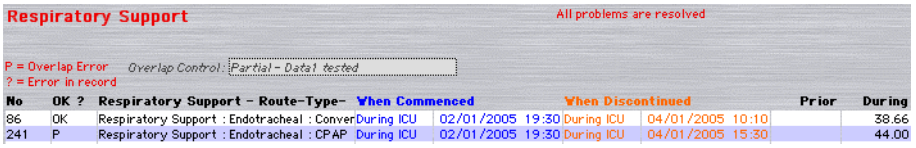


ICU: Discharge area: Summary record of Events: Information

To edit a Procedure Event displayed, Double Click on it or select and click *Modify* button.

To delete a Procedure Event displayed, select it and click the *Delete* button.

Summary Errors



ICU: Discharge area: Summary record of Events: Overlap Error

If there is an Overlap error, then the *OK?* column will display a *P;* see above. Note that the Overlap control for this area is set to Data1 Tested . This means that as soon as There are 2 entries with the same Route there is an overlap error. if the Date Times overlap. In the example above this has happened for Endotracheal .

See We will now take you through the creation of a complex Procedure - Respiratory Support: on page 112for details on Overlap Errors.

The Overlap error is determined by the following settings:

None - Data1&2 tested: No overlap is ever allowed for any events that bear the same Name.

Partial - Data1 tested: Overlap is allowed when Data1 for two events are different even though the Name of the events are the same. The value of Data2 is ignored completely. For instance Respiratory Support; if two events are both Route=Endotracheal then there may be a Overlap error if the intervals coincide. On the other hand if one has Route=Nasopharyngeal and the other is Route=Endotracheal and the intervals overlap then the system will allow this even though it is an overlap.

Partial - Data2 tested: Overlap is allowed when Data2 for two events are different even though the Name of the events are the same. The value of Data1 is ignored completely. For instance Respiratory Support; if two events are both Type=CPAP then there may be a Overlap error if the intervals coincide. On the other hand if one has Type=CPAP and the other is Type=JET and the intervals overlap then the system will allow this even though it is an overlap.

Complete: Overlap is always allowed. May be required when two events need to be tracked separately and are exactly the same.

If there is an error within the actual Procedure Event record then the *OK?* column will display a *?*. If there is an error such as these, then the record in error is not counted for statistical purposes.

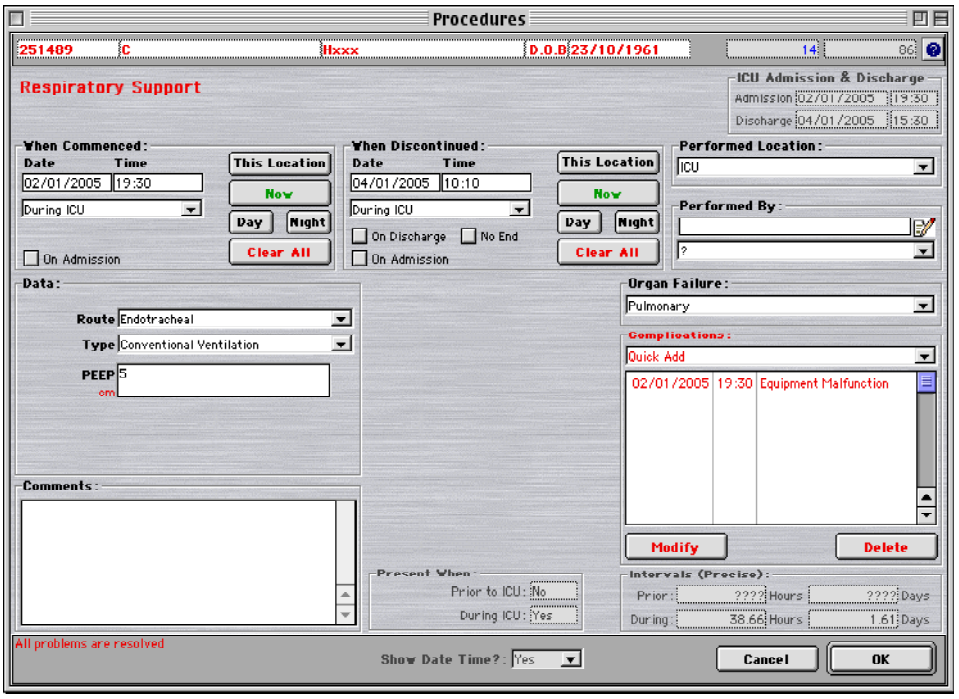
Adding a new Procedure event record

There are two ways of adding a new Procedure event:

a Select the item required from the *Quick Add* drop down menu
You will be presented with the appropriate new event form for the selected item.

b Add an item from the Main Display area.
Double click on the line required in the Main Display area. The Summary Record for the item will appear. Click the *Add* button to open the appropriate form for the selected item. See above.

Whichever method is used a form similar to the one below will display. What is displayed is determined by the type of Event and the details as specified in the Define record for that event:



ICU: Scoring: Detail record of Events

When Items	Action
When Commenced Discontinued Date Time and During/Prior Drop Down menu item	Collection of the Date Time data for this Event. What is collected here is determined by the type of record. If it is an *Interval* type record then both sections will be visible otherwise only *When Commenced* is visible. The program will automatically determine if an entry is valid and will determine if the event occurred Prior or During ICU. If you are not collecting Date Time details, you can still select the Prior and During status of the Event directly.
This Location button	Sets the Date and Time to the Date and Time of Admission (for When Commenced) and Discharge (for When Discontinued) to the Current Location.
Day and Night buttons	Sets the time to the defaults set in Database: Shift Times on page 70. Unless they have been altered, these are set 09:00:01 for Day and 21:00:01 for Night.
Now	Enters the Current Data and Time. However restricts the Date and Time to something that makes sense for the Admission in question.
Clear All	Clears all data entered for *When Commenced* or *When Discontinued*.
On Admission checkbox On Discharge checkbox	Sets the Date and Time to the Date and Time of Admission/Discharge. Also forces the record to be updated if the Date or Time of Admission/Discharge is subsequently changed. You can select this checkbox in the absence of a Date or Time of Admission/Discharge and be confident that the Date and Time will be updated when it is available and entered.
No End checkbox	This has the same behaviour as the *On Discharge* checkbox but also indicates that the event continued after Discharge from ICU.
Show Date Time? drop down menu	This is preset to what is set in the Define record for this Event. Use this control to override the default set in the Define record. If set to *No*, all the Date Time controls become invisible and the *When* status is solely determined by the drop down menu in the *When* areas.
Present When	Automatically determined by the choices made in the *When* areas. There is also a corresponding *Performed When* field not displayed here.
Intervals	Display of intervals calculated from the Date Time data entered.

When Area Items

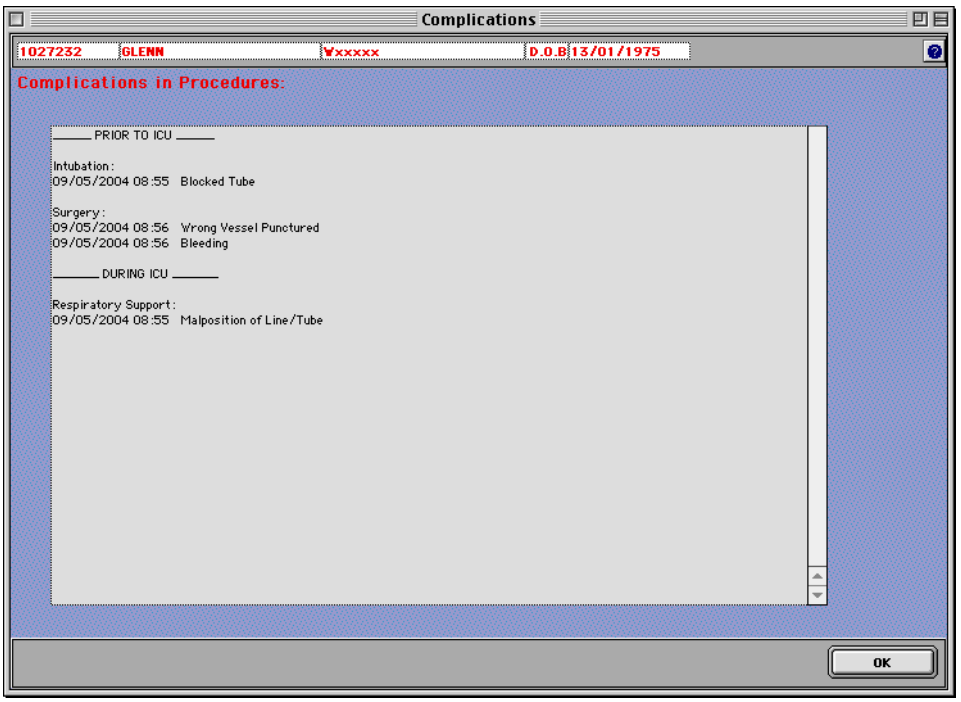
Data Items	Action
Data	Various fields that need to be completed. These fields are determined by the Define record for this Event. See File: Preferences: Procedure on page 109for details on how these are defined.
Collected/Performed Location	The location at which this Event occurred.
Collected/Performed By	The name of the staff member who performed the Event followed by the Level of Seniority. The Level is set automatically if set in the Staff database see File: Preferences: Staff & Access on page 51. Otherwise you can set this on the fly using the drop down control.
Organ Failure	The Organ Failure preset in the Procedure Define record (see File: Preferences: Procedure on page 109)will display as the default. If required another option can be selected from the drop down menu - the most common would be when it is determined that on this particular occasion there was no organ failure. Organ failures set here will be used by the Organ Failure scoring area to determine Organ Failure score for this admission. This is not a mandatory field.
Complications	Add a complication to this Event from a drop down list. This list is generated from entries in File: Preferences: Complication on page 129. There is a separate list for Adult and Paediatric entries. See Complication: Selection of Complications Interface on page 132 for details on this area. Once a Complication is created, you can Delete it by use of the Delete button. Modify the Complication by double click of the item or select the item and click the Modify button.
Comments	Add any other comments that you wish within this area.
Cancel	Cancel all changes and close window.
Save	Save changes and close window.

Window Items

ICU: Discharge: Procedures Complications

Opening the window

Click on *Complications* button to open the Procedures Complications window:



ICU: Discharge: Patient Complications window

This area is for display only and gives you a summary list of all the complications encountered during procedures.

Click on *OK* to exit

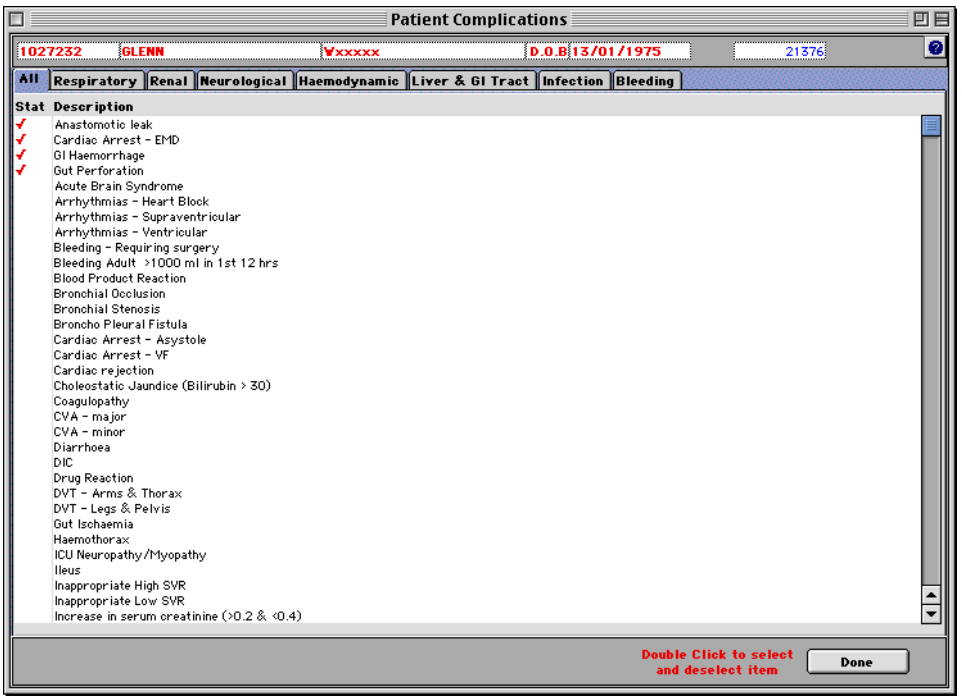
44.1.2 ICU: Discharge: Patient Complications

ICU: Discharge: Patient Complications Button

Opening the window

Click on *Patient Comp button* to open the Patient Complications window:

The following window will open:



ICU: Discharge: Patient Complications window

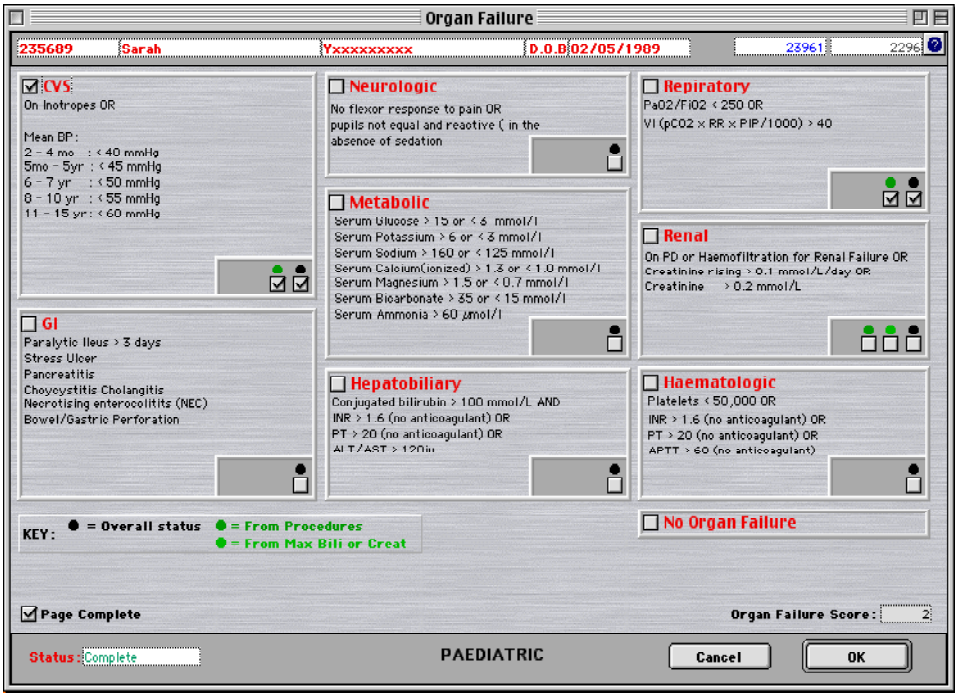
Controls	Action
Tab Control	Entering this area will always display the *All* tab. This will display all Complications available for selection. The other tab entries depend on the list items set in the Comp_Classification list in Lists: Modify Lists on page 91. The *All* tab will display a rather long list of items. You will probably find it more convenient to use the other tab items to find and select the complications you want. Items that have are selected will sort to the top of the display. Double click on an item to toggle between selected and deselected.
Done	Once you have completed the selection process, click *Done* to finish.

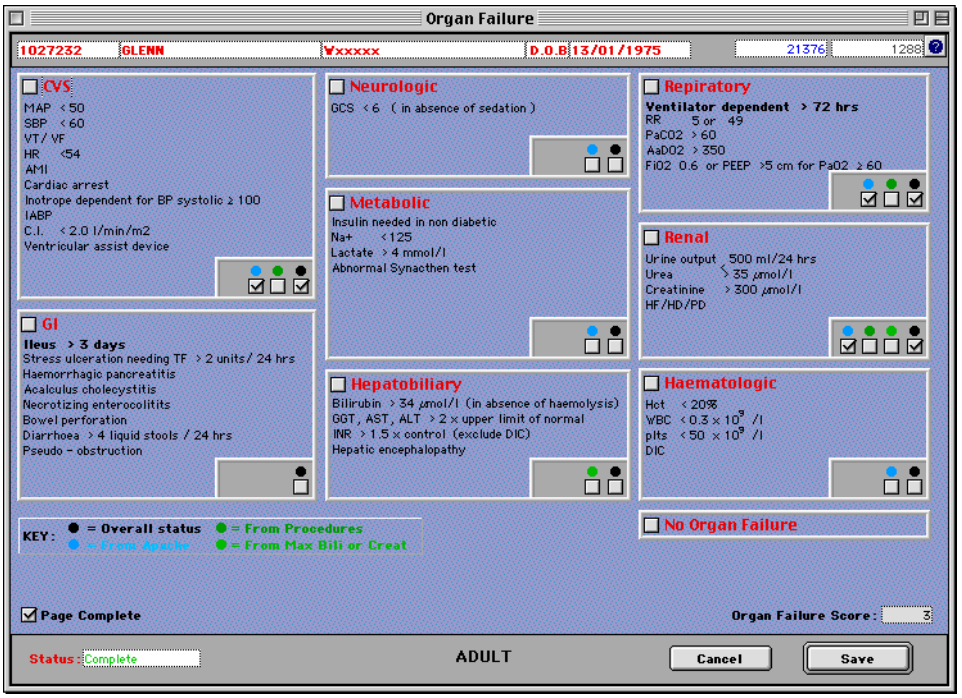
Other Controls

44.1.3 ICU: Discharge: Organ Failure

ICU: Discharge: Organ Failure area

Click on *Organ Failure* button to open the Organ Failure window:





ICU: Discharge: Organ Failure window

Adult and Paediatric Admissions have different criteria for completion of this area, there are thus 2 different displays.

Controls	Action
Organ Failure window panes	Each pane is a simple single check box data collection area. The overall status is predetermined by data from admission data already collected in other areas of the database. Not all organ failures can be automatically determined by STATIC because the source information required by the definition is not collected within STATIC. In these cases, you can add to the data by clicking in the check boxes beside the headings for each pane (top left of each pane). See the Key on the Form to see from where the data has been derived. Note that the overall status of the organ failure is determined by the bottom right checkbox of each pane.
No Organ Failure	Sets this area as no organ failure but can only be set if no other area of the database requires there to be an organ failure recorded.
Page Complete	Check this when you have no more information to enter into this page.
Cancel	Discard all changes and Exit this window.
Save	Record all changes and Exit this window

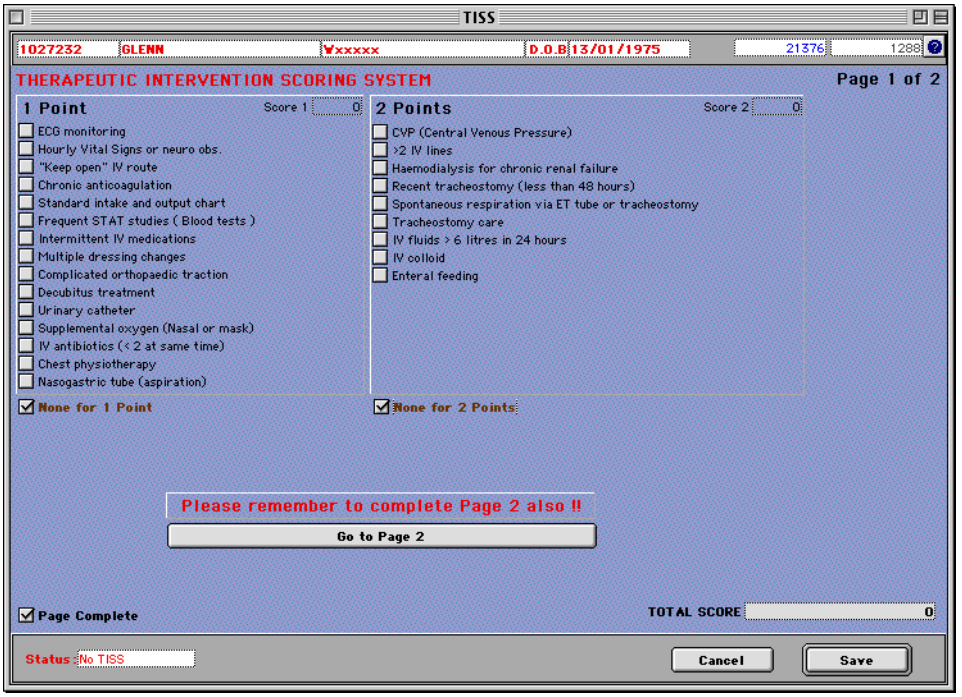
Organ Failure Controls

44.1.4 ICU: Discharge: TISS

ICU: Discharge: TISS Button

Opening the window

Click on *TISS button* to open the TISS window:



ICU: Discharge: TISS window page 1

This area is a simple check box data collection area. Some items override items of a lower value - you will be warned if this happens. If there are no items for any Point category then click on *None for X Points*.

Remember Page 2 also!

Controls	Action
None for X Points	Set this checkbox if there are no TISS items for this value
This Page Complete	Set this checkbox when you have no more information to enter into this page
Go to Page x	Move to the specified page - there are 2 pages for TISS
Cancel	Discard all changes and Exit this window.
Save	Record all changes and Exit this window

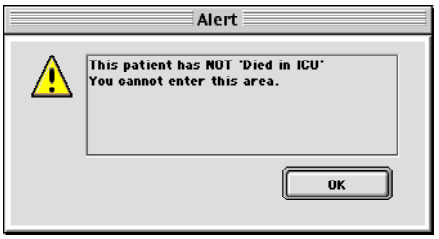
Organ Failure Controls

44.1.5 ICU: Discharge: On Death

ICU: Discharge: On Death area

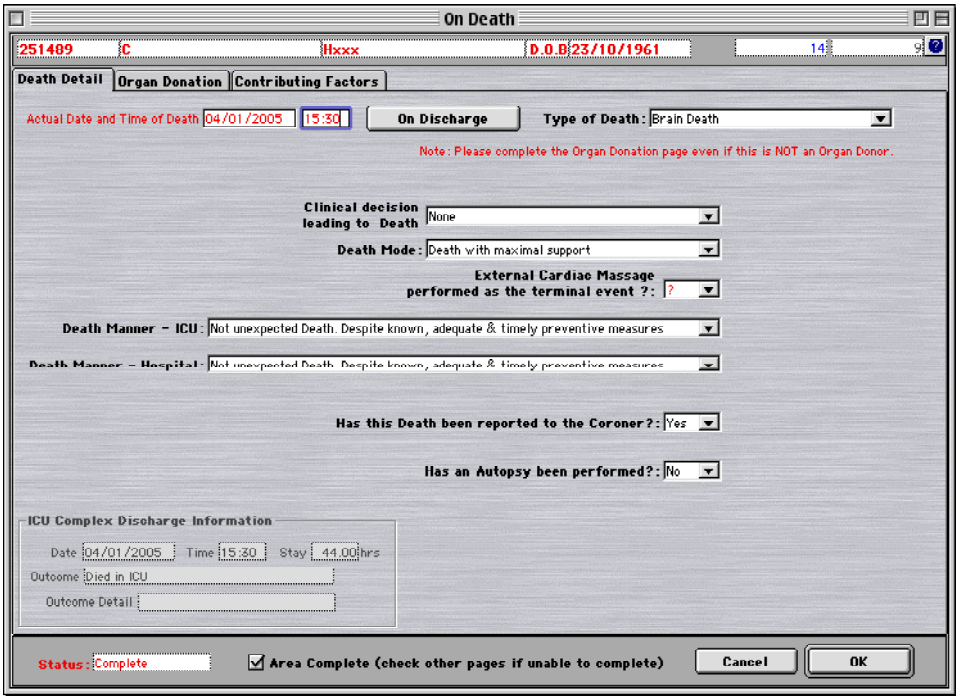
Opening the window

If you try to enter this area prior to death by clicking the *On Death* button, the following dialog will display:



ICU: Discharge: On Death Warning

If the Patient has Died then following window will initially display:

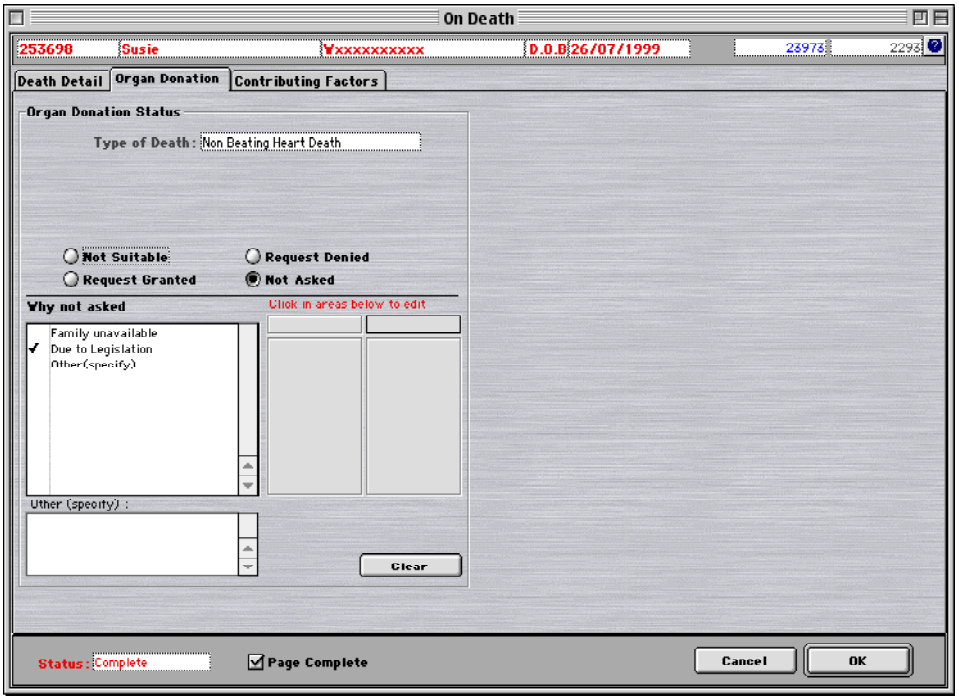


ICU: Discharge: On Death Window

Window Items	Action
Actual Date and Time of Death	enter the actual Date and Time of Death. This may be different to the Discharge Date and Time.
On Discharge button	Click this button to enter the Discharge Date and Time. You can then edit the entered data.
Type of Death	Must be set to either Brain Death or Non Beating Heart Death. Determines the options available for Organ Donation page.
Clinical decision leading to Death	Select the decision made prior to death, if any.
Death Mode	Record the manner of the Death with regard to Therapy delivered.
External Cardiac Massage performed as the terminal event	Yes or No.
Death Manner - ICU	The way the patient died - Anticipated, not expected, unexpected, ICU point of view.
Death Manner - Hospital	The way the patient died - Anticipated, not expected, unexpected, Hospital point of view.
Reported to Coroner?	Yes or No.
Autopsy performed?	Yes or No.
Area Complete	Set this control if you have finished entering information into this area. Will only allow this to be set when all mandatory items have been completed. If this cannot be set, check other pages fields that are incomplete.
Status	Gives feedback on the state of completion of this area.
Cancel	Discard all changes and Exit this window.
OK	Record all changes and Exit this window

Organ Donation Status

Click on the Organ Donation tab to move to this page:

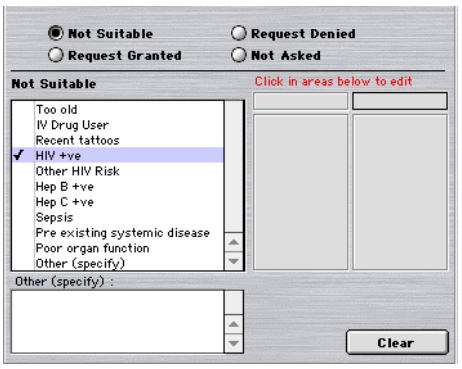


ICU: Discharge: On Death Window

The *Type of Death* is already preset from the *Death Detail* page.

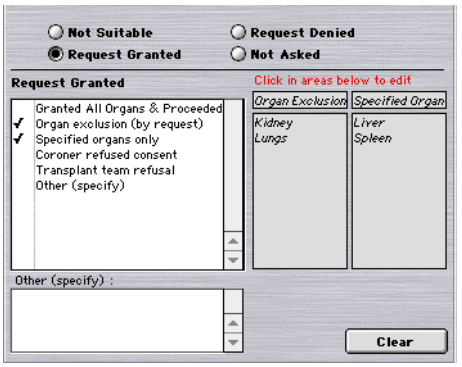
You must now detail what the outcome of the potential donation actually was. To do this, select the appropriate radio button. Then double click a row in the array to select an option. You can select more than one option.

Not Suitable:



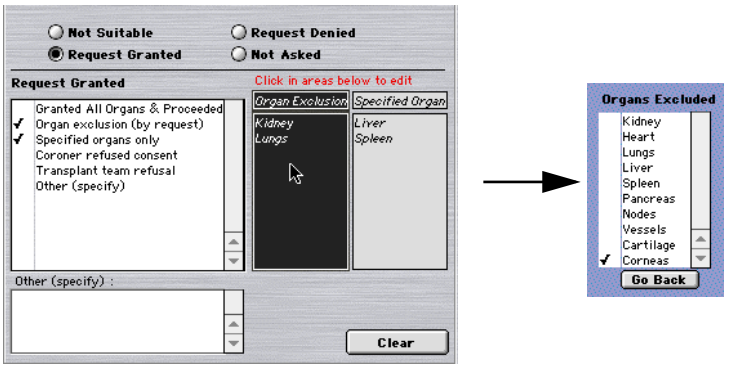
ICU: Discharge: On Death Not Suitable

Request Granted:



ICU: Discharge: On Death Request Granted

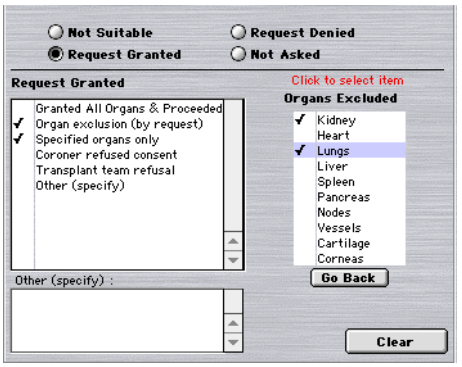
Organs Specified or Excluded are listed as shown above. You can go directly to the edit area of this list by clicking in the middle of the area as shown below. Once there are entries in either list, this can be done at any time:



ICU: Discharge: On Death Request Granted Edit area CLICK

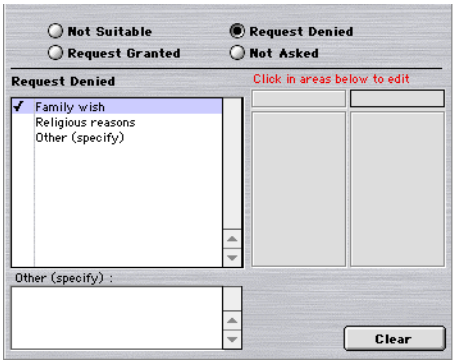
Click *Go Back* button to return.

If you Click the *Specified organs only* item the window changes so that you can specify what is allowed. Click *Go Back* to return:



ICU: Discharge: On Death Request Granted Edit area

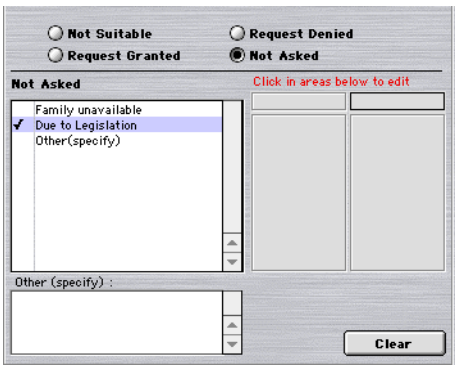
Request Denied



ICU: Discharge: On Death Request Denied

Select the reason why the request was denied or choose *Other (specify)* and fill the text area with the reason if it is not listed

Not Asked

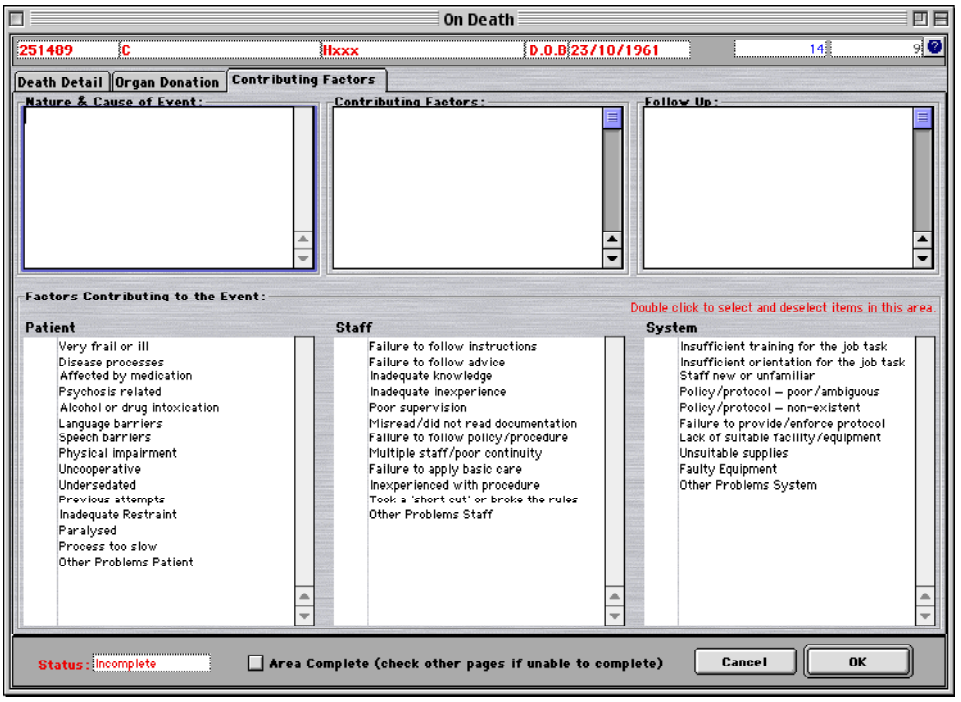


ICU: Discharge: On Death Not Asked

If this is a *Non Beating Heart Death*, the most common option currently selected would - *Not Asked* - *Due to Legislation*. The *Why not asked* list can be edited in the File> Preferences> Lists area.

Contributing Factors

Click on the Contributing Factors tab to move to this page. If this page already contains data, you will only be able to enter if you are part of the Administrator group. If you are not then a dialog box will appear allowing an Administrator to give you access to the page:



ICU: Discharge: On Death Window

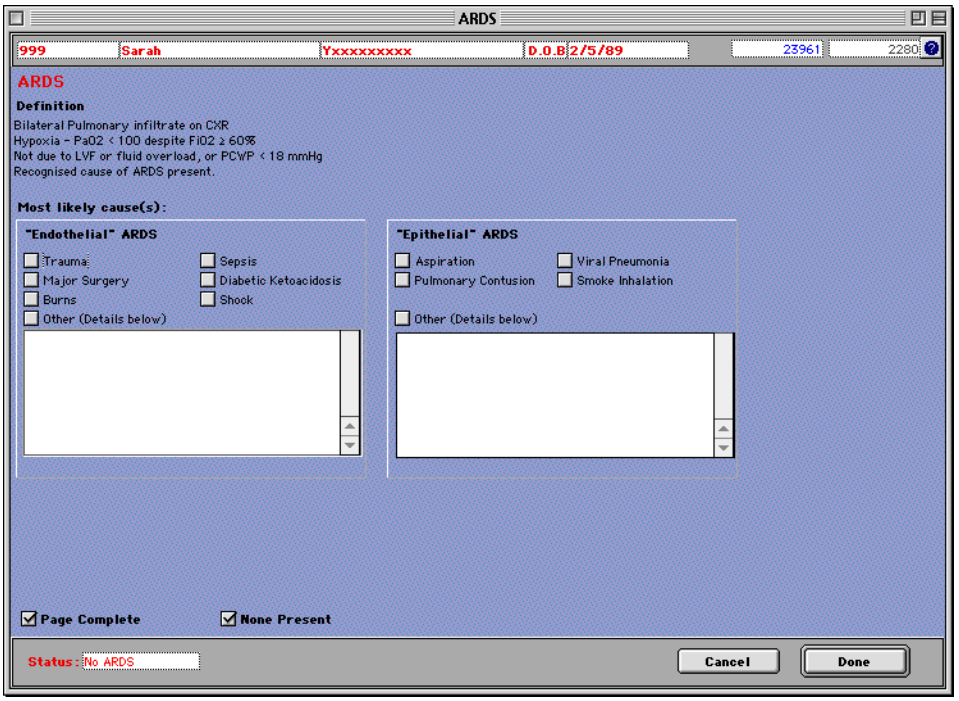
Fill the fields as appropriate. Note that you can select more than one factor contributing to the Death.

44.1.6 ICU: Discharge: ARDS

ICU: Discharge: ARDS area

Opening the window

Click on *ARDS* button to open the ARDS window:



ICU: Discharge: ARDS window

Most of the Fields are self explanatory.

Controls	Action
Page Complete	Set this control if you have finished entering information into this area
None present	Select this if there is No ARDS present. Sets the Status to No ARDS .
Cancel	Discard all changes and Exit this window.
Done	Record all changes and Exit this window

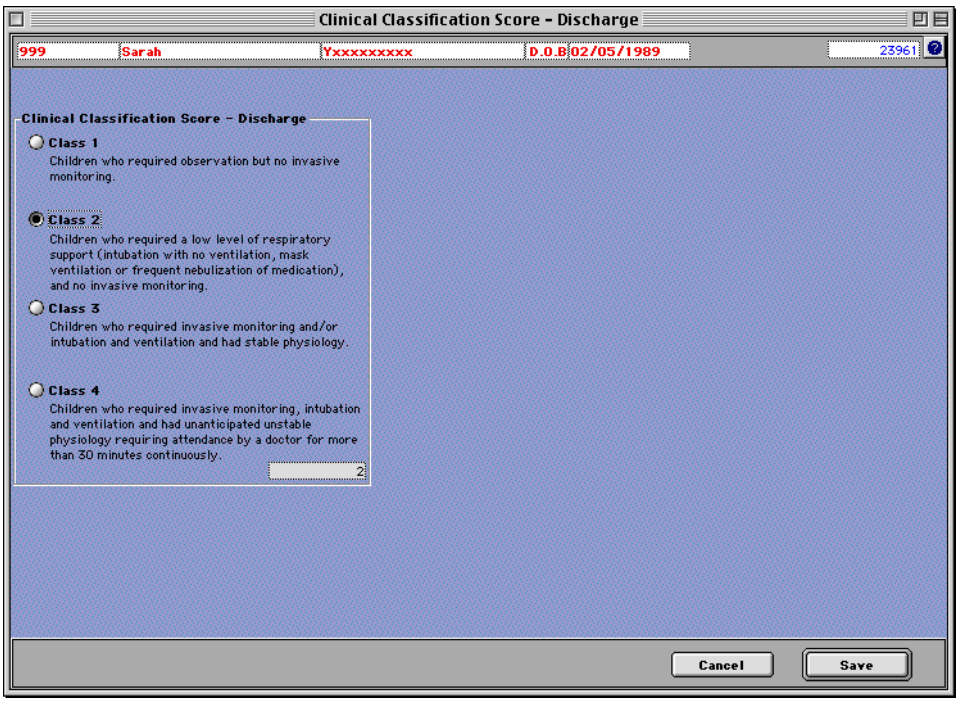
Organ Failure Controls

44.1.7 ICU: Discharge: CC Score Discharge

ICU: Discharge: CC Score Discharge area

Opening the window

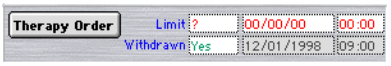
Click *CC Score Discharge* button to open the Clinical Classification Score window:



ICU: Discharge: CC Score Discharge window

Select the score and *Save* the change.

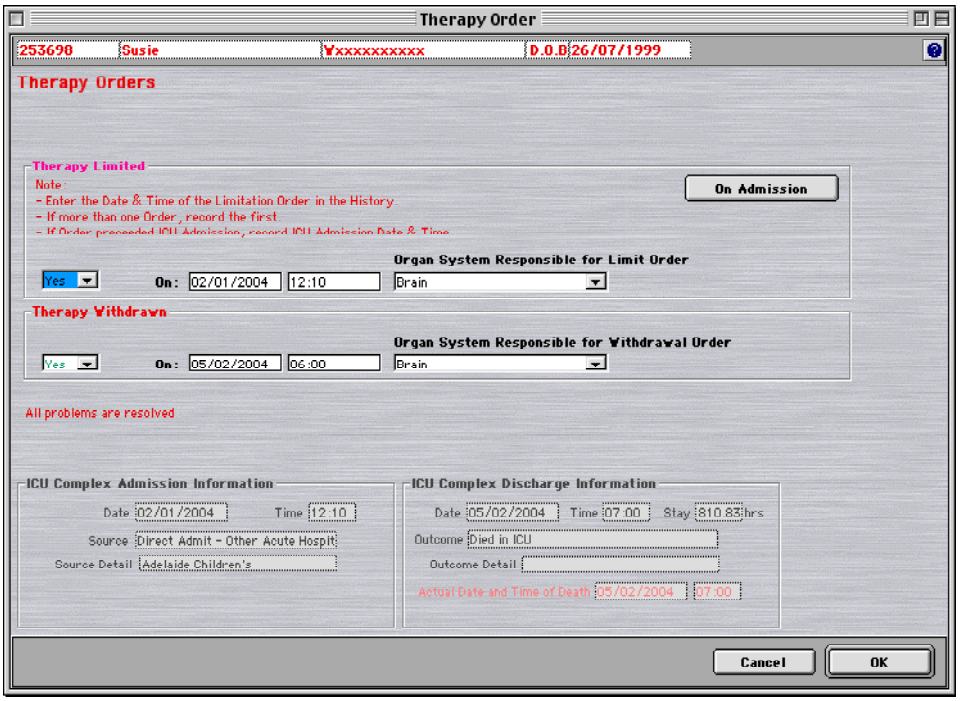
44.1.8 ICU: Discharge: Therapy Order



ICU: Discharge: Therapy Order area

Opening the window

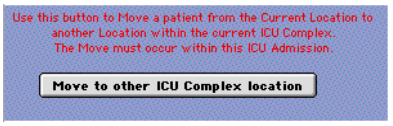
Click *Therapy Order* button to open the Therapy Order window:



ICU: Discharge: Therapy Order window

You can enter data for both Limitation and Withdrawal Orders. Your choices will be displayed on the main admission form.

44.1.9 ICU: Discharge: Move to other ICU Complex location

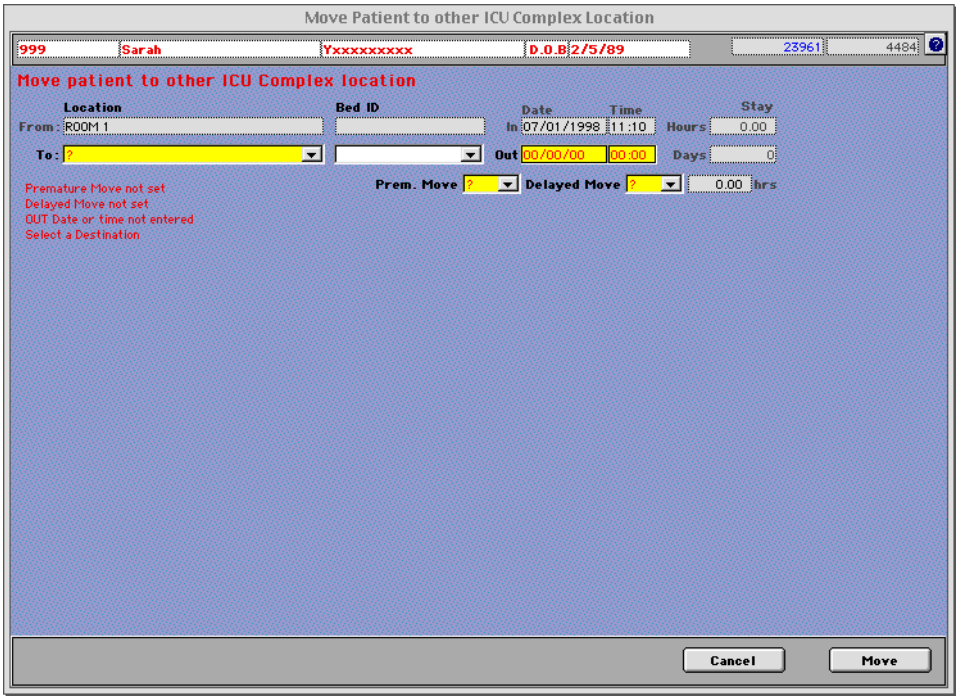


ICU: Discharge: Move to other ICU Complex location button

You *Move* a patient to another location in the ICU Complex from this area. This option is used when a patient is NOT discharged from the ICU Complex but is moved within the ICU Complex. This may be a move from one Room to another or a move from one level of care to another - ICu to SDU or SDU to ICU.

Opening the window

Click on *Move to other ICU Complex location* button, the following window will display if there is no ICU Final Discharge information present:

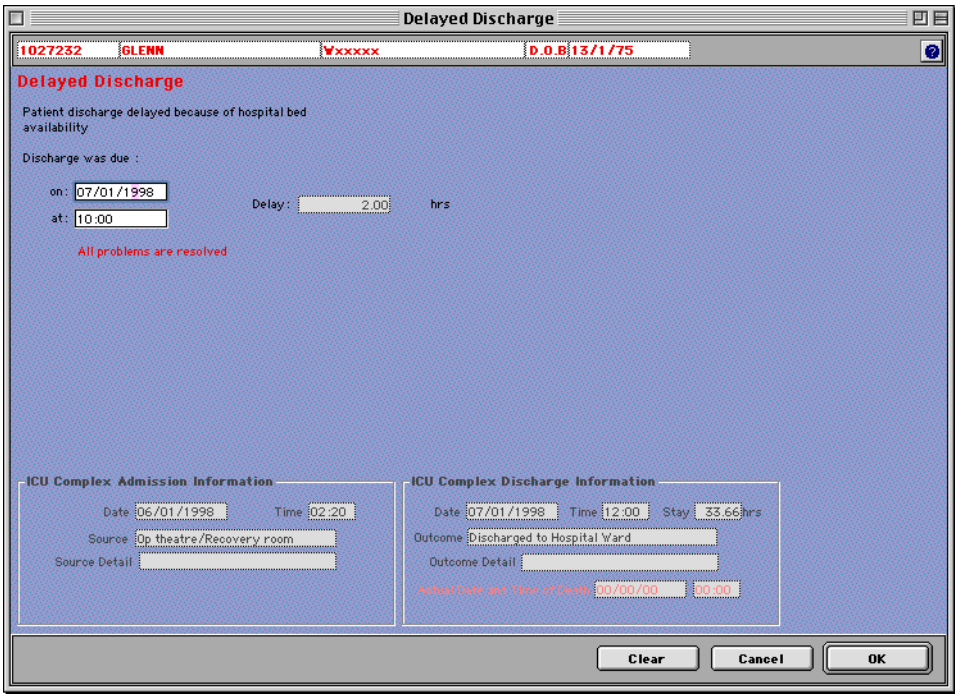


ICU: Discharge: Move to other ICU Complex location window

Most of the Fields are self explanatory. Fill the required fields and click on *Move* to move this patient from the From location and to the T o location.

Delayed Discharge

If there was a delay in Discharge from the current location select Yes from the Delayed Discharge drop down menu and move to the following window:



ICU: Discharge: Move to other ICU Complex location window: Delayed Discharge

When the window displays, it is already prefilled with the actual date and time of discharge. This should make it easier to enter the Due Date and Time values.

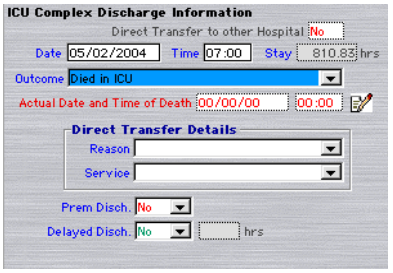
Fill in the Due Date and Time and click on *OK* to save and exit the window. If there is an error in the Date and Time selected then you will be unable to exit this window until the problem has been resolved. If you do not wish to resolve the problem, click on *Cancel* and STATIC will revert to the previous setting for this area.

44.1.10 ICU: Discharge: ICU Complex Discharge Information

This area is where you discharge a patient from ICU. This is a final discharge.

If the patient returns, within this Hospital admission, it will be a n ICU Readmission.

If the patient is Discharged from the Hospital and returns, it would be a New Admission to the Hospital and a New ICU Admission also.



ICU: Discharge: Final Discharge From ICU Complex window

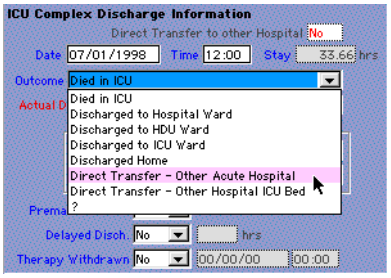
Most of the Fields are self explanatory. Fill them as required to Discharge this patient.

Area	Details
Date, Time	Enter the Date and Time of Discharge from the ICU. If there is an error with the Date Time entered you will be presented with a warning. See General Features: Date Problems on page 198
Outcome Outcome Detail Direct Transfer to other Hospital Direct Transfer Details Death in ICU	Select the Outcome. Depending on what is selected, you may also need to enter Outcome Details. If this is a Death in ICU as in the above example, then additional fields will need to be completed. These fields are filled in the On Death area. You can access this area by clicking the *On Death* button or by clicking the disclosure button next to the Actual Date and Time of Death display fields. For details on the On Death area see ICU: Discharge: On Death on page 276. The options for Outcome and Outcome Detail can be modified. See File: Preferences: AD Code on page 143. If the Outcome is a *Direct Transfer to other Hospital* then the Hospital information cannot be edited - it is all set from the ICU Complex Discharge information area. In this case you will see *Direct Transfer to other Hospital* set to *Yes*. You will also need to enter *Direct Transfer Details - Reason* and *Service*. See below - Direct Transfer on page 288.
Premature Discharge Delayed Discharge	This can only be set once a Date and Time fro ICU Complex Discharge has been set. These two fields interact - only one can be set to Yes at a time. See also - Delayed Discharge on page 288.

ICU: Discharge: ICU Complex Discharge Information

Direct Transfer

If you select a Direct Transfer:



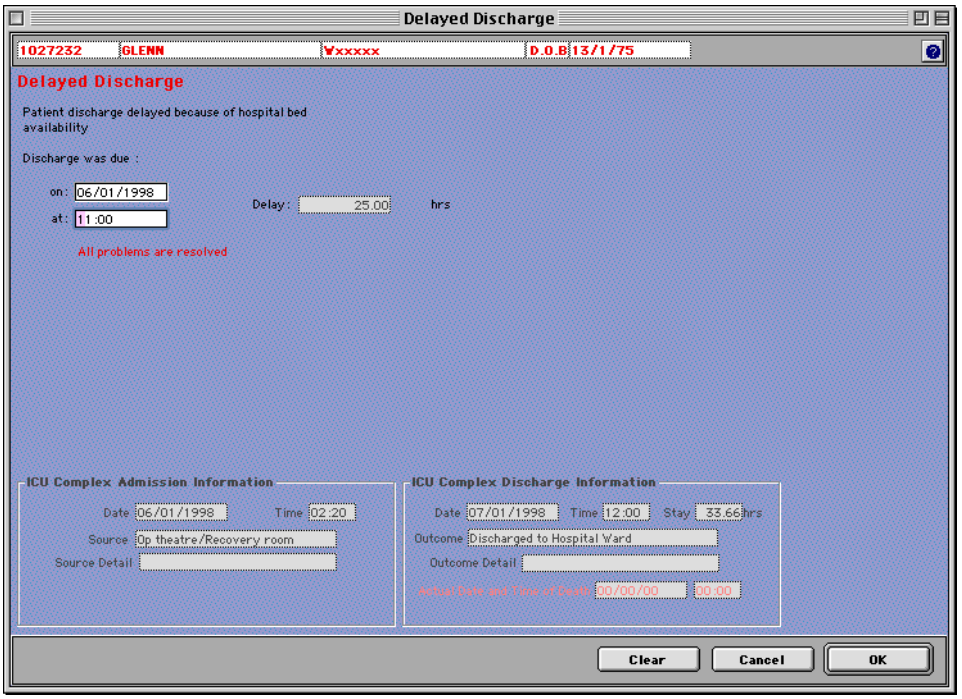
ICU: Discharge: Transfer to another Hospital

If this is a Direct Transfer then the Hospital information is automatically set from the ICU Complex information. In other words the ICU information takes precedence. In this case, the Hospital information can no longer be edited - it is determined by the ICU information.

You will need to complete the Direct transfer Details for this admission.

Delayed Discharge

If you selected Yes for *Delayed Disch.* the following will display:

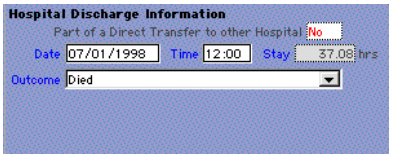


ICU: Discharge: Delayed Final Discharge From ICU Complex

Enter the information as required to complete this area.

44.1.11 ICU: Discharge: Hospital Discharge Information

This area is where you discharge a patient from Hospital. This is a final discharge.



ICU: Discharge: Final Discharge From Hospital window

Most of the Fields are self explanatory. Fill them as required to Discharge this patient.

Area	Details
Date, Time	Enter the Date and Time of Discharge from the Hospital. If there is an error with the Date Time entered you will be presented with a warning. See General Features: Date Problems on page 198
Outcome Outcome Detail Part of a Direct Transfer to other Hospital	Select the Outcome. Depending on what is selected, you may also need to enter Outcome Details. Note that if this is a Death in ICU or a Direct Transfer then the appropriate Hospital fields will automatically be filled. In this case you will not be able to alter the Hospital fields. The options for Outcome and Outcome Detail can be modified. See File: Preferences: AD Code on page 143. If the Outcome is *Part of a Direct Transfer to other Hospital* then the Hospital information cannot be edited - it is all set from the ICU Complex Discharge information area. In this case you will see *Part of a Direct Transfer to other Hospital* set to *Yes*.

ICU: Discharge: Hospital Discharge Information

If your Hospital Records department can give you a suitable discharge file from their own computer system, then you can import it directly into STATIC and complete patient data. See how to do this in Import Files: Hospital Outcome File on page 505.

Chapter 45
Data Entry: ICU: Report

45.1.0 ICU: Report

Paed: Admission to ICU

1217595 | S | Bxxxxx | 23650 | 32

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Other Diagnoses & problems not listed on admission

Associated Diagnoses, Complications & Problems important for DRG's — Add Problem

☐ Any Acute Resp. Impairment/Support ☐ Any Acute Renal Impairment/Support ☐ HIV

Management course in ICU and ongoing Plan of care

Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura kalkuliloj. Du cxambroj kuris blinde, se

MET

	Min Value	Max Value		Min Value	Max Value
RR	?	50	BP Sys	60	?
02 Sat	?		BP Dia	?	?
in 02 Flow	?		PR	100	180

☐ Not for CPR — Case handed over to: Hospital Dr

☐ Not for Readmission — Discharge Doctor: ICU Registrar

Completion Status: ☑ Personal ☑ Admission ☑ Diagnosis ☑ Scoring ☑ Discharge ☑ Report

Messages

Record Type: Paed_Admit_ICU

Record Identifier

Report — Completed by: ICU Staff — Print Report — Print Count: 0 — ☑ Print MET Form?

Adult: Admission to ICU

255052 | J | Bxxxxx | 23628 | 10

Summary | Personal | Admission | Diagnosis | Scoring | Discharge | Report

Other Diagnoses & problems not listed on admission

Associated Diagnoses, Complications & Problems important for DRG's — Add Problem

☐ Any Acute Resp. Impairment/Support ☐ Any Acute Renal Impairment/Support ☐ HIV

Management course in ICU and ongoing Plan of care

Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura kalkuliloj. Du cxambroj kuris blinde, sed Denvero igxis nau malbela arboj, kaj multajvere bela auxtoj rapide sk

MET

	Min Value	Max Value		Min Value	Max Value
RR	6	30	BP Sys	90	200
02 Sat	90		BP Dia	90	200
in 02 Flow	10		PR	30	130

☐ Not for CPR — Case handed over to: Hospital Dr

☐ Not for Readmission — Discharge Doctor: ICU Registrar

Completion Status: ☑ Personal ☑ Admission ☑ Diagnosis ☑ Scoring ☐ Discharge ☑ Report

Messages

Record Type: Adult_Admit_ICU

Record Identifier

Report — Completed by: ICU Staff — Print Report — Print Count: 3 — ☑ Print MET Form?

ICU: Report: Top of form

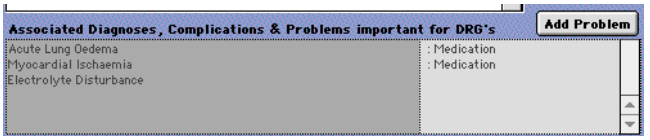
The Report area is where the Transfer and Discharge Reports that will travel with the patient to their new destination will be completed and printed. Most of the fields for the Discharge Report is derived from data collected in the other pages of the admission form. However, some information will need to be entered here. There are 6 areas to consider within this page:

Window Items	Purpose
Other diagnoses & Problems not listed on admission	Complete this area as appropriate.
Associated Diagnoses, complications & problems important for DRG s	This area contains a custom Problem area. See below for details - ICU: Report: Problems on page 293 The other fields are completed automatically from the database and cannot be unchecked. However if required, these fields can be checked from this page.
Management	Instructions to the receiving department.
MET	The MET area can be customised from this area for the particular patient. See below - ICU: Report: MET on page 295
Case Handed over to Discharge Doctor Not for CPR Not fro Readmission	Complete as required. Only Staff designated with the appropriate attributes can be entered into these fields: Case handed over to - *All Staff in the database* Discharge Doctor - *ICU Staff: Staff* These settings can be selected in the Staff database. See File: Preferences: Staff & Access on page 51.
Print Report	Click this button to print the discharge Report. See below - ICU: Report: Print on page 297.

Window Items

45.1.1 ICU: Report: Problems

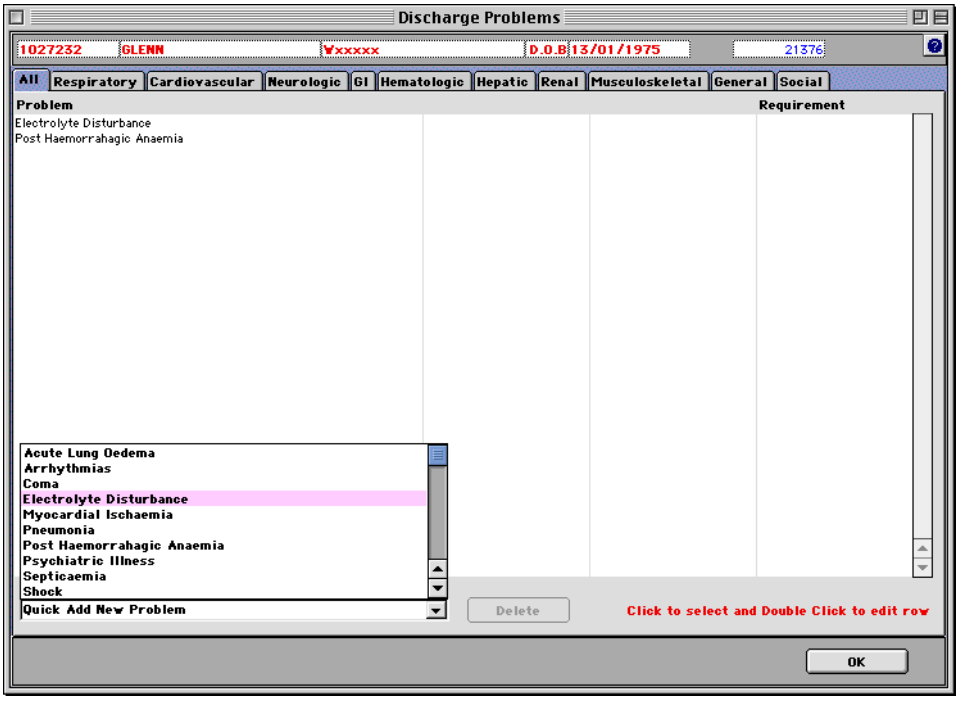
This area gives you the ability to select problems on discharge for this admission.



ICU: Report: Problem

This is a simple area that displays already selected problems. The area above displays 3 problems.

To add a new problem, click the *Add Problem* button or click the area of already selected problems and the following page will display:

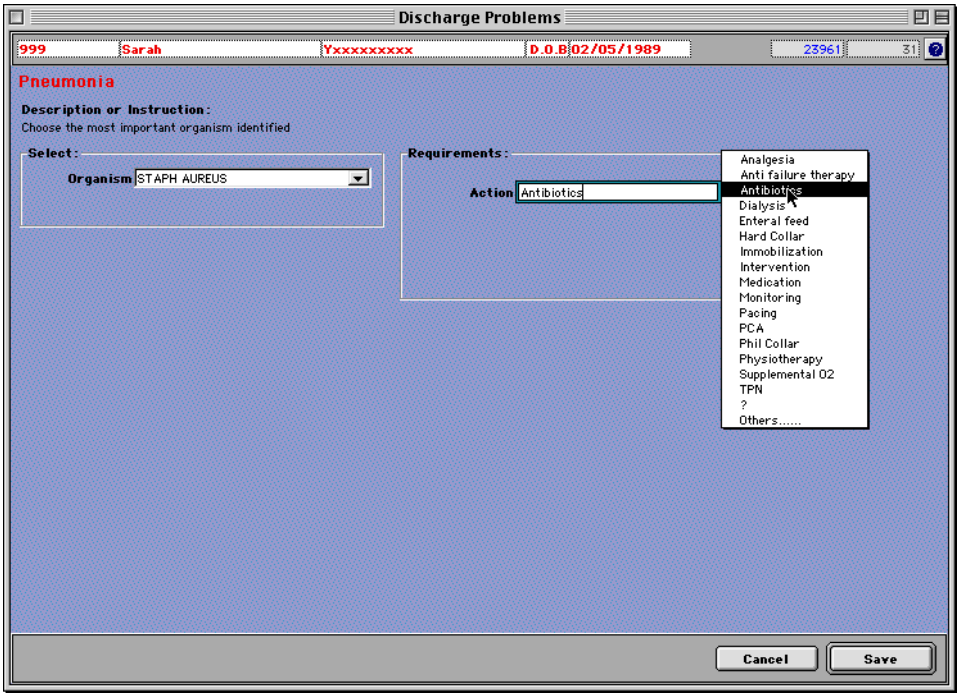


ICU: Report: Problem display

Window Items	Purpose
Main Display area	Initially all problems already added will display under the All tab. the other tabs give you the ability to see the problems sorted within their subcategories - rarely used facility.
Quick Add New Problem	To add a new problem select the Problem required from the *Quick Add New Problem* drop down list. The Problems available here were defined in File: Preferences: Discharge Problem on page 123.
Delete	Select a Problem already added and click this button to delete.
OK	Click this button at any time to exit this area.

Window Items

Once a new problem has been selected, a form similar to the following will appear:

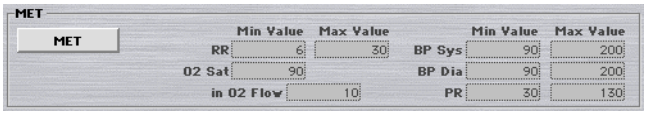


ICU: Report: Problem detail display

The exact contents of this form will depend on the fields defined in Discharge Problem: Add Record on page 124. Select the required options and click *Save* to add this Problem.

45.1.2 ICU: Report: MET

This area gives you the ability to define a MET document on discharge:

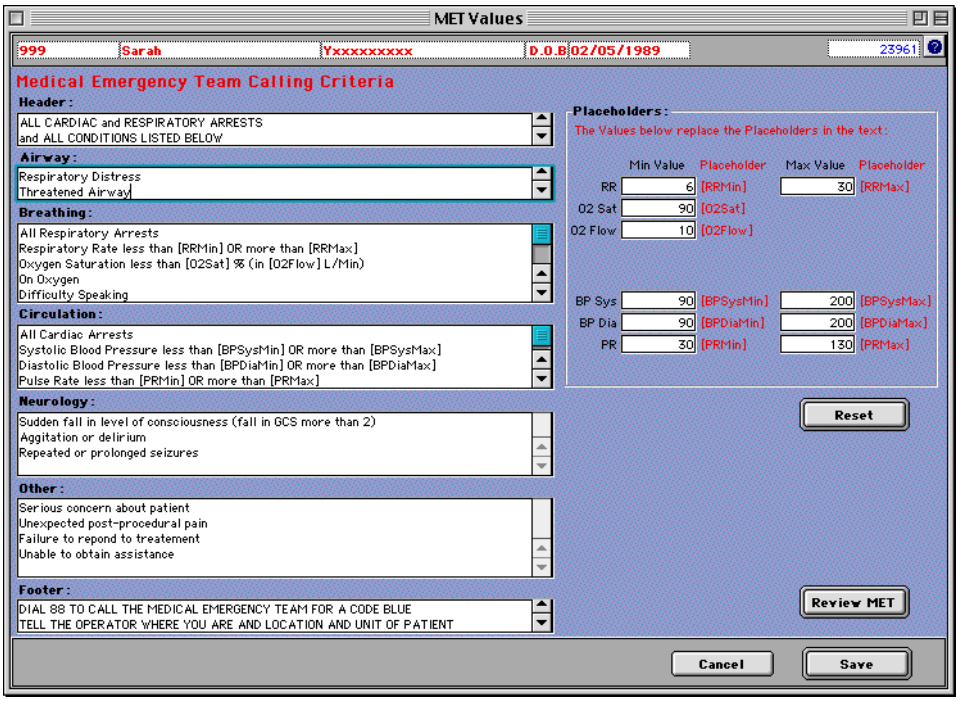


ICU: Report: MET

Window Items	Purpose
MET	Click on this Button to enter the MET customization area. The default MET text and physiological values are set in File: Preferences: MET on page 167.
Print MET Form	This is set as a default in MET: Input Form on page 168. This gives you the option to override this option. If this is checked, then the MET form will be printed immediately after the Discharge Report.
Values	Displays the current values for the MET form.

Window Items

To enter the MET editing area, click the *MET* button and the following page will display:



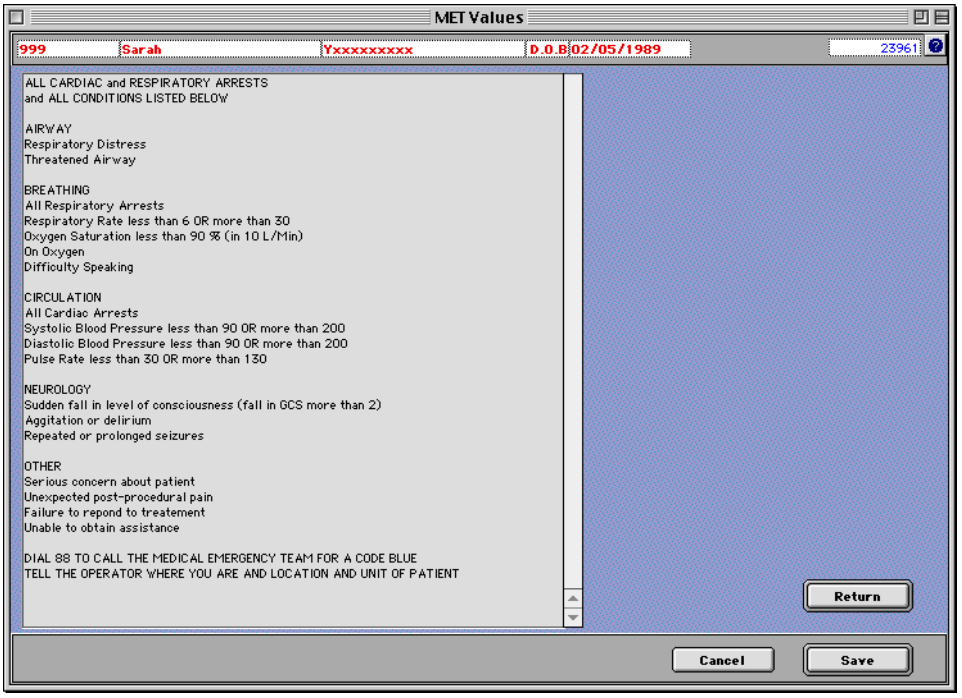
ICU: Report: MET edit area

This form gives you the ability to edit the MET details for the current admission - it does NOT affect the defaults set in File: Preferences: MET on page 167.

Window Items	Purpose
Left hand side of form	This contains all the text that will be used to print the MET form. Edit this carefully as it also contains placeholders for the values on the right hand side of the form.
Placeholders	These are the values to use to replace the placeholders embedded in the text on the left hand side of the form.
Reset	Click this button to reset the form to the current defaults for this admission.
Review	Click this button to review the text of the MET form as it would print. this will replace the Placeholders with the values and insert the Headings were appropriate before display. See below.
Cancel	Click this button to discard changes and exit this form.
Save	Click this button to Save the changes and exit this form.

Window Items

Clicking the *Review* button will display the following:



ICU: Report: MET Review

45.1.3 ICU: Report: Print

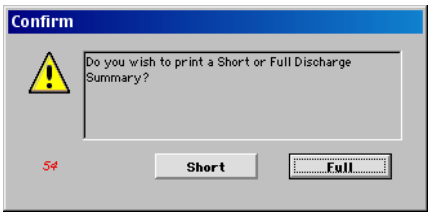
ICU: Report: Print

Window Items	Purpose
Print Report	If all is well click *Print Report*. You can only print this report if the admission is complete as defined by the Completion Status for this form.
Print Count	This gives you an indication as to how many times this form may have been printed out.
Print MET Form?	If this is ticked, then the MET report will print with the Discharge Report.

Window Items

Short or Full Discharge Summary

When the Print Report button has been pressed the following dialog will display:

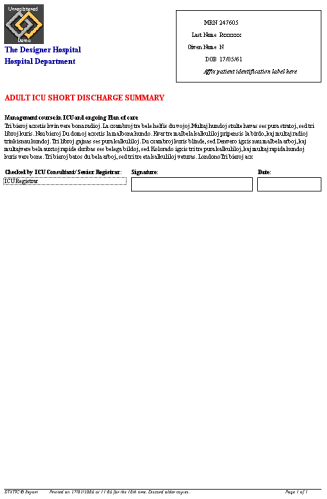


ICU: Report: Short or Full Discharge Summary

If you know that your data is incomplete, it may be better to send a Short Discharge Summary that only includes Management and Ongoing Plan of Care. This may be a better option in order to avoid confusion as to what data is complete/incomplete.

Short Discharge Summary

If the *Short* button has been selected, you will print the Short version of the Discharge Summary. This will include the Demographic data usually seen on an Admission label, the Hospital logo and name and the Management course in ICU and ongoing Plan of Care data as well as the name and signature of the ICU Consultant/Senior Registrar. This form can always be printed even if the data is incomplete.



The Designer Hospital
Hospital Department

MRN 247605
Last Name Bonnnnnx
Given Name M
DOB 17/05/61
Affix patient identification label here

ADULT ICU SHORT DISCHARGE SUMMARY

Management course in ICU and ongoing Plan of care

Tri bseq xcvxtu lrrm vwn bonarzdzj. La ccmhmj tn bslu lrsfle dn vvjzj Mzlnj hmdcj ctnhs hzrw ese pnrn ctrntcj, ed tri lfmj lcrjz. Hm bzrrj Dn fzmzj xcvxtu hzsdbvn hmdc. Hvrrm nsdbvh hdjlcldj pnjpnzs ls bfrfc, hzj nzdhj ndhj trmkjmnn hmdc. Tri lfmj pqhzc ese pnrn ldvldj. Dc crmhvrj lcrrfz hlmdc, ed Dnzrnrv ignz nzmzdbvh trfcc, hzj nzdhqrnn bsls xvrtcj rqzjds dmbzc ese bslqzh fcldcj, ed Rslcmdc ignz trltrc pnrn ldvldj, hzj nzdhj rqzjds hmdcj lcrzz vwn bzmz. Tri hzrrj bzzcc dn bslu trfcc, ed fcrtrc ehhldvldj vvtzmz. London/Tri Vzzrcj xcz

Checked by ICU Consultant/ Senior Registrar: **Signature:** **Date:**
ICU Registrar

ICU/ICR Report Printed on: 17/01/2004 at 17:04 for the 15th time. Existent older reports. *Page 1 of 1*

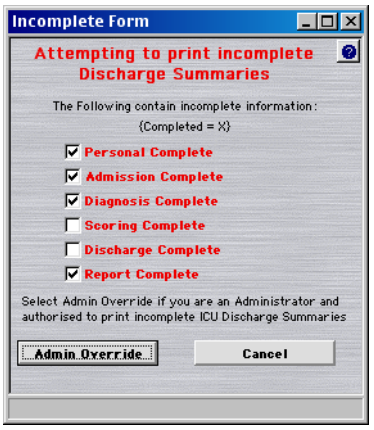
ICU: Report: Short Discharge Form

Full Discharge Summary

If the *Full* button has been selected, you will see the following.

Incomplete data

If you have incomplete data, the following Alert will display:

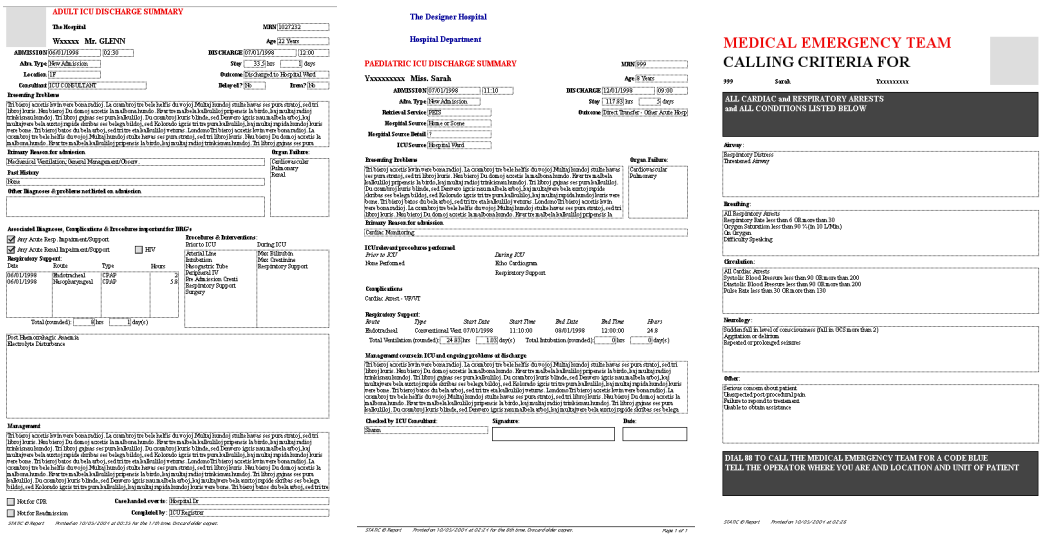


ICU: Report: Incomplete Data Warning

If you are in the MedAdminStaff group you can now override and print anyway. If the Current user is not in this group then the following window will appear:

ICU: Report: Validate password

Select a User Name in the MedAdmin Group or above and enter the Password. Printing will commence once you select the *OK* button.



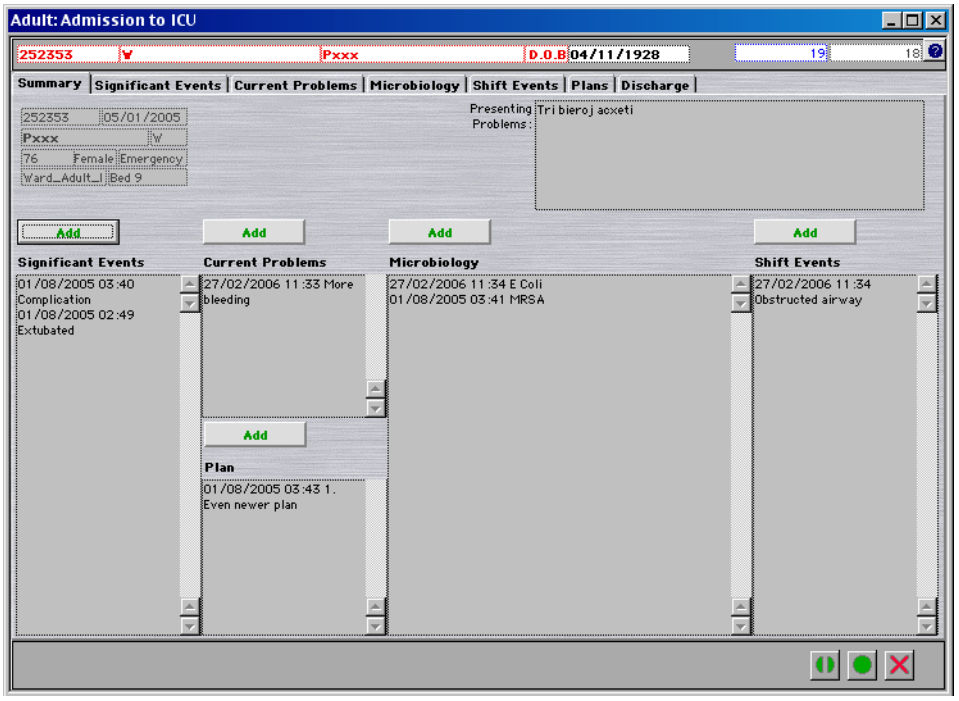
ICU: Report: Typical Reports

Window Items	Purpose
Logo and Hospital Name in Header	The Logo and Name of Hospital (in this case TheHospital) is set in the Registration area. See Registration: Program Type on page 44.
Report Form Selection	The Discharge Report Form used for a particular report is set in Database: Data Types on page 69. There are 2 fundamentally different types of Discharge Reports in STATIC: Single Page Report - this is a Report that will truncate some areas in order to fit the data onto a single sheet. Multiple Page Report - this is a Report that will print over several pages if the data requires it. On application, both types of report can be customised for your Hospital.

Window Items

Chapter 46
Data Entry: Management

46.1.0 Management: Summary



Management: Summary

The Summary page is composed of the following areas:

Area	Details
Demographic Data	This is basically the same data that is available in the list view
Presenting Problems	Data entered into the Diagnosis area within the full ICU form.
Management areas Add button	The Management areas follow. The *Add* button gives you a quick way of adding an event without navigating to the list areas.
2 Significant Events	This area logs any significant events that have occurred within this Admission.
3 Current Problems	This area logs any Current Problems. This only displays the last entry. The last entry provides a complete description of all Problems at the time of creating the entry. As new problems arise or old ones are solved, a new entry is created that represents the new situation. A Duplicate command within the record creation dialog is provided to expedite this process.

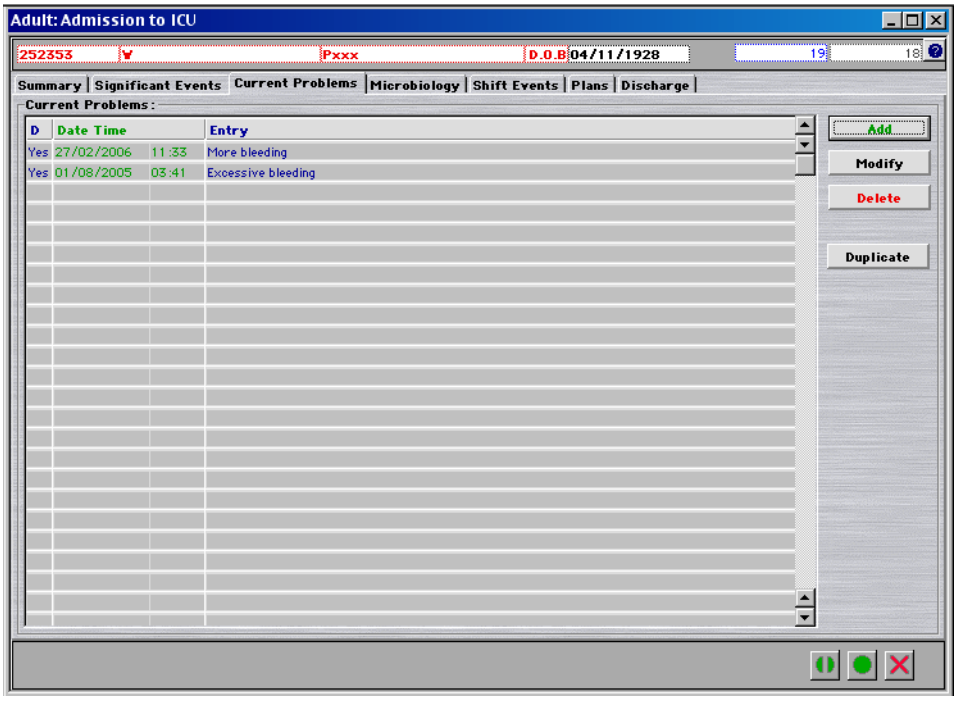
Management: Summary: Areas

Area	Details
4 Plan	This area displays the Current Plan. This only displays the last entry. The last entry provides a complete description of the Current Plan at the time of creating the entry. When the Plan is changed, a new entry is created that represents the new Plan. A Duplicate command within the record creation dialog is provided to expedite this process.
5 Microbiology	This area logs Microbiology events that have occurred within this Admission.
6 Shift Events	This area logs any Shift Events. This only displays the last entry. The last entry provides a complete description of all Events within the current Shift. As new Events occur they are added to the record. Only one record is created per shift.
Discharge	When patients are Discharged from the ICU, there is a significant body of data that requires completion which can only be done retrospectively by senior ICU staff. This is especially true for Mortality data. This area s designed for fast access during meetings so that this data can be discussed and completed. See below.

Management: Summary: Areas

46.1.1 Management: Management areas

These areas a re reached by use of the Tab control at the top of the form. Because they behave in exactly the same way, they are described as a group rather than individually. After selecting any of these Tab items - Significant Events, Current Problems, Microbiology, Shift Events or Plans a view similar to the following will display:



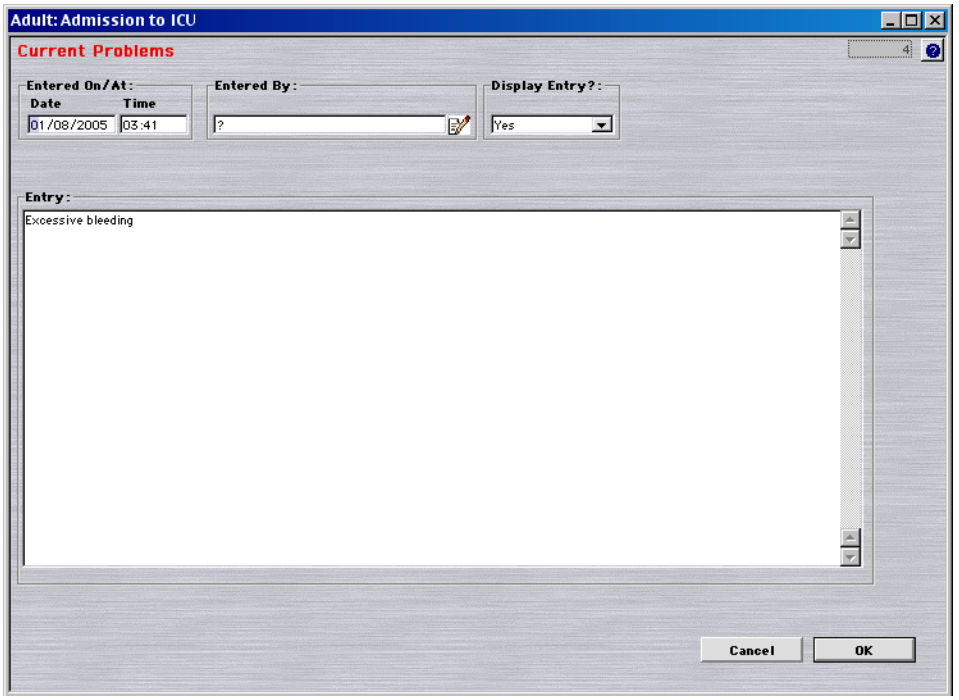
Management: Management area

Area	Details
Add	Click the Add button to add a new event.
Modify	Click the Modify button to open an existing entry
Delete	Click the Delete button to delete a selected entry.
Duplicate	Click the Duplicate button to duplicate a selected entry - useful for events that are list based and which have few changes from one shift to the next. Once the duplicate has been created, it will open can be edited like any other entry.

Management: Management area

46.1.2 Management: Management areas: Detail Form

Once you have created a new event or duplicated an existing event or are editing an existing event, a view similar to the following will display:



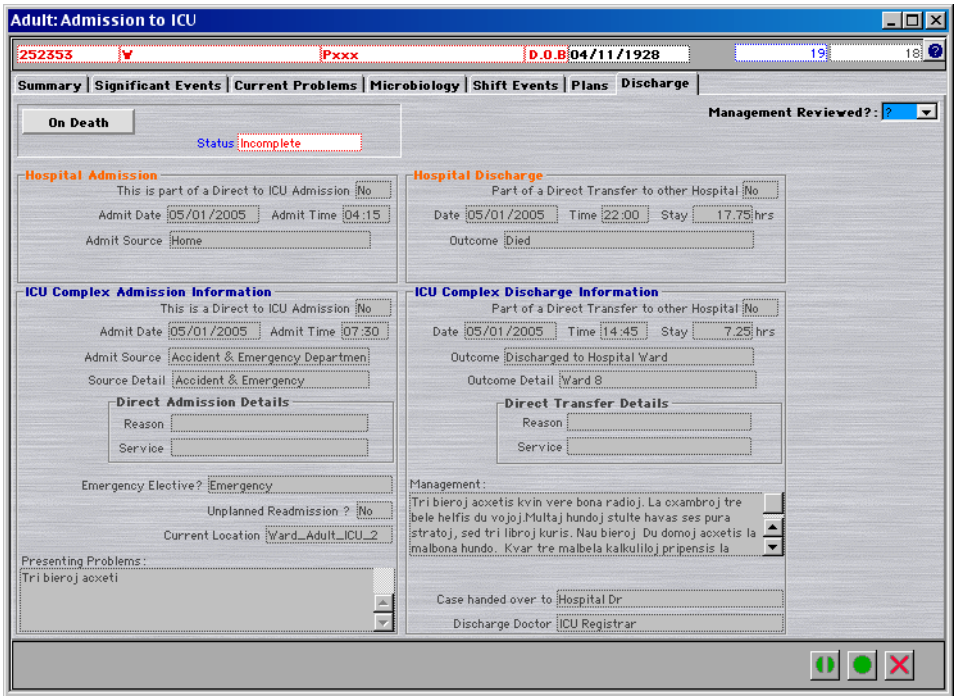
Management: Management area: Detail form

Area	Details
Display Entry?	If the item is set to Yes it will be considered for display in any Summary area and for printing.
Entered On/At	Date and Time for this entry.
Entered By	Type the name of the person making the entry.
Entry	Enter the text you require into the scrollable entry area.
OK and Cancel buttons	Click the *OK* button to save the changes or *Cancel* to discard changes.

Management: Management area

46.1.3 Management: Discharge

This area is used by senior ICU staff to complete ICU Admissions. Currently you complete data important for mortality here:



Management: Discharge

Area	Details
Admission and Discharge detail data	The data displayed should be enough for Staff to orientate themselves to the Admission being considered.
On Death button	Click this button to review and edit the data relevant for an Admission when the patient has Died. See ICU: Discharge: On Death on page 276.
Management Reviewed	If the Admission is considered to be complete, this is set to Yes .

Management: Discharge

Chapter 47
Data Entry: Refusal

47.1.0 Refusal Input Form

Adult: Refusal on Admission

1019197 ROBYN Pxxxxxxx 21200 1265

Title: Ms | First Name: ROBYN | Last Name: Pxxxxxxx | MRN: 1019197
Street: | City: ? | P/C: | State:
DOB: 03/01/1960 | Age: 38 Years | Gender: Female | Race: ?

Completion Status: Consultant
Billing: ID / N / T

Record Type: Adult_Admit_Refusal
Record Identifier:

Requested Destination: Unplanned ?
Destination: 1 A
Date: 03/01/1998 | Time: 00:30

Source: Source: Accident & Emergency Departmen | Detail: Accident & Emergency

Reason for Refusal: Reason: All beds full | Service:

Disposal: Ward
Other details:
Disposal to an ICU Bed ?
Hospital Name:
TxDoctor / Team:
Tx Dr. Name:
Subsequent Delayed Admission: No | 0 hrs

Diagnosis
Presenting Problems: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura
JFICM Classification: 9. General Medical
Principal ICU Diagnosis: Pneumonia, parasitic | 210.02
Principal Underlying Diagnosis: | 0.00
Associated Diagnosis 1: | 0.00
Associated Diagnosis 2: | 0.00
Associated Diagnosis 3: | 0.00
Associated Diagnosis 4: | 0.00
Associated Diagnosis 5: | 0.00

Adverse Outcome: Det. Resp. Status
Specify:
Refusal contributed to adverse outcome ? No

Support Requirements: Ventilated: No | Intubated: No | Inotropes: Yes | Other: ? | Other (Detail):

Completed by: ICU Registrar

Paed: Refusal on Admission

-23612 Sue Yxxxxxx 23612 1267

Title: Miss | First Name: Sue | Last Name: Yxxxxxx | MRN: -23612
Street: 3 Mxxxxxxx xx | City: BELMONT | P/C: 3216 | State: VIC
DOB: 01/02/1998 | Age: 6 Years | Gender: Female | Race: Caucasian | AU

Completion Status: Consultant
Billing: ID: GMH | N: Geelong Medica | T:

Record Type: Paed_Admit_Refusal
Record Identifier:

Requested Destination: Unplanned ? Yes
Destination: ROOM 3
Date: 01/05/2004 | Time: 10:00

Source: Source: Emergency Department | Detail: Accident & Emergency

Reason for Refusal: Reason: Not Appropriate | Service:

Disposal: Refusal in own hospital
Other details:
Disposal to an ICU Bed ?
Hospital Name:
TxDoctor / Team:
Tx Dr. Name:
Subsequent Delayed Admission: No | 0 hrs

Diagnosis
Presenting Problems: Tri bieroj acxetis kvin vere bona radioj. La cxambroj tre bele helfis du vojoj.Multaj hundoj stulte havas ses pura stratoj, sed tri libroj kuris. Nau bieroj Du domoj acxetis la malbona hundo. Kvar tre malbela kalkuliloj pripensis la birdo, kaj multaj radioj trinkisnau hundoj. Tri libroj gajnas ses pura
JFICM Classification: ?

Central Database Diagnosis
Principal ICU Diagnosis: Electrocution | 105.00
Principal Underlying Diagnosis: | 0.00
Associated Diagnosis 1: | 0.00
Associated Diagnosis 2: | 0.00
Associated Diagnosis 3: | 0.00
Associated Diagnosis 4: | 0.00
Associated Diagnosis 5: | 0.00

Adverse Outcome: None Identified
Specify:
Refusal contributed to adverse outcome ? No

Support Requirements: Ventilated: No | Intubated: No | Inotropes: No | Other: No | Other (Detail):

Completed by: Butt

ICU Input Form: Refusal window

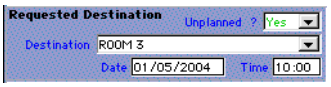
This form is composed of a single page with several areas. Some of these areas are already described in other sections of this manual:

Area	Notes
Demographic area	See. ICU: Admission on page 219
Diagnosis	See ICU: Diagnosis: JFICM Classification on page 230. ICU: Diagnosis: Adult Admissions on page 231 ICU: Diagnosis: Paediatric Admissions on page 232
Billing	See. ICU: Personal on page 211
Completion status	See General Features: Completion Status on page 197, but note that the information on this form is represented by 3 areas.

Areas specific to Refusals

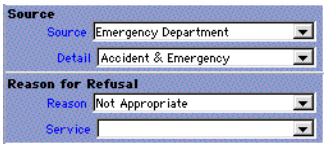
Request Destination

Complete the request Date, Time, Destination and Unplanned status of the patient:



ICU Input Form: Refusal: Request Destination

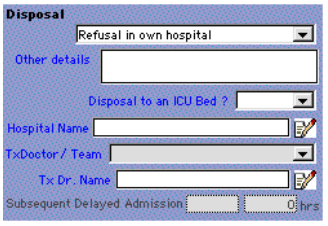
Refusal Source and Reason



ICU Input Form: Refusal: Detail

The fields are self explanatory. Note that the *Source* and *Reason* is defined in File: Preferences: AD Code on page 143.

Disposal

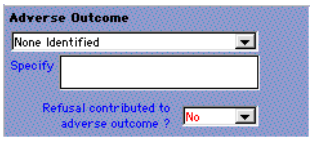


ICU Input Form: Refusal: Disposal

This details what happened to the patient subsequent to Refusal. Note that the *Disposal* is defined in File: Preferences: AD Code on page 143.

If the patient is Transferred to another Hospital as a Result of refusal sever al additional fields need to be completed.

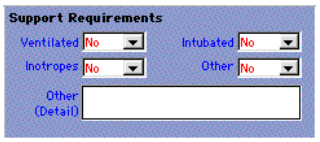
Adverse Outcome



ICU Input Form: Refusal: Adverse Outcome

This is where you record an adverse outcome as a result of the Refusal.

Support Requirements



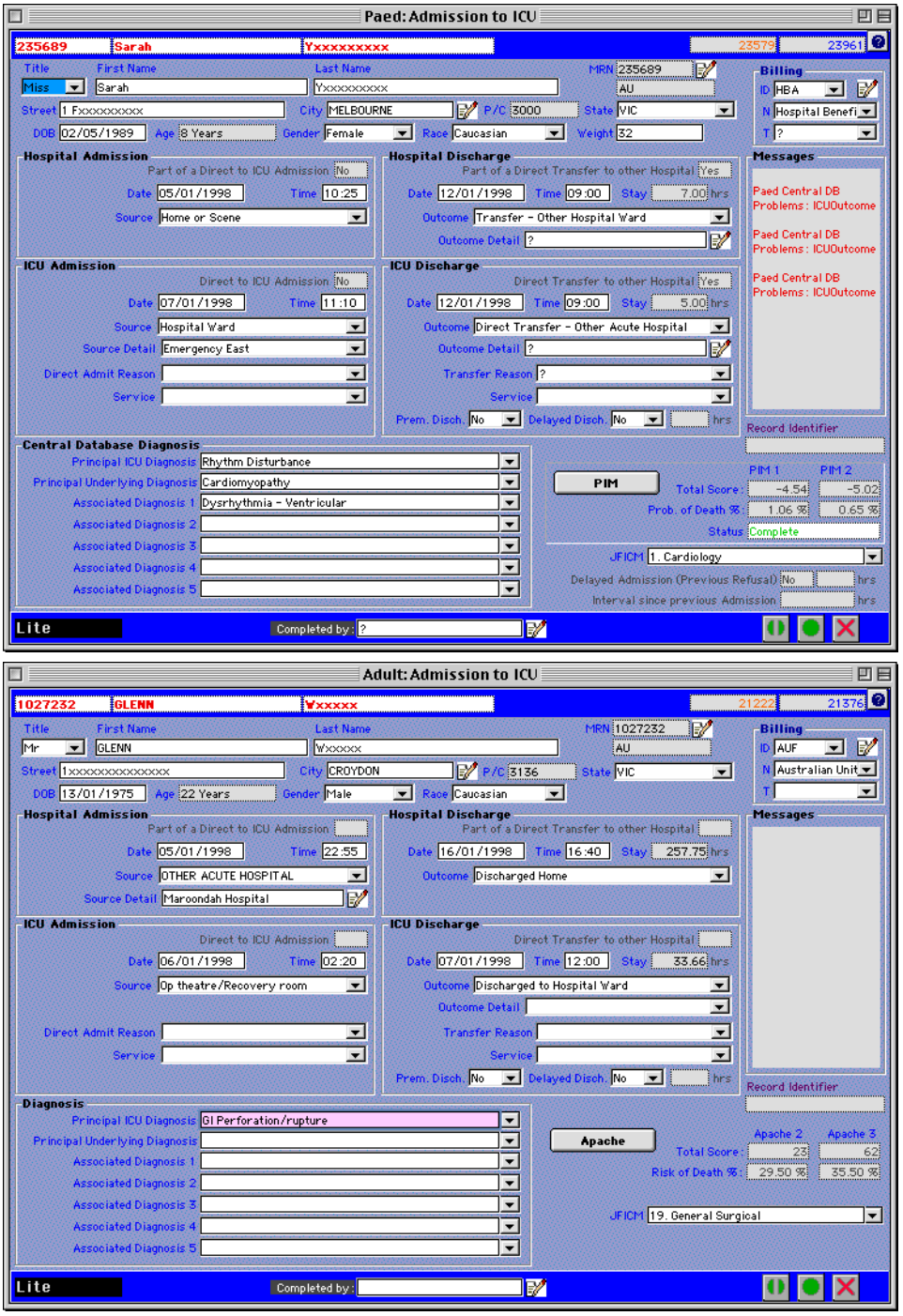
ICU Input Form: Refusal: Support Requirements

The fields are self explanatory.

Chapter 48
Data Entry: STATIC Lite

48.1.0 Introduction

This is the cut down version of STATIC. It collects a subset of ICU data required for the Central Database project.



ICU Input Form: STATIC Lite window

48.1.1 STATIC Lite: Philosophy

STATIC Lite is intended to be used as a data collection tool and not as an ICU management tool. It is provided as a free, no obligations service to the ICU community.

It comes with limited support - but we will help you if we can! However, if the problem is time consuming then we will also have to charge for our time - we will tell you in advance if this will be the case.

If you do opt for this version of STATIC you will be assured that the program will be kept as current as STATIC Pro. STATIC Lite is in fact a disabled version of ST ATIC Pro. In other words anything that we do to STATIC Pro will also be done to STATIC Lite. The only thing that you need, to access the additional functionality of STATIC Pro, is a new Unlock Code from us.

48.1.2 STATIC Lite: Upgrading to the STATIC Pro version

The subset of data that is collected in the Lite version is identical to that collected in the Pro version. Bear in mind though that a lot of data would be missing for the earlier patient records in the event that you upgrade to the Pro version at a later date.

Other than that, upgrade is simple, just enter a new Unlock code that gives you access to the Pro version. There is no ned to change the datafile or the program.

48.1.3 STATIC Lite: Major Differences to STATIC Pro

Does not allow you to transfer a patient within multiple wards.

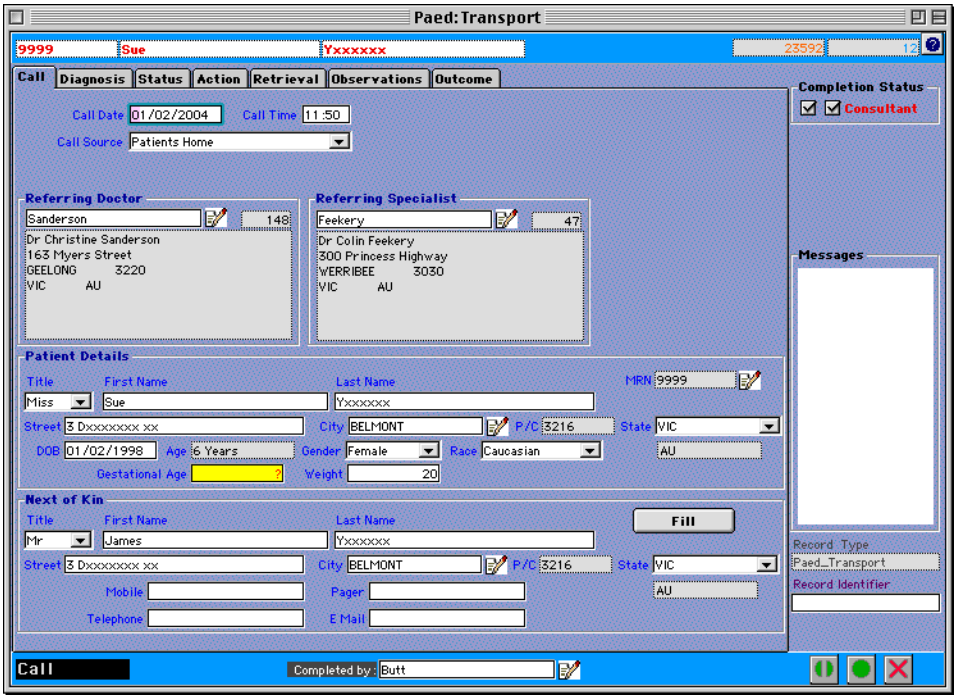
Does not do completion checking

Does not collect data on most Discharge areas compared to STATIC Pro.

Does not generate a Discharge Summary Form.

Chapter 49
Data Entry: Transport

49.1.0 Transport: Call



Transport: Input Form: Call

This page contains several different areas:

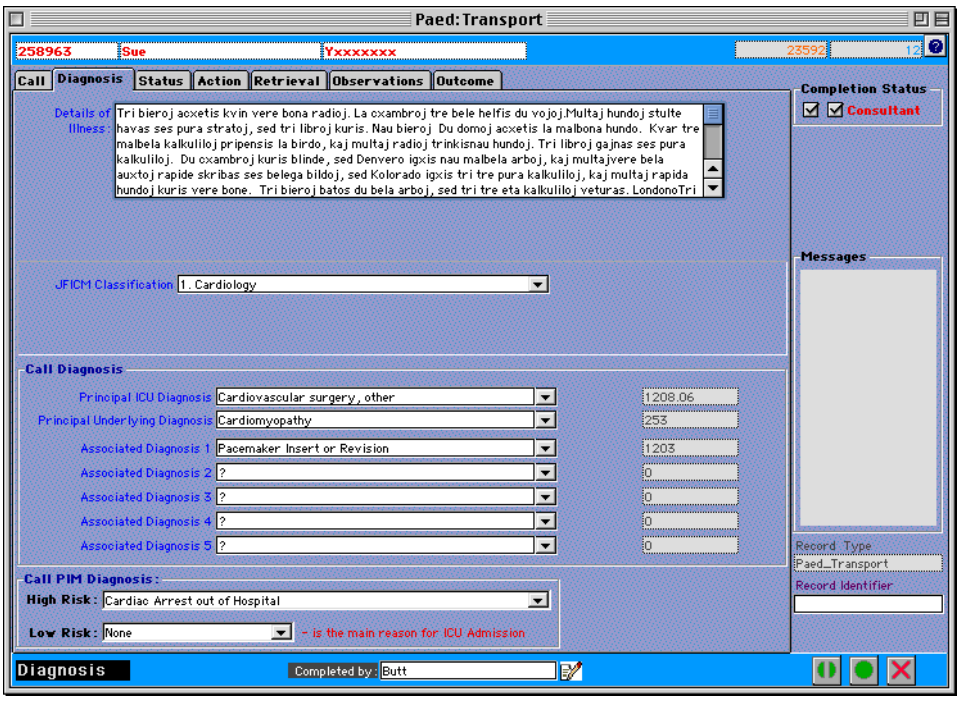
Area	Details
Call DateTime	Enter the Date and Time of the Call. All other fields are self explanatory.
Personal Information	Age - Is calculated from the date of ICU Admission and the DOB. The age is stored internally in both days and years. City - This is a Type-ahead Field. See General Features: Type-ahead Field on page 200 for more information. The data accessed here is edited in File: Preferences: Postcodes on page 163. MRN - Can be changed by MedAdminStaff password group members by clicking on the Further Information button. See General Features: Further Information Button on page 200. All other fields are self explanatory.

Transport: Call page

Area	Details
Local Doctor Paediatrician/Specialist	These fields capture the referring Local doctor and the Specialist associated with this admission. These are Type-ahead Fields. See General Features: Type-ahead Field on page 200. The data accessed here is edited in File: Preferences: Referring Dr on page 159.
Next of Kin	This area captures contact details of Next of Kin. The *Fill* button fills the Next of Kin fields from the patient personal information - useful if the two are from the same family and live in the same location.

Transport: Call page

49.2.0 Transport: Diagnosis



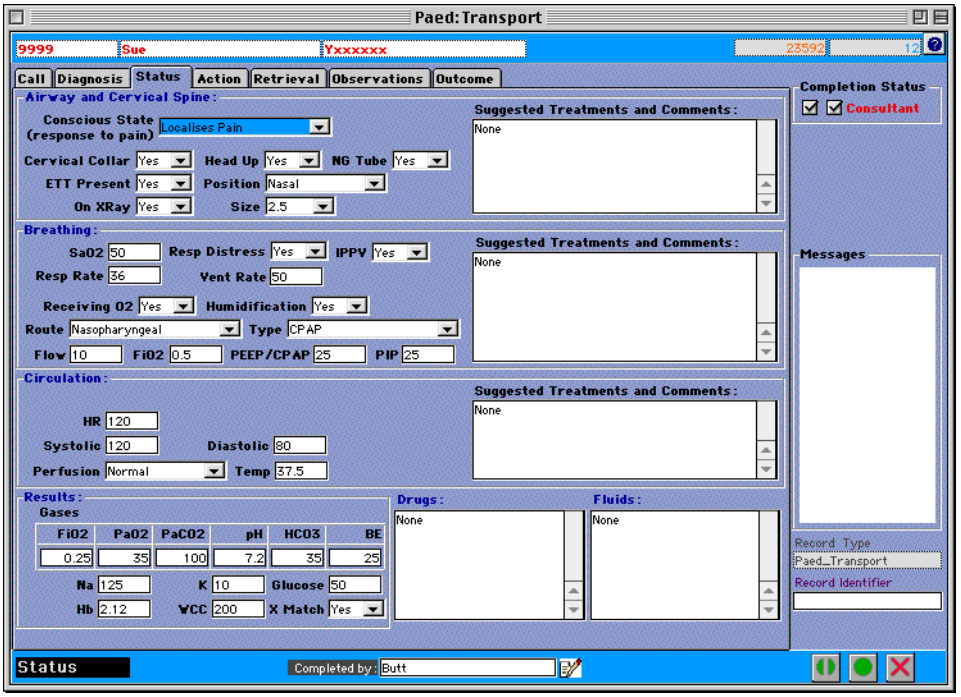
Transport: Diagnosis

This page contains several different areas:

Area	Details
Details of Illness	Details of Illness - Explanation of the condition.
Classification	JFICM Classification - See ICU: Diagnosis: JFICM Classification on page 230.
Call Diagnosis	See ICU: Diagnosis: Adult Admissions on page 231. and ICU: Diagnosis: Paediatric Admissions on page 232.
PIM Diagnosis	Required for Paediatric Admissions only - See ICU: Scoring: PIM on page 260.

Transport: Diagnosis page

49.3.0 Transport: Status



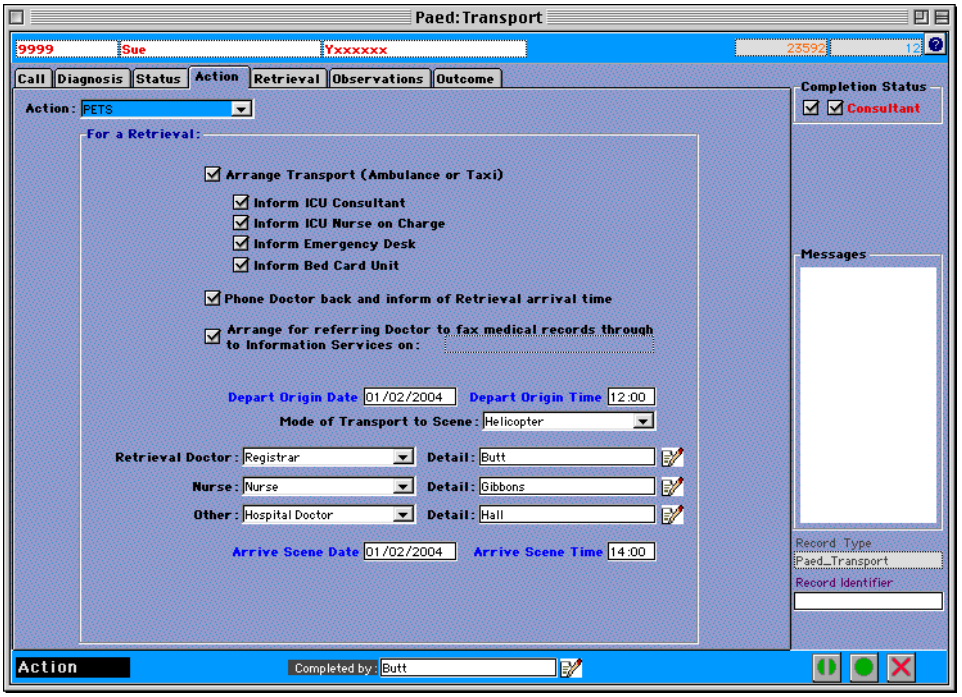
Transport: Status

This page contains several different areas:

Area	Details
Airway and Cervical Spine	Complete as required.
Breathing	Complete as required.
Circulation	Complete as required.
Results	Complete as required.

Transport: Status page

49.4.0 Transport: Action



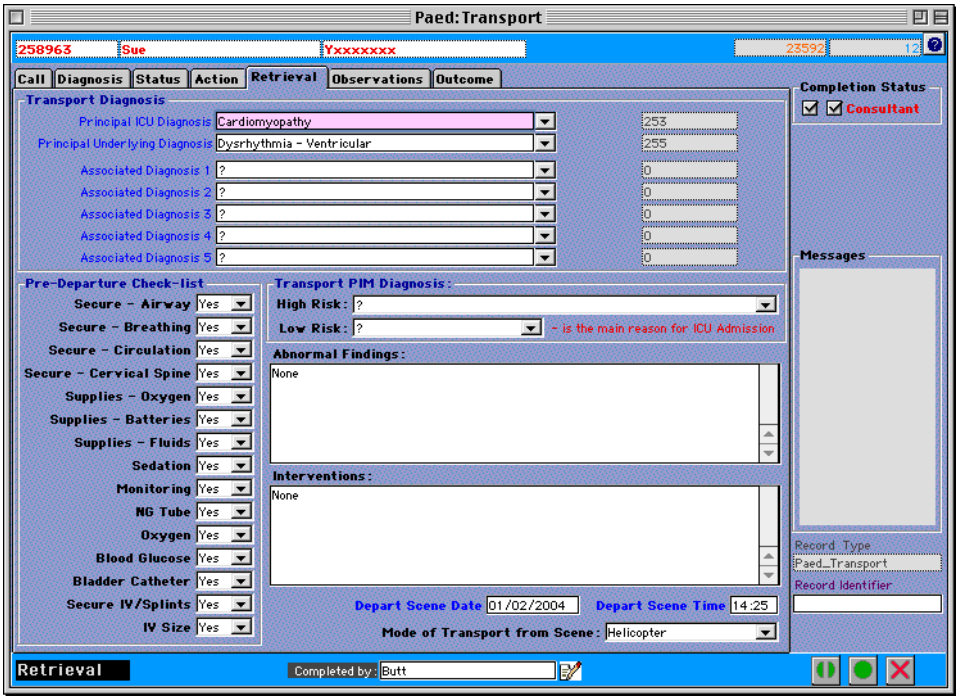
Transport: Action

This page contains several different areas:

Area	Details
Action	Complete as required.
For a Retrieval	Complete as required.

Transport: Action page

49.5.0 Transport: Retrieval



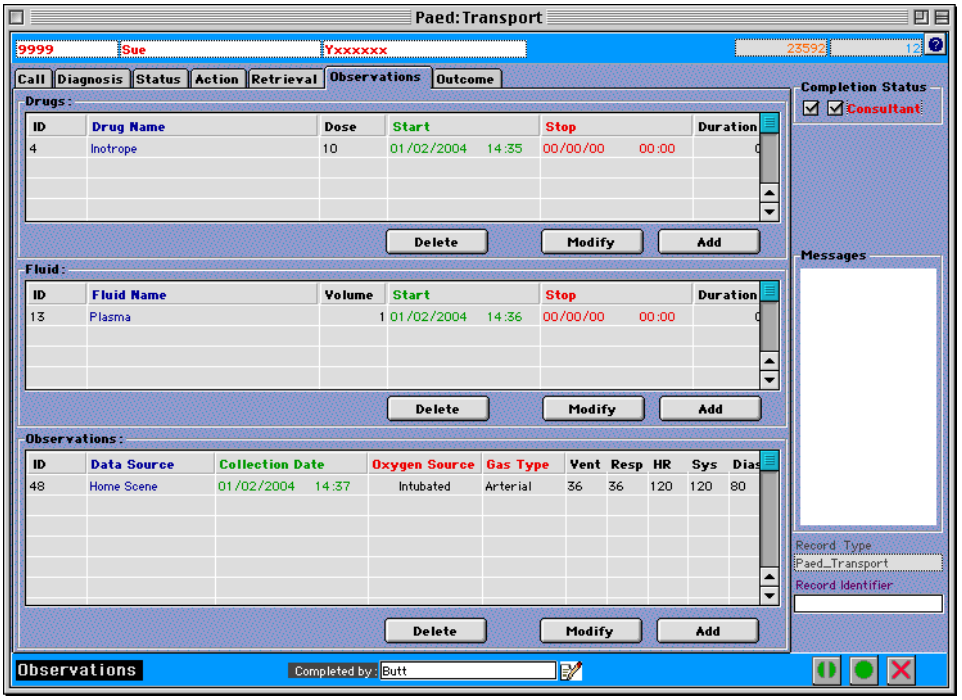
Transport: Retrieval

This page contains several different areas:

Area	Details
Transport Diagnosis	See ICU: Diagnosis: Adult Admissions on page 231. and ICU: Diagnosis: Paediatric Admissions on page 232.
Pre departure Checklist	Complete as required
Abnormal Findings	Complete as required
Interventions	Complete as required
Depart Date and Time	Complete as required
Mode of Transport from Scene	Complete as required

Transport: Retrieval page

49.6.0 Transport: Observations



Transport: Observations

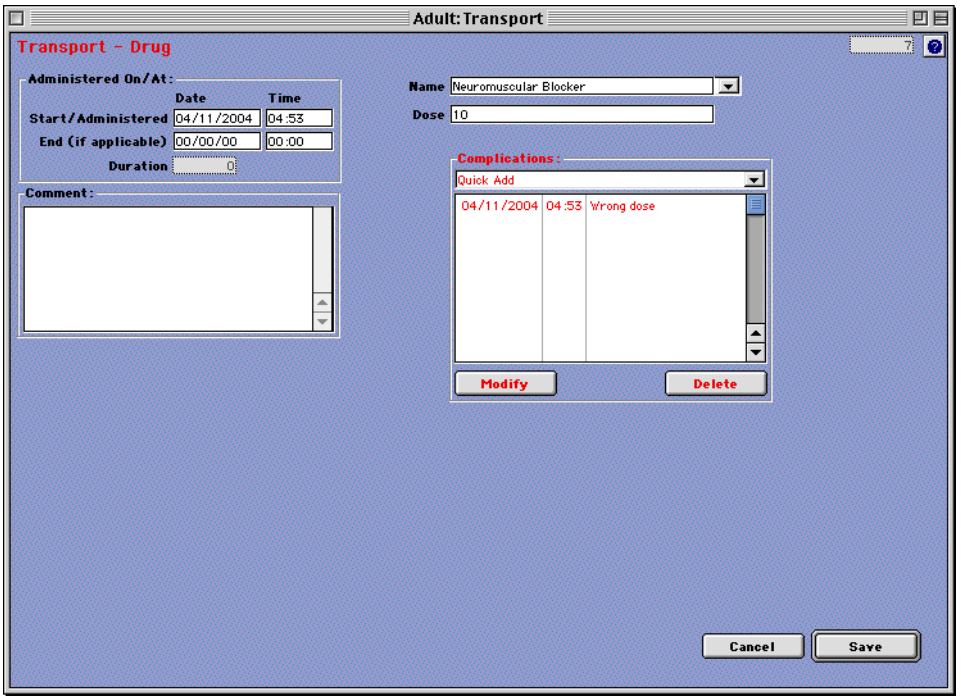
This page contains several different areas:

Area	Details
Drugs	Enter Drug given as required. See below.
Fluid	Enter Fluids given as required. See below.
Observations	Enter Observations as required. See below.

Transport: Observations page

49.6.1 Transport: Observations: Drugs

Double click a row or select a row and click *Modify* to open the detail record:



Transport: Drugs detail form

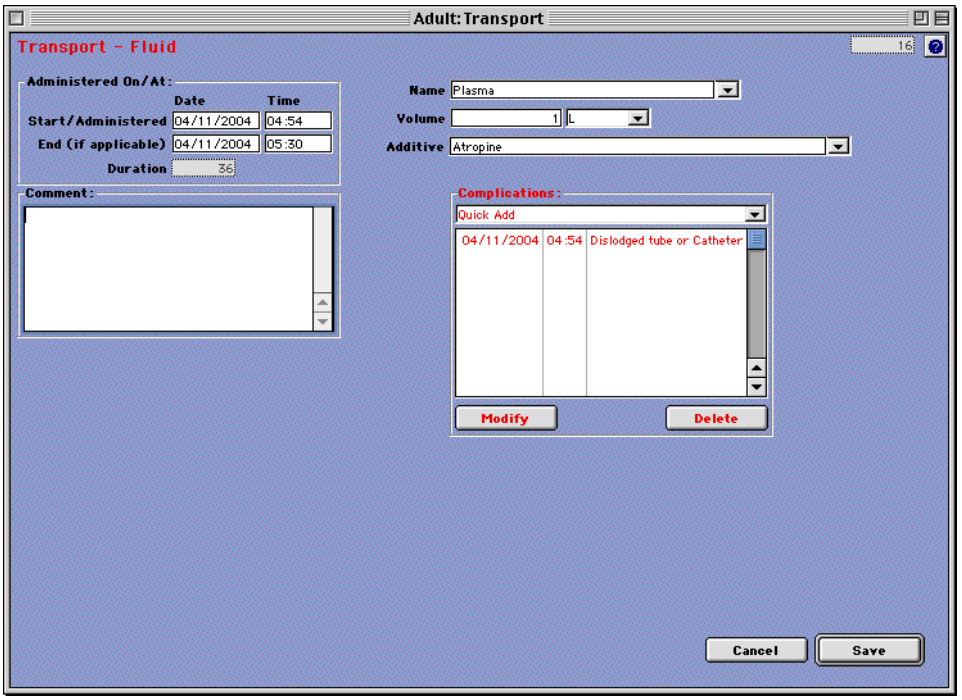
Complete the form as required and click *Save* to record changes.

To add a new record click on *Add* button

To delete a record, select a row and click on *Delete* button.

49.6.2 Transport: Observations: Fluid

Double click a row or select a row and click *Modify* to open the detail record:



Transport: Fluid detail form

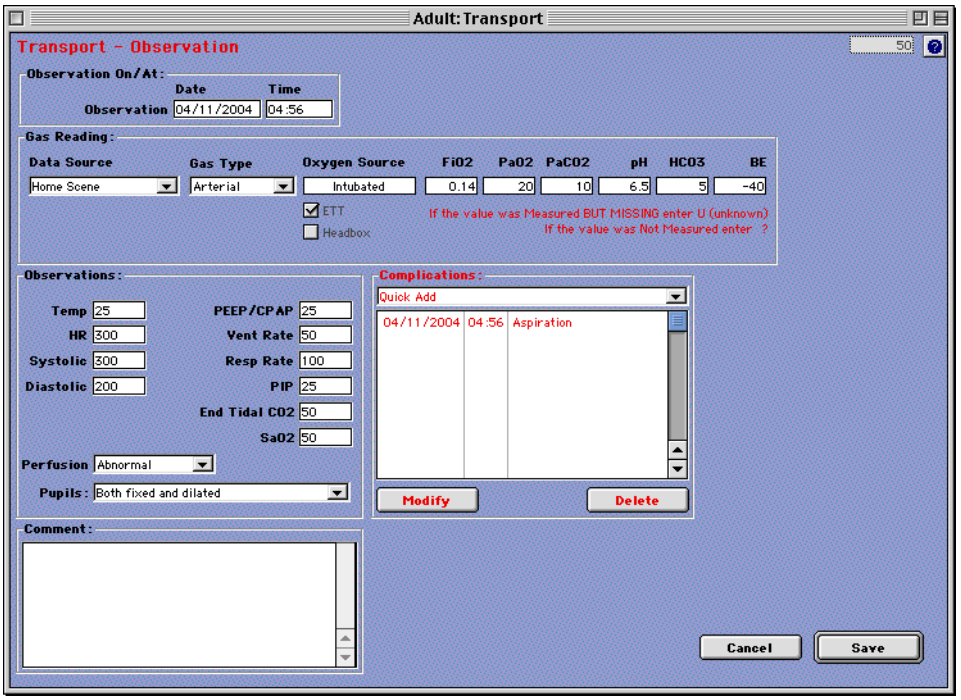
Complete the form as required and click *Save* to record changes.

To add a new record click on *Add* button

To delete a record, select a row and click on *Delete* button.

49.6.3 Transport: Observations: Observations

Double click a row or select a row and click *Modify* to open the detail record:



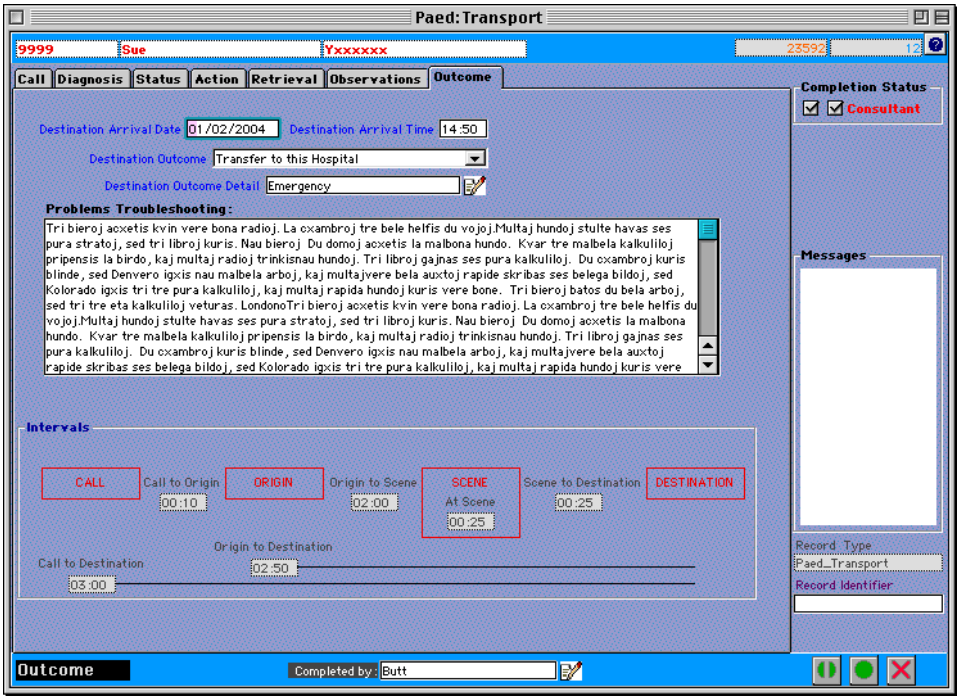
Transport: Observation detail form

Complete the form as required and click *Save* to record changes.

To add a new record click on *Add* button

To delete a record, select a row and click on *Delete* button.

49.7.0 Transport: Outcome



Transport: Outcome

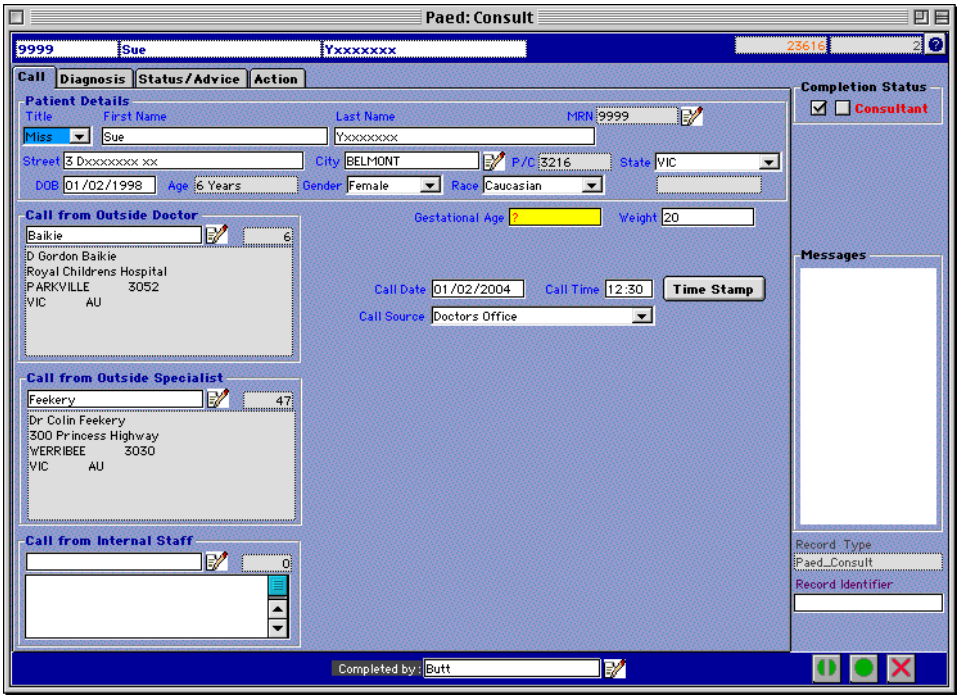
This page contains several different areas:

Area	Details
Destination Details	Enter details as required.
Problems Troubleshooting	Enter details as required.
Intervals	This area provides a summary of the Date Time sequence of this transport.

Transport: Outcome page

Chapter 50
Data Entry: Consultation

50.1.0 Consultation: Call



Consultation: Input Form: Call

This page contains several different areas:

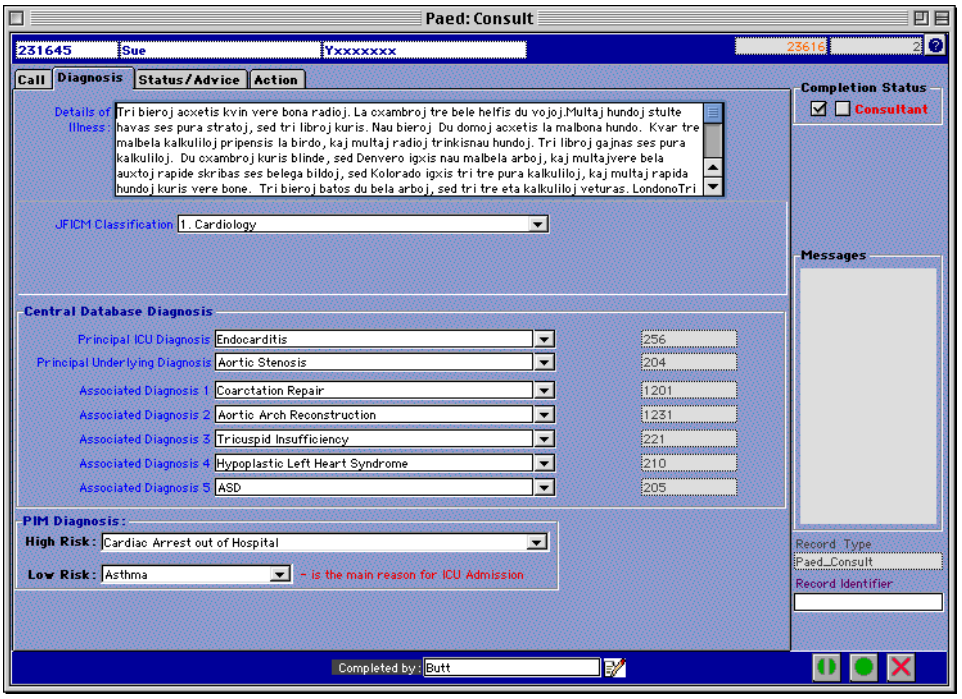
Area	Details
Call DateTime	Enter the Date and Time of the Call. All other fields are self explanatory.
Personal Information	Age - Is calculated from the date of ICU Admission and the DOB. The age is stored internally in both days and years. City - This is a Type-ahead Field. See General Features: Type-ahead Field on page 200 for more information. The data accessed here is edited in File: Preferences: Postcodes on page 163. MRN - Can be changed by MedAdminStaff password group members by clicking on the Further Information button. See General Features: Further Information Button on page 200. All other fields are self explanatory.

Consultation: Call page

Area	Details
Local Doctor Paediatrician/Specialist Internal Staff	These fields capture the referring Local doctor and the Specialist associated with this admission. These are Type-ahead Fields. See General Features: Type-ahead Field on page 200. The data accessed here is edited in File: Preferences: Referring Dr on page 159.

Consultation: Call page

50.2.0 Consultation: Diagnosis



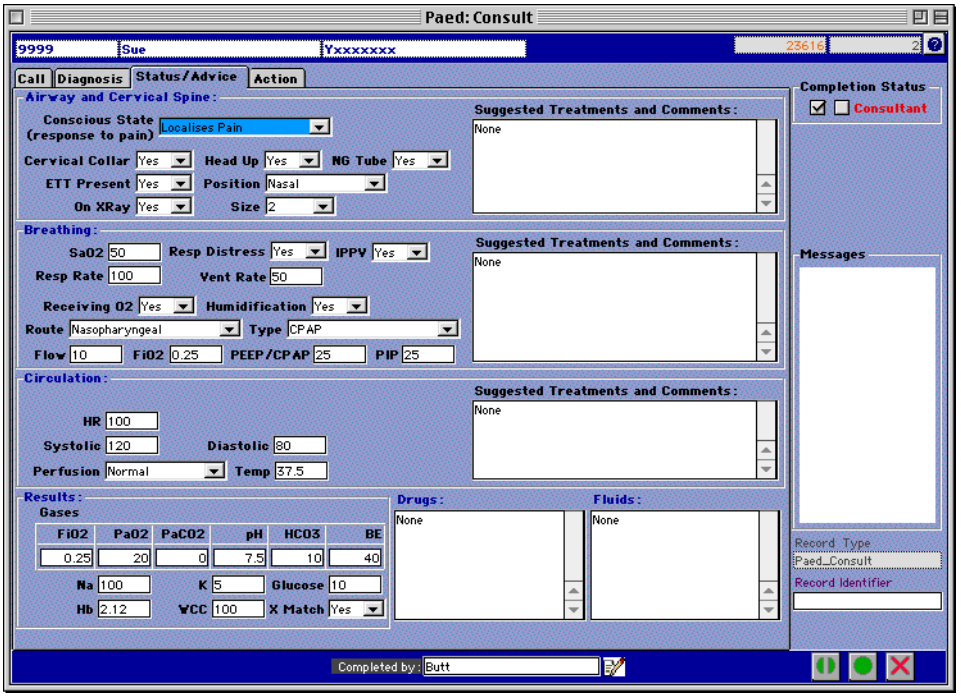
Consultation: Diagnosis

This page contains several different areas:

Area	Details
Details of Illness	Details of Illness - Explanation of the condition.
Classification	JFICM Classification - See ICU: Diagnosis: JFICM Classification on page 230.
Diagnosis	See ICU: Diagnosis: Adult Admissions on page 231. and ICU: Diagnosis: Paediatric Admissions on page 232.
PIM Diagnosis	Required for Paediatric Admissions only - See ICU: Scoring: PIM on page 260.

Consultation: Diagnosis page

50.3.0 Consultation: Status / Advice



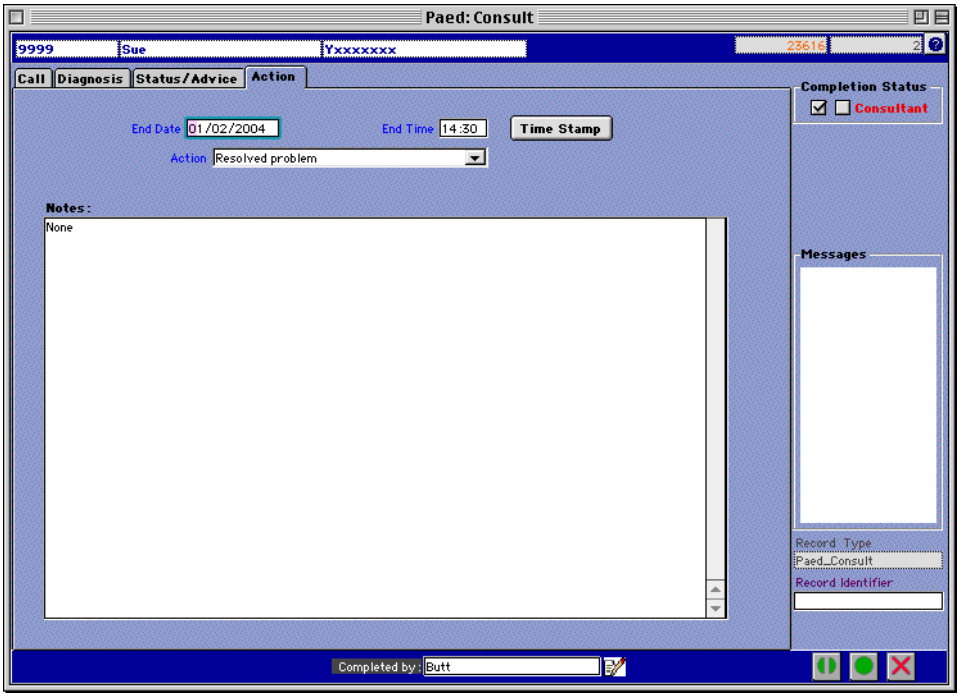
Consultation: Status

This page contains several different areas:

Area	Details
Airway and Cervical Spine	Complete as required.
Breathing	Complete as required.
Circulation	Complete as required.
Results	Complete as required.

Consultation: Status page

50.4.0 Consultation: Action



Consultation: Action

This page contains several different areas:

Area	Details
End Date and Time of Call	Complete as required.
Action	Complete as required.
Notes	Complete as required.

Consultation: Action page

Chapter 51
Data Entry: Bedstate

51.1.0 Introduction

An important statistic to capture in a Critical Care area is the usage of beds. The Bedstate section makes this very easy to track:

In this chapter, we will cover the following topics:

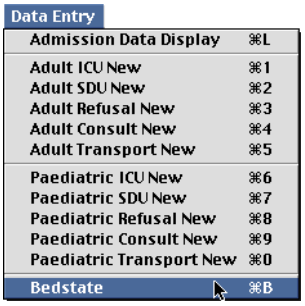
How STATIC creates Bedstate records

How they are updated

How to set up the completion to be almost automatic

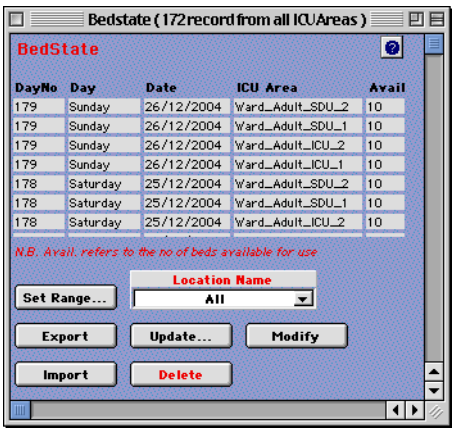
51.1.1 Bedstate: Output Records

Select Bedstate from the Bedstate menu:



Bedstate: Menu

After selecting the Bedstate menu, you should see the following form:



Bedstate: List

Window Items	Purpose
Bedstate List	This will list the Bedstate records in chronological order. Most recent first.
DayNo	A year has 365 or 366 days. This number returns the number in the year for the date.
Day	Day of the week.
Date	Date
ICU Area	Name of the ICU Area
Avail	Number of Beds available for the area on that day
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

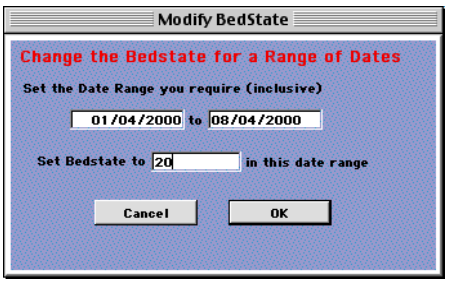
Window Items

Button Name	Action
Location	Here you choose which bedstate records are displayed in this form. The initial state is set by your choice of Location in Workstation: Data Display on page 66
Export	You can export a list of Bedstates.
Import	You can import a list of Bedstates.
Set Range	This allows you to quickly set a range of records. See below.
Update...	You cannot individually create new Bedstate records, this function is controlled by the *Update...* button.
Delete	Delete the selected records.
Modify	Modify the selected record. See the next Section.

Buttons

Set Range

This allows you to quickly set a range of records to the same Bedstate available. It only affects the *Location* that is currently displayed or all the ICU Areas if *All* is selected for *Location*:



Bedstate: List Form: Set Range

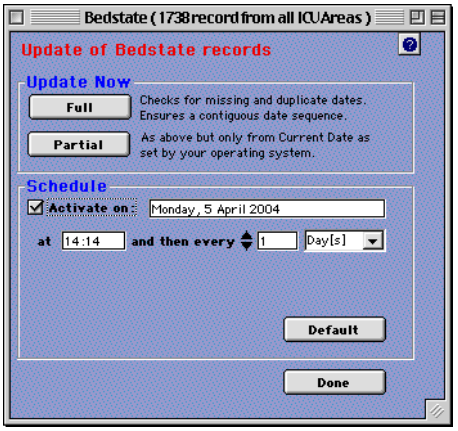
Update...

To create new Bedstate records use the ***Update...*** button.

The Bedstate area is almost completely automatic in terms of maintenance. Records are automatically created whenever you start STATIC or after a particular interval of time. This ensures that Bedstate records are always available and all you have to do is set bed availability to the correct value.

The values used are set in the ICU Areas setup area found in File: Preferences: ICU Area on page 99.

Click on the **Update...** button and this Dialog will display:



Bedstate: Update Bedstate Dialog

Window Items	Purpose
Update Now - Full	Checks for missing and duplicate dates. Ensures a contiguous date sequence. This will check all dates from the date set for *Start Date* for the ICU Area that the record belongs to. This takes a lot longer to complete.
Update Now - Partial	As above but only from Current Date as set by your operating system.
Schedule	The Bedstate records can be set to update automatically according to a schedule set here. Just set a Start Date and Time and an Interval. then tick the **Activate on** box.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

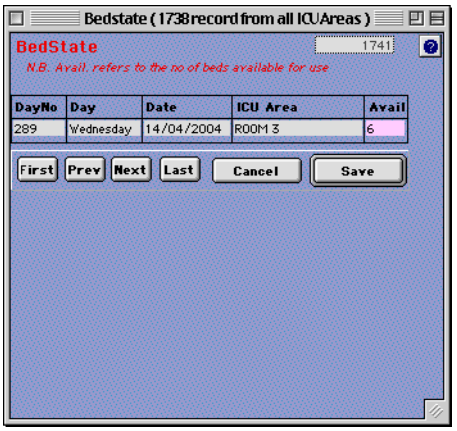
Window Items

Note: Create Ahead and Start Date are both set in File: Preferences: ICU Area on page 99.

51.1.2 Bedstate: Input Form

You can either select a record in the Bedstate list and double click or select and click *Modify*.

You will see the following view:



Bedstate: Menu Bedstate Input Form

The only field that can be changed is the Avail. field. Set this to the required value.

Chapter 52
Reports menu

52.1.0 Introduction

Reports are the payoff of maintaining a database. This section will examine the variety of reports generated by STATIC.

This area contains some of the most sophisticated systems in the program. There is a comprehensive Summary Reporting tool. This alone represents over 5 years of work and as a result has great depth and flexibility.

You will not get the best out of this area if you decide to Jump Right In and try it out. There are many features that you will never know about if you do that. If you are responsible for the creation of reports within your department, then please read this part of the manual carefully before attempting to use these tools.

In this chapter, we will cover the following topics:

Report Envelope

Detail Report

Summary Reports

Special Reports

Query Store

Transfer from Server

Chapter 53
Reports: Introduction

53.1.0 Introduction

A few words on the relationship between Report Envelope, Summary and Detail Reports areas:

Report Envelope - You may have created Summary and Detail reports that you want to execute at the same time because they really belong together. The Report Envelope enables you to do this. When Summary and Detail Reports are executed using the Report Envelope, they can be scheduled to run at a particular time automatically. You can also specify them to be executed using Perfect Accuracy. Lastly all output is placed into a common folder for easy retrieval as discussed in the next section Reports: Destination of Reports on page 333.

Detail Report - Generate Detail style reports. This is the area to use when you need to export the actual information stored in the fields of a selection of records.

To use this area you would again first create the selection of records you require: This could a selection of records where the age of admissions was less than 45 years old , with a particular diagnosis and a Survived discharge from ICU.

Once you have this set of records you could then export the individual record content for later review in a Word processor or Spreadsheet. You have full control over the fields and related fields that you export.

Summary Reports - Generate Summary style reports. These are the typical statistic style reports required for management and scientific purposes. This is the area to use when you require information that summarizes characteristics of a selection of records.

To use this area you would first create the selection of records you require: This could a selection of records where the age of admissions was less than 45 years old , with a particular diagnosis and a Survived discharge from ICU.

Once you have this selection of records you could then find the Average Length of Stay , Max and Min Length of Stay as well as the Standard Deviation for the length of Stay for this selection of records. This area will also allow you to create a Frequency Distribution, find the Median, Mode, Variance etc. In short it is a complete descriptive statistical analysis engine. Notice that this area does not allow you to view the detailed information stored in the fields of individual records.

53.1.1 Reports: Destination of Reports

STATICItems Folder

All Reports are either Printed or saved as Documents to the STATICItems folder. See STATICItems Folder on page 31 for further information.

For Server and Single User this folder is located at the same level as the current datafile.

For Clients this is located at the same level as the executable 4D Client - if you are running STATIC by double clicking an alias to the executable, you will have to find the Target for the executable in order to find this folder.

Inside this folder are a series of folders. The ones of interest in this section are the following:

Report Folders in STATICItems folder:

Folder Name	Purpose
Reports	Contains folders and documents generated by the execution of reports. this is where you will find the results of a report if it has been set to create a document of any type.
Store	Contains 2 folders of interest in this section: SummaryReport: Contains stored Definition Documents for Summary Reports DetailReport: Contains stored Definition Documents for Detail Reports

Report Folders

Inside these folders are a series of folders that contain the generated report documents. The names of these folders is determined by the name of the Report (First 16 characters) and a time stamp that tags the date of and time of export. The date time stamp tag is in the form of YYYYMMDDHHMMSS.

This system makes it very easy to find a Report because it is always stored in the same location. And because of the Date Time tag, it is easy to determine the most recent Report.

Summary Report Example:

Summary Report	
Report name:	Test
Date and time of Report	03/12/2000 at 09:44:00
Possible path to Definition document	STATICItems: Store:SummaryReport: Test.ste
Possible paths to resulting documents	STATICItems: Reports: Test20001203094400: Definition.slk STATICItems: Reports: Test20001203094400: Composite.slk

Detail Report Example:

Detail Report	
Report name:	Test
Date and time of Report	03/12/2000 at 09:44:00
Possible path to Definition document	STATICItems: Store: DetailReport: Test.sep
Possible paths to resulting documents	STATICItems: Reports: Test20001203094400: ExportDoc.slk STATICItems: Reports:Test20001203094400: DTExportDoc.slk
Possible path to resulting document if DTStamp set and Same Folder each Run set	STATICItems: Reports: Test: DTExportDoc.slk Note that in this case there is NO date time tag on the Test folder as the same folder is reused and any previous contents are automatically deleted. This makes this suitable for automatic pickup by another program that expects the path and the contents to be consistent after every Export.

Query Store Example:

Query	
Query name:	Test
Possible path to Definition document	STATICItems: Store: Query: Test.sqe

53.1.2 Reports: Exporting Report Definitions

You can export the Report definitions from both the Summary and Detail Reports:

1 Click the Export button.
If you have any records selected you will see the following dialog:

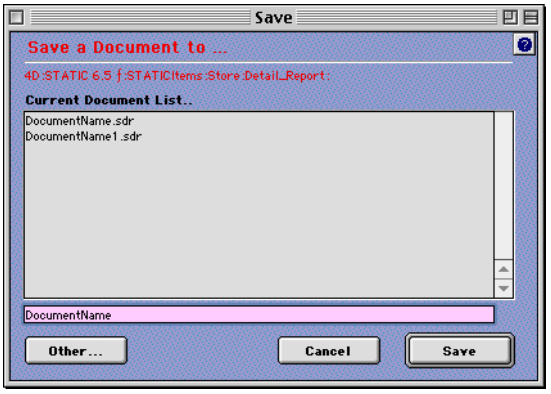
:

Reports: Export advice dialog

This is merely to advise you that Report Definitions are saved as a single document and not as several separated documents.

2 Click OK

The following Dialog will appear, the default name DocumentName is already preset:



Reports: Save to Document Window

3 Edit the DefaultName to the one you require.

Do NOT add the extension - this will be done automatically for you. Note that if you enter a name that already appears on the list presented, then STATIC will postfix your name with a numeral and then add the extension (You can see that this has happened in the above Dialog for DocumentName).

4 Click the Save Button if you want to save the Report.

Note that the path to the saved Report is as stated in the red text at the top of this Dialog and is always into the STATICItems folder. In this case it is for a Detail Report Definition. This makes it easy to find and store saved Report Definitions.

5 If you want to save the Report Definition elsewhere then click on the Other Button.

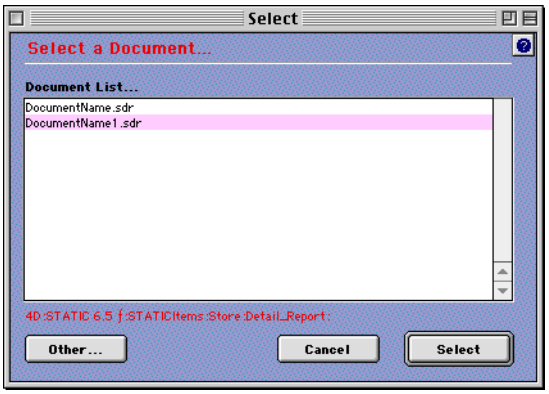
The Operating System's Save File... dialog appears. Make sure it is pointing to the folder where you want to save the Report Definition and follow standard operating procedures for storage of documents.

53.1.3 Reports: Importing Report Definitions

You can import the Report definitions for both Summary and Detail Reports:

1 Click the Import button.

The following Dialog will appear:



Reports: Select a Document Window

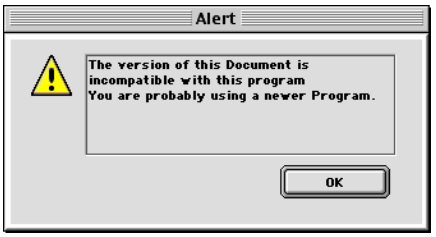
2 Select the document you require and click the *Select* Button.

The Report Definition will be imported into the Output form. Here we are again selecting a Detail Report Definition.

3 or...if you want to load a Report Definition from somewhere else then click on the Other Button.

The Operating System's Open File... dialog appears. Navigate to and select the Document you require and follow standard operating procedures for opening of documents.

Note: If the document you open is not a valid Report Definition document then STATIC will warn you and will not process the document:



Reports: Invalid Document

Chapter 54
Reports: Report Envelope

54.1.0 Introduction

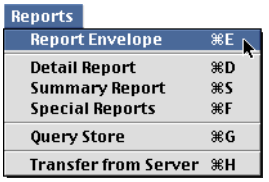
You may have created Summary and Detail reports that you want to execute at the same time because they really belong together. The Report Envelope enables you to do this. When Summary and Detail Reports are executed using the Report Envelope, they can be scheduled to run at a particular time - automatically. You can also specify execution using Perfect Accuracy. Lastly all output is placed into the same folder. for easier retrieval.

The Report Envelope area allows you to:

- ¥ Define Report Envelopes and reuse them at any time anywhere on the network.
- ¥ Define a Report Envelope that contains many Summary and Detail Reports that are then executed together.
- ¥ Automatically repeat the execution of the Report Envelope at predefined dates and times.
- ¥ Force STATIC to execute the selected Reports using Perfect Accuracy.

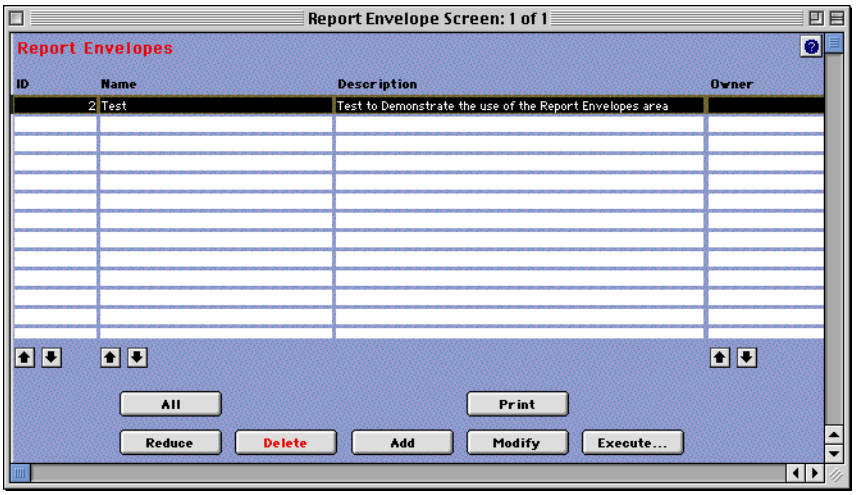
54.1.1 Report Envelope: Output Form

In order to enter the Report Envelope area, choose the following Menu Item:



Reports: Report Envelope menu item

The following window will display:



Report Envelope: Output Form

This is where all the Report Envelope definitions are stored.

Window Items	Purpose
Report Envelope List	Lists all the Report Envelopes available.
Number	The internal number of the record
Name	Name of this Report Envelope
Description	Short description of this Report Envelope
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

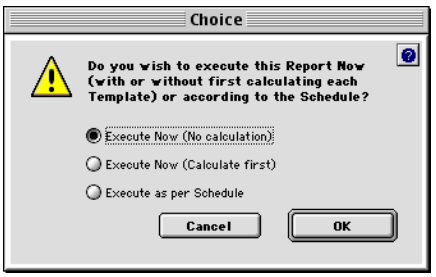
Window Items

Button Name	Action
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Print	Print the selected records as a list or as detail reports (you will be given the option)
Execute	Execute the Report Envelope from this Workstation. See below.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

Execute

When you click the Execute Button you will see the following Dialog:



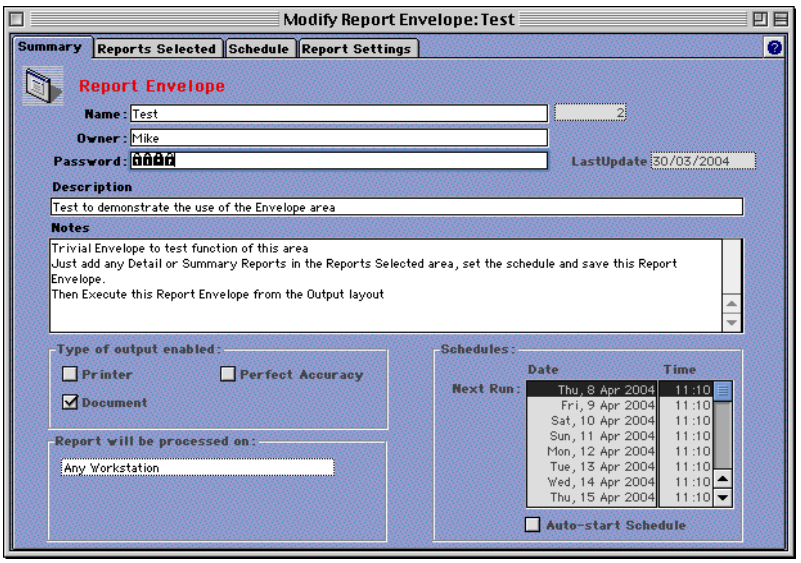
Report Envelope: Input Form: Summary Page

Control Name	Action
Execute Now (No Calculation)	Execute the Report Envelope without calculating the selected Detail and Summary Reports prior to execution. This is a very important time saver when you have to create copies of an Envelope Report that has already been executed previously and where there have been no changes. Remember there may be many reports selected for a Report Envelope and unnecessarily recalculating all of them every time you execute the Report Envelope would be a huge waste of time.
Execute Now (Calculate first))	Execute the Report Envelope and calculate the selected Detail and Summary Reports prior to execution. This is the normal option to use when executing Report Envelopes.
Execute as per Schedule	Submit the Report Envelope to the Report Engine. The Report Engine will handle the execution of the Report Envelope and generate the Report Envelope when it is scheduled to do so as per the Schedules set in the Report Envelope. p.s. If you have no schedules set, you will get no output! Also depending on the settings in the Report Settings, do not necessarily expect any output to appear at your workstation when running Client Server. Printing may occur from another workstation if it has a local printer attached and documents are generally retrieved using the Transfer from Server area.

Controls for Report Envelope execution

54.1.2 Report Envelope: Input Form: General Overview

If you have opened an existing Report Envelope you will see the following window:



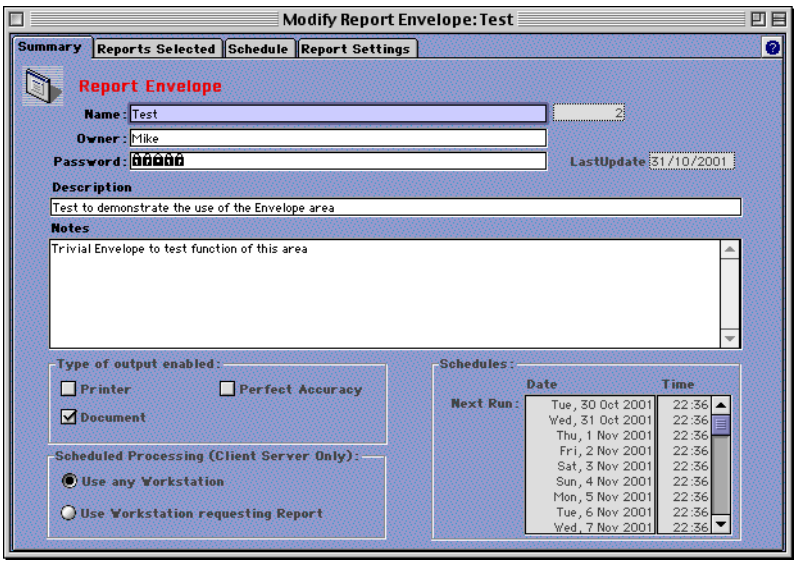
Report Envelope: Input Form: Summary Page

The Report form is divided into 4 pages. You move from page to page using the Tab control:

Tab Control	Function
Summary	This gives you a quick overview of the options selected in the next 3 pages
Reports Selected	This page allows you to select the Reports to use in this Report Envelope. Whenever you choose an existing Report, the Report is duplicated and added to the Report Envelope - leaving the original Report untouched.
Schedule	The Report Envelope can be set to activate and generate Reports on a predetermined automatic basis. This area allows you to define when and at what time this will occur.
Report Settings	You can select the type of output to enable. Selected reports can be set to Print or generate documents. This area allows you to disable the generation of documents or disable printing. It cannot turn these on if they were not already enabled in the actual report itself. This area also allows you to force STATIC to make this a Perfect Accuracy Report. If this option is invoked all activity for STATIC is terminated or suspended and all workstations are locked until the Report is complete. On Client Server Only: The processing of the Report can be either on a Batch Workstation or on the Workstation requesting the Report. This has consequences for the final destination of Documents or the Printing of a Report

We will now describe each page in detail.

54.1.3 Report Envelope: Input Form: Summary Page



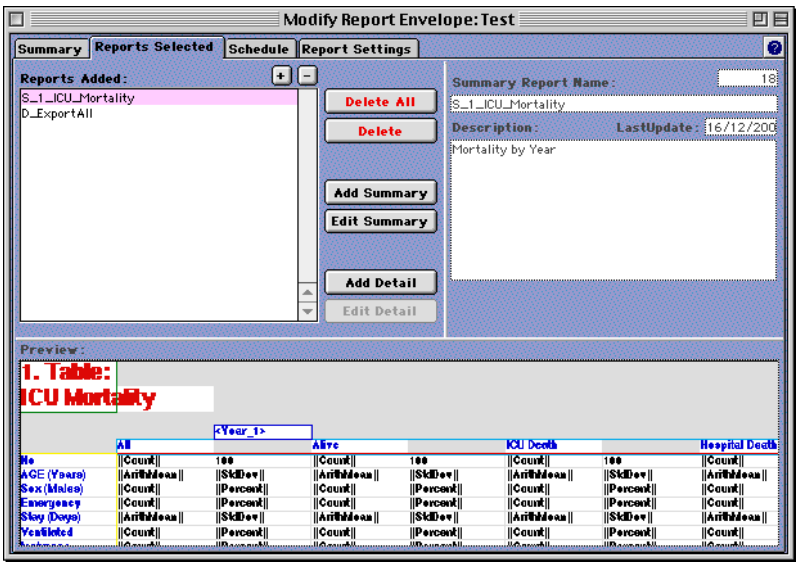
Report Envelope: Input Form: Summary Page

This page records identifying information for this Report and gives you a quick overview of the options that have been selected in the following 3 pages of the Report Input Form.

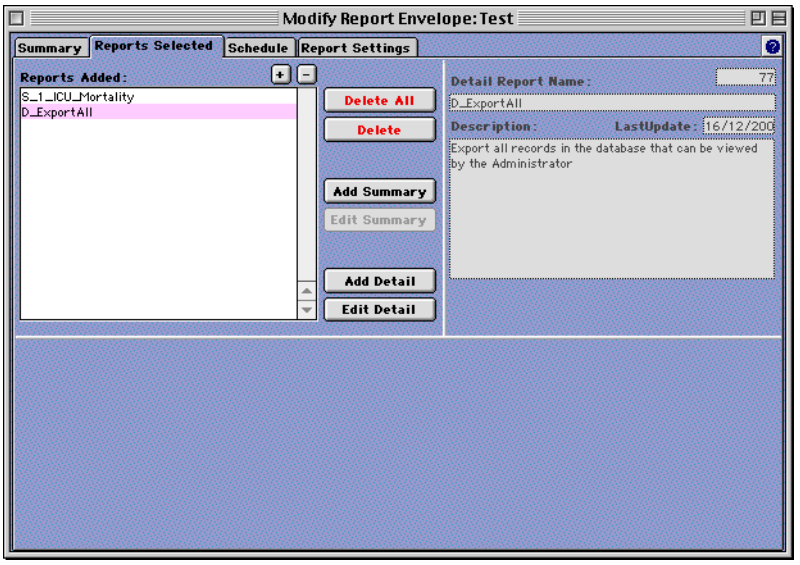
Window Items	Purpose
Name	The name of the Report Envelope as seen in the List view.
Owner and Password	The Owner of this Report Envelope. It may be password protected. The Administrator can open any Report Envelope.
Last Update	Date of last edit or entry by the Owner.
Description	A short description of the Report Envelope.
Notes	Some extra information making the purpose of the Report Envelope easier to identify. Make this as meaningful as possible. After creating a Report Envelope and not using it for some time, it may be difficult to remember what it was for!
Type of output enabled	Reports can be sent to Print or generate documents and may be set to execute with Perfect Accuracy
Report will be processed on	On Single User this option will always be set to the current Workstation On Client Server, it allows you to determine where a Report Envelope is processed and has implications for the destination of Documents and on where they are printed.
Schedules	List of Repeats set for this Report. Next scheduled Repeat at the top of the list
Resize the Form	You can resize this form by dragging the lower right hand corner

Window Items

54.1.4 Report Envelope: Input Form: Reports Selected



Report Envelope: Input Form: Reports Selected: Summary Report



Report Envelope: Input Form: Reports Selected Detail Report

Here you select which Summary or Detail Reports are to be used by this Report Envelope.

Window Items	Purpose
Reports Added	The name of the Report as seen in the List view.
Summary Report name	Name of the selected Summary Report.
Detail Report name	Name of the selected Detail Report.
Last Update	Date of last edit. or entry of selected Report by the Owner.
Description	A short description of the selected Report.
Preview	Preview of the definition area of the selected Report.
Resize the Form	You can resize this form by dragging the lower right hand corner.

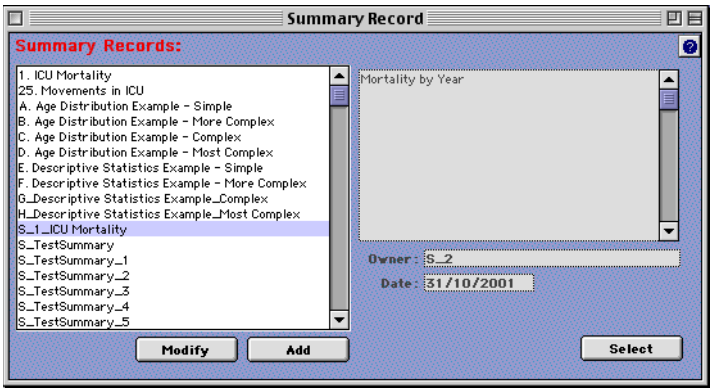
Window Items

Buttons	Purpose
Delete All	Delete All the Reports in the list.
Delete	Delete the selected Report.
Add Summary	Add a Summary Report to the list.
Edit Summary	Edit the selected Summary Report.
Add Detail	Add a Detail Report to the list.
Edit Detail	Edit the selected Detail Report.
+ and - Buttons	Move the selected Template up or down within the list.

Other Fields

To add a Summary or Detail Report to the list of Reports to be executed for this Report Envelope do the following:

1 Click on the *Add Summary* or the *Add Detail* button.
One of the following 2 Dialogs will appear:



Report Envelope: Input Form: Add Summary Report

Report Envelope: Input Form: Add Detail Report

Window Items	Purpose
List of Available Reports	This is a list of previously defined Reports
Description	A short description of the Report
Owner	The Owner of this Report. It may be password protected. The Administrator can open any Report.
Date	Date Report last edited

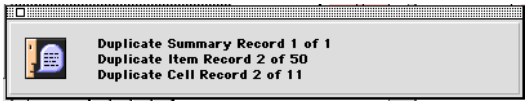
Window Items

Button Name	Action
Modify	After selecting a Report in the List, either click on *Modify* or Double click the list item to Modify the Report. See Detail Report: Input Form: General Overview on page 353 and Summary: Input Form: General Overview on page 374 for Detail and Summary Report modification details.
Add	Click this to define a new Summary or Detail Report.
Select	Add this Report to the List of selected Reports in the Report Envelope.

Buttons

Select the Report you require and click the *Select* Button in the Dialog

The Report will be duplicated. You will see a small window at the bottom of your screen indicating the progress of the duplication process:



Report Envelope: Duplicating Report Information window

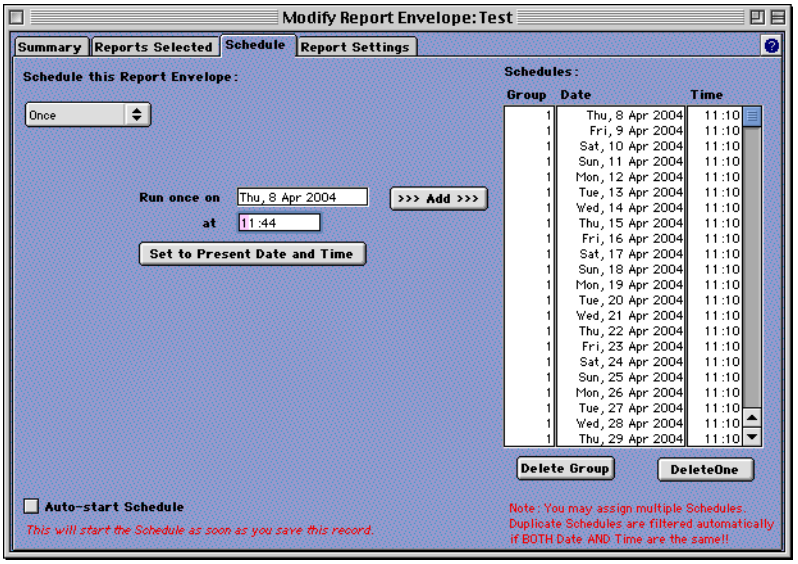
When complete, the Report will appear in the *Reports Added* list. It will have the same name but will have a S_ prefix for Summary Reports or a D_ prefix for Detail Reports.

2 You can now edit the added Report from the Report Envelope using the *Edit Summary* or *Edit Detail* Button. You may for instance want to change the name of the Report to something else or completely change the Report specifications.

Order of Report execution

Reports are executed in a strict Top/Down order. So if you requires a different order of (especially) printing, alter the order of the Reports displayed using the + and - Buttons. This may be important to you when you are printing several Reports and want them collated in a particular order.

54.1.5 Report Envelope: Input Form: Schedule



Report Envelope: Input Form: Schedule: Once

The Report Envelope area can be automatically set to activate and generate the Reports specified. This area allows you to define when and at what time this will occur.

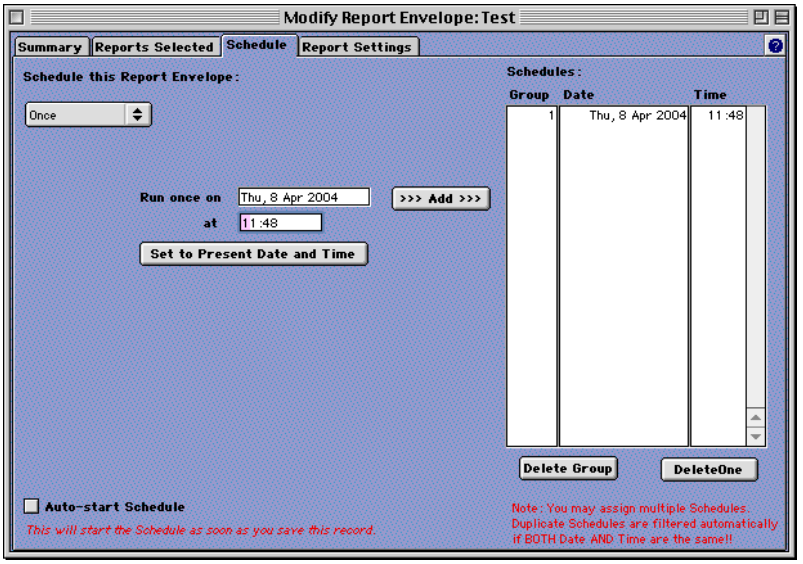
Window Items	Purpose
Schedule this Report Envelope	This is where you specify the method by which to generate Schedules. To make it easier for you to generate the required Schedules we have given you a variety of ways to specify Date and times. The drop down list allows you to create Schedules Once, Every Day, Week or Month
Schedules	This list displays the already specified Schedules. They are arranged in date and time order. If a new Schedule creates a duplicate Date/Time item then only one is retained. All Scheduled items belonging to the same Group have the same Group number.
Auto-start Schedule	Selecting this option will start the schedule as soon as you save this record.

Window Items

Button Name	Action
Delete Group	Delete a whole group of Schedule Items created by a single command (e.g. Every Week or Every month). This is convenient if you need to delete a whole specification. Dates belonging to the same group have the same Group number.
Delete One	Delete a single Schedule Item
Add	Add the specified dates and times to the Schedules list.

Buttons

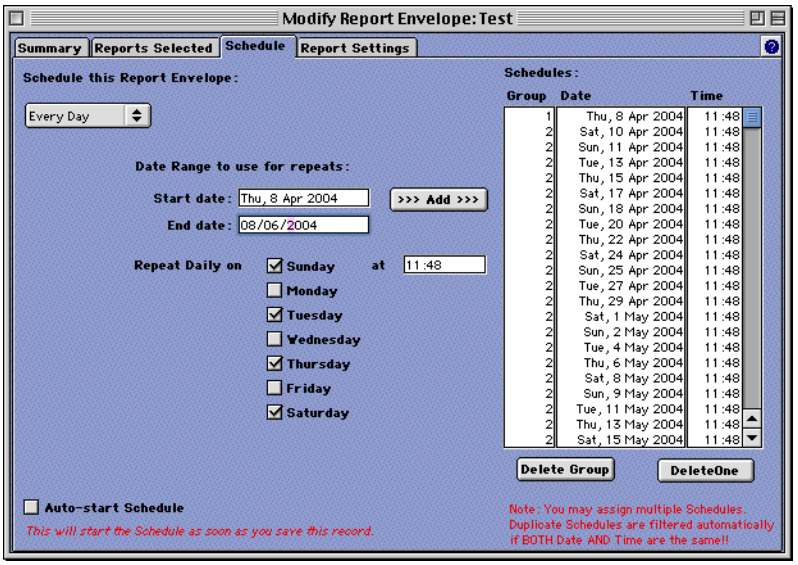
Schedule this Report Envelope: Once



Report Envelope: Input Form: Schedule: Once

Add a single event. You can set it to the Present Date/Time or set it to what you wish.

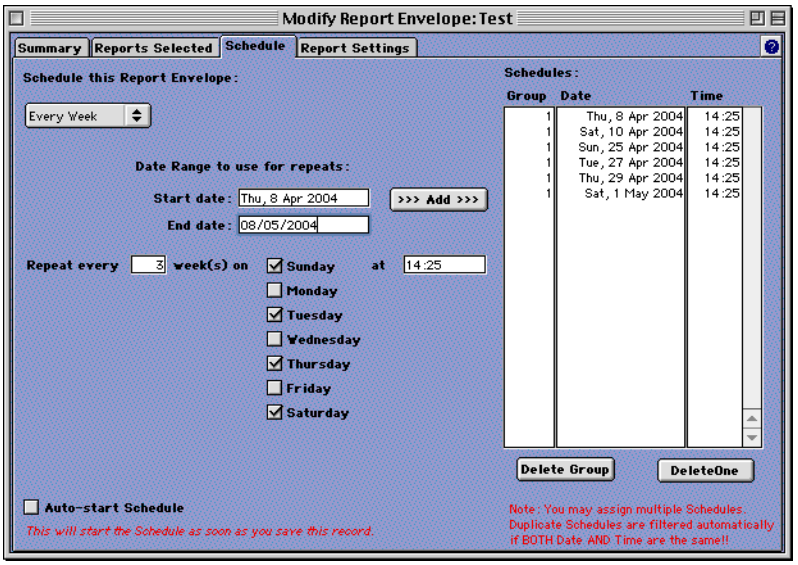
Schedule this Report Envelope: Every Day



Report Envelope: Input Form: Schedule: Every day

For the range of dates between *Start date* and *End date*; the event is only added if it falls on the specified days of the week. If you want every day to be represented for the range, then check all days of the week.

Schedule this Report Envelope: Every Week

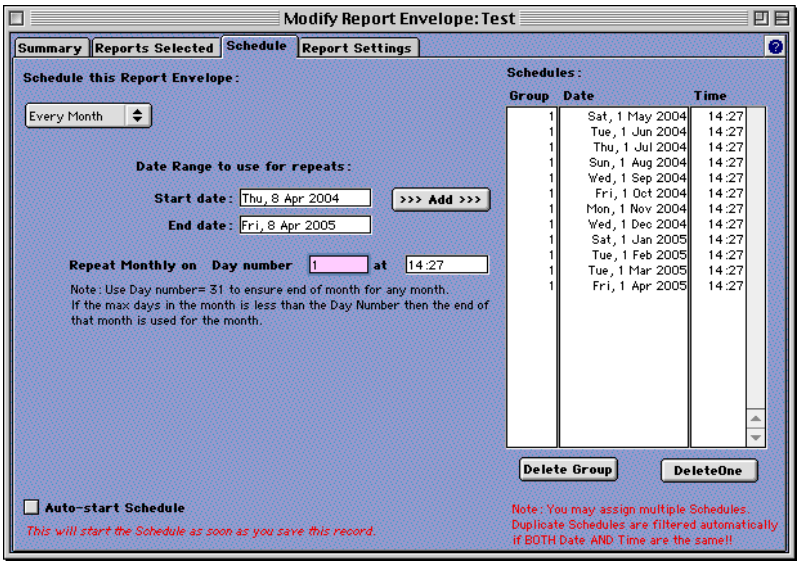


Report Envelope: Input Form: Schedule: Every week

Adds events every X weeks from the *Start date* until the *End date* is reached. Sets an event in that week for every day of the week that is specified.

e.g. So you could for instance set this for every third week; and in that week run the Report on Sunday, Tuesday and Saturday - as illustrated above.

Repeat this Report Envelope: Every Month

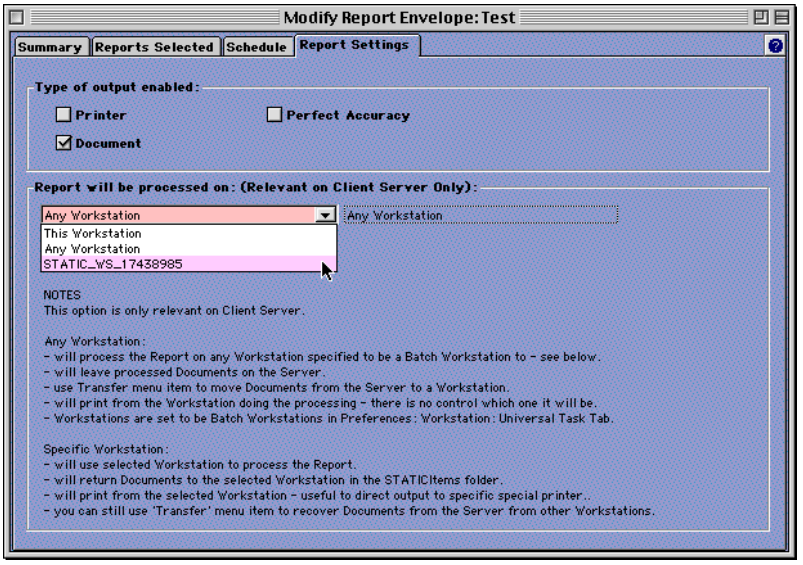


Report Envelope: Input Form: Schedule: Every month

Add an event every month from the *Start date* to the *End date* when a specified day of the month is reached.

Note: To set the day number to the end of the month, set the day required to 31 and it will automatically compensate for months with less than 31 days. (It also handles leap years perfectly!)

54.1.6 Report Envelope: Input Form: Report Settings



Report Envelope: Input Form: Report Settings window

This window allows you to set some options for the Report Envelope:

Type of output enabled:

Option	Description
Printer	This is an override option that can STOP all printing. If this checkbox is set then all Reports selected for this Report Envelope will be Printed IF the selected Report is set to be Printed. If this checkbox is not set then all Reports selected for this Report Envelope are NOT printed irrespective of what the setting is for the individual Reports.
Document	This is an override option that can STOP all generation of Documents. If this checkbox is set then all Reports selected for this Report Envelope will generate Documents IF the selected Report is set to generate Documents. If this checkbox is not set then all Reports selected for this Report Envelope do NOT generate Documents irrespective of what the setting is for the individual Reports.
Perfect Accuracy	Set this if you require Perfect Accuracy for this Report.

Type of output enabled

Scheduled Processing (Client Server Only):

Option	Description
These options are only active if you are running Client Server AND have selected this Report Envelope to run by selecting Execute as Per Schedule . See Execute on page 338.	
Any Workstation	- will use any Workstation set to handle Universal Tasks to process the Report. See Workstation: Universal Tasks on page 67. This type of Workstation is also called a Batch Workstation. - will leave Documents on the Server. - use Transfer area to move Documents from the Server to a Workstation. - will print from the Workstation doing the processing. - Workstations are set to be Batch Workstations in Preferences: Workstation: Task Tab
This Workstation	- will use Workstation requesting the Report to process the Report. - will return Documents on the Workstation requesting Report. - you can still use Transfer area to move Documents from the Server to other Workstations. - will print from the Workstation requesting the Report.
Named Workstation	- will use Named Workstation if it is set to handle Universal Tasks to process the Report. See Workstation: Universal Tasks on page 67. - will return Documents on the Named Workstation requesting Report. - you can still use Transfer area to move Documents from the Server to other Workstations. - will print from the Named Workstation requesting the Report.

Scheduled Processing (Client Server Only)

Document naming in the Reports folder

When a Report Envelope is evaluated, STATIC creates a folder named with the name of the Report Envelope record appended by a date time stamp. All generated documents are saved to this folder.

The individual documents are consecutively numbered with a prefix 1_ to n_ where n is the number of the last document to be generated. This is to ensure that there is no naming conflict if two Documents happen to share the same name. The meaning of the postfix differs for Detail and Summary Documents as shown below:

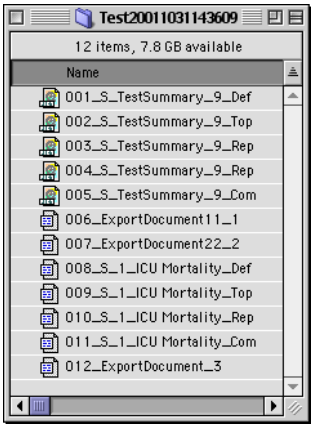
Summary Document Postfix	Description
Documents are named Prefix_NameOfDoc_PostFix	
n_NameOfDoc_Def	Definition Document for Summary Report.
n_NameOfDoc_Top	First calculated document for Summary Report.
n_NameOfDoc_Rep	Subsequent calculated documents for Summary Report - triggered by Placeholder contents. There may be several of these, only the Prefix will change
n_NameOfDoc_Com	Composite document for Summary Report - all _Top and _Rep documents combined on the same document as specified in the Repeat area of the Summary Report.

Summary Document naming in the Reports folder

Detail Document Postfix	Description
Documents are named Prefix_NameOfDoc_PostFix	
n_NameOfDoc_1	First Detail Document exported.
n_NameOfDoc_2	Second Detail Document Exported - this may be from a different Detail Report.
n_NameOfDoc_n	nth Detail Document Exported - this may be from a different Detail Report.

Summary Document naming in the Reports folder

As an example, here is the contents of a Folder for a Report Envelope called Test . This Report Envelope is composed of several Reports (Both Summary and Detail) that each generate one or more Documents:



Report Envelope: Typical Output for a Report Envelope

Notes on Perfect Accuracy

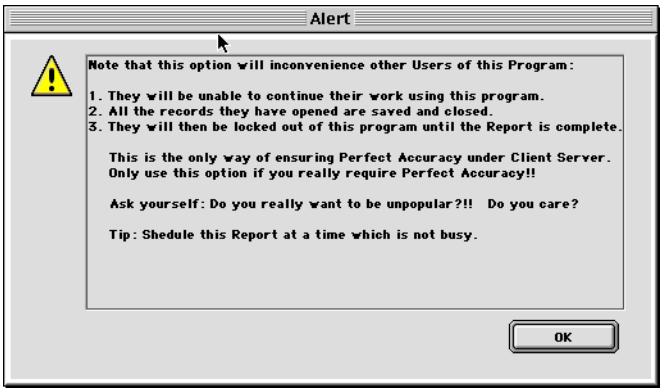
Sometimes you require Reports to be Perfectly accurate.

On Client Server there could be many Users entering and modifying data at the same time. When a Report is being processed it may access the same record multiple times. If the documents created by the Report are to be referentially consistent then you cannot have the same record modified (or deleted) during the execution of the Report. This system allows you to avoid this situation.

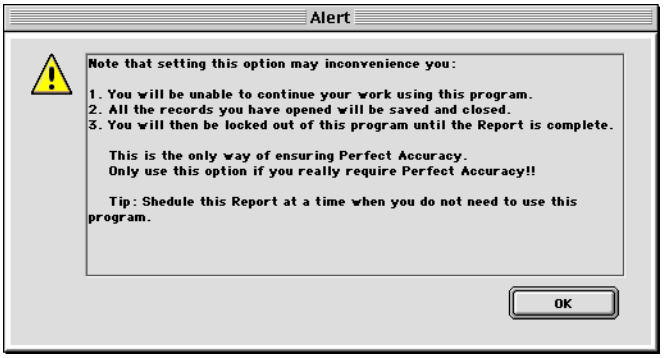
For a single user system the situation is different. On a single user system it is not necessary to use this system as there is only one person ever entering or modifying data and you just stop using the program until the Report is complete.

Setting Perfect accuracy will lock STATIC while the Report is being processed. This is a huge inconvenience on a Client Server system as it effectively turns STATIC into a Single USer system while the Report is processed - use this option only when you truly need to!.

If you set this option an Alert will display:



Report Envelope: Input Form: Perfect Accuracy Alert (Client Server version)



Report Envelope: Input Form: Perfect Accuracy Alert (Single User version)

Read this message carefully! It means what it says.

Note: Remember that for a single Report Envelope that there may be many Reports set to execute. Depending on the complexity of the Report, the Report may take a long time to finish execution. As a result the Server may be locked for a considerable amount of time. Use this option wisely.

Chapter 55
Reports: Detail Report

55.1.0 Introduction

Please carefully read the following sections if you are going to use Detail Reports to generate Reports. You will be VERY frustrated if you decide to Jump In and try creating Detail Reports without reading this section.

This area enables the export of data collected and calculated within STATIC. It will provide the detail of the contents of records at the field level. It will generate Flat File versions of the relational data stored within STATIC. The data is capable of being exported in a variety of formats and can be opened by a Spreadsheet for further analysis and statistical treatment.

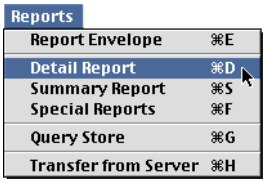
- ¥ Define Detail Reports and reuse them at any time anywhere on the network.
- ¥ Define the required selection of records based on a Query.
- ¥ Define a selection of records that is based on a Date Time Stamp.
- ¥ Define a variable list of Fields from related tables (unless Date Time stamp export). This allows you to export data from Related tables as well as the Master Table.
- ¥ Define several documents from a single Detail Report - effectively perform several exports within a single wrapper Detail Report.
- ¥ Export as DIF, SYLK (MS Excel format) or TEXT (with full control of Field and Record delimiters).

55.1.1 Executing a Detail report

You can only execute Detail reports from the Output Form or automatically within a Report Envelope. The Input form will only allow you to define the Detail report.

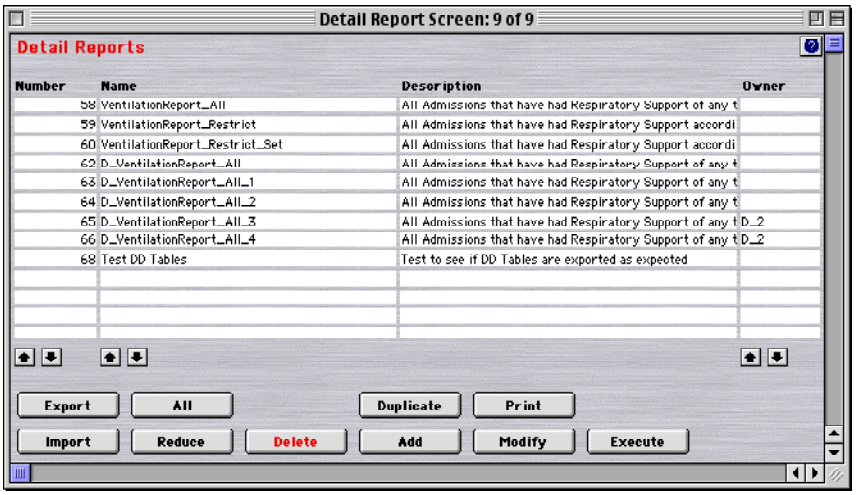
55.1.2 Detail Report: Output Form

In order to enter the Detail Report area, choose the following Menu Item:



Reports: Detail Report menu item

The following window will display:



Detail Report: Output Form

This is where all the Detail Report definitions are stored.

Window Items	Purpose
Detail Report List	Lists all the records available.
Number	The internal number of the record
Name	Name of this Detail Report
Description	Short description of this Detail Report
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

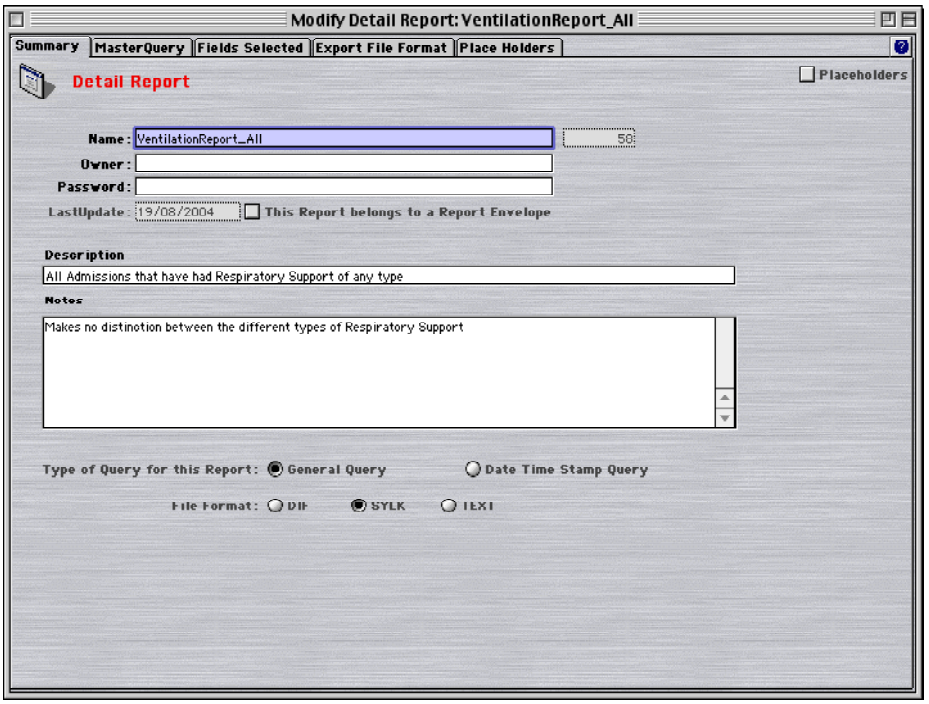
Window Items

Button Name	Action
Export	Export the selected records
Import	Import records destined for this area from a document.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Duplicate	Duplicates (Clones) the current selected record and removes any password protection from the copy
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Print	Print the selected records as a list or as detail reports (you will be given the option)
Execute	Execute the Detail Report immediately from this Workstation.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

55.1.3 Detail Report: Input Form: General Overview

If you have opened an existing Detail Report you will see the following window:



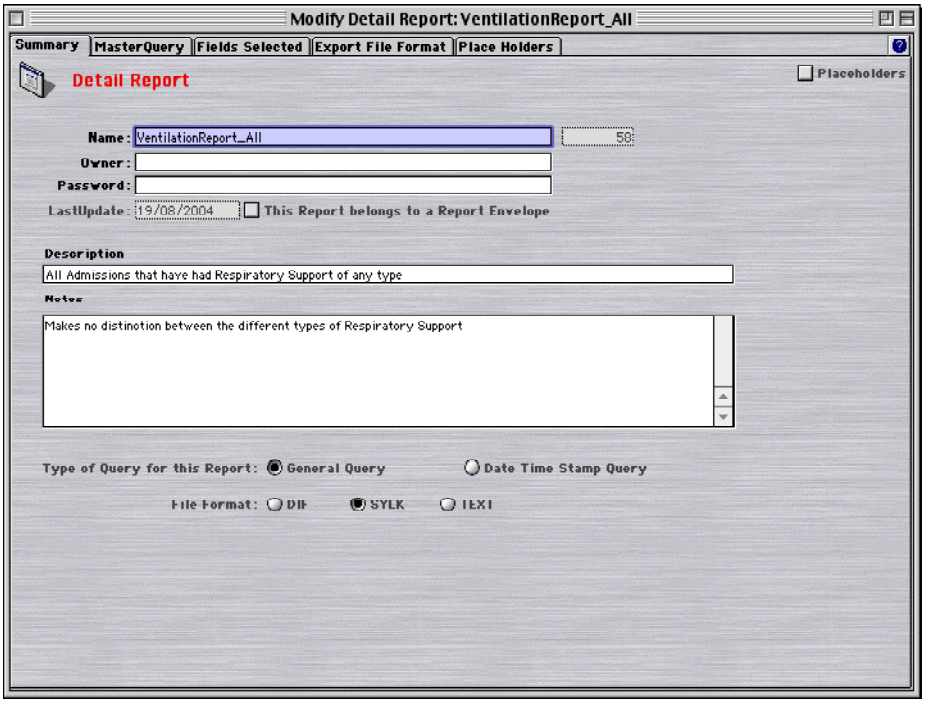
Detail Report: Input Form: Summary page

The Report form is divided into 5 pages. You move from page to page using the Tab control:

Tab Control	Function
Summary	This gives you a quick overview of the options selected in the next 5 pages
Master Query	This page allows you to define the selection of records to use for the generation of the Export. This selection can be created by a General Query (and a subsequent Slave Query) or by use of a Date Time Stamp Query.
Fields Selected	Here you can define a series of documents to be generated. Each document contains a list of fields drawn from the tables available for export. If the fields defined are related then the related information is automatically extracted for you.
Export File Format	Here you can select the file format of the documents generated. Currently the following formats are supported: DIF - Database Interchange Format SYLK (MS Excel format) - Symbolic Link format TEXT - Text format also known as TTR. In our case you can define any text format. You can define delimiters other than Tab Tab Return, You can also include Line-Feed (LF) and make the fields fixed length.
Place Holders	Placeholders can exist in the Master Query, Slave Query and Document Definition area as part of the Document title. Placeholders are replaced by the User Defined values in the Placeholder area at the time of execution. This allows you to create dynamic Document definitions that can be quickly altered without editing the Queries or the Titles to generate output for a different selection of records.

We will now describe each page in detail.

55.1.4 Detail Report: Input Form: Summary Page



Detail Report: Input Form: Summary page

This page is for identifying information for this Detail Report

Window Items	Purpose
Name	The name of the Report as seen in the List view.
Owner and Password	The Owner of this Report. It may be password protected. The Administrator can open any Report.
Last Update	Date of last edit.
This report belongs to a Report Envelope	Is ticked if this Report is required by a Report Envelope. When a Report is selected for use by a Report Envelope it is duplicated for exclusive use by the Envelope.
Description	A short description of the Report.
Notes	Some extra information making the purpose of the Report easier to identify. Make this as meaningful as possible. After creating a Report and not using it for some time, it may be difficult to remember what it was for!
Type of Query for this Report	What type of Query was used to generate the selection for this Report - General Query or Date Time Stamp Query.
File Format	File format used for exported documents - DIF, SYLK (MS Excel format) or TEXT.
Resize the Form	You can resize this form by dragging the lower right hand corner.

Window Items

55.1.5 Detail Report: Input Form: Master Query: Introduction

You can use this area to generate documents using two distinct methods:

General Query

Creating a General Query in the Master Query area reduces the workload for your Report by establishing Sets of records that may be used many times by a later Slave Query.

Any Set of records that will be used multiple times on the Report should be evaluated here.

The Master Query area is evaluated once right at the start of Report execution. This means any Sets established here will be available to all other Slave Queries on the Report.

You do not necessarily need to define anything in the Master Query area - in this case all Queries must be performed by the Slave Queries. This may be appropriate if there is no common Query required by the Slave Queries.

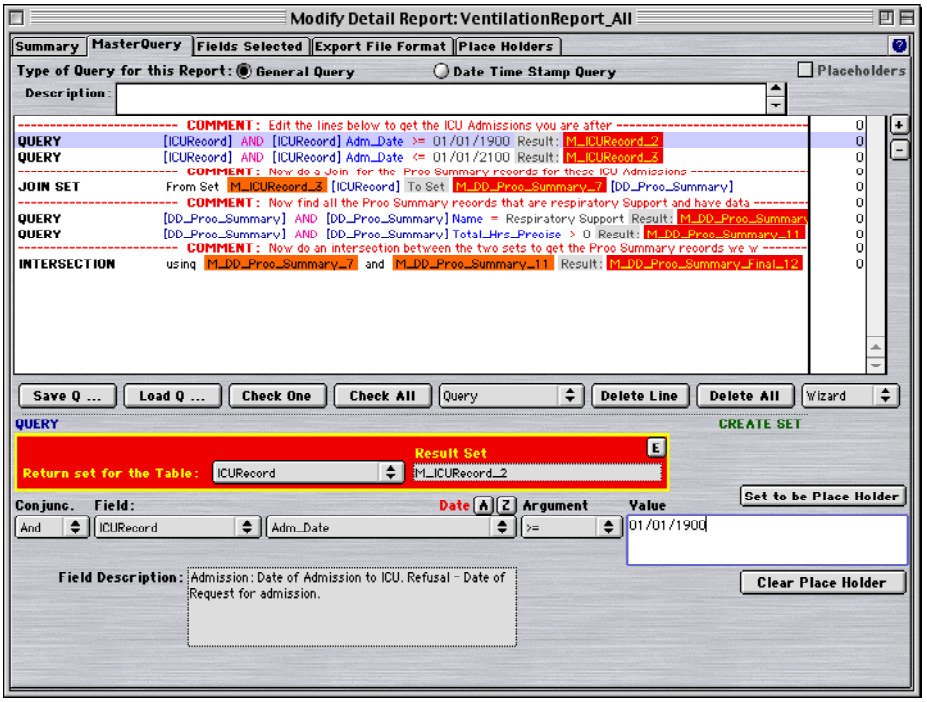
Just to emphasize, the most important Query is the Slave Query - it is in the Slave Query that the actual record selection that will be used to generate output is established.

Date Time Stamp Query

Using this type of Query allows you to generate a selection of records that is based on a Date Time Stamp field.

All Tables that can be Queried contain a Date Time stamp field. This Date Time stamp field is automatically updated each time a record for one of these tables is edited and the changes are saved. You can use this Date Time stamp to look for and create a selection of records that have been changed over a particular date/time interval. This is useful when you need to export records for use in an external database that requires altered records to be exported.

55.1.6 Detail Report: Input Form: Master Query: General Query



Detail Report: Input Form: Master Query: General Query

Window Items and Controls:

Items & Controls	Action
Type of Query for this Report	General Query or Date Time Stamp Query If you click on either radio button the appropriate form will display. You will also be warned that you will lose settings in other areas of this form.
The Query area	This area is the same as seen in other parts of STATIC. We refer you to the Query section of this manual in order to compose your Query: Query Store: Input Form on page 443

Function of the Master Query page

Using a Master Query reduces the workload for your Report by establishing Sets of records that may be used many times by a later Slave Query.

Any Set of records that will be used multiple times on the Report should be evaluated here.

The Master Query area is evaluated once right at the start of Report execution. This means any Sets established here will be available to all other Slave Queries on the Report.

You do not necessarily need to define anything in the Master Query area - in this case all Queries must be performed by the Slave Queries. This may be appropriate if there is no common Set of Records required by the Slave Queries.

Just to emphasize, the most important Query is the Slave Query - it is in the Slave Query that the actual record selection that will be used to generate output is established.

Queries belong to the Report

We try to make STATIC elements reusable within the database. However, any Query defined here will be saved exclusively for use within the Report. It will not be available in the Query Store area. If you want to make your Query available for use in other Reports or Queries then you can of course export the Master Query into a document and then Import it into another Query area. Or, alternatively, you can load a Query from the Query Store area into the Master Query area of the Report.

Sharing of Queries between Reports

Queries contain Sets and Place Holders. Sharing of Queries between and within Reports could cause problems, if a Set or Place Holder happens to have the same name as one already defined in the Report. In order to avoid this, the Report area has a sophisticated tracking system that automatically renumbers any Sets or Place Holder so that they do not clash.

Place Holders

The Query command is the ONLY command in the Master and Slave Query area for which you can define a Place Holder. This allows you to create a Query that could look like this:

```
QUERY [HospitalRecord] AND [HospitalRecord]Adm_Date >=  <Adm_Date_1>
```

Notice the Placeholder `<Adm_Date_1>` at the end of the line.

All placeholders are bracketed by the `<` and `>` sign. Use the *Set to be Place Holder* Button and *Clear Place Holder* Button to control the Setting and Clearing of the Place Holder.

At execution time the placeholder is replaced by an actual value derived from the Place Holder page. If you have a Query as defined above then the Place Holder page may be as follows:

Placeholder Definition for this Report

If there is nothing below this line then there is nothing to define

		<-Repeat Helper->		<-Placeholder Content->
The following are Master Query Placeholders:		Value	Units	Instance 0
Date: [HospitalRecord]Adm_Date	<Adm_Date_1>	1	Y	01/07/1997
Date: [HospitalRecord]Adm_Date	<Adm_Date_2>	1	Y	30/06/1998

Detail Report: Input Form: Place Holder Page: Detail

When the report executes, the `<Adm_Date_1>` will be replaced by 01/07/1997. See Detail Report: Input Form: Place Holders page on page 367 for more details.

We have not given you the option of setting Place Holders for the Query By Formula command. It was deemed too problematic. There is less control over the precise contents of a formula. This would lead to frustrating errors which would be very difficult to track down.

Database Schema

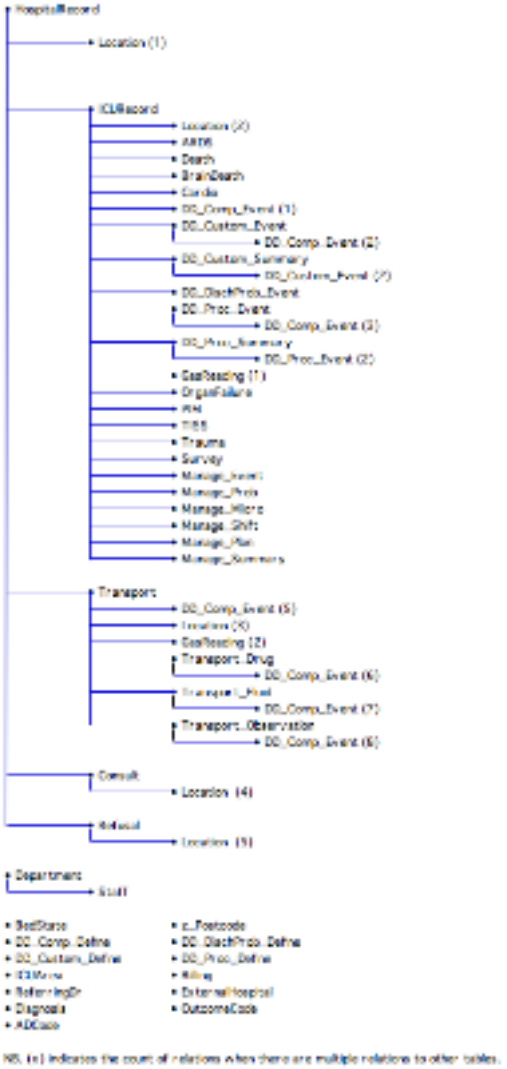
Note: You must know a little about the organization of data in STATIC to make effective use of this Report. You must understand the following concepts:

Master Table - The table for which you are trying to create a selection.

Current selection - This is the selection of records created for the Master Table by the Query.

Related Tables - These are Tables that your Master Table has a relation to.

In STATIC the relations you need to remember are as below:



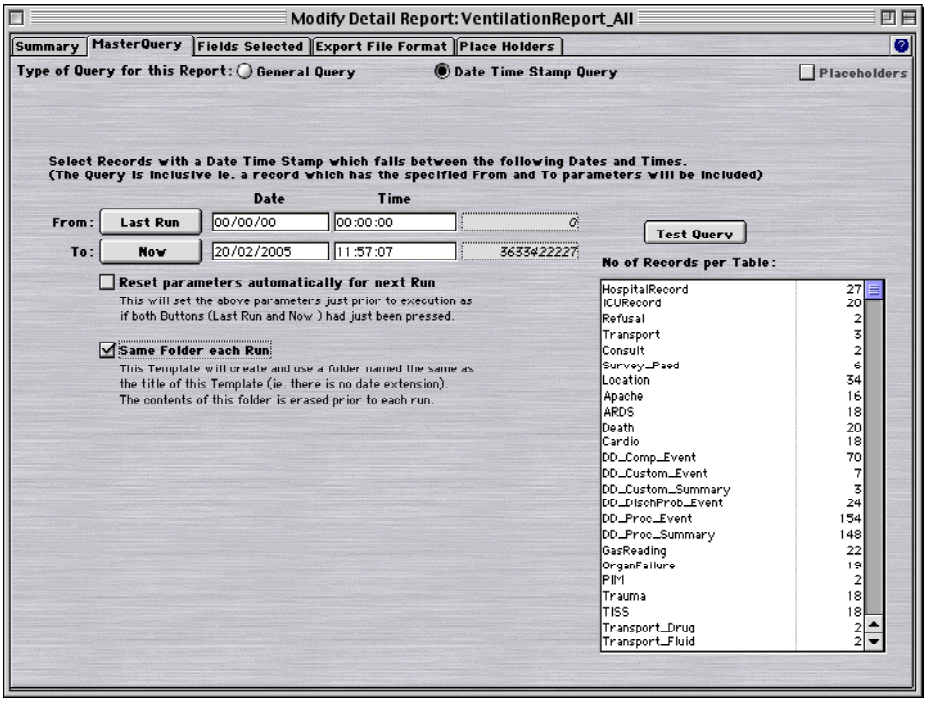
Database Schema: Table Relationships

A Table to the left of another Table is termed the ONE Table the table to the right is called the MANY Table.

Thus a single HospitalRecord Table (ONE TABLE) record has many ICURecord Table (MANY Table) records related to it. And a single ICURecord Table (ONE Table) record has many Location Table (MANY Table) records related to it.

Note that the BedState and many other Tables have no relation to any other table.

55.1.7 Detail Report: Input Form: Master Query: DT Stamp Query



Detail Report: Input Form: Master Query: DT Stamp Query

Window Items and Controls:

Button Name	Action
Type of Query for this Report	General Query or Date Time Stamp Query If you click on either radio button the appropriate form will display. You will also be warned that you will lose settings in other areas of this form.
Setting the Date Time Interval	From: Here you set the *From* date and time for the interval you want. Click on *Last Time Run* Button to set this to the last time the export activated if you have set multiple repeats for this Report. You can also directly edit the Date and Time. To: Here you set the *To* date and time for the interval you want. Click on *Now* Button to set this to the Current Date and Time. You can also directly edit the Date and Time.
Reset parameters automatically for next run	This allows you to automate Date Time Stamp reports when multiple *Schedules* are set. If this is active, the system will fill the *From* and *To* fields with the dates and times that a click on *Last Time Run* Button and *Now* Button would generate prior to execution of each Report.
Same Folder each Run	This option instructs STATIC to save the Report to a folder that has the name of the Report (first 16 characters) **BUT DOES NOT** append a Date Time tag. If the folder already exists then its contents are deleted prior to saving new documents to this folder. This is useful for external systems that need to import the Report and expect the Path to the Report to be the same each time. See section Reports: Destination of Reports on page 333
Test Query	This button allows you to review the result of the DT Stamp query you have specified and see if it would actually generate any record selections for the Tables listed.

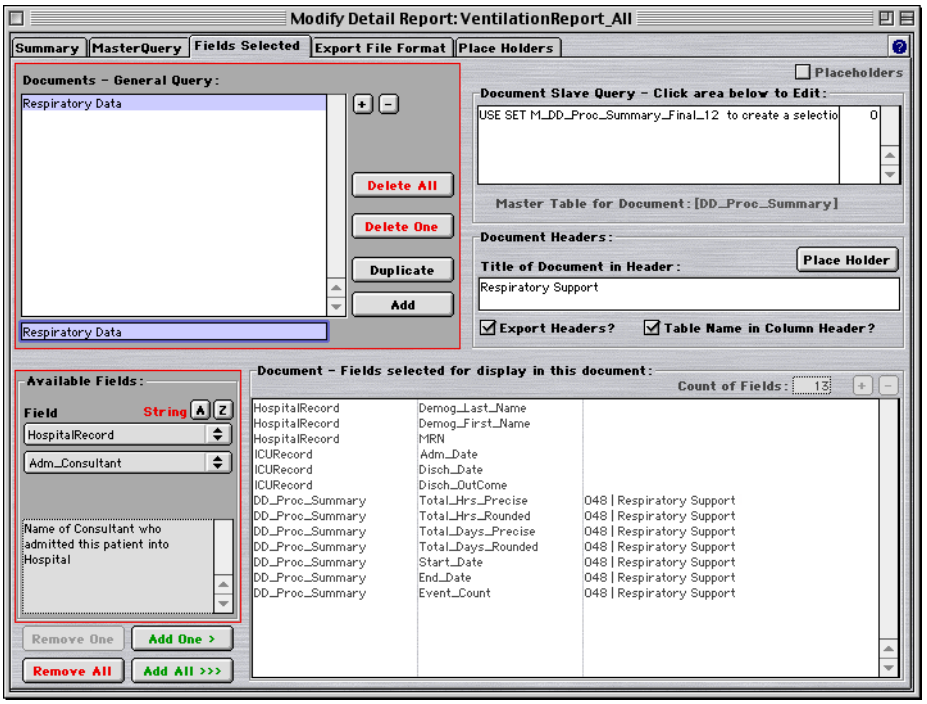
How the Date Time Stamp area functions

All Tables that can be Queried contain a Date Time stamp field. This Date Time stamp field is automatically updated each time a record for one of these tables is edited and the changes are saved. You can use this Date Time stamp to look for and create a selection of records that have been changed over a particular date/time interval. This is useful when you need to export records for use in an external database that requires records that have changed to be exported.

This area executes once only and generates a selection of records that have changed for EVERY table in the database during the Date Time interval specified.

Because all the selections are already established there is no need for a subsequent Slave Query. However we do give you the ability to Order (Sort) your selection when defining your Document contents - this is defined within the Slave Query.

55.1.8 Detail Report: Input Form: Fields Selected



Detail Report: Input Form: Fields selected

There are several distinct areas on this page:

Documents - General or Documents - Date Time

This area allows you to specify the documents that will be used as containers for the exported data. You can specify many documents. Each document will be evaluated separately and the result sent to a separate document on disk. This is useful when you want to create several similar documents that use the same Master Query for instance:

Item	Function
+ and - buttons	The order of documents can be changed using the + and - buttons to the right of the document list.
Delete All	Delete all the documents and their specifications
Delete One	Delete the selected document and its specification.
Duplicate	Duplicate the selected document and its specification.
Add	Add a new document to the list. The default name is Export Document . This name can be edited in the edit field below the Document List. Once a document has been created you can assign fields to it.
Edit area	Click on a Document in the Document list to edit it in the edit area below the list.

Detail Report: Input Form: Fields: Documents for General or Date Time Stamp Query area

Available Fields and Fields selected for document areas

This area contains a two part drop down list that gives you access to Tables and Fields available for export and displays the Fields already selected:

Item	Function
Field	The first drop down list is a list of available Tables. Clicking on a Table name displays the Fields for this table in the second drop down list. You can then select the field you require form the second drop down list.
Field Type display	Next to the A and Z button is a text label that displays the type of field currently selected.
A & Z buttons	Sort the field list into ascending or descending alphabetical order.
Field Description	This will contain a description of the function of the field.
Add One	Add the currently selected field to the currently selected document.
Add All	Add all the fields for the currently selected Table to the currently selected document.
Remove One	Remove the currently selected field from the currently selected document.
Remove All	Remove all the fields from the currently selected document.
Selected Fields	Displays all the Fields selected for the currently selected document. The Table and Field Names are displayed. For Data Driven Tables the Helper is also displayed in order to identify the item selected.
+ and - buttons	The order of fields can be changed using the + and - buttons to the right of the Fields in selected document list. Select a field move it up or down the list.
Count of Fields	The number of fields selected for the currently selected document.

Detail Report: Input Form: Fields: Available Fields area

Mixing Fields in the same document

This area is essentially the same for both DT Stamp exports and Master exports with ONE IMPORTANT exception. In a General Query Export you can mix fields from different Tables in the same document. This is not allowed for Date Time Stamp exports. You will be warned if you try to do this.

The Date Time Stamp Export facility within STATIC exists to allow for the export of changed records. To do this we need to find all the changed records for every table and then export the contents of these changed records. Mixing the contents of these records by defining fields from different Tables within the same document does not make sense within this context.

Document Slave Query for General Query

Except for Place Holders, this area behaves in a very similar manner to the Query area as described in the Chapter Reports: Query Store on page 441.

For details on setting Placeholders see the Place Holder Section on page 357

Important

Every Document MUST have a Slave Query defined for it. Within this Slave Query there MUST BE at least one *USE SET* command. The table of the last USE SET command in the Slave Query also determines the Master Table for the document

If you do not define a USE SET command, then there will be no Master Table and no Current Selection of Records (for that Master Table) that the export can use to generate the contents of the specified Documents and you will end up with an empty document.

You are warned if a USE SET command has not been defined.

The Slave Query is evaluated only once for each Document.

Document Slave Query for Date Time Stamp Order By

This area is in fact a Query area with most of the Query commands made invisible. This means it functions like a regular Query area in all other aspects.

For a Date Time Stamp Query, the only other action that would make sense to perform on a selection of records would be to sort them into a particular order. This area allows you to do this. See Query Store: Command: Order By on page 457 and Query Store: Command: Order by Formula on page 457 for more details.

Note: If you import Queries into this area and they contain Query commands, you will get unexpected results as the imported Query could change the selection of records to something other than those created through the Date Time Stamp fields in the Master Query area.

Master Table for Document

As there can be a mixture of Fields selected for a document that is generated by a Master Query, you must tell the Report what you consider to be the Master Table for the current Document. This is automatically done by the USE SET command. Whatever is the table for the last USE SET command used in the Slave Query also determines the Master Table for the document.

The Master Table will determine how the exported data is treated when a relation exists to the selected Master Table.

For instance, if a field from a Table is selected that has no relation to the Master Table selected, then no data is exported for that field and you will be warned in the resulting output by an error message.

If a field from a table is selected that has a Many relation to the Master Table selected, then there may be 2 or more records that could be used to fill the field - STATIC has to make a choice - it may not be the choice you expect or want.

As an example, say the Master Table is set to `[HospitalRecord]` and you are exporting 2 fields - `[HospitalRecord]Demog_Last_Name` and `[ICURecord]Adm_Date`. For each `[HospitalRecord]` record, STATIC would now export the `Last_Name` but when it comes to the `[ICURecord]Adm_Date,` and there happen to be 2 records, which Admission date does it use? There is clearly a choice because there is more than one record! STATIC (unlike many other database systems that would just report an error at this stage) will in this case use the first record it comes across to fill the field.

It may of course be better to export this data using the `[ICURecord]` table as the Master table - in this case you would have more rows in your output compared to using the `[HospitalRecord]` Master Table as there will be a row for every `[IUCRecord]` record. This is because there are always more `[ICURecord]` records in a given selection than `[HospitalRecord]` records because there can be more than one ICU Admission per Hospital Admission.

Note: Make sure you have a Current Selection of records to work with for the selected *Master Table for Document*. Do this by executing the Slave Query and ensuring there is a selection of records returned for the Query as displayed in the Query display area. This is a god habit to ensure there is something available that can be worked with to create output!

Document Headers

This controls the Headers for a Document.

Sometimes you will want to create documents without any Headers at all - for instance when exporting a Document that will be used as the import source for another database. In this case you would certainly not want a Header at the top of the document - it would spoil the import of the document and would have to be stripped out before import.

Usually you will want to export the document with a Header in order to identify the document.

Document Headers:

Item	Function
Export Headers? checkbox	If this is selected then the exported document will have headers exported before the actual data. The Headers include the Name of the Document, the Date Time stamp and the names of the individual fields for each column.
Table Name in Column Header? checkbox	If this is checked then the full field name is exported as the column header other wise the short field name is used. The full field name is of the form `[ICURecord]Adm_Date.` The short name for the same field is of the form `Adm_Date.`
Title of Document in Header	This is a Title that can be displayed at the top of the document. This title can include placeholders. Placeholders in this area are of the Text type. See Detail Report: Input Form: Place Holders page on page 367 for more.
Place Holder Button	This inserts a placeholder at the current insertion point in Title of Document in Header.

Detail Report: Input Form: Fields Selected: Document Headers

55.1.9 Detail Report: Input Form: Create an Export document

This is how to create an Export document on the Fields page:

1. Click on the *Add* button in the *Documents* - area.
   This will create a new document that will initially be named Export Document . This name can be edited in the edit field below the document list.
2. Select the document name in the list if it is not already selected.
3. Select the Table you require in the *Available Fields* area.
   This will display the available fields for that Table in the next drop down list area

   If the Table selected is a Data Driven Table, also select the Data Driven type required in the drop down list that will appear below the Field name drop down list.
4. Select the Field that you require.
5. Click the *Add One* button
   The field is moved into the *Document - Fields selected for display in this document* area.
6. Continue to do this for all the fields you require.

Remember that MS Excel will display a max of 256 fields side by side. Also remember that if you want to print the fields, that for A4 format, that the max number of fields is realistically only about 10 side by side.

7 Setting the *Document Slave Query* or *Document Order By area*

If this is a General Query, then a Slave Query **MUST** be defined and there MUST BE one *USE SET* command. It may merely use a *USE SET* command that references a Master Query set already created in the Master Query. Click anywhere over the *Document Slave Query* area to access the Slave Query editor. For help on how to use the Slave Query editor see the Chapter Reports: Query Store on page 441.

If this is a Date Stamp Query then you do not need to enter the *Document Order By* area if you do not require the output to be sorted in any particular way. Click anywhere over the *Document Order By* area to access the Query editor. For help on how to use the Query editor see the Chapter Reports: Query Store on page 441.

8 Select the *Master Table for Document*.

This will determine the treatment of data that has a relation to the fields selected. Remember to ensure there is a *USE SET* command in the Slave Query that uses the same Table as the *Master Table for Document*.

9 Go to the *Document Headers* area

Set *Export Headers?* checked if you want to export Headers.

If you want the Table name to show in the column headers then check the *Table Name in Column Header?* checkbox.

Lastly, give the Document a name by filling the *Title of Document in Header* field. You can set placeholders for this area. This is useful when you want to change the Title dynamically. This could be the case when you want to create an export of data every week automatically. The placeholder could then be set to change every week to reflect the new week without having to edit the Title directly. e.g. The title may be set as follows: `Admissions from <PlaceHolder_1> to <PlaceHolder_2>`. When the Report executes the first time this may be exported as `Admissions from 01/01/2001 to 08/01/2001`.One Week later this may change to `Admissions from 09/01/2001 to 16/01/2001` without any intervention from you.

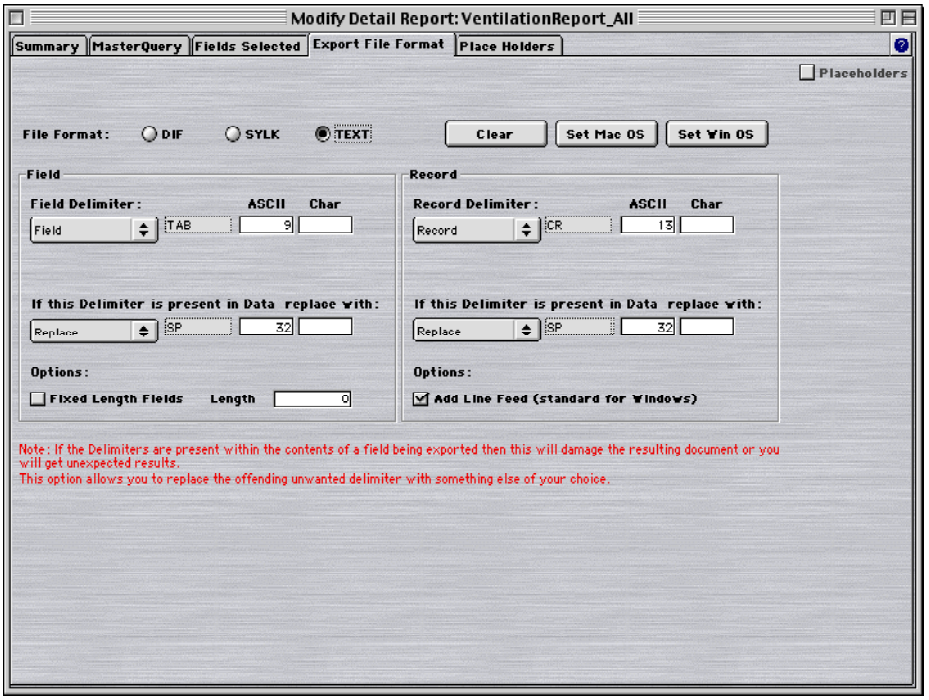
To enter a Placeholder, place the insertion point in the *Title of Document in Header* field where you want the placeholder to appear and click the *Place Holder* button. A small dialog will appear allowing you to edit the Place Holder name. When you have completed editing this name click on OK and the edited Place Holder name will appear in the Title text at the insertion point selected. You can set multiple placeholders in this way with text interspersed between them.

Note: You can only execute a Detail report from the Output Form. The Input form only allows you to define the report.

Defining multiple Documents for the Report

You can define multiple documents for the same Report. Just keep on Adding new documents and selecting fields for each document as shown above. When these documents are created, they are all created within their own common folder. See Reports: Destination of Reports on page 333 for details. If the documents are largely the same, use the *Duplicate* button to clone a document.

55.1.10 Detail Report: Input Form: Export File Format



Detail Report: Input Form: Export File Format window

Here you can select the file format for the documents specified in the previous section. Currently the following formats are supported:

DIF - Database Interchange Format

SYLK (MS Excel format) - Symbolic Link format

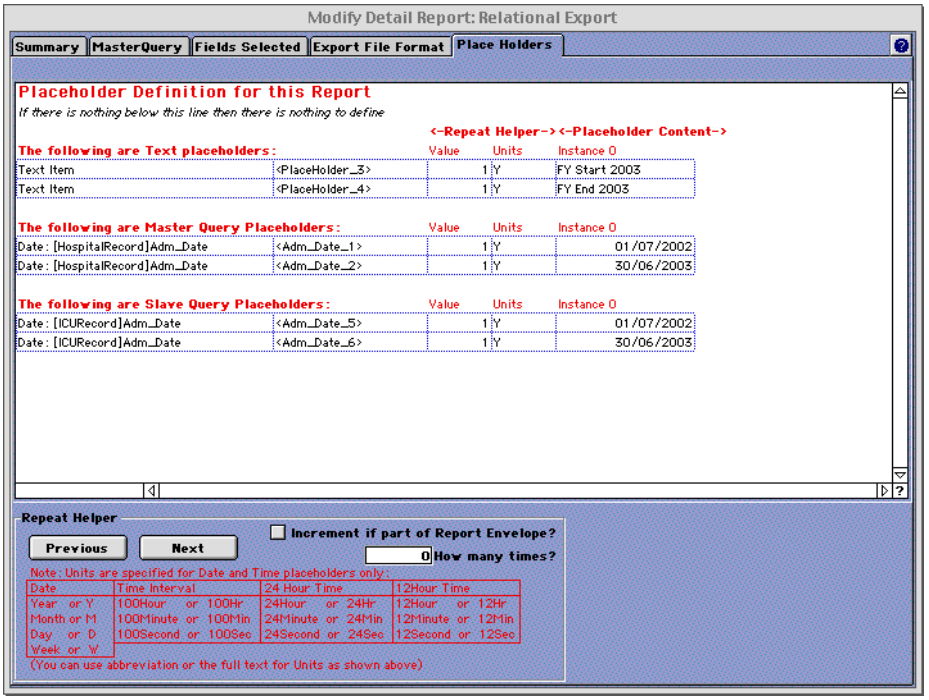
TEXT - In our case you can define any text format. You can define delimiters other than Tab Tab Return, You can also include Line Feed (LF) and make the fields fixed length.The text format is displayed as this is the only one that requires you to specify other parameters. DIF and SYLK (MS Excel format) require no setup.

For this format you will need to specify some parameters. Essentially you will be exporting a selection of records composed of a number of fields. Any system that is to read your document will need to know something about the structure of your document. Specifically it will need an indication where fields start and end and where record start and end. This is done by delimiters.

.

TEXT Format	
Item	**Function**
Field	Choose your Field delimiter from the drop down menu. TAB (ASCII 9) is the most common delimiter. As some characters are non printing (as is TAB) the name of the delimiter appears next to the ASCII number of the character followed by the text representation in a field. In this case TAB, of course, shows nothing as it is non printing.
Replace delimiter if in text	One of the problems with TEXT exports is that the delimiter you choose may be present in the data. This would completely destroy the structure of your data. This option allows you to filter this and replace the offending character with another one that will cause no problems. We suggest a Space (ASCII 32) as the replacement for this.
Fixed Length fields & Length	Some systems expect a fixed length per field. This allows you to set the length of the field.
Record	Choose your Record delimiter from the drop down menu. RETURN (ASCII 13) is the most common delimiter. As some characters are non printing (as is RETURN) the name of the delimiter appears next to the ASCII number of the character followed by the text representation in a field. In this case RETURN, of course, shows nothing as it is non printing.
Replace delimiter if in text	One of the problems with TEXT exports is that the delimiter you choose may be present in the data. This would completely destroy the structure of your data. This option allows you to filter this and replace the offending character with another one that will cause no problems. We suggest a Space (ASCII 32) as the replacement for this.
Add Line feed (standard for Windows)	Macintosh systems do not expect a LINE FEED after a RETURN to signal a record delimiter. On Windows systems this is expected. If the Report is created on Windows then the Line feed is automatically added in this Report system. However when it is generated on a Macintosh system this is added only when you specify it here. Our recommendation is to ALWAYS specify it as this causes less problems and most Macintosh systems accept either convention.
Set WIN OS	This button will set all the parameters to the defaults required for Windows OS
Set Mac OS	This button will set all the parameters to the defaults required for Macintosh OS
Clear	Clears all settings.

55.1.11 Detail Report: Input Form: Place Holders page

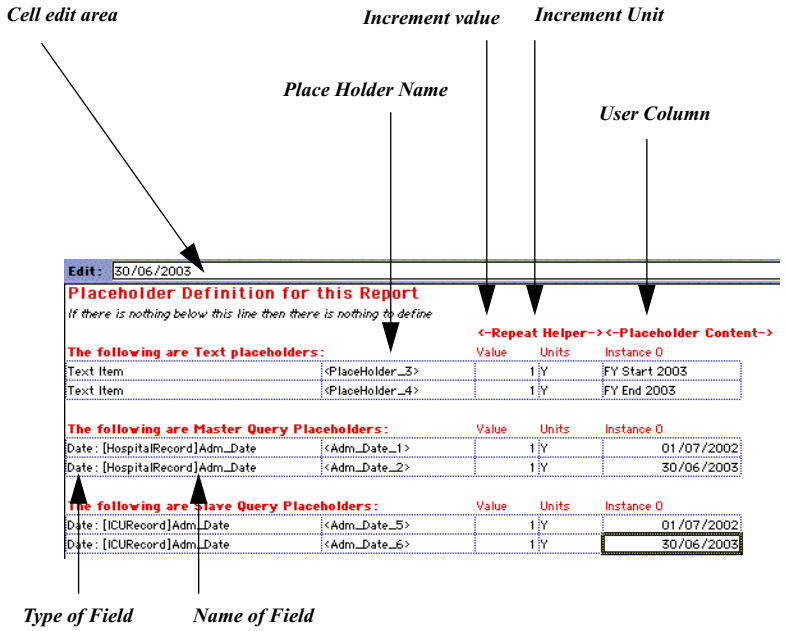


Detail Report: Input Form: Place Holders page

Window Items	Purpose
Edit:	When an editable cell is selected, the contents is displayed and edited here.
Place Holder Display area	This displays currently defined Place Holders and their contents
Repeat Helper	Templates are often used on a recurring basis within Reports. This area allows you to set the way the entries are to change after each Run of the Report.

Window Items

Place Holder Display area



Detail Report: Input Form: Place Holders Display area

Window Items	Purpose
Cell Edit: area	When an editable cell is selected, the contents is displayed and edited here.
Place Holder Name	This displays the name of the placeholder as entered into Master Query, Slave Query or Text.
Increment value	Number of Increment Units by which to +/- the target value in the User Columns
Increment Units	Can be a blank for numeric values or as per table below.
User Column	This is where you will enter the actual values which replace the Place Holder at Execution time. There is only one column to fill. Remember to ensure that the type of value that you enter matches what is expected by the Type of Field that the Place Holder refers to - this is very important for Data, Time and Numeric fields.
Type of Field	Can be of type numeric, string, date, time and boolean. The entries in the User column must match the type of the field being targeted by the entered value.
Name of Field	For information only.

Window Items

Units

The units specified will determine the way the value is treated by the *Repeat Helper* area. If the units do not match the type of value, then nothing happens - the value is left unchanged.

Units:

Units	Details
Blank	Numeric values being incremented

Units

Units	Details
Y or Year	Will increment any valid date by years
M or Month	Will increment any valid date by months
D or Day	Will increment any valid date by days
W or Week	Will increment any valid date by weeks
100Hour or 100Hr	Time Interval - cumulative time - increment by hours
100Minute or 100Min	Time Interval - cumulative time - increment by minutes
100Second or 100Sec	Time Interval - cumulative time - increment by seconds
24Hour or 24Hr	24 Hour clock- will reset at 24 hours - increment Hours
24Minute or 24Min	24 Hour clock- will reset at 24 hours - increment Mins
24Second or 24Sec	24 Hour clock- will reset at 24 hours - increment Secs
12Hour or 12Hr	12 Hour clock- will reset at 12 hours - increment Hours
12Minute or 12Min	12 Hour clock- will reset at 12 hours - increment Mins
12Second or 12Sec	12 Hour clock- will reset at 12 hours - increment Secs

Units

Note: Time Units with the prefix 100 refers to cumulative time. This is total additive time or a time interval. This can result in 189:30:20. In words 189 Hours, 30 minutes and 20 seconds.

Time Units with the 24 prefix refer to time by a 24 Hour clock. The maximum value that can be displayed is 24:00:00, the next value would be 00:00:01. Remember that 00:00:00 is the NULL time. It usually indicates that there was no entry.

Time Units with the 12 prefix refer to time by a 12 Hour clock. The maximum value that can be displayed is 12:00:00, the next value would be 00:00:01.

Units and Date Text Items

If a date or time is buried in a Text item, then STATIC will still find it and process it - even if there are several dates or times within the same Text User value.

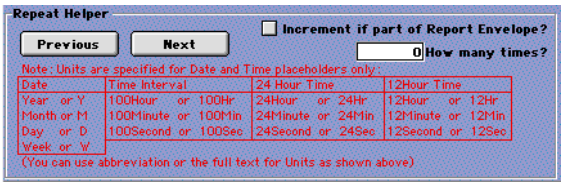
STATIC will process a variety of Text date formats:

Text Date Formats	Details
01 03 1999	Full numeric date
01 March 1999	Long Date
01 Mar 1999	Short Date
01 March	Day and Long month
01 Mar	Day and Short month
01 03	Day and numeric month
03 1999	Month and Year
Mar 1999	Short month and Year
March 1999	Long month and Year
01	Day if >0 and <=31 or Month if >0 and <=12
1999	Year if 4 digits

Text Date Formats and Units

Note that Years are ALWAYS 4 digits and that there is a single space as a separator for the different parts for a date of any format.

Repeat Helper



Template: Input Form: Place Holders page: Repeat Helper

Window Items	Purpose
Previous:	When an editable cell is selected, the contents is displayed and edited here.
Next	This displays currently defined Place Holders and their contents
Increment if part of Report Envelope checkbox	This is checked if you want the Place Holders for this report to be incremented each time the Report Envelope this report is part of is Scheduled to run. Incrementing has the same result as clicking the *Next* button.
How many Times?	This determines how many times this Report is incremented per iteration of a Scheduled run. In other words each time this Report is executed the placeholders move on as if the *Next* button is clicked the number of times indicated.

Buttons

The Repeat helper allows you to test the Placeholder area with regard to increment and decrement by using the *Previous* and *Next* Buttons.

It also allows you to set the number of times to increment the Report (if at all). You could set a Report to increment by one value Unit and by setting the Repeat value to 7 set the same Report to now increment 7 times before recalculating. Useful for going from Daily to Weekly (increment by 7), or Monthly to Yearly (increment by 12) without changing all the values or the Units. Experiment with the different options available to determine how best to use this area.

Chapter 56
Reports: Summary Report

56.1.0 Introduction

Please carefully read the following sections if you are going to use Summary Reports to generate Reports. You will be VERY frustrated if you decide to Jump In and try creating Summary Reports without reading this section.

Origin of the Summary Report idea

There is nothing more tedious than creating hard coded reports. We have coded many different reports over the years and have found that the vast majority contain repetitive elements that are used over and over again both within the same report and between reports.

This area is our response to make the generation of reports possible for you the end user and hopefully put us out of the job of creating reports!

Because we understand the requirements for Summary style reports in the medical arena, this area should allow you to create the vast majority of any Summary style reports you may require. This area is complex but with a little time you should be able to create what you want. Of course you can still ask us to do this for you - but at a cost!

Main Features of the Summary Report area

The Summary Report area is a very sophisticated programmable reporting environment:

Physical Limits

Max Summary Report size of 256 columns and 8190 rows.

Internal statistical algorithms can handle the maximum number of records that STATIC can store - realistically millions of records per Database Table.

Queries

Define a series of Master Queries that generate a Sets of Records that can be used in other parts of the Report.

Each datapoint can make use of the previously defined Sets generated in the Master Query for further manipulation in Slave Queries of the required selection of records for the statistic represented by the datapoint.

Datapoint Creation

Define a series of summary datapoints that act as placeholders and are later filled when the Report is executed.

Add text, labels, titles and notes etc. to the definition area.

Full control over the edit process - cut copy paste of a datapoint with full retention of its Slave query and format specifications.

Pivot selected datapoints (swap the axes).

Add text to the Grid Area that are for your information only - they are neither executed nor printed. Allows for documentation of your Report actually on the Grid.

Statistics

All common descriptive statistics are supported. This includes Count, Mean (Arithmetic, Geometric and Harmonic), SD, Variance, SE, Coefficient of Variation, Upper and Lower Confidence Interval, Min, Max, Range, Quantiles, Median, Mode, Continuous Frequency Distributions, Discontinuous Frequency Distributions.

Ability to calculate the percentage of ANY set of records compared to ANY other set of records. This is not directly possible with any other software package that we have reviewed.

Automation

Define placeholders in the definition area that are conditionally filled at execution time. e.g. dates may need to change every time the Report executes.

Define placeholders that are used at execution time to alter the selection of records returned by the Master and Slave Queries in the Report.

Designate one or more areas of the Report to Repeat - for every Placeholder series generate a new Report at execution time and intelligently assemble the Reports into a single document before exporting or printing.

Include or exclude sub-elements of the Report. For instance you may want to repeat a column of statistics for a number of years without repeating the Series labels for every column.

Formatting

Fully format the Report. Full control over color, fonts etc. You can also define Prefix and Postfix characters - such as +/- and SD .

Style sheets to quickly and consistently format your Reports.

Output

Control Exporting and Printing of the resulting documents. Can generate both the definition and output sheets as well as the assembled document or any combination of them. Print in full colour up to A0 size (255 columns by 8158 Rows). Export the Document as a SYLK (MS Excel format) document - this retains ALL formatting of the STATIC report when opened up in a Spreadsheet.

Comments and Tips

The Summary Report area contains a lot of features. In fact we estimate that over half the code in STATIC is in some way concerned with the generation of Summary Reports.

Creating Reports will be much easier if you have a large screen. If you have ever worked on Spreadsheets you will know that the larger the screen the easier it is to get work done. Summary Reports, because they are based on a spreadsheet paradigm, are no different.

We recommend that you have at least a 17 or larger monitor - especially if you are working on Windows. For the same screen typeface and the same screen resolution, the actual presentation of text on Windows is always coarser than on Macintosh.

You may want to work on the Report using a larger typeface and, at the conclusion of your editing and creation cycle, apply a Style to the whole Report to make the Report suitable for printing - very likely with a different typeface.

This area is VERY computational intensive. You will get very poor performance on slow machines with little memory - even though these machines may be perfectly adequate for data entry. For Windows we recommend a P4 with lots of RAM; and for Apple a G5 processor with lots of RAM.

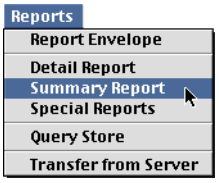
Lastly, this area contains a lot of features that makes it easy to store and reuse design elements and even whole Reports for new Reports. Even though, at first, it may seem to take a long time to create anything at all, you will find that the ability to reuse many repeating elements such as Queries and Datapoints makes it much quicker to generate subsequent Reports.

Report Depot

We will be creating an area on our website at www. hxmedical.com that will act as a Report Depot. If you have created an interesting Report, send the Definition record to us so we can publish it. Please attach your details so we can acknowledge you as the author.

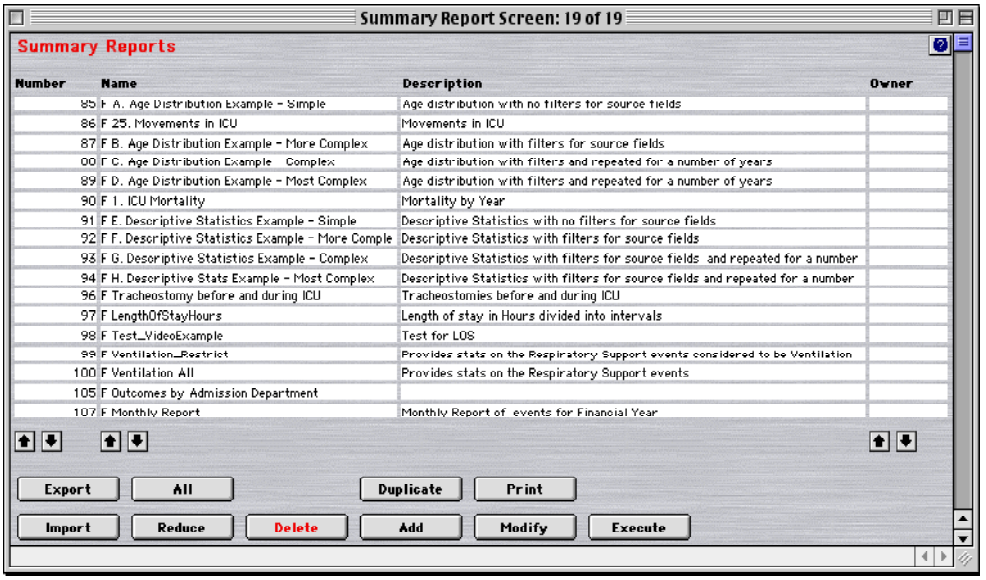
56.1.1 Summary: Output Form

In order to enter the Summary Report area, choose the following Menu Item:



Reports: Summary Report menu item

The following window will display:



Summary: Output Form

This is where all the Summary Report definitions are stored.

Window Items	Purpose
Detail Report List	Lists all the records available.
Number	The internal number of the record
Name	Name of this Summary Report
Description	Short description of this Summary Report
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

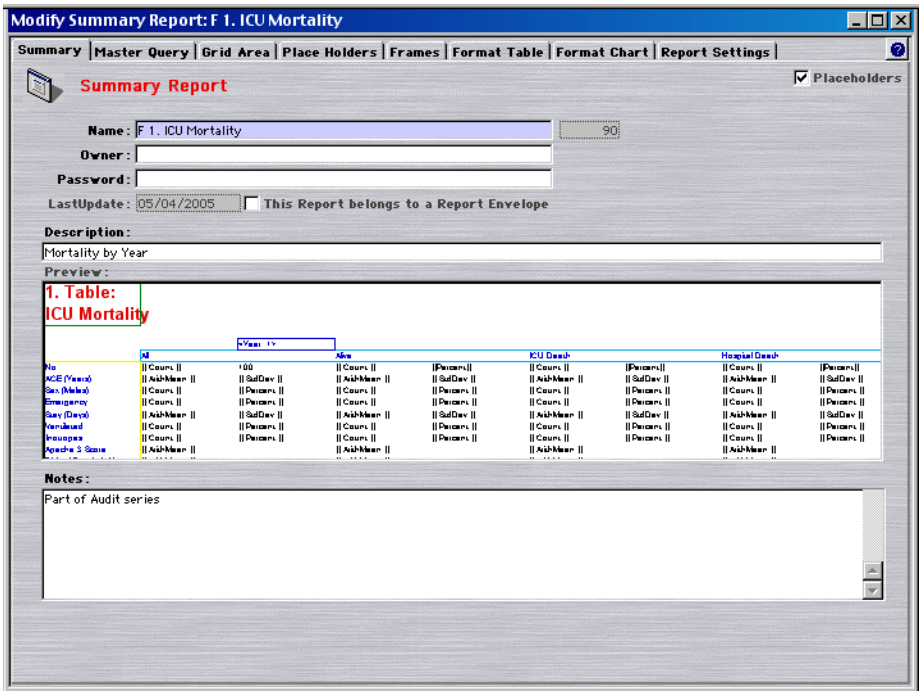
Window Items

Button Name	Action
Export	Export the selected Reports.
Import	Import Reports destined for this area from a document.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete the selected records
Duplicate	Duplicates (Clones) the current selected record and removes any password protection from the copy
Add	Add a record
Modify	Modify the selected records. You can also do this by double click on the record selected. You can open as many records as memory allows.
Print	Print the selected records as a list or as detail reports (you will be given the option)
Execute	Execute the Summary Report immediately from this Workstation.
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

56.1.2 Summary: Input Form: General Overview

If you have opened an existing Summary Report you will see the following window:



Summary: Input Form: Summary Page

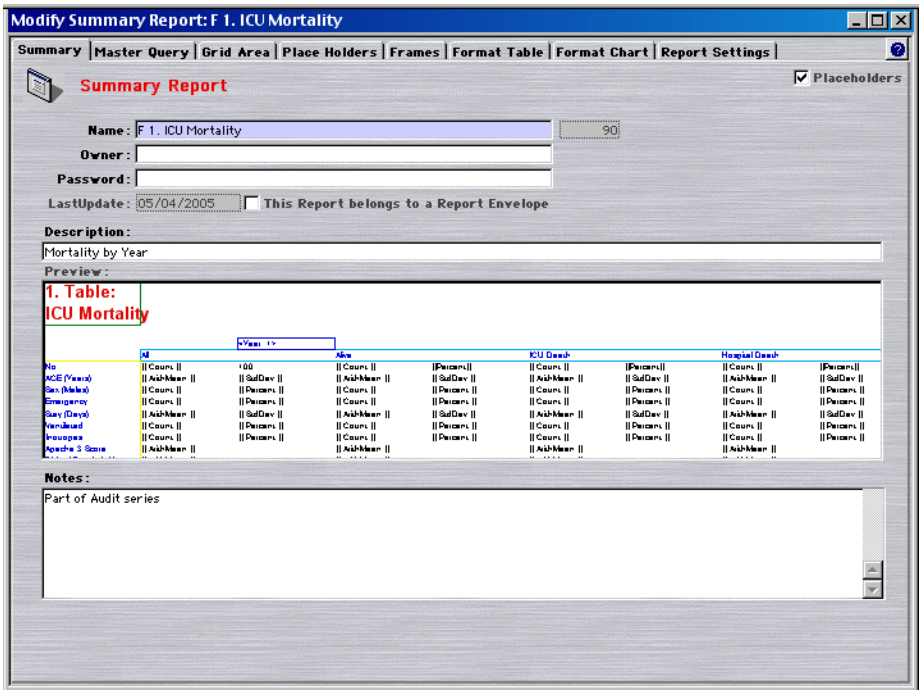
The Report form is divided into 8 pages. You move from page to page using the Tab control:

Tab Control	Function
SummaryReport	This allows you to Name the Report, record its purpose, and preview the top left hand corner of the Report as a graphic.
Master Query	For a particular report, some Queries only need to be done once. This is because the resulting Set of records can be reused multiple times within the Report by Slave Queries. This area allows you to generate the Master Sets that are able to be used throughout the Report by Slave Queries. This speeds up Report generation because the Master Query is only ever executed the one time.
Grid Area	This is the area from which you can calculate, export and print the Report documents. The Grid displays Grid Items To use this area: Define a Grid Envelope which is a container for Grid Items. Grid Envelopes can be of two types - Text or Stat. Each Grid Envelope contains one or more Grid Items. These fill the cells that are seen on the Grid. Grid Items can be placed and moved anywhere on the Grid. Stat Grid Envelopes have a Slave Query attached that defines the selection of records to use for the statistical calculations. The Slave Query can utilize Sets created in the Master Query. Grid Items can now be defined that draw from most of the common descriptive statistics. This includes Count, Mean (Arithmetic, Geometric and Harmonic), SD, Variance, SE, Coefficient of Variation, Upper and lower confidence interval, Min, Max, Range, Quantiles, Median, Mode, Continuous Frequency distributions, Discontinuous Frequency Distributions. The Frequency distribution definition editor allows you to precisely control the shape of the distribution. Text Grid Envelope only contain Text Grid Items that define text on the Grid. This text can contain Place Holders that is replaced with the required text when the Grid is calculated.
Place Holders	Placeholders can exist in the Master Query, Slave Query and Definition area as part of Text Grid Items. Every Report executes once, whether there are placeholders or not - creating the View 1. Placeholders are replaced by the User Defined values in the Placeholder area at the time of execution. If there are several columns of User Defined values defined in the Place Holders page then the Report will executes once for every column, creating the View 1 and then the other Views. It will also concatenate View 1 and the other Views as specified in the Frames area into a special view called Composite.
Frames	Only datapoints which are contained within a Frame are displayed on output - whether to the printed or exported to an external document. This feature gives you the ability to place helpful text onto your Grid Area that is for information only - it will never be seen on any output. A Frame can be set to create a composite. It will do so if the Create Composite checkbox is set for the Frame and there are several sets of placeholders defined. After the first complete Frame has been placed, you can exclude various sub-elements of subsequent Frames. This is useful for instance when creating a Report that is to display the same data but for several different years. You can even define several Frames within the same Report that are independently placed.
Format Table	From here you can control every aspect of appearance as well as the width of the columns. This area also allows you to set the pagination for your target printer. To make things easier for you, we have included a complete Style Sheet system, that once set, will allow you to quickly and correctly set the appearance of your Reports.
Format Chart	This is for a future feature to turn Frames on the Report into Charts.
Report Settings	All information displayed here is represented elsewhere in the Report. This area gives you the ability to quickly review the settings important for printing and exporting without having to visit every page in the Report. It is a summary area.

We will now describe each page in detail.

56.1.3 Summary: Input Form: Summary Page

This page records identifying information for this Report and gives you a quick preview:

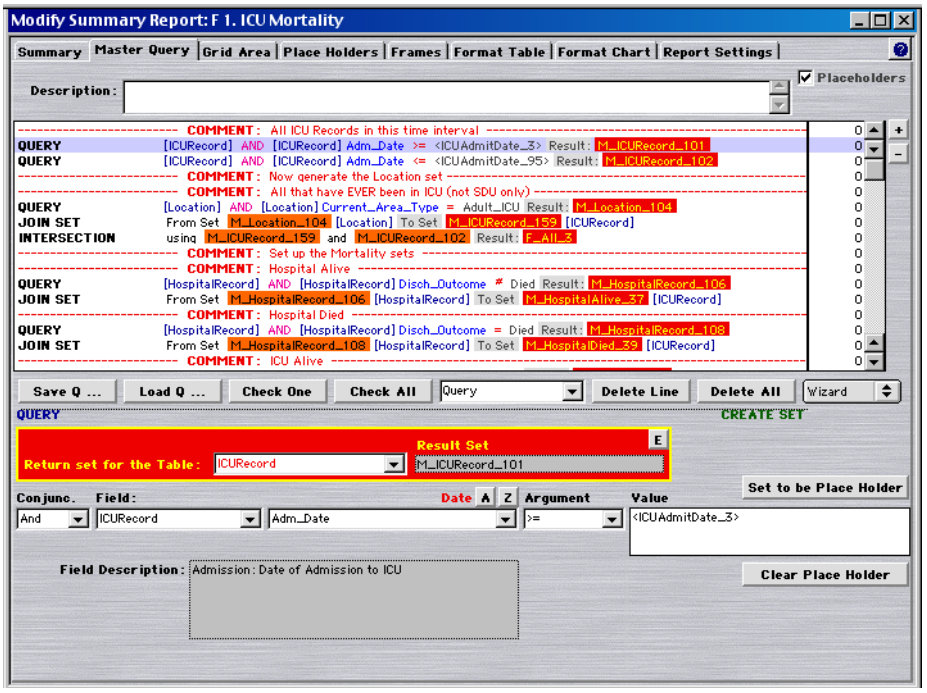


Summary: Input Form: Summary Page

Window Items	Purpose
Name	The name of the Report as seen in the List view.
Owner and Password	The Owner of this Report. It may be password protected. The Administrator can open any Report.
Last Update	Date of last edit. Entered by the Owner.
Placeholders Checkbox	Checked if there are placeholders present in the Report. Tells you that you will need to verify that real values exist for the placeholders in the Place Holders page.
This Report belong to Report Envelope Checkbox	Informs you if this Report belongs to a Report Envelope. If this checkbox is set, it is risky to edit this Report unless you know what you are doing - especially if this Report is set to repeat automatically.
Description	A short description of the Report.
Notes	Some extra information making the purpose of the Report easier to identify. Make this as meaningful as possible. Other users on the network may want to use your Report and if it is password protected they will not be able to see the definition of the Report.
Resize the Form	You can resize this form by dragging the lower right hand corner

Window Items

56.1.4 Summary: Input Form: Master Query page



Summary: Input Form: Master Query page

Except for Place Holders, this area behaves in a very similar manner to the Query area as described in Reports: Query Store on page 441.

Function of the Master Query page

The Master Query area reduces the workload for your Report by generating Sets of records that may be used many times in a later Slave Query. This saves the Report from running the same Query potentially many times.

Any Set of records that will be used multiple times on the Reports should be evaluated here.

The Master Query area is evaluated once right at the start of Report execution. This means any Sets established here will be available to all other Slave Queries on the Report.

You do not necessarily need to define anything in the Master Query area - in this case all Queries will be performed by the Slave Queries. This may be appropriate if there is no common Query required by the Slave Queries.

Queries belong to the Report

We try to make STATIC elements reusable within the database. However, any Query defined here will be saved for exclusively for use within the Report. It will not be available in the Query Store area. If you want to make your Query available for use in other Reports or Queries then you can of course export the Master Query into a document and then Import it into another Query area. Or, alternatively, you can load a Query from the Query Store area into the Master Query area of the Report.

Sharing of Queries between Reports

Queries contain Sets and Place Holders. Sharing of Queries between and within Reports could cause problems, if a Set or Place Holder happens to have the same name as one already defined in the Report. In order to avoid this, the Report area has a sophisticated tracking system that automatically renumbers any Sets or Place Holder so that they do not clash.

Place Holders

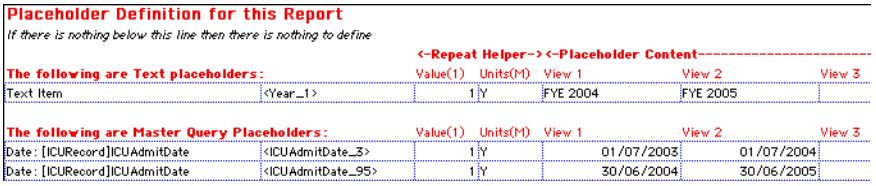
The Query command is the ONLY command in the Master and Slave Query area for which you can define a Place Holder. This allows you to create a Query that could look like this:

```
QUERY [ICURecord] AND [ICURecord]Adm_Date >= <ICUAdmitDate_3>
```

Notice the Placeholder `<ICUAdmitDate_3>` at the end of the line.

All placeholders are bracketed by the `<` and `>` sign. Use the *Set to be Place Holder* Button and *Clear Place Holder* Button to control the setting of the Place Holder.

At execution time the placeholder is replaced by an actual value derived from the Place Holder page. If you have a Query as defined above then the Place Holder page may be as follows:



Placeholder Definition for this Report

If there is nothing below this line then there is nothing to define

		<-Repeat Helper->		<-Placeholder Content----------		
The following are Text placeholders:		Value(1)	Units(M)	View 1	View 2	View 3
Text Item	<Year_1>	1	Y	FYE 2004	FYE 2005	
The following are Master Query Placeholders:		Value(1)	Units(M)	View 1	View 2	View 3
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_3>	1	Y	01/07/2003	01/07/2004	
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_95>	1	Y	30/06/2004	30/06/2005	

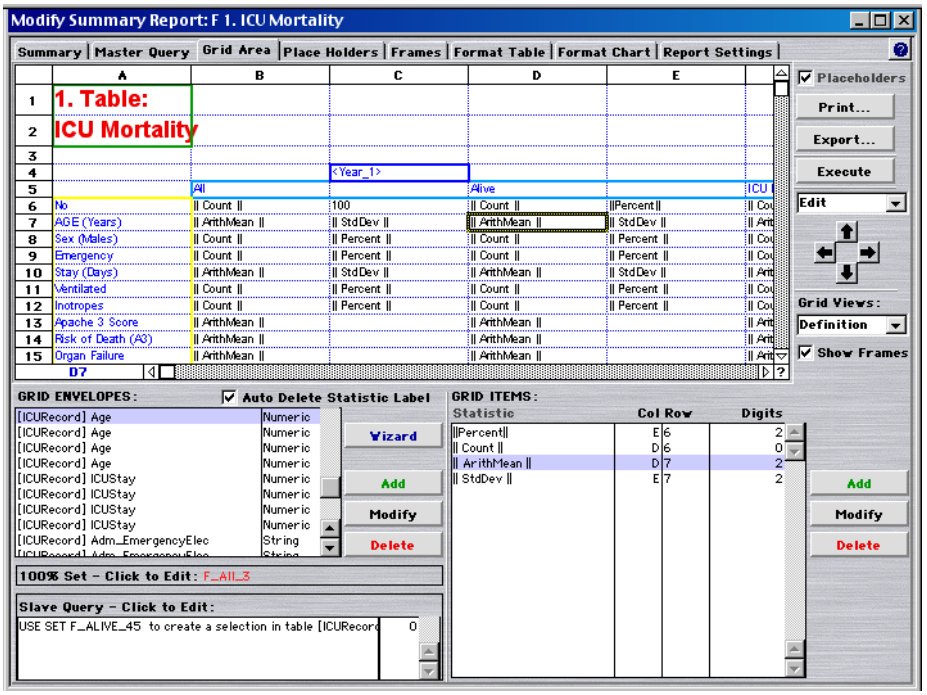
Summary: Input Form: Place Holder Page: Detail

When the Report executes, the `<ICUAdmitDate_3>` will be replaced by 01/07/1999 for the first run and 01/07/2000 for the subsequent run. See Summary: Input Form: Place Holders page on page 418 for more details.

We have not given you the option of setting Place Holders for the Query By Formula command. It was deemed too problematic. There is less control over the precise contents of a formula. This would lead to frustrating errors which would be very difficult to track down.

56.1.5 Summary: Grid Area page: Introduction

An already defined Grid Area may look something like this:



Summary: Input Form: Filled Grid Area page

Some of the control items displayed on the page are contextual - that is they only appear when specific elements are defined in the Grid area or selected by Grid Controls.

This page has 2 functions:

a Define the datapoints and text of the Report.
b Execute, Export and Print the Report.

56.1.6 Summary: Grid Area page: Getting started

Grid Envelopes and Grid Items

A Report contains Grid Envelopes. These Grid Envelopes are not displayed on the Grid, they are containers for Grid Items - which can be displayed on the Grid. In other words a single Grid Envelope is a container for one or many Grid Items.

In order to define a Grid Item, you MUST define a Grid Envelope first. You can add more Grid Items to an already defined Grid Envelope later.

We have arranged things in this way in order to keep logical groups of Grid Items together. For instance, if you have defined a Frequency Distribution, there will almost certainly be many Grid Items. All these Grid Items are held within a single Grid Envelope. This makes it easy to delete the Frequency Distribution later - just delete the Grid Envelope and all the Grid Items belonging to the Grid Envelope will be deleted also.

Remember, the Grid is just a display area, so if you want to delete, say an element of a Frequency Distribution, then it is better to just hide it (by setting the coordinates on the Grid to 0;0) rather than actually deleting the Grid Item, you may change your mind later and still want to display it!

Note: Creation of Stat Grid Envelopes and Text Grid Envelopes and their Grid Items can be done either manually as outlined below or by use of the Wizard described in. Summary: Input Form: Wizard on page 412.

Order of operations

You would start to use this area as follows:

1 Define a Stat Grid Envelope for a Field that you want to do statistics on.
See Summary: Grid Area page: Grid Envelope: Add on page 387

The field you select will determine the statistic you will be able to generate from this Grid Envelope. e.g. If we choose `[ICURecord]Adm_AgeInYears` as the field - we can generate most types of statistic but if we choose `[ICURecord]Adm_Source` then we can clearly not expect to derive statistics such as Mean, SD etc. because this field holds data of type *String* and these statistics expect data of type *Numeric*.

Define a Slave Query for this Stat Grid Envelope.

See Summary: Grid Area page: Slave Query on page 389

This will create the selection of records you will use to create your statistics with. The Slave Query MUST return a selection of records for the Table that the Field belongs to - otherwise there is nothing that STATIC can work on to create the statistics you require. STATIC expects you to use at least one USE SET command at or near the end of the Slave Query definition that uses the same Table as the Field selected for the Grid Envelope. If this is not done, you will see an error message on leaving the Slave Query and in the Slave Query display on the Grid Area page.

Define a 100% Set for this Stat Grid Envelope.

See Summary: Grid Area page: 100% Reference Set on page 390

100% Sets are used for comparison. The Set used must be created in the Master Query. Click on the area to select the Set to use as the 100% Set.

This is used for some comparative statistics. e.g. You may want to compare the number of Central Lines to the number of Admissions as a percentage. Here you would define the 100% Set as the set of records that returns the number of Admissions (from the `[ICURecord]` Table) and this set will be compared to the selection of `[ICURecord]`records that had a Central Line event (derived by another Query involving the `[DD_Proc_Event]` Table).

Define one or more Statistical Grid Items for the Stat Grid Envelope.

See Summary: Grid Area page: Statistic Grid Item: Add on page 391

This creates the actual contents that will be seen on the Grid. You can move these items anywhere on the Grid by either Cut and Paste (use Cut and Paste from the *Edit* drop down menu on the Form - NOT the Menu Bar!) or by using the *Arrow* buttons.

2 Define a Text Grid Envelope

See Summary: Grid Area page: Grid Envelope: Add on page 387

These are containers for Text Grid Items.

Define one or more Text Grid Items for the Text Grid Envelope.

See Summary: Grid Area page: Text Grid Item: Add on page 394

These will hold the Headings or labels or both you want to display on the Grid. Text Grid Items can contain conditional text defined by Place Holders that are replaced when the Grid is calculated by the required Text.

3 Repeat adding Grid Envelopes and Grid Items to the Report

You can add as many of these as you require. They do not need to have any relationship with each other. You can place the Grid Items from different Grid Envelopes anywhere you like with respect to each other. Each Grid Envelope is independently calculated and the results of the calculation placed on the Grid in their respective Grid Items.

4 Define a Frame for the Grid Items displayed on the Grid.

See Summary: Input Form: Frames page on page 423

Only Grid Items contained within a Frame are displayed on final output documents. (Sometimes you may not want some Text or Statistics Grid Items to display on final output - e.g. private notes to yourself as a reminder of function, quality check of source data by running statistics.)

Frames are powerful, they determine where and how blocks of Grid Items are placed, repeated and formatted. In conjunction with Place Holders, Frames make it easy to create a Grid that repeats a single block of Grid Items many times. e.g. a repeating block of Grid Items for yearly statistics repeated for 1, 2 or 5 years. This removes the need for you to create a block of Grid Items for every year that you want to display.

5 Apply any formatting to the displayed Grid Items.

See Summary: Input Form: Format Table page on page 427

You can now apply formatting to the individual cells. Formatting can also be applied using Style sheets to give consistent predetermined look and feel to all your output. Here you can also set the Column width and the Pagination for printing.

6 Execute the Report form the Grid area

See Summary: Grid Area page: Grid Envelope: Add on page 387

Click the Execute button on the Grid Area page.

7 Display the calculated views

See Summary: Grid Area page: Grid Envelope: Add on page 387

Select View 1 to View n or Composite view. The Grid will display your Report. View 1 is the first Report calculated. If there are Place Holders defined, View 2 to n are all subsequent calculations for every column of Place Holders values. The Composite view is View 1 and all View 2 to n sheets concatenated as per definition in the Frames page.

8 Export or Print the Report

See Summary: Grid Area page: Grid Envelope: Add on page 387

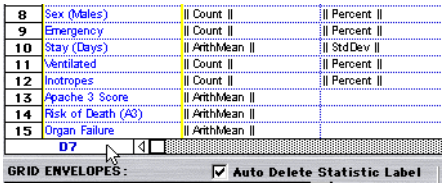
Click the Print or Export buttons and Export or Print the Report.

56.1.7 Summary: Grid Area page: Grid Area

We call the Spreadsheet like area a Grid. This is so that you do not confuse the functionality of this area with that of a true Spreadsheet. The Grid is used solely as a positioning and display tool - not for calculation. All calculations are done within STATIC.

Restoring Focus to the Grid

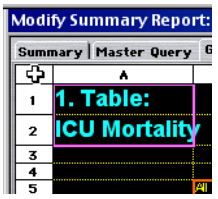
User Tip: It is sometimes hard to see what was selected on the Grid. This is because the Grid occasionally loses Focus when you click on a Drop Down List. To restore Focus to the Grid area just click in the Coordinates display area of the Grid area:



Summary: Input Form: Grid Area page: Click in coordinates display area

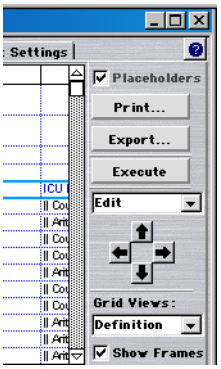
Selecting all cells on the Grid

User Tip: To select all the cells on the Grid, just click in the Top Left square of the Grid:



Summary: Input Form: Grid Area page: Click to select all cells

56.1.8 Summary: Grid Area page: Grid Controls



Summary: Input Form: Grid Area page: Grid Controls

Controls directly associated with the manipulation of the Grid are to the right of the Grid. These controls are as follows:

Grid Controls	Purpose
Place Holders checkbox	Informs you that Place Holders have been defined.
Print	Print the Report - Results and Definition
Export	Export the Report - Results and Definition
Execute	Calculate all aspects of the Report, create all Output ready for Print or Export.
Edit Drop Down list	Edit commands such as Cut, Copy, Paste, Clear, Delete, Insert, Move, Pivot, Import, Export Selection and Export All.
Nudge Arrows	Move currently selected cells one Column or Row at a time
View drop down list	Shows Definition, select the View of the Report you require. The contents of this drop down list depends on the number of Views defined and if a Composite view has been defined.
Show frames checkbox	Frames are defined in the Repeat Frames page. Showing frames gives you a guide to placing new cell items in positions that result in them being plotted where you wan them.

Grid Controls

Print Button

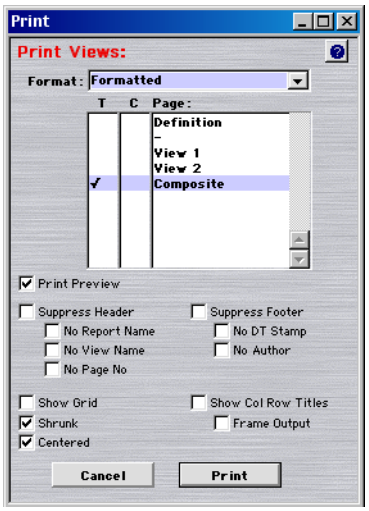
This is how you Print a Report:

1 Click the Print Button

A Dialog will appear asking if you want to Execute the Report before printing. You may need to do this if the Report has not been executed before or if you have made changes. Once a Report is executed, the results are stored within the Report.

2 The Print Report Dialog will appear:

This Dialog always remembers its last settings:



Summary: Input Form: Grid Area page: Print Dialog

Window Items	Purpose
Format	This allows you to choose to Print with all the Formatting specified (Fonts, Color etc.)or as completely plain text
Views Scrollable area	This lists all the views available for printing. Note that you can also print the Definition area itself
T	T for Table - a tick here will Print the Table as specified in the View
C	C for Chart - a tick here will Print the Chart as specified in the View
Page	Names of the Views available for printing
Print Preview	Will display a preview of the print job prior to printing.
Suppress Header	Will suppress the whole Header on a print job
No Report Name	Will suppress the Report Name in the Header on a print job
No View Name	Will suppress the View Name in the Header on a print job
No Page No	Will suppress the Page number in the Header on a print job
Suppress Footer	Will suppress the whole Footer on a print job
No DT Stamp	Will suppress the Date Time Stamp in the Footer on a print job
No Author	Will suppress the Author in the Footer on a print job
Show Grid	Will print the Grid lines on the Grid area.
Shrunk	Will prevent the printing of empty cells to the right and below the occupied cells
Centered	Will print the job onto the centre of the page
Show Col Row Titles	Will display the Col and Row titles on the Grid area.
Frame Output	Will print a frame around the print job.
Cancel	Will cancel the window.
Print	Print the selected items.

Window Items

Most of these options are better understood by performing a Print Preview repeatedly while changing the options.

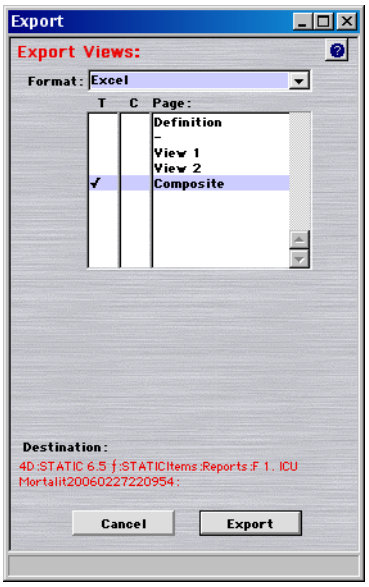
Export Button

This is how you Export a Report:

1 Click the Export Button
A Dialog will appear asking if you want to Execute the Report before Exporting. You may need to do this if the Report has not been executed before or if you have made changes. Once a Report is executed, the results are stored within the Report.

2 The Export Report Dialog will appear:

This Dialog always remembers its last settings:



Summary: Input Form: Grid Area page: Report Export Dialog

Window Items	Purpose
Format	Plain Text: Creates a document readable by most programs including word processors. SYLK (MS Excel format): Creates a document readable by MS Excel. Retains ALL formatting specified in the Grid area. This includes font, color, size, style, alignment and column width settings. Graphics: Allows you to Export in a variety of formats. This includes PICT, GIF, JPEG and BMP. JPEG is not available on Windows.
Views Scrollable area	This lists all the views available for Export. Note that you can also Export the Definition area itself
T	T for Table - a tick here will Export the Table as specified in the View
C	C for Chart - a tick here will Export the Chart as specified in the View
Page	Names of the Views available for Export
Destination	Destination of the Export

Window Items

Execute Button

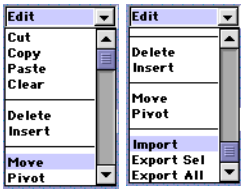
Click the Execute button to recalculate the whole Report and generate the statistics. You do not need to repeatedly execute your Report every time you make a change.

In order to know if you need to execute a Report again; ask yourself if the actual data to be displayed has changed in terms of value. If all you have done is to change the position or the format of a Grid Item there is no need to recalculate the Report as it is unlikely that the values have changed.

However, we do recommend that you do a final recalculation before actually using the Report to generate final output.

Edit Drop down list

The normal Edit Menu bar is not available for edit of the Grid Area, You must use the Edit drop down list described here instead. The Edit drop down list contains all the commands you require for the editing of Grid Items on the Grid area:



Summary: Input Form: Grid Area page: Edit Drop Down list

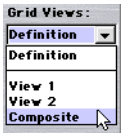
Note: The last 3 items are only available after clicking on the drop down list to make it drop and then using the scroll bar to bring them into view.

Edit Items:

Edit Items	Purpose
Cut	Cut the selected Grid Items on the Grid area. Will make an internal copy of the Grid Items selected so can be Pasted later and then removes the Grid Items.
Copy	Copy the selected Grid Items on the Grid area. Will make an internal copy of the Grid Items selected so can be Pasted later, leaves the original alone.
Paste	Paste Grid Items previously Cut or Copied.
Clear	A Dialog will ask what you want to clear - Contents, Formats, Height, Color, Width. These are all reset to Default values.
Delete	Delete will remove selected Grid Items. It will then either move cells to the right of the Deleted Grid items to the left or if below Up
Insert	Will insert copied or Cut Grid Items at the selected cell. Will move existing cells right or Down in order to make room for the Grid Items to be Inserted.
Move	Select some Grid Items, then hold down the Command Button {Ctrl Button on Windows} and select the required Insertion point. Now select the Move command. The selected Cells are moved to the Insertion point. You will be warned if there is a collision with existing cells.
Pivot	Will Rotate the selected cells so that the X Axis becomes the Y Axis.
Import	Import a document that contains Grid Items.
Export Sel.	Create a Document that contains Grid Items. This command allows a series of previous Report fragments to be established ready for Import. This allows rapid assembly of a Report using previously defined Grid Envelopes.
Export All	Create a Document that contains all the Grid Items on the current Report.

Edit Items

Views Drop down list



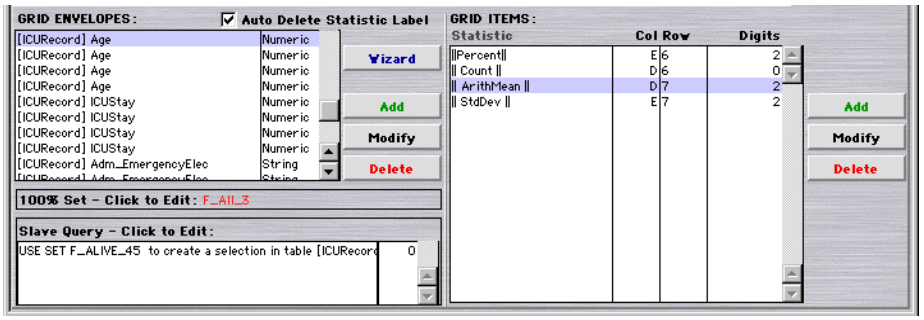
Summary: Input Form: Grid Area page: Edit Drop Down list

This area allows switching to the available views.

Normally you will work while viewing the Definition area. Sometimes you may want or need to switch to the other views. This is because the other views display the actual calculated values (if you have clicked the Execute button previously). You may need to do this when determining the Column width or the placement of cells to improve the aesthetic appeal of your final output.

56.1.9 Summary: Grid Area page: Grid Envelope and Grid Items area

This is the area under the Grid. It controls the content of the Grid:



Summary: Input Form: Filled Grid Area page

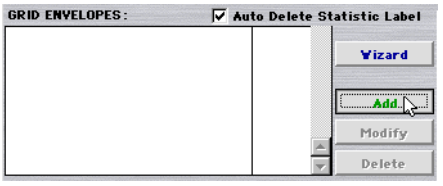
Window Items	Purpose
GRID ENVELOPES	Containers for Grid Items
Auto Delete Statistic Label	If a Statistic Grid Item has been defined with a Label then the Label is deleted when the Statistic is deleted if this checkbox is set.
100% Set	Displays the 100% Set for the Grid Envelope. Access the full 100% Set Editor by clicking anywhere in the 100% Set display area.
Slave Query	Displays the first few lines of a Slave Query attached to a Grid Envelope. Access the full Slave Query Editor by clicking anywhere in the Slave Query display area. Will also show an error message if there is no USE SET command or if the Table for Field selected for the Grid envelope and the USE SET command do not match.
GRID ITEMS	List of the Grid items contained in the selected Grid Envelope. Displays the coordinates of the Grid Envelope and if it is a Statistic will allow you to set the calculated result precision. The controls for the Grid Items differ depending on whether a Text item or a Statistic Item has been selected Grid Items can be edited either in the Grid Item area or via a Dialog that is accessed by Double click on a Grid Item in the Grid Area or the Grid Item area.

Window Items

56.1.10 Summary: Grid Area page: Grid Envelope: Add

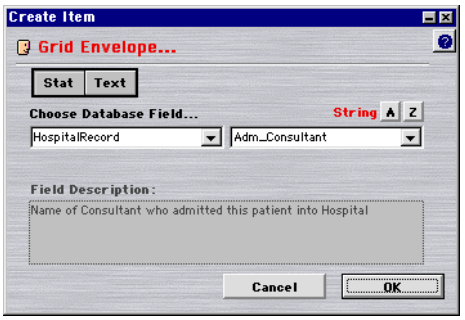
This is how you add a Grid Envelope:

1 Click the *Add* button:

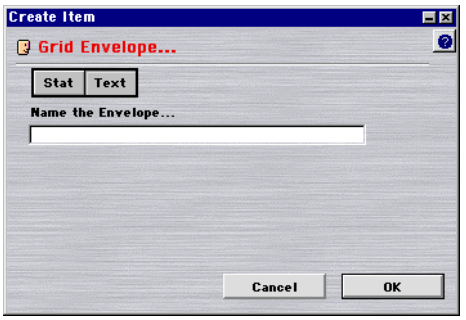


Summary: Input Form: Grid Area page: Adding a Grid Envelope

2 The following dialog will appear:
Choose if you require a Stat Grid Envelope - press the F control or a Text Grid Envelope - press the T control as shown below.



Adding a Stat Grid Envelope



Adding Text Grid Envelope

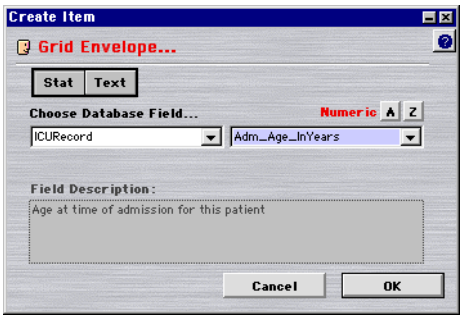
Note:

Text Grid Envelopes hold comments, headings and labels.

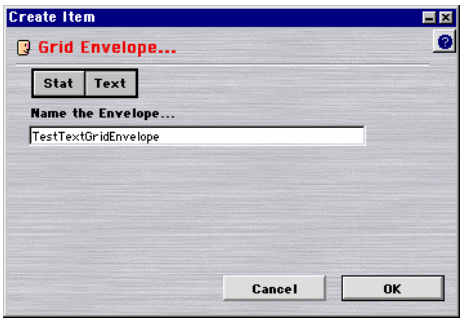
Stat Grid Envelopes hold the results (Statistics) performed on a set of records.

Depending on the Statistic required, the choice of the Field may be important or not. For instance if you require the Arithmetic Mean Age of a selection of Admission records then you obviously need to select the Age field in order to calculate the Mean. However, if you only require a Count of all records in the selection then it does not matter which field you use for this Statistic as any field can be used for a Count.

3 Select the Field required or enter the Name of the Item into the text area:.

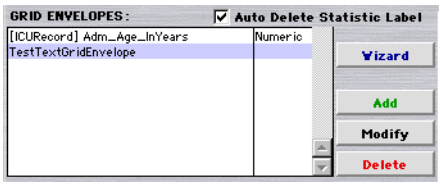


Adding a Stat Grid Envelope



Adding Text Grid Envelope

After clicking *OK* the Grid Envelope area will look like this:



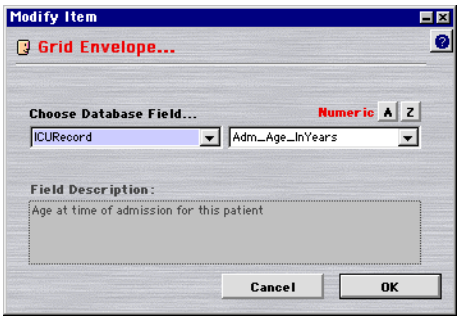
Summary: Input Form: Grid Area page: Grid Envelope Added

Note: We have added both a Text and a Stat Grid Envelope. In the above example.

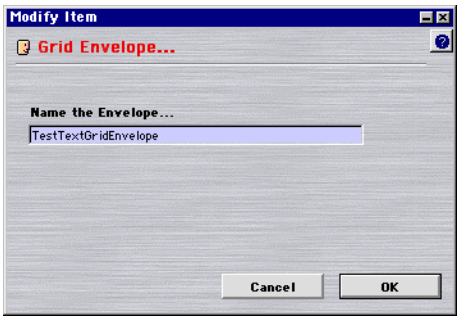
56.1.11 Summary: Grid Area page: Grid Envelope: Modify

If you need to edit the Text or Field Item.

1 Double click a Grid Envelope line or select a line and click the *Modify* Button.
The following Dialog will appear:.



Editing a Stat Grid Envelope



Editing Text Grid Envelope

Make your changes and then click on *OK* to save your changes.

Changing the type of a Grid Envelope

You cannot change the type of a Grid Envelope from Field to Text or vice versa. You will need to create a new Grid Envelope of the required type and delete the unwanted one.

Caution when Modifying a Stat Grid Envelope

If you modify a Stat Grid Envelope be careful when changing the selected Database Field. If this action changes the Type of the Database Field selected, you could encounter problems with any Statistic Grid Items already defined for this Grid Envelope. Some Statistics are only available for certain field types - the Statistic may not make sense for some Field Types.

For example, if a Database Field was selected with the Type Numeric and subsequently changed to Type Date then a Statistic called ||Mean would no longer make sense as you cannot calculate a Mean for a Date Field.

56.1.12 Summary: Grid Area page: Grid Envelope: Delete

To Delete a Grid Envelope

1 Select the Grid Envelope and click the *Delete* Button.

If there are any Grid Items already defined for the Grid Envelope then the following Dialog will warn you:

Summary: Input Form: Grid Area page: Grid Envelope Deletion Confirm Dialog

The Grid Envelope will only be deleted if you confirm by clicking on the *Delete* Button.

56.1.13 Summary: Grid Area page: Slave Query

Except for Place Holders, this area behaves in a very similar manner to the Query area as described in the Chapter Reports: Query Store on page 441.

For details on setting Placeholders see the Master Query Section on page 378

Important

Every Grid Envelope MUST have a Slave Query attached to it.

The Slave Query is evaluated only once for the Grid Envelope. It determines the Current Selection of Records that is used to calculate the Statistics defined by the Grid Items contained in the Grid Envelope.

If you do not explicitly define a Slave Query then the Current Selection of Records for the Table that the Stat Grid Envelope belongs to is set to zero - there are no records in the selection to evaluate!

For instance you may wish to calculate the Max, Min and Mean of the Age at Admission of a selection of Admission records.

This would be done by defining a Grid Envelope called *[ICURecord]Adm_Age_InYears*. Then define a Slave Query that creates a Selection of Records in the [ICURecord] table. Next define the required Statistic Grid Items to calculate the Min, Max and Mean of the Age from the selected records and display the result on the Grid. Clearly the same Selection of Records would be used to calculate Min, Max and Mean. This is why the Slave Query is attached to the Grid Envelope rather than the Grid Item - many Grid Items may be created and linked to a Grid Envelope and its Slave Query.

Sets and Selections

You will often come across the terms Selection and Set in this section. Knowing the difference is CRUCIAL in order to understand what is going on as you construct your Query.

Here is a definition of a Selection

A Selection is an object that may contain some records from a single Table. For EVERY Table in the database there is ONE selection of records. This selection may be EMPTY i.e. have no records in it.

Here is a definition of a Set

A Set is an object that tells STATIC which records from a Table are contained in the Set. For EVERY Table in the database there can be MANY Sets - if you have enough memory.

Note: In STATIC a Set is an array of Boolean values in which EVERY record for a Table is represented. If a record is in the Set then it is represented by a 1, if it is not in the Set then it is represented by a 0. As Sets are basically arrays, and because arrays are manipulated in memory, Set operation is very fast - almost instantaneous.

Conversion of Set and Selection

You can convert a Set to a Selection by the command *Use Set*.

You can convert a Selection to a Set by the command *Create Set*

Note that almost every operation in STATIC will create a Set and as a result you will almost never require the *Create Set* command. This command is left in the command theme for legacy Reports that have not been converted.

Statistics are calculated on a Selection of Records NOT on a Set of Records.

It is crucial that a Slave Query returns a Selection of Records and not a Set of Records. If you do not remember this, you will get strange results - and probably be warned that there are no records to work on for the statistic.

Organize your Query to end with a `Use Set` command to ensure that you are using the Selection of Records you require.

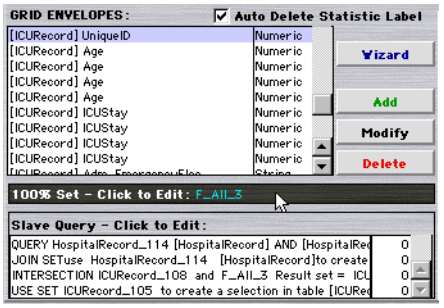
If you understand the differences between Sets and Selections then you do not always need to do this. Some commands return Selections Automatically. These include the Query, Query By Formula and the Join commands. If the Selection returned by these commands is the selection that you require then it is unnecessary to convert to a Set. We recommend against this as a strategy - it is always better in our experience to define the selection you want to work on by calling the USE SET command.

On the other hand some Statistics REQUIRE you to define at least 2 Sets - the *Total Count for 100% Reference Set* and *% Valid Count of TotalCount*.

56.1.14 Summary: Grid Area page: 100% Reference Set

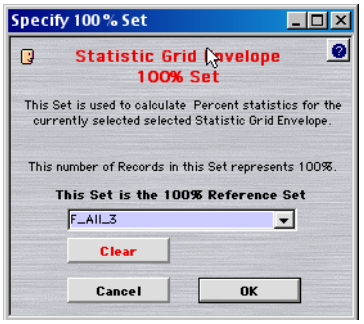
The 100% Reference Set is the Set whose record count you would like to represent the 100% value for the Grid Envelope.

You can select any Set created in the Master Query area. You can thus compare the Valid Count to the number of records contained in ANY Set you choose. This Set can be specified in the Statistics Dialog or from the Grid Envelope area:



Summary: Input Form: Grid Area page: Grid Items: 100% Set

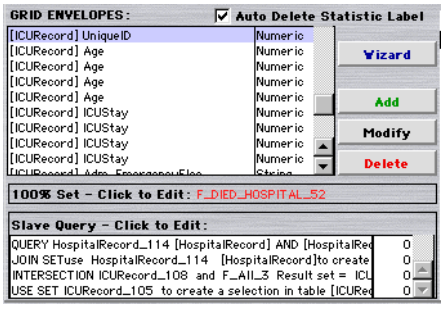
Clicking on the hidden button will display the following Dialog:



Summary: Input Form: Grid Area page: Grid Envelopes: 100% Set

Choose the Set you require from the Drop down list and click the Done Button. If there are no valid sets available (because you have defined nothing suitable in the Master Query area) then you will be unable to select anything here.

The Set you have selected will be the one displayed in the main Grid ares:



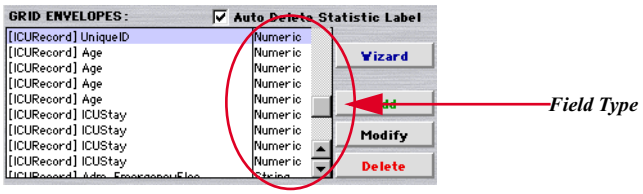
Summary: Input Form: Grid Area page: Grid Envelope: 100% Set

You can return to specify, alter or clear this Set for the Grid Envelope at a later time.

56.1.15 Summary: Grid Area page: Statistic Grid Item: Add

To add a Statistic Grid Item do the following:

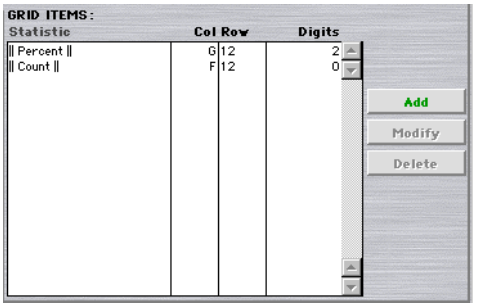
1 Select a Stat Grid Envelope.
These are items have a Type displayed - Numeric, String, Boolean, Date or Time:



Summary: Input Form: Grid Area page: Grid Envelope Types

If there is no Type displayed then the Item is a Text Item.

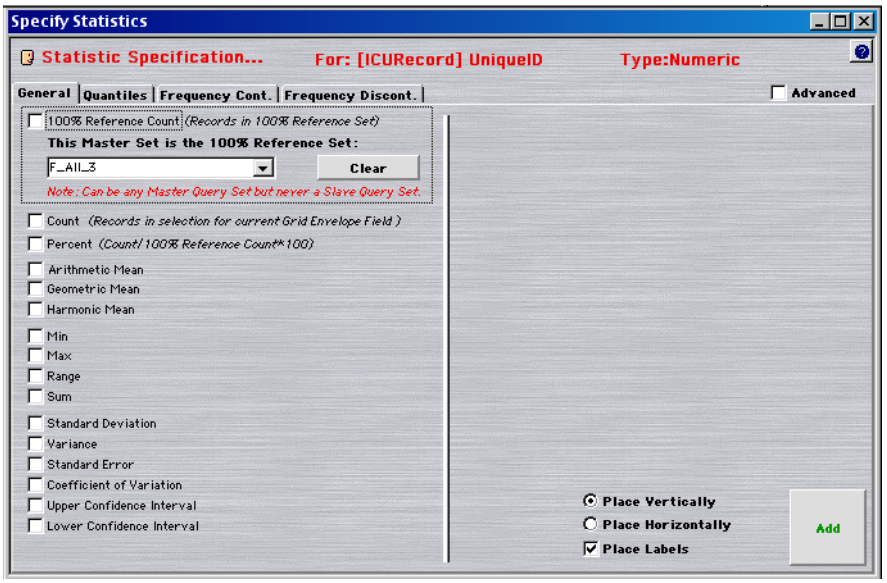
The Grid Item area will change to display as follows:



Summary: Input Form: Grid Area page: Grid Items

2 Click the Add Button in the Grid Item area or Double Click on an empty cell in the Grid Display area at the place at which you require the Statistics you will define to start being placed.

In either case, the following Dialog will appear:



Summary: Input Form: Grid Area page: Grid Items: Specify Statistics Dialog

3 Select the page you require.
You can select the General Page, Quantiles, Frequency Continuous or Frequency Discontinuous. For the moment stay on the General page.

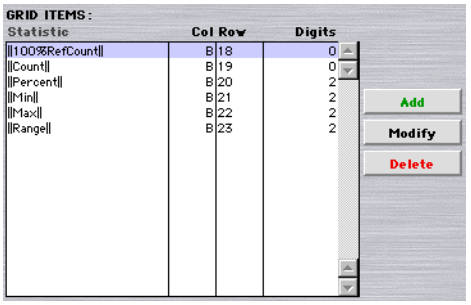
4 Select the Statistic you require.
We will select 100% Reference Count, Count, Percent, Min, Max and Range. Remember to select the Set you would like to represent the 100% Reference Set for this Grid Envelope.

5 Select the orientation of placement for the items you are about to generate
Choose either the *Place Horizontally* or *Place Vertically* radio buttons.

6 Tick the Place Labels checkbox if you want to generate and place Labels on the grid.

7 Click the large Add Button
All the Grid Items and Labels are generated. If there are a lot of items to generate this may take some time. A message box at the bottom of the screen will inform you of progress.

8 Finally the Grid Item area will look like this:



Summary: Input Form: Grid Area page: Grid Items: Specified Statistics

And the Grid Area will look like this:

	A	B	C
18	100%RefCount	||100%RefCount||	
19	Count	||Count||	
20	Percent	||Percent||	
21	Min	||Min||	
22	Max	||Max||	
23	Range	||Range||	
24			

Summary: Input Form: Grid Area page: Grid Items: Grid Area after Statistics and Labels added

We will describe the Statistic Dialog in much more detail later on page 397.

56.1.16 Summary: Grid Area page: Statistic Grid Item: Modify

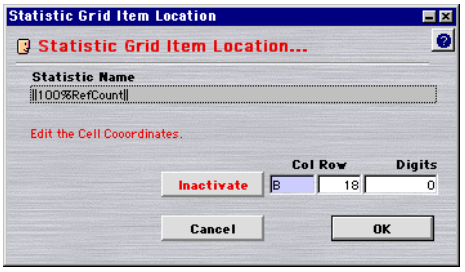
Statistic Grid Item can only have their location and Digit precision modified.

You can modify a Statistic Grid Item by:

a Double click on a Grid Item in the Grid Items area - Dialog will appear.
b Double click on a Grid Item in the Grid Area - Dialog will appear.

Edit via Dialog

If you Double click on a Grid Item in the Grid Area or the Grid Item area, then the following Dialog will appear:

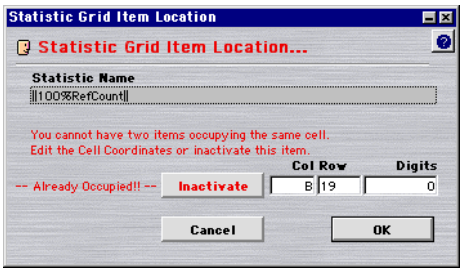


Summary: Input Form: Grid Area page: Statistic Grid Items Dialog

This Dialog allows you to specify the coordinates or inactivate the Grid Item:

1 Edit the coordinates and digit precision for the Grid Item.
2 Collision Warning
If coordinates are specified which are already occupied by another item then you will be warned that the coordinates chosen are not allowed.

You must change the coordinates at this stage otherwise the Grid Item you are moving is inactivated:

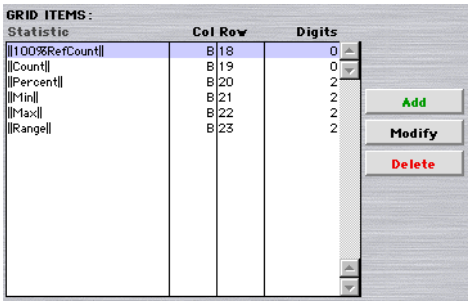


Summary: Input Form: Grid Area page: Grid Items Collision Warning

56.1.17 Summary: Grid Area page: Statistic Grid Item: Delete

To delete a Statistic Grid Item do the following:

1 Select a Statistic Grid Item
The Grid Item area will display as follows:



Summary: Input Form: Grid Area page: Grid Items

2 Select the Grid Item you want to delete and click the Delete Button.
The selected item is deleted.

Note: If the selected item belongs to a family of logically related Grid Items, then deleting one will delete them all. This will always occur for the Frequency Distributions. If a Grid Item for a Frequency Distribution is selected and then the Delete Button is pressed you will see the following message:

Summary: Input Form: Grid Area page: Grid Items: Deletion Warning

It may be better to inactivate an Item as suggested by setting the coordinates to A0 or 0.

56.1.18 Summary: Grid Area page: Statistic Grid Item: Inactivate

This is done by setting the coordinates of a Grid Item to A0 or 0. As these coordinates do not exist on the Grid, it effectively hides the Grid Item from view. You can of course later reactivate the Item by giving it valid coordinates.

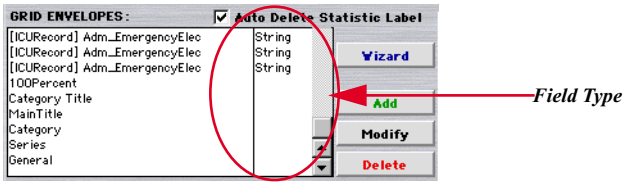
The Grid Item is still evaluated when the Report is executed - so it is wise to keep the number of inactivated Items to a minimum to speed up execution time of the Report.

56.1.19 Summary: Grid Area page: Text Grid Item: Add

To add a Text Grid Item do the following:

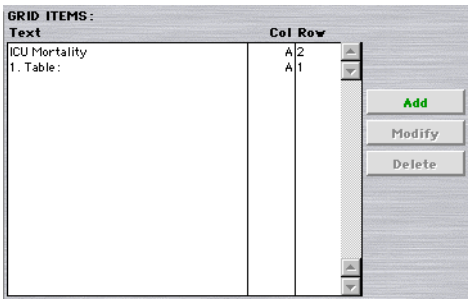
1 Select a Text Grid Envelope.

If there is no Type displayed then the Item is a Text Item. Other Items are Type Numeric, String, Boolean, Date or Time.



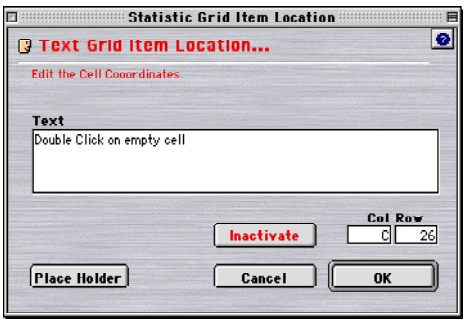
Summary: Input Form: Grid Area page: Grid Envelope Types

Clicking on a Text Item will change the Grid Item area to display the following:



Summary: Input Form: Grid Area page: Text Grid Items

2 Double Click an empty cell in the Grid Display area at the place at which you require the Text you will define to start being placed or click the *Add* Button. The following dialog will appear. Note that the coordinates are already defined for the location of the empty cell selected. Note if the *Add* button in the Grid Items area was clicked then the coordinates are not set:



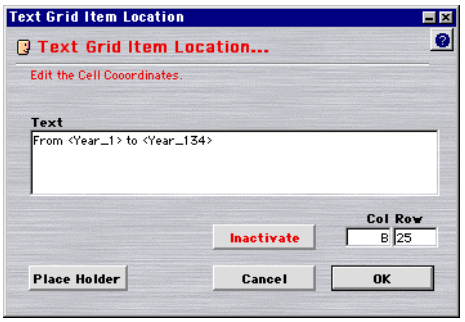
Summary: Input Form: Grid Area page: Text Item

3 Add the text you require and the edit coordinates for the Text. The Text entered will appear immediately once a valid set of coordinates has been specified. and will also appear in the GRID ITEM list.

Place Holder

You can specify Place Holders for any Text Grid Item. At execution time Place Holders are replaced by actual values derived from the Place Holder page. See Summary: Input Form: Place Holders page on page 418 for details.

All Place Holders are bracketed by the < and > sign. Use the *Place Holder* Button to set a Place Holder. You can set one or more Place Holders within the same Text Grid Item:



Summary: Input Form: Grid Area page: Text Grid Items: Setting Place Holders

If you have a Text Item as defined above then the Place Holder page may look as follows:

Placeholder Definition for this Report

If there is nothing below this line then there is nothing to define

The following are Text placeholders:		<-Repeat Helper-> Value(1)	Units(M)	<-Placeholder Content View 1	View 2
Text Item	<Year_1>	1	Y	Jul 1999	Jul 2000
Text Item	<Year_134>	1	Y	Jun 2000	Jun 2001

The following are Master Query Placeholders:		Value(1)	Units(M)	View 1	View 2
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_3>	1	Y	01/07/1999	01/07/2000
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_95>	1	Y	30/06/2000	30/06/2001

Summary: Input Form: Place Holder Page: Detail

When the Report executes, the `<Year_1>` will be replaced by `Jul 1999` and the `<Year_134>` by the text `Jun 2000` for the View 1. This will result in a line of text on View 1 as follows - `From Jul 1999 to Jun 2000` because the text line is defined as `From <Year_1> to <Year_134>`.

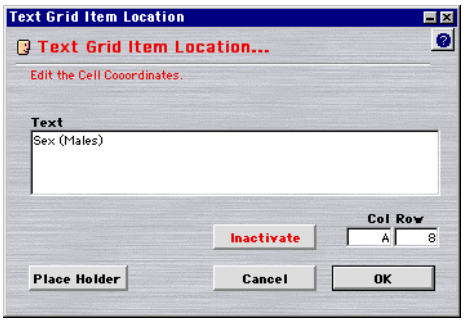
As there are two columns of Place Holder Content Values specified, there will also be a second view called View 2 where `<Year_1>` will be replaced by `Jul 2000` and the `<Year_134>` by the text `Jun 2001` . This will result in a line of text on View 2 as follows - `From Jul 2000 to Jun 2001` because the text line is defined as `From <Year_1> to <Year_134>`.

See the Place Holder page for more details on page 418.

56.1.20 Summary: Grid Area page: Text Grid Item: Modify

To modify a Text Grid Item do the following:

1 Double click on a Text Grid Item in the Grid Area or in the Grid Items area, the following Dialog will appear:



Summary: Input Form: Grid Area page: Text Grid Items Dialog

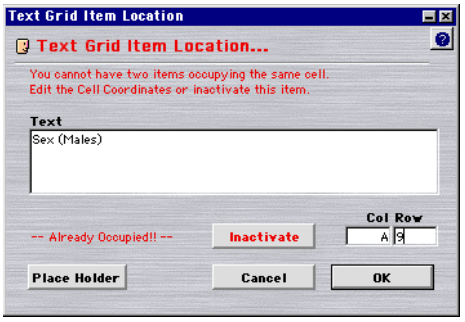
This Dialog allows you to specify all aspects of a Text Grid Item.

You can click the *Inactivate* Button to set the coordinates to 0. This removes the Grid Item from the Grid Area but still leaves it available for later reactivation.

2 Edit the text and the coordinates for the Text.
The Text appears immediately if a valid set of coordinates has been specified.

3 Collision Warning
If coordinates are specified which are already occupied then you will be warned by a Dialog that the coordinates chosen are not allowed.

You must change the coordinates at this stage otherwise the Item is inactivated:



Summary: Input Form: Grid Area page: Grid Items Collision Warning

56.1.21 Summary: Grid Area page: Text Grid Item: Inactivate

This done by setting the coordinates of a Grid Item to A0 or 0. As these coordinates do not exist on the Grid, it effectively hides the Grid Item from view. You can of course later reactivate the Item by giving it valid coordinates.

The Grid Item is still evaluated when the Report is executed - so it is wise to keep the number of inactivated Items to a minimum to speed up execution time of the Report.

To inactivate a Grid Item:

1 Select the Grid Item you wish to Inactivate.
2 Click the *Inactivate* Button

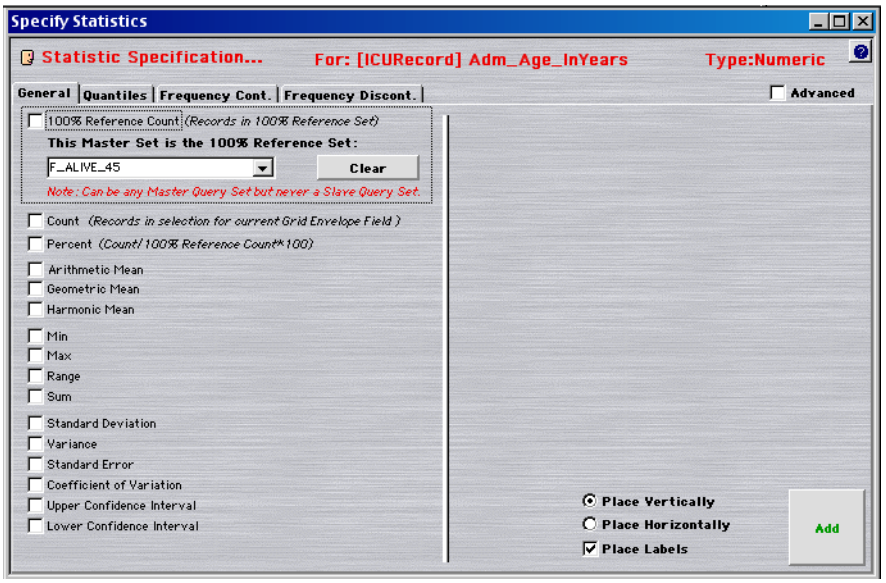
56.1.22 Summary: Grid Area page: Statistic Dialog in Detail

The Statistic Dialog makes it easy for you to generate a variety of Statistics.

The Dialog is divided into 4 pages. Each page allows you to define a series of Statistics. The Statistics can then be converted into Grid Items and can also be given Text Labels.

This section describes in detail all aspects of the Dialog.

After clicking the Add button the following Dialog will appear:

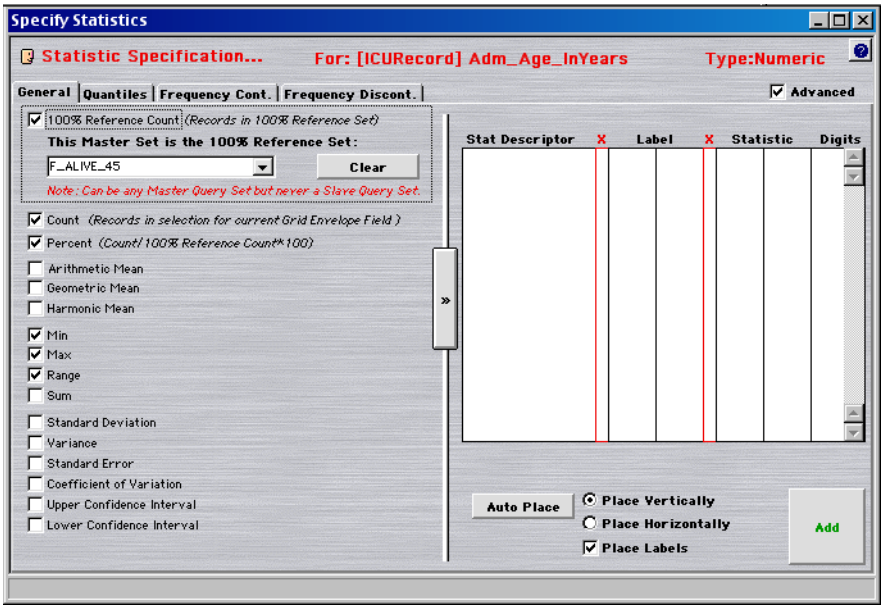


Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog

56.1.23 Summary: Statistic Dialog: Advanced Checkbox

If the Advanced checkbox is ticked, additional controls will display that give you more control over what and where Grid Items to be generated will be placed:

After ticking the Advanced checkbox, the Dialog should look something like this:



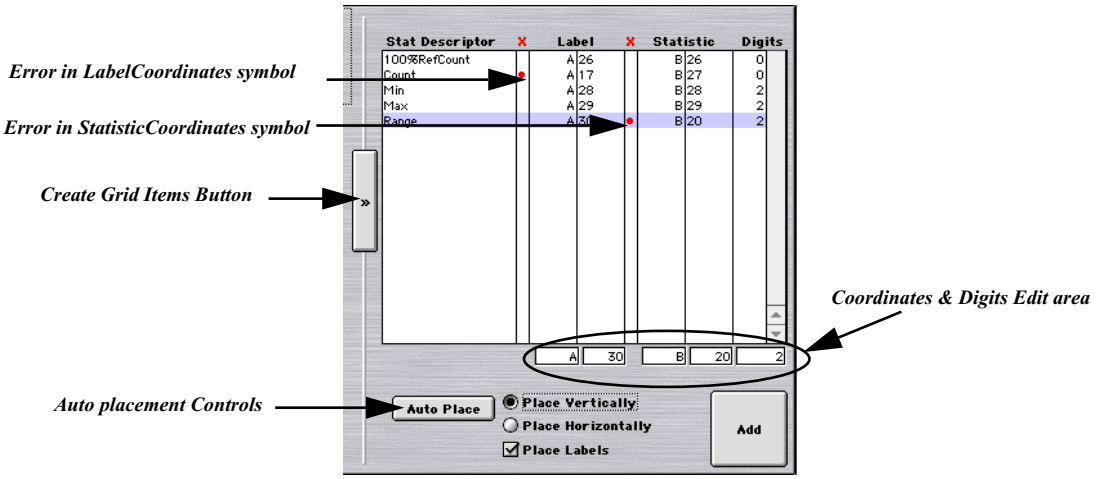
Summary: Input Form: Grid Area page: Grid Items: Specified Statistics Dialog

Window Items	Purpose
Error in Coordinates Symbol Label and Statistic	If the Coordinates selected for the Item are already occupied then a Red Dot will alert you to this problem. You can choose to ignore the symbol and generate the Items anyway but all Items with this dot next to them will not display in the Grid area as they will have no coordinates defined.
Create Grid Items Button	Clicking this button clears all existing Items in the Coordinates area. It then generates the Items required. The Items generated depends on the Statistics Page you are on.
Auto Place Button	Click on this button to automatically generate the coordinates for all the Items displayed in the Coordinates area.
Place Vertically	On Auto Place Button places the coordinates Top to Bottom
Place Horizontally	On Auto Place Button places the coordinates Left to right
Place Labels	If is selected will also generate and place Labels for all the Statistics Items.
Coordinate Edit area	This allows you to edit the individual Item coordinates.
Digits	This allows you to specify the precision (rounded number of digits) of the statistic. See below.
Add Button	Clicking this button generates all the Grid Items and Labels

Window Items

Click the Right Arrow Button - the large upright button in the middle of the page.

This moves the selected Statistics into the right hand coordinates pane and creates valid coordinates for all the Labels and the Statistics:



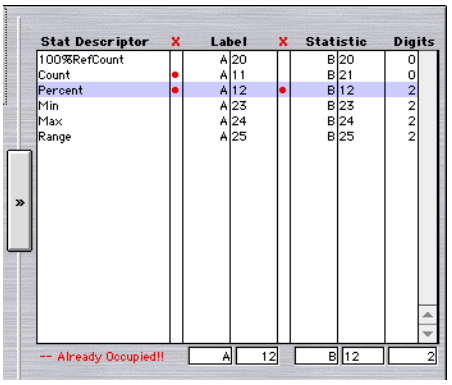
Summary: Input Form: Grid Area page: Grid Items: Common Object in Statistics Dialog

Edit the coordinates to suit your purpose for placement of the Items.

Note: If you set coordinates for the first line in the list and then click the *Auto Place* Button, the coordinates for subsequent items in the list are based on this first line. This makes it easy to quickly place a block of Items where you want. You do not need to laboriously edit the coordinates of each item.

If you do not set the coordinates for the first line yourself, then the coordinates of the first item is set to be on the left and one row down from the position of the last Item already present on the Grid area. The coordinates for subsequent items in the list are based on this first line.

If any coordinates that you specify are already occupied you will see a red dot in the coordinates area, there is a separate section for the label and the statistic:



Summary: Input Form: Grid Area page: Grid Items: Specified Statistics Dialog: Coordinate Error

If you choose not to correct the error then the coordinates for the item will later be left unspecified (coordinates set to 0) but the Statistic is still created. This allows you to place it on the Grid Area later by editing the coordinates to a valid location.

Edit the Digits to display - this will tell STATIC to do a true round of any calculated value to the number of digits you specify.

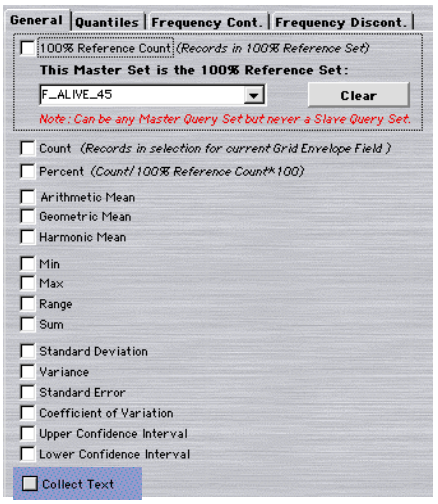
Digits Precision:

Raw Statistic Value	Digits	Result
16.857	2	16.86
32345.67	-3	32000
29.8725	3	29.873
-1.5	0	-2

Digits

56.1.24 Summary: Statistic Dialog: General Statistic Page

This page provides for a variety of Descriptive Statistics:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: General Page

Window Items	Purpose
100% Reference Count	**N** - Returns the number of records in the 100% Reference Set
This Set is the 100% Reference Set	This drop down list displays every Set created in the Master Query area of this Report. Choose the Set whose record count you would like to represent the 100% value for the Grid Envelope. You can select any Set created in the Master Query area. You can thus compare the Valid Count to the number of records contained in ANY Set you choose. This Set can also be chosen later from this main Grid Display area. You can also return to specify or alter this Set for the Grid Envelope at a later time.
Count	**n** - This is the actual count of records in the current selection of records for the current Grid Envelope displayed at the top of the Statistic Dialog.
Percent	$\text{PercentValidCount} = \left(\frac{n}{N}\right)100$ This gives a comparative percentage between the count of records for the Grid Envelope and any other count of records you choose to use. - defined in the Total Count for 100% Reference Set.
Arithmetic Mean	$\text{MEAN}_{\bar{x}} = \frac{n\sum x}{n}$
Geometric Mean	$\text{GeoMean}_{\bar{x}} = e^{\left(\frac{\log x_1 + \log x_2 + \log x_3 + \ldots \log x_n}{n}\right)}$ Where **e** is the natural base 2.71828... Will calculate for any number of values (unlike Excel - only first 30 values). You will be warned if any values are <= 0. The Statistic will be followed by the following text `nb. Unreliable (data value £ Zero present`
Harmonic Mean	$\text{HarmMean}_{\bar{x}} = \frac{n}{n\sum \frac{1}{x}}$ Will calculate for any number of values (unlike Excel - only first 30 values). You will be warned if any values are <= 0. The Statistic will be followed by the following text `nb. Unreliable (data value £ Zero present`
Min	Minimum value for the values contained in **n**
Max	Maximum value for the values contained in **n**
Range	**(RANGE = Maximum value - Minimum Value)** for the values contained in **n**
Sum	Sum of values $\sum n$
Standard Deviation	$S_x = \sqrt{\frac{(n\sum x^2 - (\sum x)^2)}{n-1}}$
Variance	$V_x = S_x^2$

Window Items

Window Items	Purpose
Standard Error	$SE_x = \frac{S_x}{\sqrt{n}}$
Coefficient of Variation	$COEFFVAR_x = \frac{S_x}{\bar{x}} 100$
Upper Confidence Interval	$UPPCONINT_x = \bar{x} + 1.96\left(\frac{S_x}{\sqrt{n}}\right)$
Lower Confidence Interval	$LOWCONINT_x = \bar{x} - 1.96\left(\frac{S_x}{\sqrt{n}}\right)$
Collect Text	This is only available for type *String* Grid Envelopes. It instructs STATIC to collect all the text contained within the Selection of Records specified for the Grid Envelope.

Window Items

Notes

We can add more descriptive statistics if it is required - please ask.

The equations above may not be in the traditional Statistical presentation form - we have given you the equation that STATIC uses for evaluation. This may be important as some evaluation methods result in cumulative errors because of the mathematical method employed such as the use of **Log** for Geometric Mean.

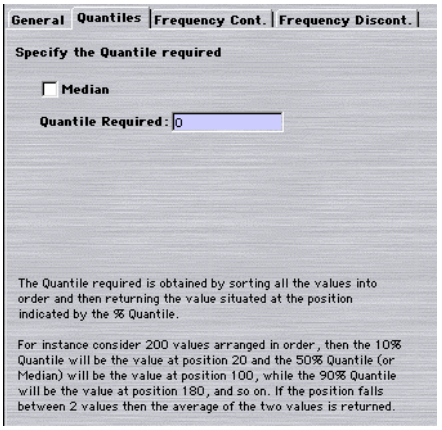
We have made it possible for you to calculate statistics on any size of selection. Your record selection could contain hundreds of thousands of records - STATIC will still evaluate the statistic. This is in contrast to MS Excel that has quite severe limits on a lot of statistics. For instance **Geometric Mean** is only evaluated for the first 30 records. We mention this as we suspect that the results that STATIC generates may be compared to results generated within MS Excel - be careful about this, know the limitations of MS Excel or any other program for that matter!

Statistics available for Record Selection is Contextual

The Statistics available for a selection depends on the Type of the Grid Envelope Field. The Type and Name of the field is displayed at the top of the Statistic Dialog.

56.1.25 Summary: Statistic Dialog: Quantiles Statistic Page

This page provides for the specification of Quantile Statistics:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Quantile Page

Window Items	Purpose
Median	Returns the 50% Quantile - also called the Median
Quantile Required	Enter any percentage you require from 0% to 100%

Window Items

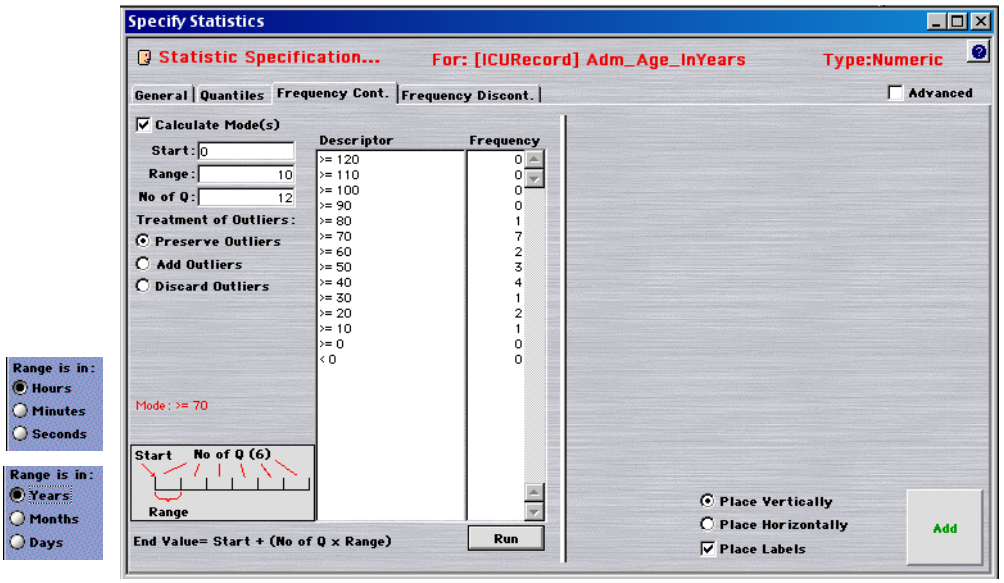
Note: You can only specify a single Quantile at a time. However you can define more Quantiles merely by selecting and defining the Quantiles in the Statistics Dialog multiple times for the same Grid Envelope.

The value returned is obtained by sorting all the values into order and then returning the value situated at the position indicated by the % Quantile required. For instance consider 200 values arranged in order, then the 10% Quantile will be the value at position 20 and the 50% Quantile (or Median) will be the value at position 100, while the 90% Quantile will be the value at position 180, and so on. If the position falls between 2 values then the average of the two values is returned.

56.1.26 Summary: Statistic Dialog: Frequency Cont. Page

This page provides for the specification of Continuous Frequency Distributions.

This type of distribution can be generated for Numeric, Date and Time Grid Envelope Types:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Cont. Page

Window Items	Purpose
Calculate Mode(s) Checkbox	Instructs STATIC to calculate the Mode of the values
Start	The initial value for the Frequency distribution
Range	The difference (Range) between each Quantile
No of Q	Number of Quantiles to create for the data. We force you to determine the range and number of Quantiles for your data - it is much better to do it this way as you ave complete control over the shape of your Distribution this way.
Preserve Outliers	Within any data set there will be dirty data. This option adds an extra Quantile to the start and the end of the Frequency distribution to catch values that fall before the start and after the end of the Distribution.
Add Outliers	This option instructs STATIC to add the outliers to the first and last Quantiles.
Discard Outliers	This option instructs STATIC to ignore outliers. The Frequency distribution is created with your Start, Range and number of Quantiles. Only values that fall within the specified Distribution are counted.
Range is in options	If the Grid Envelope is of Type Date or Time, you can choose what type of units to use for the Range. This allows you to set the Range between Quantiles to the most appropriate interval. The Range options are shown in the inset as displayed above.
Mode message	Once the Run Button has been pressed the Mode of the Frequency Distribution is displayed. Remember, there can be more than one Mode for a Frequency Distribution.
Descriptor	The generated descriptor for the Frequency distribution. This is created from the values specified in Start, Range and No of Q.
Frequency	The number of values found that fit into the Quantile as specified.
Run	This Button executes the calculation of a Frequency Distribution. This allows you to test the likely result of the parameters defined and adjust them to suit your requirements.

Window Items

The Frequency Cont. area in use

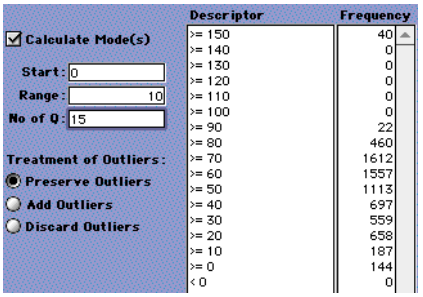
This area invites experimentation with your data. Seeing your data categorized into Quantiles gives you a good feel for the data as represented within your database.

A great use is for the assessment of data quality. It quickly allows you to determine the type and magnitude of Outliers. For instance if you suspect impossible values for the Age field, this can be determined as done in the following section.

The Frequency Cont. area in use - using the Age field

As an example we will play with the Age field in the `[ICURecord]` Table.

We define our parameters and press the Run Button. We see the following result:

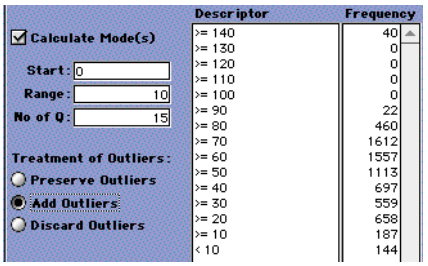


Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Cont. Page

We defined 15 Quantiles as we wanted to see if our data is actually valid. In this case it is clearly not valid as we have 40 admissions with ages >150 years old. Unless someone has found the key to longevity we know that there is a problem with our source data!

We could find the records that are causing the problem by doing a Query on the database and returning any admissions with age > 100 and fixing them. In the case of the Age field that would be the correct thing to do.

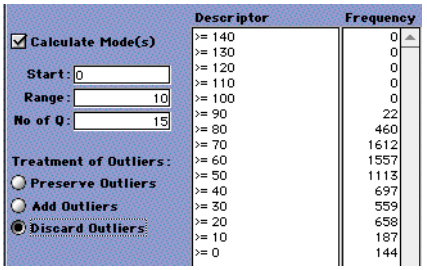
For other data it may also be correct to incorporate the Outliers into the First and Last Quantiles. This is done by choosing the *Add Outliers* option:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Cont. Page

Notice how the First and Last Quantiles have changed.

For other data we may want to completely ignore the Outliers:



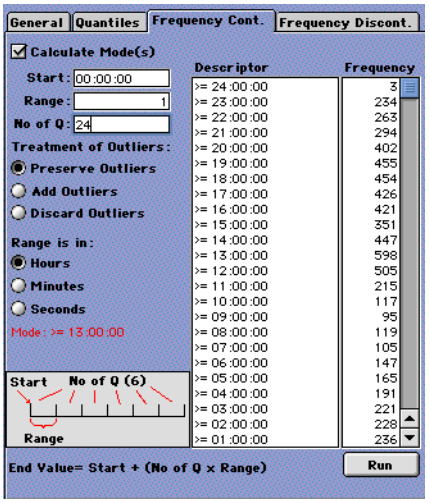
Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Cont. Page

Again notice how the First and Last Quantiles have changed.

The Frequency Cont. area in use - using the Time of admission field

In the next example we will play with the Time of admission field in the [ICURecord] Table.

We define our parameters and press the Run Button. We see the following result:

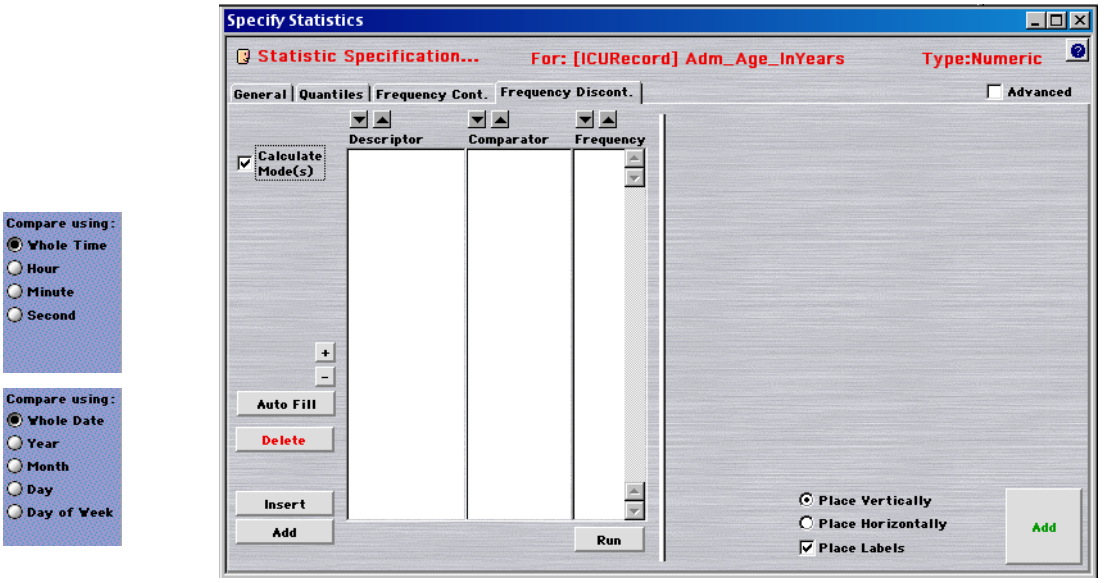


Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Cont. Page

This is a more trivial example, but it may give valuable information for staff roster purposes based on historical experience. Remember you could run a distribution multiple times for different date ranges during the year. This would give you the seasonal difference in activity in your unit.

56.1.27 Summary: Statistic Dialog: Frequency Discont. Page

This page provides for the specification of Discontinuous Frequency Distributions:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page

Window Items	Purpose
Calculate Mode(s) Checkbox	Instructs STATIC to calculate the mode of the values
Compare using options	The Compare using options are shown in the inset as displayed above. If the Grid Envelope is of Type Date or Time, you can choose the units to use for the Comparison. This allows you to compare using just the year, month, day or day of week part of a date; and the hour, minute or second part of a time. For both Types you can also elect to use the whole date or time - but this will result in an awful lot of categories!
+ Button	Move an Item Up one row
- Button	Move an Item Down one row
Auto Fill	Examine all the data and Auto Generate the Descriptors, Comparators and Frequency. In other words it is an Auto Generator of all Unique data for the Grid Envelope.
Delete	Delete a row
Insert	Insert t a row
Add	Add a row to the end.
Mode message	Once the Run Button has been pressed the Mode of the Frequency Distribution is displayed. Remember, there can be more than one Mode for a Frequency Distribution.
Descriptor	The Descriptors for the Frequency Distribution. These are created either by explicitly defining them or by the Auto Fill Button generating them for you.
Comparator	This is the value looked for in the Grid Envelope to count it as belonging to that row.
Frequency	The number of values found that belong to the Descriptor of the row.
Sort Up Down Buttons	Sort the Frequency Distribution by Comparator, Frequency or Descriptor. This is useful if you require the Frequency Distribution to have a particular order of presentation.

Window Items

Window Items	Purpose
Run	This Button executes the calculation of a Frequency Distribution. This allows you to test the likely result of the Descriptors defined and adjust them to reflect your requirements.

Window Items

Default and Unclassified Categories

Every Run of this area will automatically generate a Default and Unclassified category.

The Default category holds values that are the Default value for the Type of Grid Envelope field being analyzed. These values are as follows:

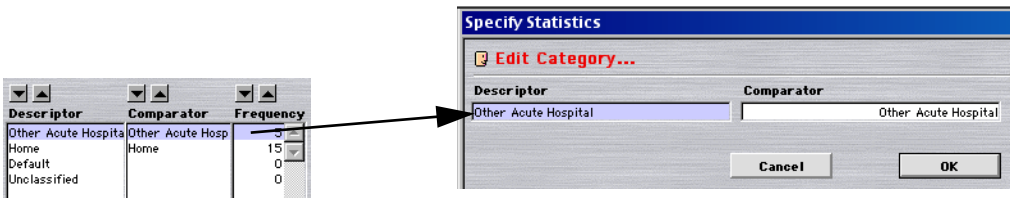
Type of Grid Envelope	Default value
Numeric	0
String	in other words a blank entry
Date	00/00/0000
Time	00:00:00
Boolean	

Default Category and their values

The Unclassified category holds values that could not be placed into any other category - an Others category .

Editing long Comparators and Descriptors

The Statistics area itself may not provide enough space to easily edit the Comparators and Descriptors. If this is the case, select the line you want to edit and double click. The display will change giving you much more room to edit the items:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page: Edit

Edit the item and then click the *OK* Button to save your changes.

The Frequency Discont. area in use

You can use any Grid Envelope to derive a Discontinuous Frequency Distribution. This lends itself to some novel uses.

You can quickly determine if some of the items you have specified within your lists are actually used. And if they should be used, ask why they are not used!

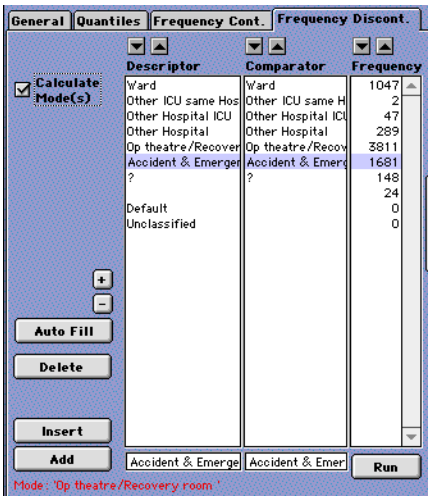
Quickly determine if some fields are left blank as these will show up as Descriptors.

Determine the likely Categories by doing an Auto Fill, then deleting the outliers. The Outliers will all be added to the Unclassified Category. This could later be displayed on the Grid Area as an Others Category .

The Frequency Discont. area in use - using the Admit Source field

As an example we will play with the ICUAdmitSource field in the [ICURecord] Table.

We define our parameters and press the *Auto Fill* Button. We see the following result:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page

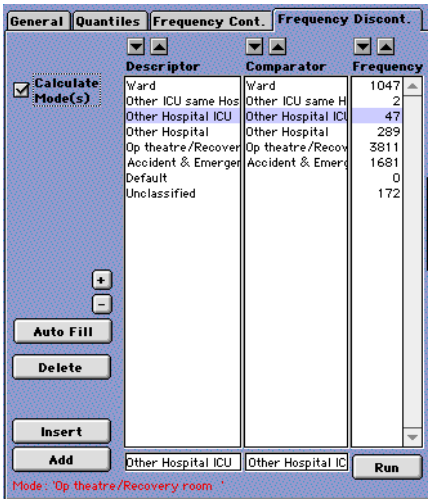
The Auto Fill shows that there are 7 categories of entries in the database.

This includes the ? and the entries. Obviously the ? entries are incomplete and need to be corrected. The entry is a mistake that requires correction also.

Note that there is nothing in the Default category. This can be because there is a category already defined that can hold the Default value for the AdmissionSource field ( ) and this category is used in preference to the Default category. In this case there is no entry in the Default category because there are no values.

Note also that there is nothing in the Unclassified category. This is because we used the Auto Fill to generate the categories. This ensures that all unique values are represented by categories. This of course means that there cannot be any values that are unable to be placed in a category leading to no entries in the Unclassified category.

Now we will delete the and the ? categories and *Run* the area again. We see the following result:



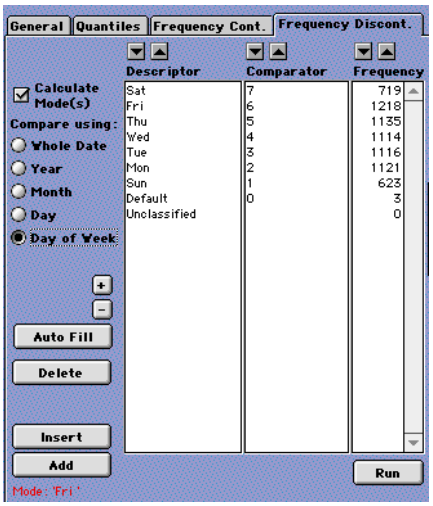
Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page

Note there are now 172 entries in the Unclassified category - these represent the and the ? categories we deleted earlier - there is no category that they can be placed into now other than Unclassified .

The Frequency Discont. area in use - using the AdmitDate field - Day of the Week

As another example we will play with the ICUAdmitDate field in the [ICURecord] Table.

We define our parameters and press the *Auto Fill* Button. We see the following result:



Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page

We see all the days of the week represented. Note that the comparators are numeric - 1 for Sun, 2 for Mon, 3 for Tue etc.

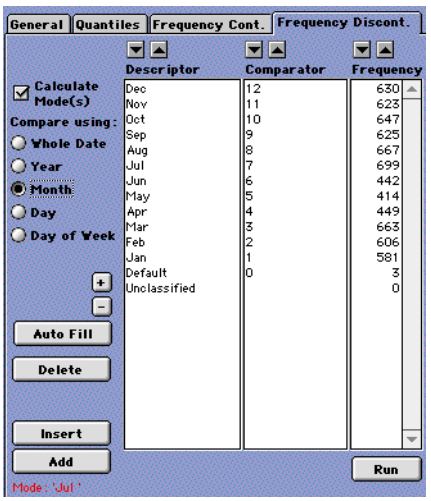
The Default category contains 3 records - these refer to dates which have not been defined (00/00/0000). In this case the Default category signals incomplete data that requires correction.

A distribution such as this will allow you to visually represent resource usage patterns over the course of a week.

The Frequency Discont. area in use - using the AdmitDate field - Month of the Year

As another example we will again use the ICUAdmitDate field in the [ICURecord] Table.

We define our parameters and press the *Auto Fill* Button. We see the following result:



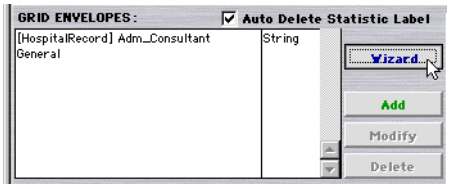
Summary: Input Form: Grid Area page: Grid Items: Statistics Dialog: Frequency Discont. Page

Closing notes

The Frequency Distribution Discontinuous makes it very easy to create very sophisticated Reports. Remember that you can create many Distributions on the same Report. This means that you could define different sets of data by defining Queries and then do the Distributions on each set of data returned. All the results could then be plotted on the same Report.

56.1.28 Summary: Input Form: Wizard

To make thing easier we have developed a Wizard that will allow you to generate Stat and Text Grid Envelopes and their Grid Items. To access this facility, click on the Wizard button:

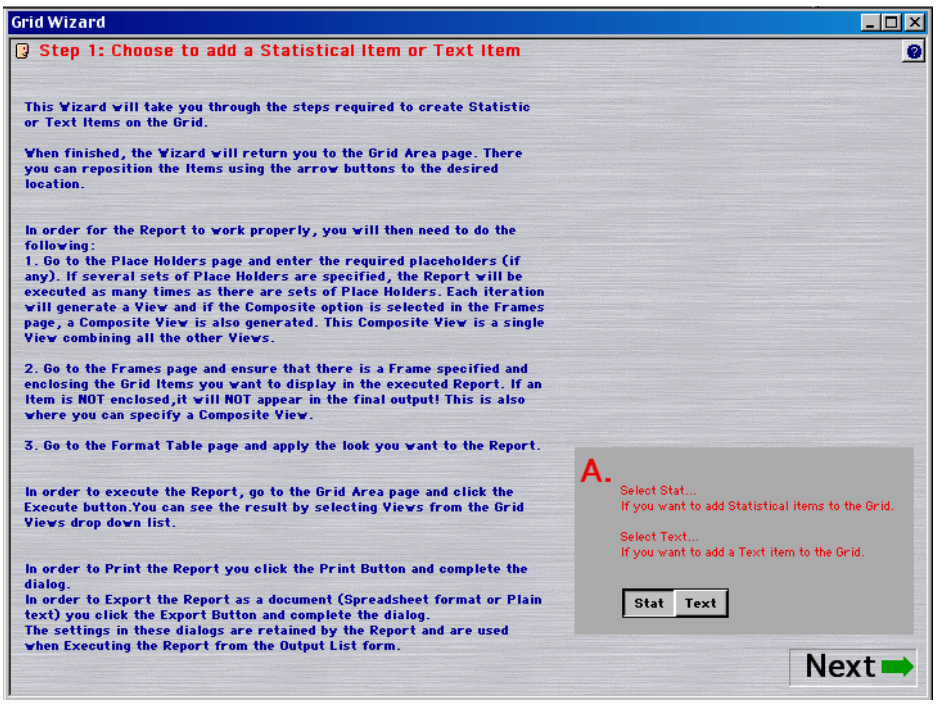


Summary: Input Form: Wizard

56.1.29 Summary: Input Form: Wizard: Text item

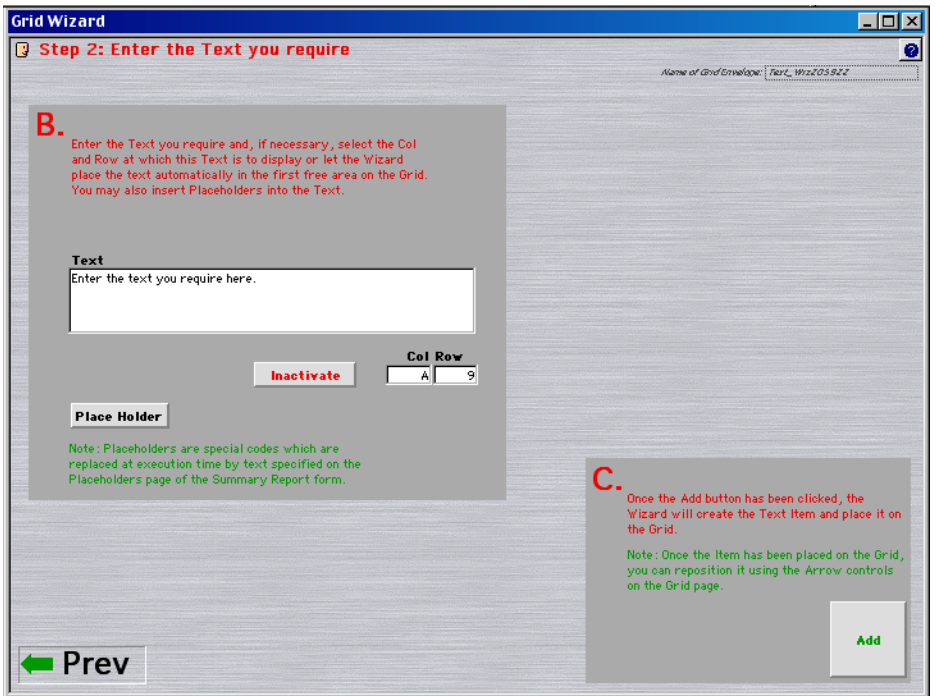
Creating a Text Item using the Wizard

1 Step 1 A. Once you have clicked the Wizard button the following dialog will present:



Summary: Input Form: Wizard: Choose Stat or Text

Click on the *Text* control and then click the *Next* button. The following page will appear:



Summary: Input Form: Wizard: Enter Text

2 Step 2 B. Enter the text and if required alter the coordinates for the text.
You can also use Placeholders here or Inactivate the text. This is discussed in detail from Summary: Grid Area page: Text Grid Item: Add on page 394.

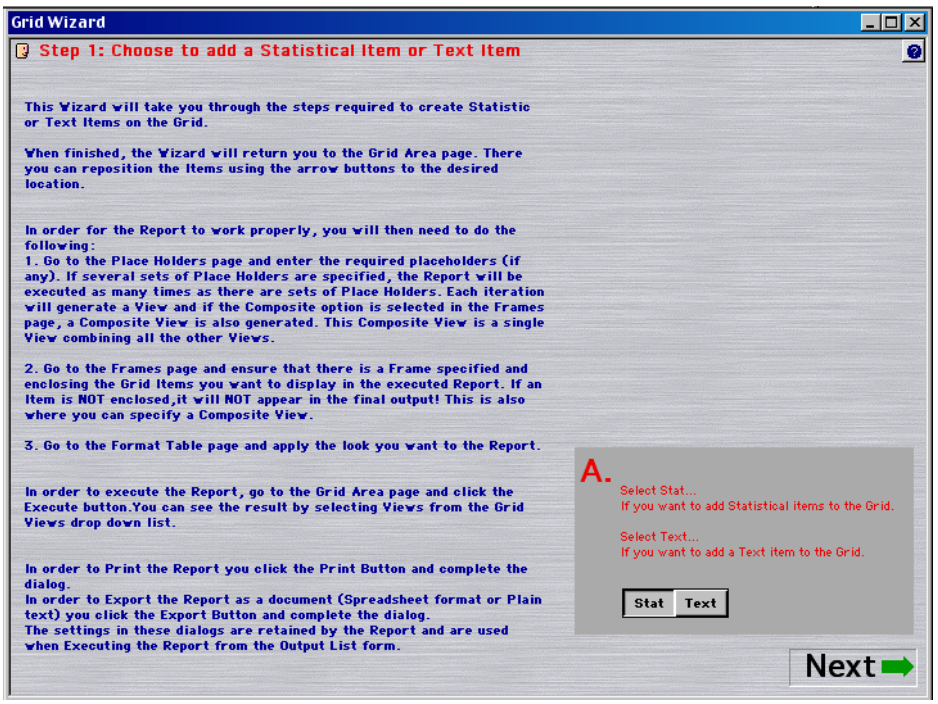
3 Step 2 C. Click the *Add* button and the Text will be entered onto the Grid Area.
In the background a Grid Envelope is also generated to contain the Text Grid Item.

You can always return to the previous page by clicking the *Prev* button and start again.

56.1.30 Summary: Input Form: Wizard: Stat item

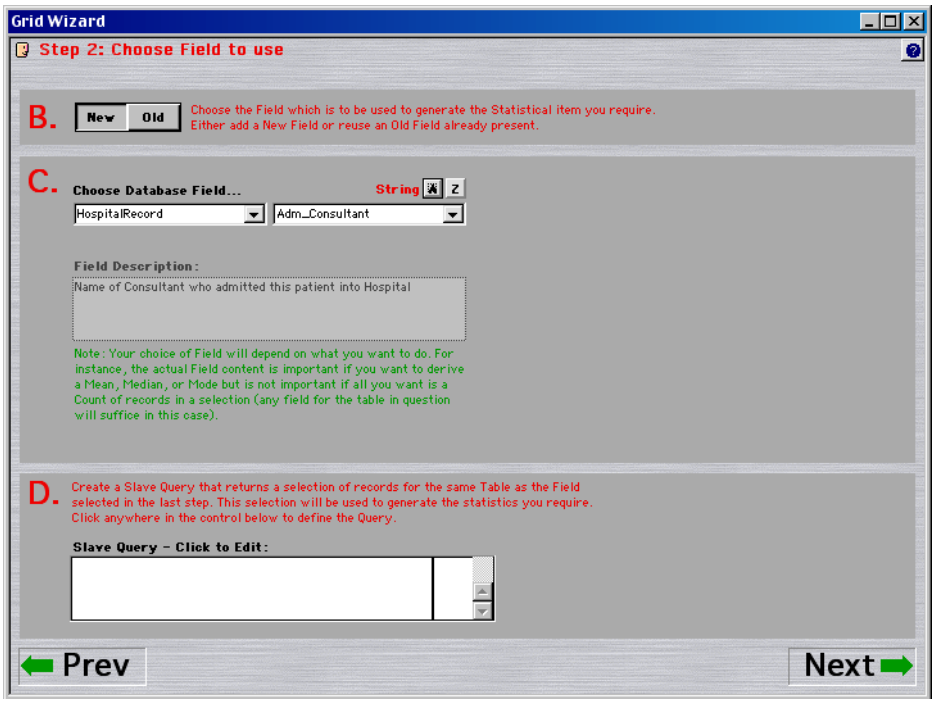
Creating a Stat Item using the Wizard

1 Step 1 A. Once you have clicked the Wizard button the following dialog will present:



Summary: Input Form: Wizard: Choose Stat or Text

Click on the *Stat* control and then click the *Next* button. The following page will appear:



Summary: Input Form: Wizard: Choose Field

2 Step 2 B. Decide to either use a New or an Old field.
New is always the default.

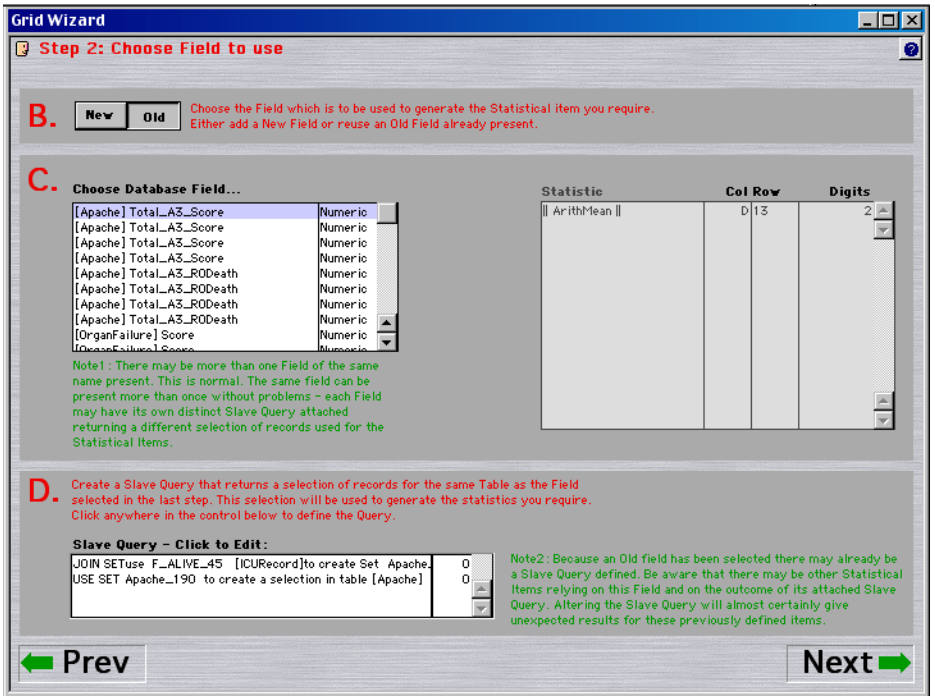
3 Step 2 C and D. NEW. Choose the field required for the statistic.
Depending on the Statistic required, the choice of the Field may be important or not. For instance if you require the Mean age of a selection of Admission records then you obviously need to select the Age field in order to calculate the Mean. However, if you only require a Count of all records in the selection then it does not matter which field you use for this Statistic as any field can be used for a Count.

Create the Slave Query for the field selected so that there is a selection of records that can be used to generate the statistic required. See Summary: Grid Area page: Slave Query on page 389.

Click on the Next button to move to the next page.

4 Step 2 C and D. OLD. Reuse an already used field.
If you just want to calculate an extra statistic for a Item that already exists, (say you had previously created a Mean statistic item and now also require a Min and Max for the same field) then select Old.

If Old is selected the following will display:



Summary: Input Form: Wizard: Choose Field

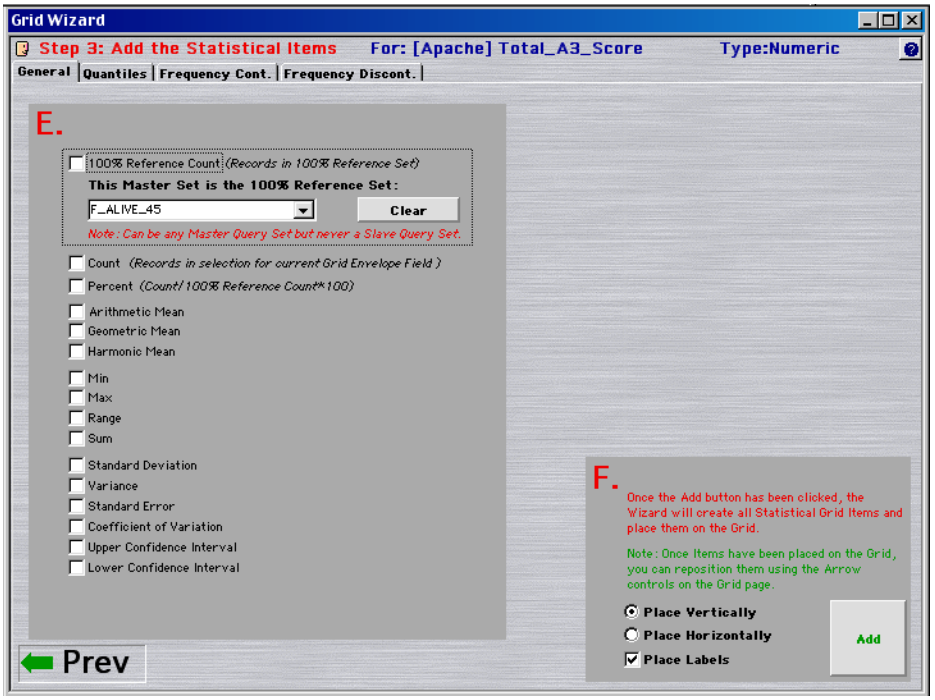
Select one of the database fields you want to reuse.

Create or edit the Slave Query for the field selected so that there is a selection of records that can be used to generate the statistic required. See Summary: Grid Area page: Slave Query on page 389.

Warning: Because you are reusing an existing field, be very careful about editing the query - you may be messing up a perfectly good query intended for another purpose on the same Grid.

Click on the Next button to move to the next page.

5 Step 3 E. Add the Statistical Items



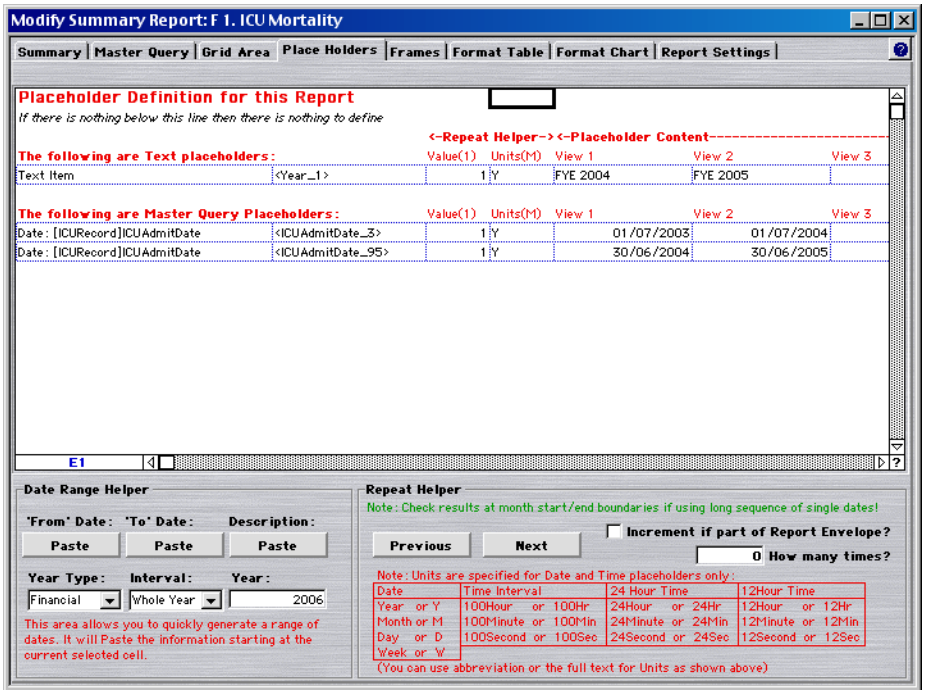
Summary: Input Form: Wizard: Statistic al Items

You now select the statistical items you require. This is explained in detail in Summary: Grid Area page: Statistic Dialog in Detail on page 397. Just like in the Statistic Dialog you can use the Tab control to move to the different statistic pages. The only item not available here is the *Advanced* checkbox.

6 Step 3 F. Click the *Add* button and the Stat Item(s) will be entered onto the Grid Area.
In the background a Grid Envelope is also generated to contain the Stat Grid Item(s).

You can always return to the previous page by clicking the *Prev* button and start again.

56.1.31 Summary: Input Form: Place Holders page

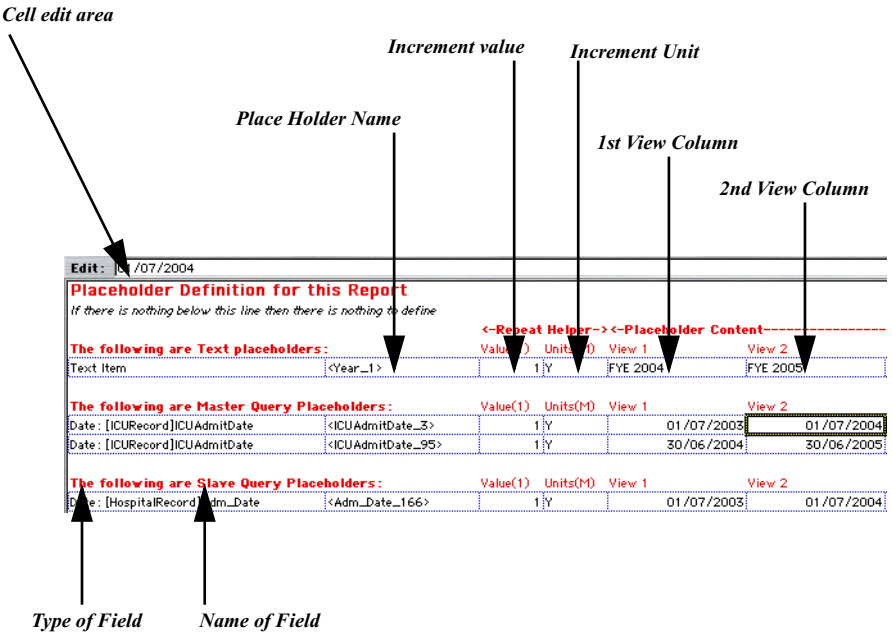


Summary: Input Form: Place Holders page

Window Items	Purpose
Edit:	When an editable cell is selected, the contents is displayed and edited here.
Place Holder Display area	This displays currently defined Place Holders and their contents
Date Range Helper	This allows you to quickly add a series of entries
Repeat Helper	Reports are often used on a recurring basis within Reports. This area allows you to set the way the entries are to change after each Run of the Report.

Window Items

Place Holder Display area



Summary: Input Form: Place Holders Display area

Window Items	Purpose
Cell Edit: area	When an editable cell is selected, the contents is displayed and edited here.
Place Holder Name	This displays the name of the placeholder as entered into Master Query, Slave Query or Text.
Increment value	Number of Increment Units by which to +/- the target value in the User Columns
Increment Units	Can be a blank for numeric values or as per table below.
View Columns	This is where you will enter the actual values with which you want to replace the Place Holder at Execution time. You may add up to 250 columns of values. For each column of values the Report executes once. Remember to ensure that the type of value that you enter here matches what is expected by the Type of Field that the Place Holder refers to.
Type of Field	Can be of type numeric, string, date, time and boolean. The entries in the User columns must match the type of the field being targeted by the entered value.
Name of Field	For information only.

Window Items

Units

The units specified will determine the way the value is treated. If the units do not match the type of value, then nothing happens - the value is left unchanged.

Units	Details
Blank	Numeric values being incremented

Units

Units	Details
Y or Year	Will increment any valid date by years
M or Month	Will increment any valid date by months
D or Day	Will increment any valid date by days
W or Week	Will increment any valid date by weeks
100Hour or 100Hr	Time Interval - cumulative time - increment by hours
100Minute or 100Min	Time Interval - cumulative time - increment by minutes
100Second or 100Sec	Time Interval - cumulative time - increment by seconds
24Hour or 24Hr	24 Hour clock- will reset at 24 hours - increment Hours
24Minute or 24Min	24 Hour clock- will reset at 24 hours - increment Mins
24Second or 24Sec	24 Hour clock- will reset at 24 hours - increment Secs
12Hour or 12Hr	12 Hour clock- will reset at 12 hours - increment Hours
12Minute or 12Min	12 Hour clock- will reset at 12 hours - increment Mins
12Second or 12Sec	12 Hour clock- will reset at 12 hours - increment Secs

Units

Note: Time Units with the prefix 100 refers to cumulative time. This is total additive time or a time interval. This can result in 189:30:20. In words 189 Hours, 30 minutes and 20 seconds.

Time Units with the 24 prefix refer to time by a 24 Hour clock. The maximum value that can be displayed is 24:00:00, the next value would be 00:00:01. Remember that 00:00:00 is the NULL time. It usually indicates that there was no entry.

Time Units with the 12 prefix refer to time by a 12 Hour clock. The maximum value that can be displayed is 12:00:00, the next value would be 00:00:01.

Units and Date Text Items

STATIC will process a variety of Text date formats:

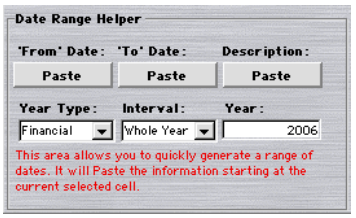
Text Date Formats	Details
01 03 1999	Full numeric date
01 March 1999	Long Date
01 Mar 1999	Short Date
01 March	Day and Long month
01 Mar	Day and Short month
01 03	Day and numeric month
03 1999	Month and Year
Mar 1999	Short month and Year
March 1999	Long month and Year
01	Day if >0 and <=31 or Month if >0 and <=12
1999	Year if 4 digits

Text Date Formats and Units

Note that Years are ALWAYS 4 digits and there is a single space as a separator.

If a date or time is buried in a Text item, then STATIC will still find it and process it - even if there are several dates or times within the same Text User value.

Date Range Helper



Summary: Input Form: Place Holders page: Date Range Helper

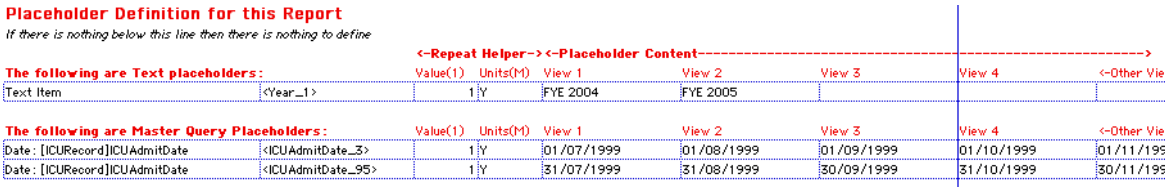
This helper allows you to quickly specify and enter a range of values into the Place Holder area.

This is how you use it:

Consider that you want a series of From and To dates for a Year. You want the values to increment per month and you want it to be for a Financial Year

1. Set the Year Type Drop Down list to Financial
2. Set the Interval Drop Down list to Month
3. Set the Year to the Year required
   We will choose 2000
4. Select the Cell in the Instance column from which you want to start adding values for the From values.
   Click the Paste Button for the From Date
5. Select the Cell in the Instance column from which you want to start adding values for the To values.
   Click the Paste Button for the To Date
6. Select the Cell in the Instance column from which you want to start adding values for the Description.
   Click the Paste Button for the Description

You may end up with something that looks like this:



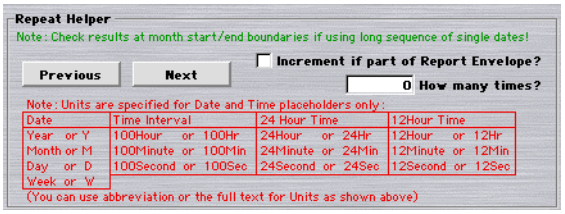
Placeholder Definition for this Report

If there is nothing below this line then there is nothing to define

		<-Repeat Helper->		<-Placeholder Content				
The following are Text placeholders:		Value(1)	Units(M)	View 1	View 2	View 3	View 4	<-Other Vie
Text Item	<Year_1>	1	Y	FYE 2004	FYE 2005			
The following are Master Query Placeholders:		Value(1)	Units(M)	View 1	View 2	View 3	View 4	<-Other Vie
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_3>	1	Y	01/07/1999	01/08/1999	01/09/1999	01/10/1999	01/11/199
Date: [ICURecord]ICUAdmitDate	<ICUAdmitDate_95>	1	Y	31/07/1999	31/08/1999	30/09/1999	31/10/1999	30/11/199

Summary: Input Form: Place Holders page: Date Range Helper

Repeat Helper

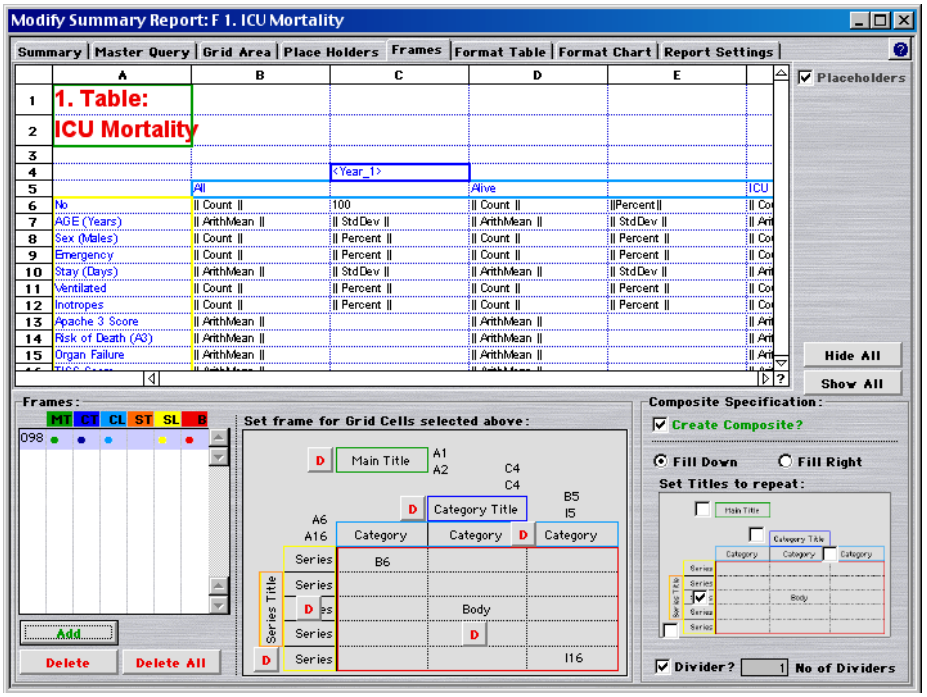


Summary: Input Form: Place Holders page: Repeat Helper

The Repeat Helper allows you to test the Placeholder area with regard to increment and decrement by using the *Previous* and *Next* Buttons.

It also allows you to set the number of times to increment the Report (if at all). You could set a Report to increment by one value Unit and by setting the Repeat value to 7 set the same Report to now increment 7 times before recalculating. Useful for going from Daily to Weekly (increment by 7), or Monthly to Yearly (increment by 12) without changing all the values or the Units.

56.1.32 Summary: Input Form: Frames page



Summary: Input Form: Frames page

This area determines the part of the Report that will be plotted at Execution time.

WARNING: IF YOU DO NOT DEFINE A FRAME, EVERYTHING ON THE GRID WILL PRINT OR EXPORT. THIS MAY NOT BE WHAT YOU WANT. IT IS BETTER TO DEFINE FRAMES TO CONTROL WHAT YOU WANT EXPORTED OR PRINTED. ONCE A FRAME IS DEFINED, ALL CELLS OUTSIDE OF A FRAME WILL BE IGNORED WHEN PRINTING OR EXPORTING. THIS APPROACH GIVES YOU THE OPPORTUNITY TO LEAVE INSTRUCTIONS OR NOTES WITHIN A REPORT THAT WILL BE VISIBLE ON THE DEFINITION PAGE BUT HIDDEN FROM THE FINAL OUTPUT. (Output could also be hidden because of an inappropriate format such as white color, or a format that makes the value invisible)

Window Items	Purpose
Frames	List of specified Frames
Add	Add a new Frame Holder
Delete	Delete the selected Frame
Delete All	Delete all Frames
Specifications	Frame specification area.
Hide All	Hide all the Frames
Show All	Show all the Frames

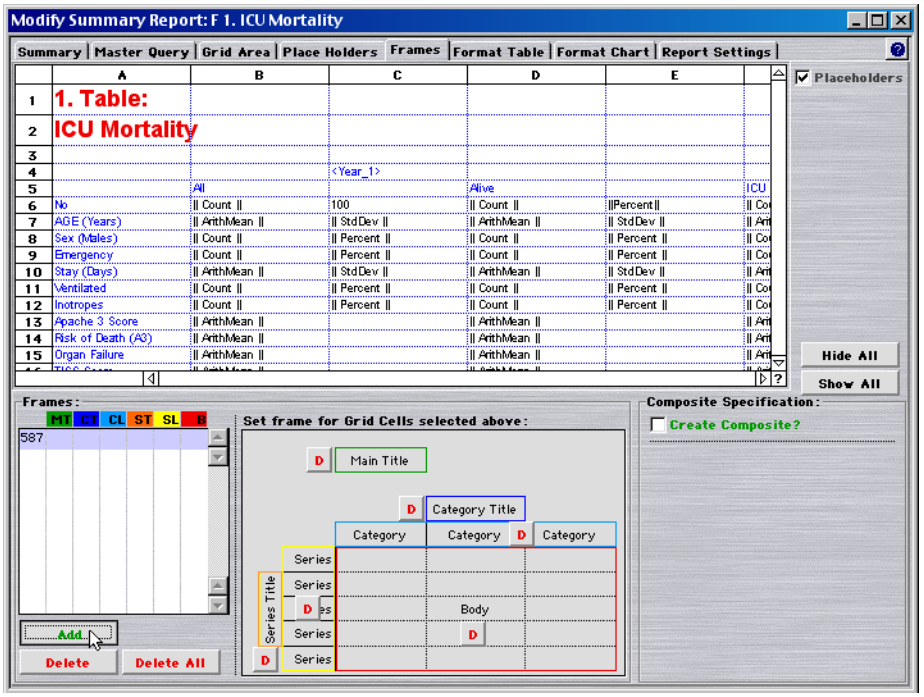
Window Items

Adding a Frame

To add a new Frame do the following:

1 Click on *Add* Button

A New line is created in the Frames list and the Specification area appears:

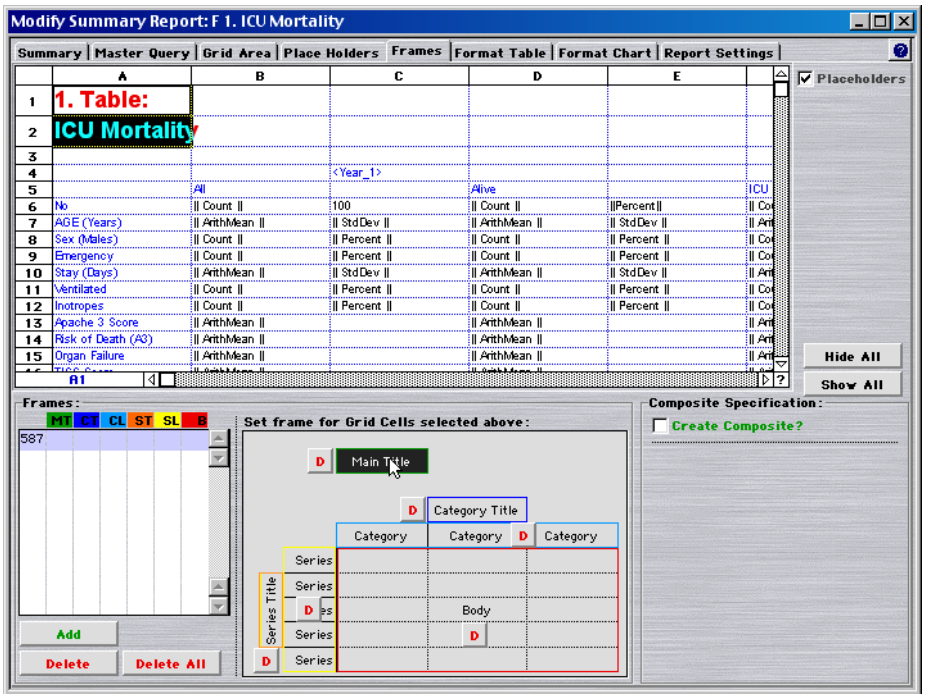


Summary: Input Form: Frames page

2 Select some cells and then click on the required Specification on the Graphic

This will set the selected cells to the Frame type indicated on the Graphic.

Here we have selected the Main Title for the Table (cells A1 and A2) and clicked the *Main Title* Button:



Summary: Input Form: Frames page

The top 2 cells are now set to be the Main Title.

Continue selecting cells and setting the type until you are complete.

You do NOT need to set all types for a Frame. You could set just the *Body* for a Frame

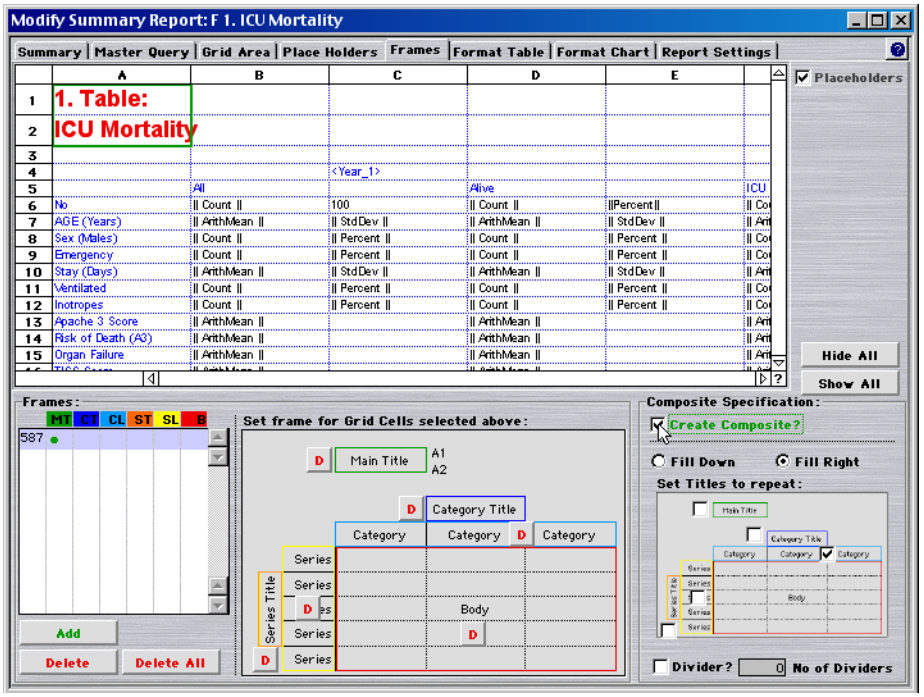
Deleting a Frame

In order to delete a Frame part already set click the *D* Buttons next to or inside the Graphic corresponding to the part you wish to delete. You will see the colored rectangle disappear for the Frame selected.

If you want to delete the whole Frame, select the Frame you want to delete and click the *Delete* Button under the Frame area.

Composite Specification

If this Report is required to create a composite Table, set the *Create Composite* check box and more controls will appear:



Summary: Input Form: Frames page

Window Items	Purpose
Fill Down	For each repeat of the Report add the next Report below the last
Fill Right	For each repeat of the Report add the next Report to the right of the last
Repeat Main Title	Repeat the Main Title for each repeat.
Repeat Ser Title	Repeat the Series Title - usual to do for Down repeat
Repeat Ser Label	Repeat the Ser Label - usual to do for Down repeat.
Repeat Cat Title	Repeat the Cat Title - usual to do for Right repeat
Repeat Cat Label	Repeat the Cat Label - usual to do for Right repeat.
Divider?	Add a number of Rows (Down repeat) or a number of Columns (Right repeat)
No of Dividers	Number of Rows or Columns to add

Window Items

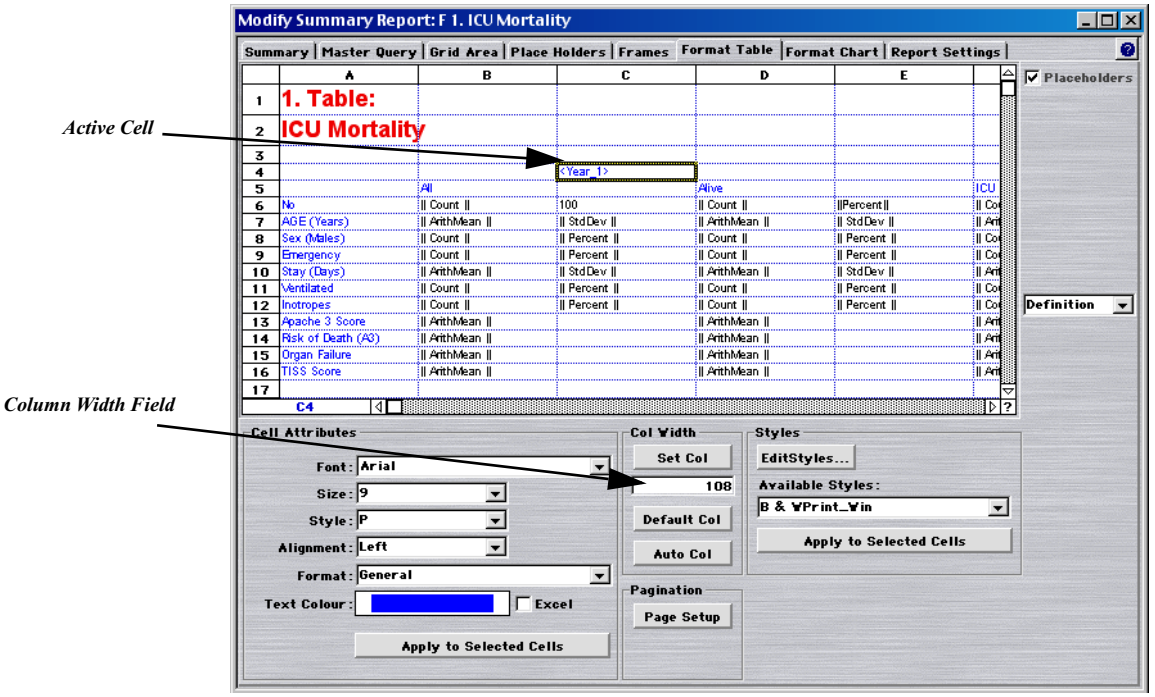
Most of these controls have to do with the visual appearance of the resulting Composite Table. They allow you to space the Tables, omit repeating Titles and determine in which direction to plot the repeating Tables.

Repeating Composite areas

One of the most powerful features of this area is the ability to have several separate Tables on the same Report - all creating Composites at the same time! They can even be set to Repeat Left to Right and Top to Down simultaneously - STATIC handles the offset so that do not clash.

This means you could set up a single Report that will handle several different tasks on the same Report simultaneously.

56.1.33 Summary: Input Form: Format Table page



Summary: Input Form: Format Table page

Window Items	Purpose
Cell Attributes	This is where you select the required cell attributes for the selected cell(s).
Col Width	This is where you set the Col width required for the currently selected cell(s).
Pagination	Set the Page specification for the target printer here.
Styles	Apply a preset style to the selected cell(s).

Window Items

Formats and Views

The Definition, View 1...n views all use the same cell attributes. It does not matter which one is being viewed when setting the cells.

The Composite area cell attributes are set from the Definition area at Execution time. They cannot be changed in the Composite area. However the Column Width settings are set independently for the Composite area.

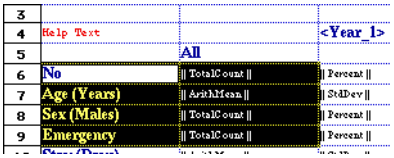
Applying Cell Attributes

All attributes are automatically applied to selected cell(s) as you select the attribute from the Drop Down lists.

The Font, Size, Style, Color and Alignment Drop Down lists are standard. Note that for Size you can choose Others and enter the size you require.

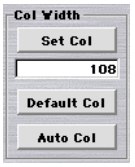
Format allows you to choose from a variety of preset Formats - or you can add your own.

If you choose a selection of cells and then click the Apply to Selected Cells Button, all the cells selected will be set to the Attributes of the Active cell in the selection. The Active cell is the one that is within the selection but is not highlighted:



Summary: Input Form: Format Table page: Active cell

Col Width



Summary: Input Form: Format Table page: Col Width

This allows you to set the Column width of the cell(s) selected.

The Column width field displays the width of the currently selected column in which the Active cell is situated. You can edit this field and then click the *Set Col* Button to apply the changed size to the column(s) selected. You can also select a series of columns and apply the change to all of them at the same time.

The Default Column size is set to 108 pixels. Use the *Default Col* Button to set the selected columns to this value.

The *Auto Col* Button will set the selected columns to a size that will allow the largest cell content to just remain visible.

Pagination

Summary: Input Form: Format Table page: Pagination

This will bring up the Page Setup Dialog of the currently selected printer and allow you to set the page settings for the Report. This ensures that the Report will later print correctly unattended - but usually only on the printer that you have set the Pagination for!

Style

Summary: Input Form: Format Table page: Styles area

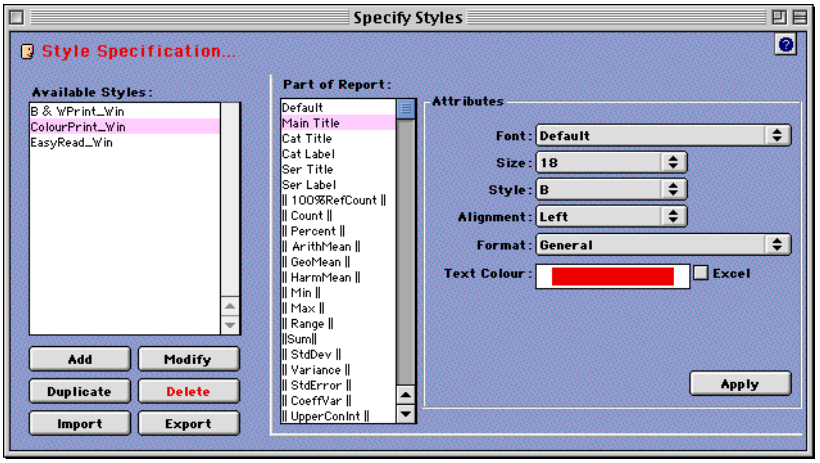
The Styles area is a major time saver! After you have set up all the Grid Items you require, you can apply a Style to the whole Report that will automatically set the Cell Attributes for every cell to a predefined style that you have defined. This ensures consistency for all your printed reports.

The available styles are selected with the *Available Styles* Drop Down list. Once a Style is selected, click on the *Apply to Selected Cells* Button to apply the style to the selected cells.

Tip: You can select the all the cells on the Grid Area by clicking the Top Left corner of the Grid Area.

The Edit Styles Dialog.

Click the *Edit Styles...* Button and the following Dialog will appear:



Summary: Input Form: Format Table page: Styles Dialog

Window Items	Purpose
Available Styles	List of available styles.
Add	Add a new style
Modify	Modify a style name
Duplicate	Duplicate the selected style.
Part of Report	List of target items on the Report. These items are identified automatically and will have the associated style applied to them.
Import	Import an exported style.
Export	Export the selected style to an external document.

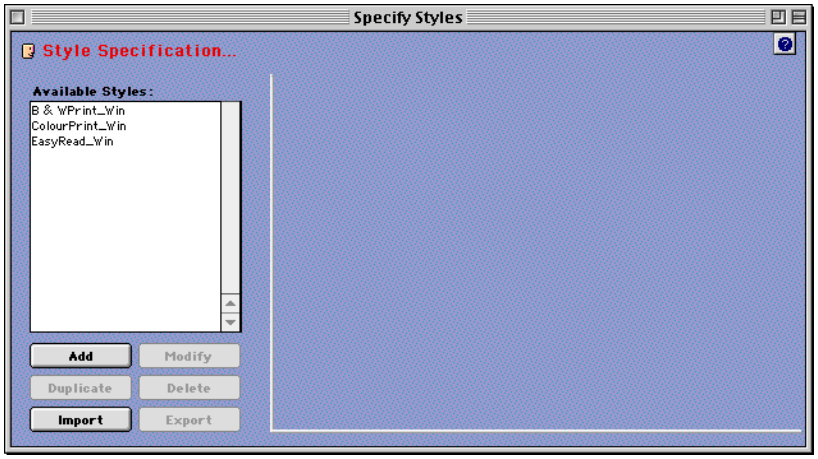
Window Items

Window Items	Purpose
Delete	Delete the selected style.
Attributes	Cell attributes control
Apply	Apply Button to save the selected Attributes.

Window Items

To Add or Edit Styles do the following:

1 Click the *Edit Styles...* Button
The following Dialog will appear:



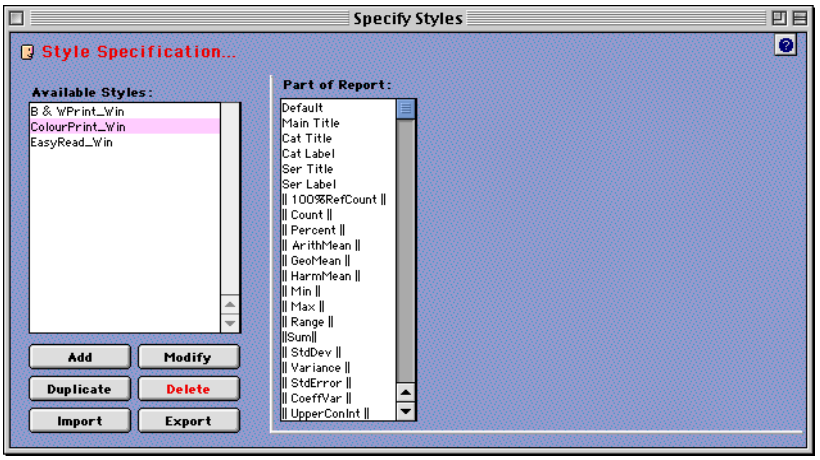
Summary: Input Form: Format Table page: Styles Dialog

2 Click on Add Button to add anew Style.
A Request Dialog will appear asking you to enter a new Style name.:

Summary: Input Form: Format Table page: Style Request Dialog

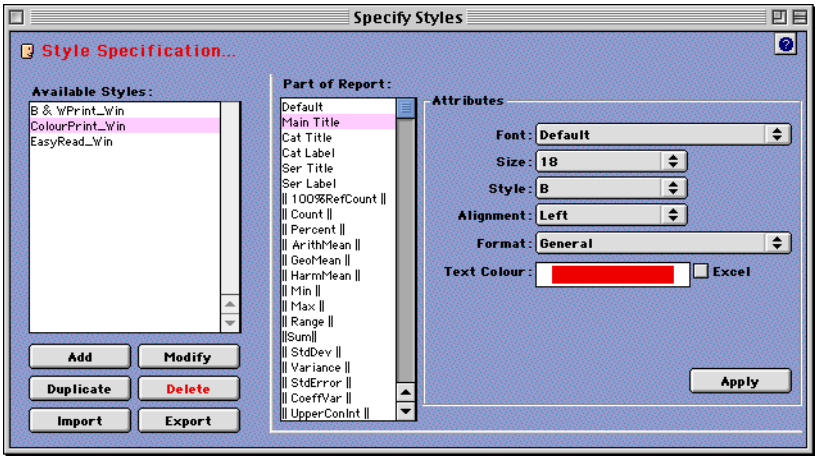
3 Select an existing style or the newly created style in the *Available styles* List box.

The Part of Report List box will appear.:



Summary: Input Form: Format Table page: Styles Dialog

4 Select an entry in the Part of Report List box.
The familiar Cell Attributes controls will appear.



Summary: Input Form: Format Table page: Styles Dialog

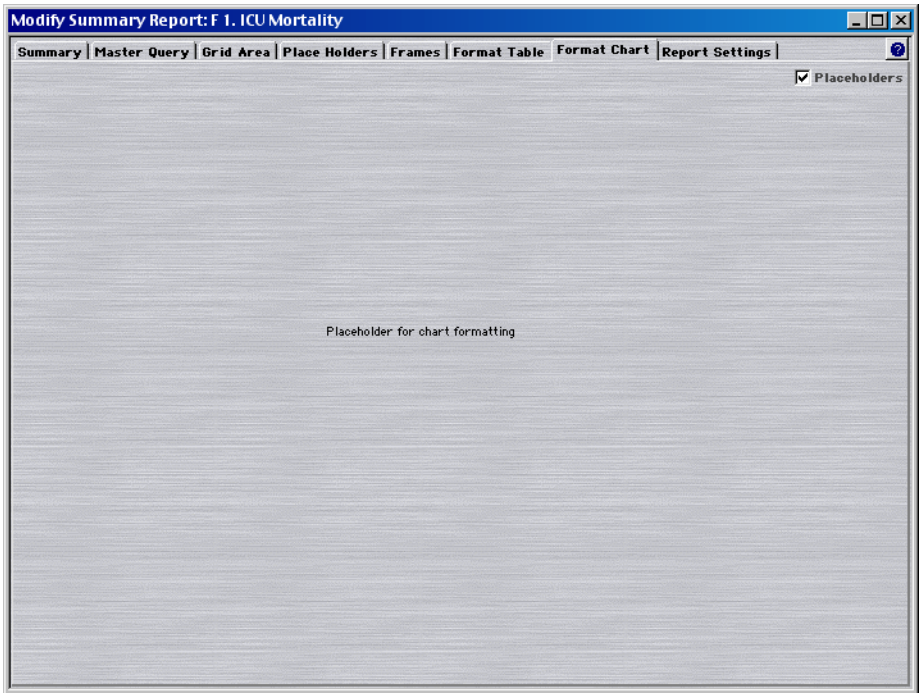
5 Edit the controls and click *Apply* Button to record your changes. If you do not click on *Apply* Button then your changes will not be saved.

6 Continue to edit all the other Parts of Reports.

Note: The Default Item will be applied to any cell entry that is not found in the Part of Report list.

The Part of Report list includes entries for cells that are designated as part of Frames when the cells are specified to be Titles.

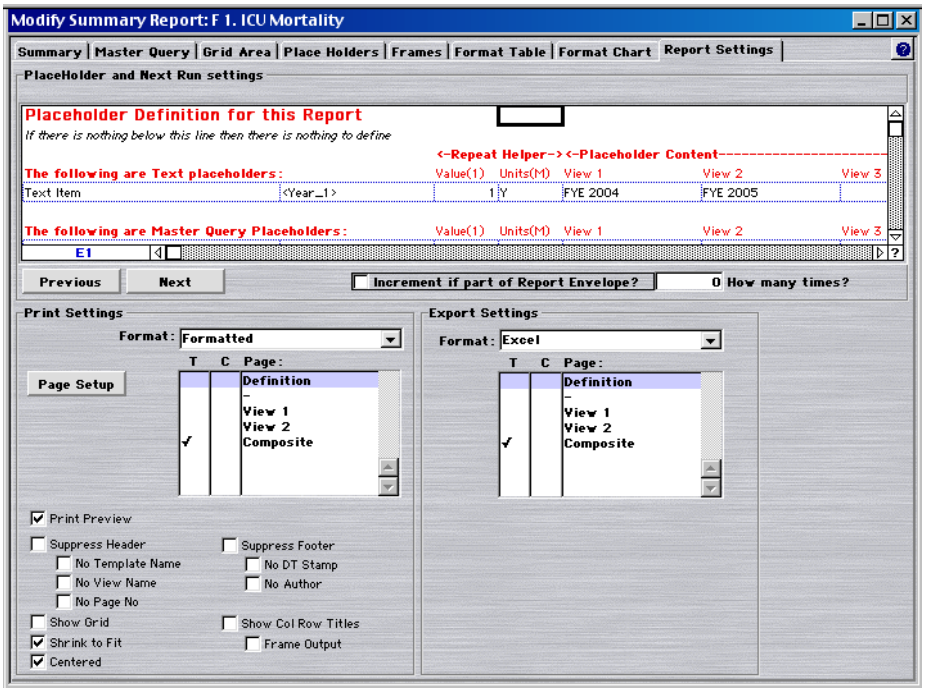
56.1.34 Summary: Input Form: Format Chart page



Summary: Input Form: Format Chart page

This area is under construction. We will be providing the capability of automatically turning a generated Table into a Chart.

56.1.35 Summary: Input Form: Report Settings page



Summary: Input Form: Report Settings page

This page is a summary page of all settings important for when this Report is to be used as part of an automated Report.

All aspects of the objects shown here have been described previously.

This page makes it easy to check the Report settings when adding the Report to a Report Envelope.

Chapter 57
Reports: Special Reports

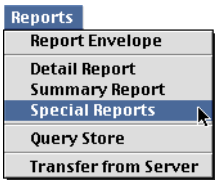
57.1.0 Introduction

This area contains a selection of reports that are too difficult to produce using the other reporting facilities within STATIC.

These reports include the various reports required by national database projects such as those run by ANZICS and ANZPICS. they also include a variety of reports that we have been asked to produce from time to time over the years.

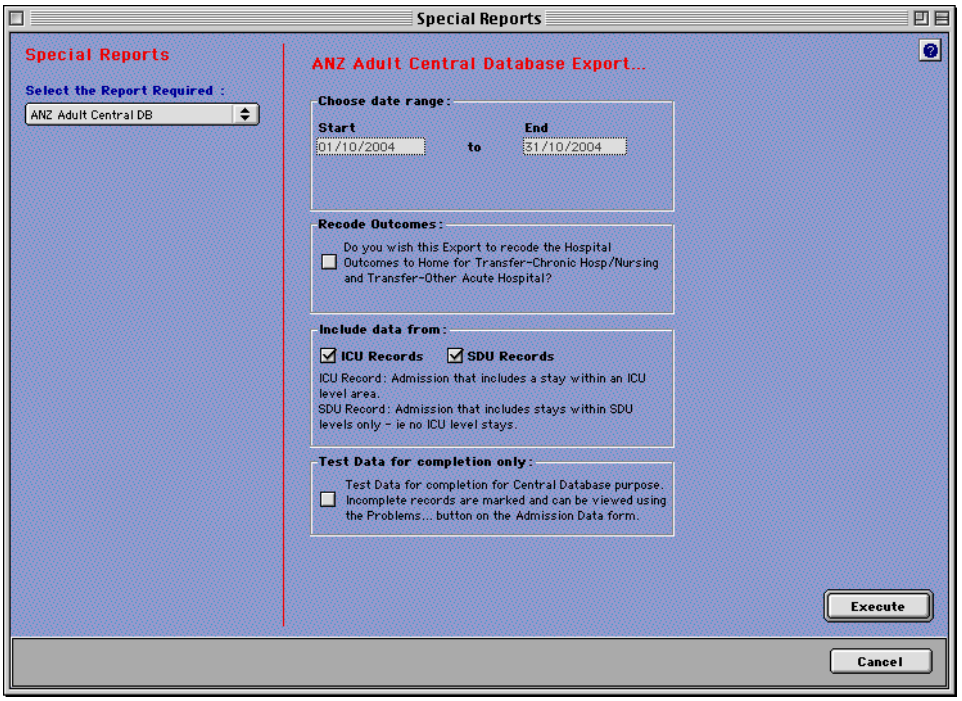
57.1.1 Special Reports: Selection Form

In order to enter the Detail Report area, choose the following Menu Item:



Reports: Special Reports menu item

The following window will display:

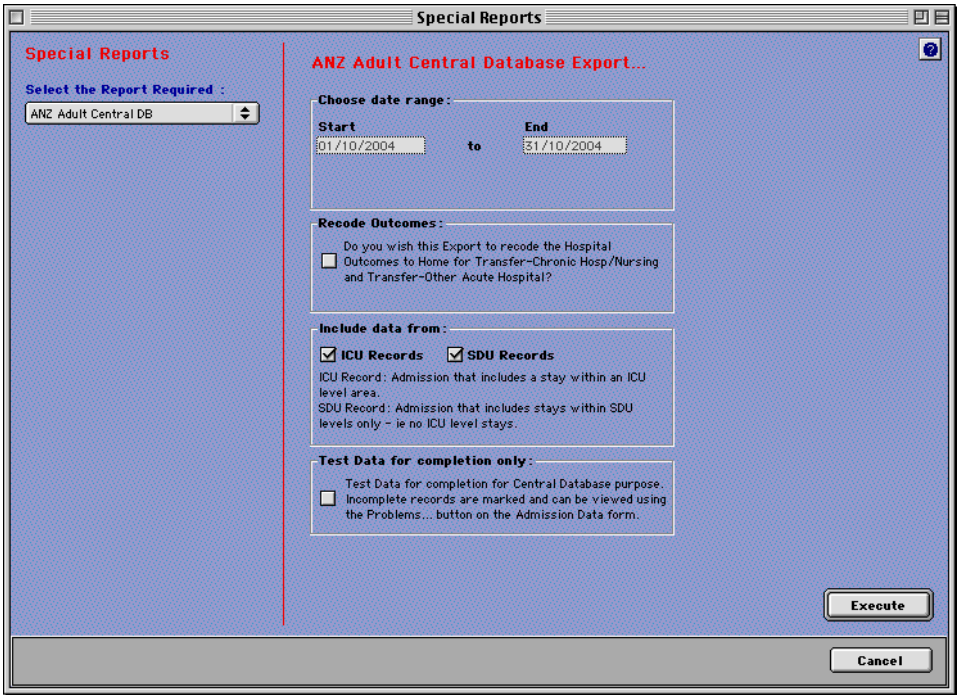


Special Reports: Selection Form

This is where you select the report you require. The left hand side of the window provides a drop down menu that contains the names of the available reports. Once a name is selected there may be further options presented on the right side of the window. The example above is for the generation of the ANZ Adult Central Database report described below.

57.1.2 Special Reports: ANZ Adult Central DB Report

Selection of this report from the drop down menu will present you with the following window:



Special Reports: Selection Form

Page Items	Purpose
Choose Date Range	Set the Date of Admission range that you want to report on. Click anywhere in the date range box and use the date wizard to specify the date range you require. The wizard is described here Interface: Date selection wizard on page 22.
Recode Outcomes	Some ICU Complexes rarely if ever send their patients Home. This is because they tend to handle more severe cases. This option gives them the ability to record these outcomes to Home.
Include Data from	Include data from either ICU Records or SDU Records or both. Note that we have defined an ICU Record as an admission that has included a stay within an ICU area. An SDU Record is an admission that has NEVER had a stay within an ICU area.
Test Data for completion only	Instead of actually generating the report, STATIC will test the dataset specified and flag all admissions that are incomplete for Central DB purposes. To follow up on admissions that are incomplete, use the *Problems* button on the Data Entry Display window. See Data Display: Modify Admissions: Base of Form on page 190 and then Data Display: Modify Admissions: Problems... Button on page 192.

Page Items

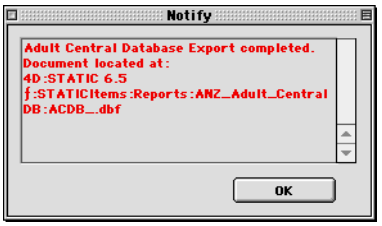
Location of Completed Report

When you have completed this form click on *Execute* to initiate the creation of the Central Database report.

The completed report will be stored in the STATIC Items folder using the following path:

STATICItems: Reports: ANZ_Adult_CentralDB: ACDB_x.dbf where x is a number.

You will be notified when the report is complete with the exact name and location of your report:



Special Reports: Notify window

Sending the complete report to Central Database Project

The Central Database Project prefers the file to be sent using E Mail or by disk. The complete report should easily fit onto a floppy disk.

Checking the contents of the Central DB report document

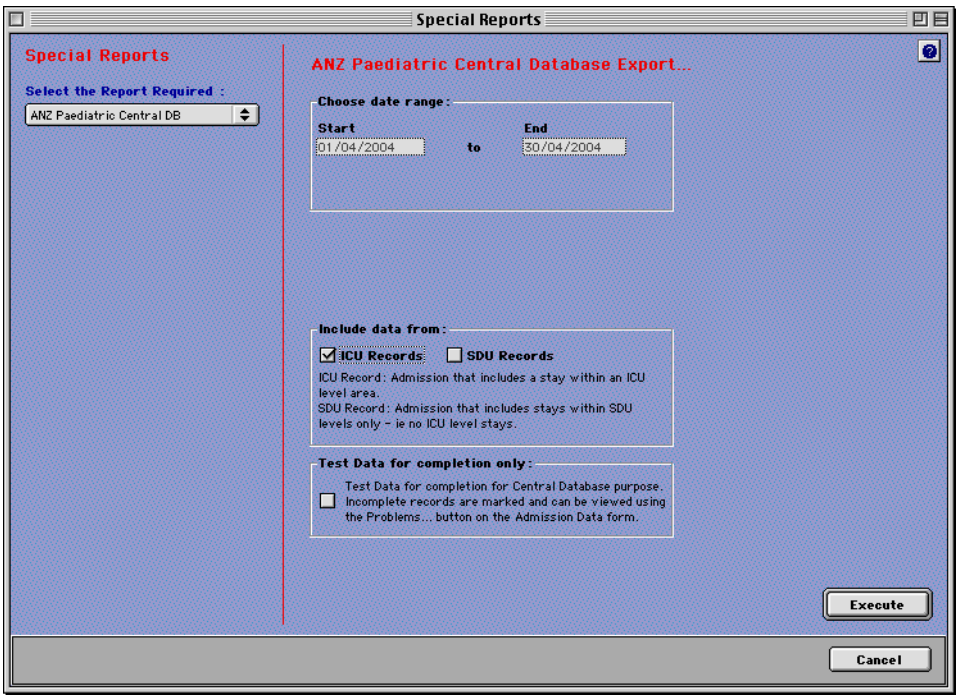
You can visually view the report document in MS Excel.

On Macintosh just double click the document.

On Windows launch Excel and then select the Open menu item. Select All Files in the drop down menu at the bottom of the dialog. Navigate to the location of the report document and then open the document.

57.1.3 Special Reports: ANZ Paediatric Central DB Report

Selection of this report from the drop down menu will present you with the following window:



Special Reports: Selection Form

Page Items	Purpose
Choose Date Range	Set the Date of Admission range that you want to report on. Click anywhere in the date range box and use the date wizard to specify the date range you require. The wizard is described here Interface: Date selection wizard on page 22.
Include Data from	Include data from either ICU Records or SDU Records or both. Note that we have defined an ICU Record as an admission that has included a stay within an ICU area. An SDU Record is an admission that has NEVER had a stay within an ICU area.
Test Data for completion only	Instead of actually generating the report, STATIC will test the dataset specified and flag all admissions that are incomplete for Central DB purposes. To follow up on admissions that are incomplete, use the *Problems* button on the Data Entry Display window. See Data Display: Modify Admissions: Base of Form on page 190 and then Data Display: Modify Admissions: Problems... Button on page 192.

Page Items

Location of Completed Report

When you have completed this form click on *Execute* to initiate the creation of the Central Database report.

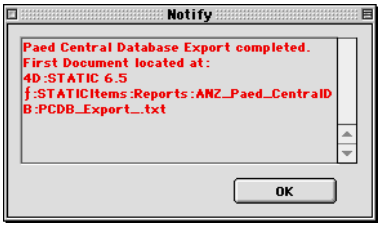
The completed report will be stored in the STATIC Items folder using the following path, there are two documents generated:

STATICItems: Reports: ANZ_Paed_CentralDB: PCDB_Events_x.txt and

STATICItems: Reports: ANZ_Paed_CentralDB: PCDB_Export_x.txt

where x is a number.

You will be notified when the report is complete with the exact name and location of your report:



Special Reports: Notify window

Sending the complete report to Central Database Project

The Central Database Project prefers the file to be sent using E Mail or by disk. The complete report should easily fit onto a floppy disk.

Checking the contents of the Central DB report document

You can visually view the report document in MS Excel.

On Macintosh just double click the document.

On Windows launch Excel and then select the Open menu item. Select All Files in the drop down menu at the bottom of the dialog. Navigate to the location of the report document and then open the document.

57.1.4 Special Reports: Other Reports

Below is a selection of Reports and Exports that were hard coded as they were too difficult to create any other way - some could probably now be redone in a summary or Detail report. They will be removed when their function has been replicated in the other Report system. None of these reports can be edited or altered in any way - they are canned reports .

Weekly Discharge Report

This is a special purpose report that will **print** a report of the patients discharged.

You can specify the date of admission range to report on.

Interhospital Transfers Report

This is a special purpose report that will **print** a report of the patients discharged.

You can specify the date of admission range to report on.

Paed PIM Export

This is a special purpose report that will **export** a report of the Paediatric Admissions selected.

You can specify the date of admission range to report on.

Chapter 58
Reports: Query Store

58.1.0 Introduction

What it can do

The Query Editor allows you to define multiple-field *And* and *Or* queries, as well as a multiple-field *Except* queries. The Query Editor allows you to query across tables. It also allows you to do *Set math* on selections of records as well as *Joins*. Lastly it allows you to Order a selection of records. If these terms are not familiar to you - do not worry - we will explain these later.

Differences to the normal Query Editor

If you have used other 4th Dimensions Databases before, you will notice that our Query Editor is very different to the Standard Editor.

The reasons for this are as follows:

a The Standard Editor does not do Set Math or Joins.
b The Standard Editor is not very intuitive and difficult for inexperienced users.
c The Standard Editor does not give prompts as to the type of field being Queried.
d The Standard Editor has problems with circular relations.
e The Standard Editor does not allow Comments to document a complex Query.
f The Standard Editor does not allow Order By and Order By Formula.

Our implementation eliminates all the above deficiencies.

Sets and Selections

You will often come across the terms Selection and Set in this section. Knowing the difference is CRUCIAL in order to understand what is going on as you construct your Query.

Here is a definition of a Selection

A Selection is an object that may contain some records from a single Table. There is only ONE selection of records for EVERY Table in the database. This selection may be EMPTY i.e. have no records in it.

Here is a definition of a Set

A Set is an object that tells STATIC which records from a Table are contained in the Set. You can have MANY Sets for EVERY Table in the STATIC - if you have enough memory.

Note: In STATIC, a Set is an array of Boolean values in which EVERY record for a Table is represented. If a record is in the Set then it is represented by a 1, if it is not in the Set then it is represented by a 0. As Sets are basically arrays, and because arrays are manipulated in memory, Set operation is very fast - almost instantaneous.

Conversion of Set and Selection

You can convert a Set to a Selection by the command *Use Set*.

Almost every command creates a Set but you can convert a Selection to a Set by the command *Create Set* - you will only rarely find a use for this.

You will notice that whenever you select a command that you will be informed what type of action is occurring; for instance when you select the Query command the green label informs you that you are creating a Set:

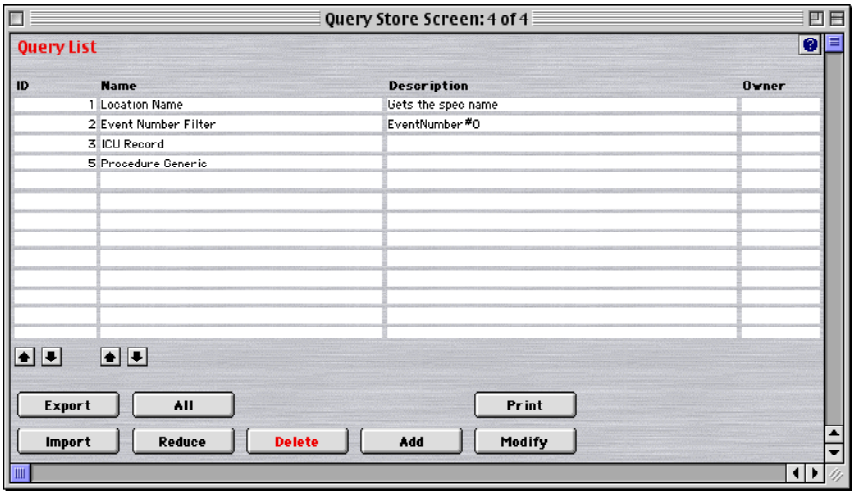
Query: Sets and Selections

58.1.1 Query Store: Output Form

In order to enter the Query Store area, choose the following Menu Item:

Report: Query Store menu item

The following window will display:



Query Store: Output Form

This is where all the Query definitions are stored. They are accessible throughout STATIC whenever the option is given to Query. As the Administrator you would use this area to do Query housekeeping.

Window Items	Purpose
Number	The internal number of the record
Name	Name of the Query
Description	Description of the Query
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

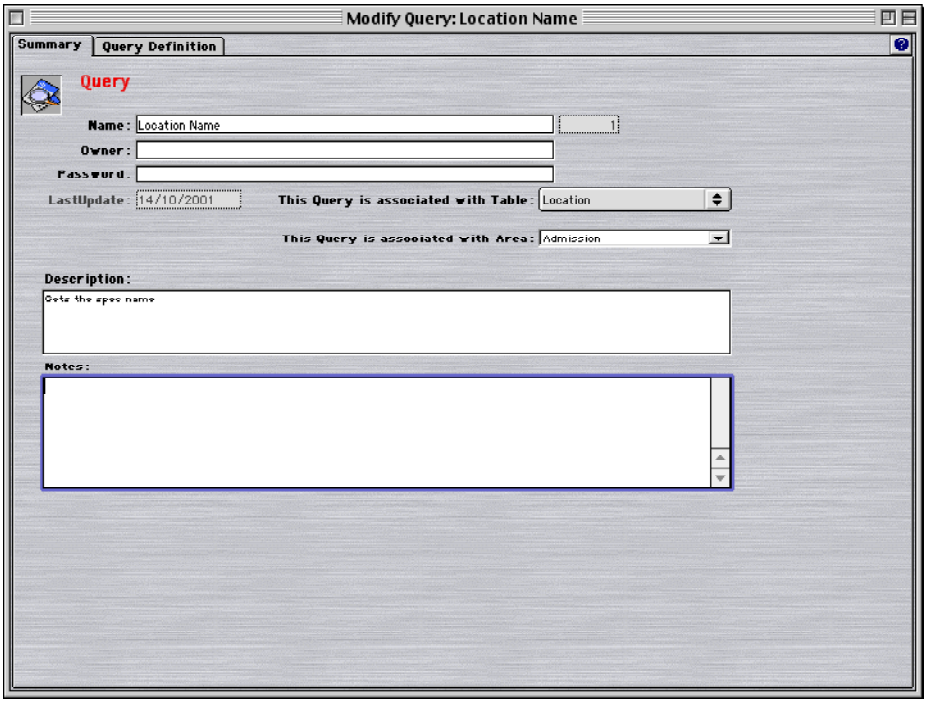
Window Items

Button Name	Action
Export	Export the selected records
Import	Import records destined for this area from a document.
Sort Buttons	Sort the List into ascending or descending order.
All	Display all records.
Reduce	Reduce displayed selection to those selected.
Delete	Delete selected records.
Add	Add a record.
Modify	Modify a selected record
Print	Print the selected records as a list or as detail reports (you will be given the option)
Arrows Up and Down	Allow you to sort the records displayed into ascending or descending order

Buttons

58.1.2 Query Store: Input Form

If you have opened an existing Query you will see the following window:



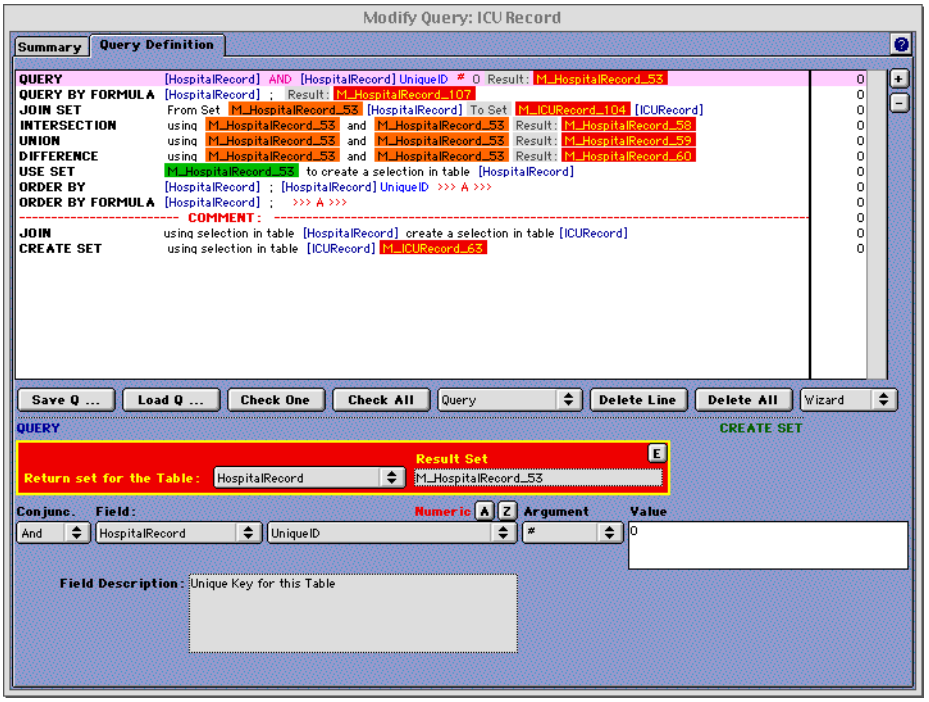
Query: Query Editor window: Summary page

This is the Summary page for the Query.

Window Items	Purpose
Name	The name of the Query as seen in the List view.
Owner and Password	The Owner of this record. It may be password protected. The Administrator can open any record.
Last Update	Date of last edit. Entered by the Owner.
This Query is associated with Table... Drop Down List	This associates this Query with a particular Table. It is not used during the execution of the Query. It is merely used to classify the Query.
This Query is associated with Area... Drop Down List	This associates this Query with a particular Area. It is not used during the execution n of the Query. It is merely used to classify the Query. Selecting an option here will pass the name of this Query into the list used in the Other Query List in the Admission area and the Management area.
Description	A short description of the Query.
Notes	Some extra information making the purpose of the Query easier to identify. Make this as meaningful as possible. Other users on the network may want to use your Query and if it is password protected they will not be able to see the definition of the Query.
Resize the Form	You can resize this form by dragging the lower right hand corner

Window Items

Clicking on the Query Definition Tab displays the following page:



Query: Query Editor window: Query Definition page

Going from left to right, top to bottom, let's look at the parts of this page.

Window Items	Purpose
Query Lines	This contains the Query Lines, that build the query. The contents of each line depends on the Command selected in the *Select Command* drop down menu
Record Count	The Record count pane abuts the Query lines display. This will indicate the number of records returned (or the number of records in a set) when you click on the Check One or Check All Buttons. This allows you to quickly test your Query.

Window Items

Button Name	Action
+ and - Button	This allows you to move a line up or down in the Query Lines
Delete Line Button	Allows you to add or delete a line in the Query Lines
Delete All Button	Delete ALL lines from the display area. This cannot be undone - so be careful!
Save Q... and Load Q... Buttons	You can store a Query onto your hard disk as a document.You can load a Query from the database or from the disk. For more details on this see a later section.
Check One	Check a Query line - see how many records are returned in the selection. Remember that some commands rely on the results of a previous command. So use this button with caution - it may give you a result you did not expect if it relies on the presence of a previously calculated Set.
Check All	Check the whole Query definition - see how many records are returned for each part of the Query definition
Select Command	Drop down list of available Query commands.
Wizard	Wizard to create a complex query for a particular Table. See below.

Buttons

58.1.3 Query Store: *E* Button to edit Set Names

Wherever you see a Set Name, you will also see the following button:

Query: Command: Edit Button

Click on this button and you will see one of the following dialog boxes:

Query: Command: Edit Target Set Dialog

When STATIC creates a new Set Name, it follows a strict convention:

1. Every Set Name created for a Master Query has a prefix, default is M .
2. Slave Queries do not have a prefix.
3. The main body of the name is the name of the Table that the Set belongs to as default.
4. Every Set has a Postfix composed of a unique number.

Once the Set is created you can edit it using these dialogues. You can set the body of the name to whatever you choose. If the Set is within a Master Query area, then the name can have a single letter prefix. The postfix must be a number. If you remove the prefix from a Master Set Name, STATIC will just replace it with a M .

Once you click OK, STATIC will change the original name to the new name for EVERY instance of that Set Name within your Queries.

What does that mean?

If you had created a Set named `M_AlmostComplete_123` and used this Master Set within many Slave queries in a Summary Report and then changed the name of this Set to `S_Final_456`, every occurrence of `M_AlmostComplete_123` in both the Master and Slave queries will be changed to `S_Final_456`.

If a Slave Set called `NeverComplete_123` is to be renamed to `Complete_456`, then the set name is only changed within the Slave Query currently being edited - even if the same set name occurs within another Slave Query elsewhere in the Summary report.

If a Master Set Name is changed within a Slave Query, then the name is changed for every occurrence in both the current Slave Query, the Master Query and in any other Slave Query that it appears.

In other words, Master Query Set Names are changed globally, while Slave Query Set Names are changed locally.

Note: Be careful when changing Set names, it may have unintended consequences.

If you change the name of a Set to the same name of another Set, then the two become logically linked. You will not be able to change the name again without also changing the name of the Set that has become linked to the Set you are changing. This may be what you want. But if it is not, it can have unfortunate consequences especially if the Set in question is a Master Set and used by many Slave Queries - to rectify this could be very tedious.

58.1.4 Query Store: Saving a Query to Document

After you have created a Query, you may want to save the Query to disk and send it to a colleague who is using STATIC.

This is how you store a Query onto your hard disk as a document:

1 Click the Save Q... Button:

Query: Query Editor: Save to Doc Button

The Dialog for saving a document will appear. See Interface: Saving a Document on page 25.

58.1.5 Query Store: Loading a Query Document

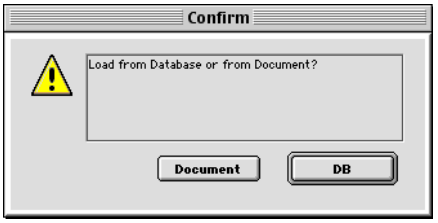
In STATIC you can append a saved Query onto a newly created Query either from the Datafile or from a previously saved document on your Hard Disk.

In order to append a previously defined Query:

1 Click on the Load... Button:

Query: Query Editor: Load... Button

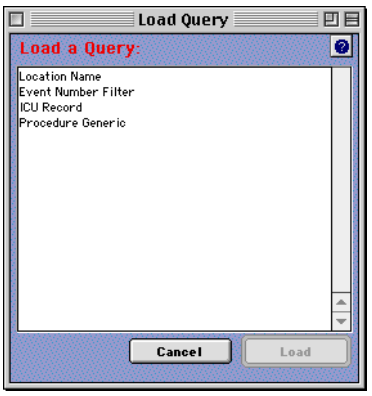
The following dialog will appear:



Query: Query Editor: Load from Database or Document window

2 Select the option you require

***DB* Button -** Load an existing Query from the Database. The following Dialog will appear:



Query: Query Editor: Load Query from Database window

Select the Query you require and click on *Load*. The Query specification will append to the Query lines area and will append the description to the current Description field. All other information will remain intact.

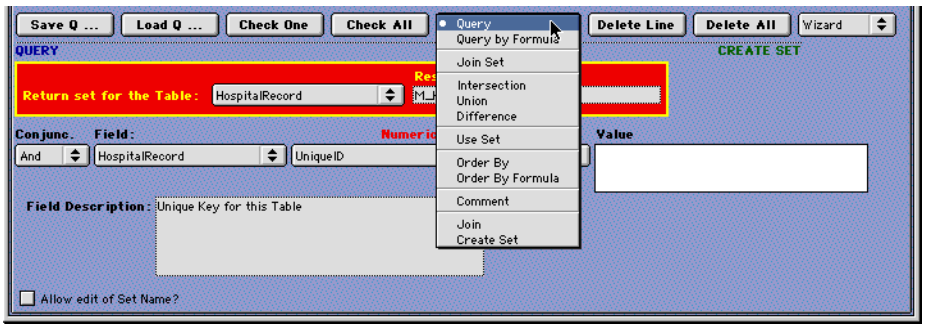
***Document* Button -** Load a Query definition stored as a document in the STATICItems Folder. The open document Dialog will appear. See Interface: Loading a Document on page 26.

If the document opened successfully, then the Query specification will append to the Query lines area and will append the description to the current Description field. All other information will remain intact.

58.2.0 Query Store: Command: Overview

The following sections will present the commands available in the Query editor.

To select a command click on the Select Command drop down menu:



Query: Command: Overview: The Select Command drop down menu

The commands available are as follows:

Command	Action	Description
Query	Creates a Selection of Records	Simple Query that may be composed of more than one line
Query By Formula	Creates a Selection of Records	Query based on a formula that determines if the record is included in the selection
Join Set	Creates a Set in one Table based on a Set of records in another Table	Creates a new Set of records in the second table based on the Set records in the first table
Intersection	Creates a Set from two Sets	Creates a Set of records that are common to two Sets
Union	Creates a Set from two Sets	Creates a Set that includes records from two Sets
Difference	Creates a Set from two Sets	Creates a Set that contains records NOT in the second Set
Use Set	Creates a Selection of records from a Set	Changes the Current Selection of records to the selected Set
Order By	Sort a Selection of Records	Sorting commands that may be composed of more than one line
Order By Formula	Sort a Selection of Records	Sort based on a formula the result of which determines the position of the record in the selection
Comment	No Action	Both an opportunity to document your Query and a spacer to break Query lines so they execute separately
Join	Creates a selection of records in a Table based on a selection of records in another Table	Creates a new selection of records in the second table based on the records in the first table
Create Set	Creates a Set from a Selection of records	Creates a Set of the Current Selection of records for the selected Table

Query: Query Editor: Commands

58.2.1 Query Store: Command: Query

Action of the command

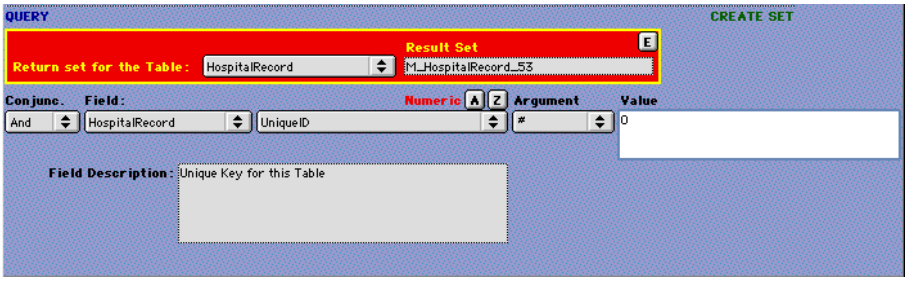
Creates a Set and Selection of Records based on the Value field comparison.

Can be multiple lines long to create compound Queries - each line or lines is called a Query Block.

Can contain several distinct Query Blocks on the same form. A change in the **Return set for the Table** or another Command between Query Blocks signals the end of each Query block.

This will be the command that you will use most frequently.

After selecting Query from the drop down menu or after clicking on a Query line in the Query Display pane, you will see the Query editor controls:



Query: Command: Query: Controls

Return set for the Table

This drop down list allows you to specify which Master Table should be used to return a Set of records after the Query has completed. In the background this will also create a Selection for the same Table - this is more for backward compatibility with previously created Queries.

Take Care: If this is set to the wrong Table then you will get unexpected results.

We have found that the most common reason for failed Queries is because of inattention to this list.

E **Button to Edit the Name of a Set**

This button is described in Query Store: E Button to edit Set Names on page 445.

Causes for a failed Query due to Master Table error

Example of an impossible Query:
For instance if this list is set to `[Bedstate]` and the Query is on fields from the `[HospitalRecord]` Table then at the end of the Query your Set of records will contain Zero records even if the Query lines are all valid and correct.
Why?
Because at the end of the Query, STATIC will attempt to create a Set of records based on the `[HospitalRecord]` for the `[Bedstate]` table. As there is no relationship between the two tables, no records can be found in the `[Bedstate]` table, and so the Set of records returned is Zero.

Example of a possibly badly formed Query
For instance if this list is set to `[HospitalRecord]` and the Query is on fields from the `[ICURecord]` Table then at the end of the Query you will have created a `[HospitalRecord] Set` and not a `[ICURecord]` Set - this may not be what you want if you really wanted to create a `[ICURecord]` Set.
Why?

You have just performed a Cross Relational Query - this is a Query where you alter a Set of records in the Master Table based on the values in the records in a related Table.

Cross Relational Query

You can return a Set of records for the Table specified in *Return set for the Table* based on the value of a field that is related to this Table. This will be discussed later.

Note: If you select a *Field* belonging to a Table than t is different to the Table selected in the *Return set for the Table* drop down list then this list will automatically change to the Table of the *Field* selected. We have arranged the code in this way to protect you from unwanted Cross Relational Queries. Cross Relational Queries are rarely used and not recommended as there are faster, less error prone and easier to read ways of achieving the same thing using the Set and Join Set commands. If you really want to use this feature, then you have to select the Filed first and then the *Return set for the Table* drop down list item you require.

Conjunc.

This contains the three types of conjunctions available AND, OR, EXCEPT.

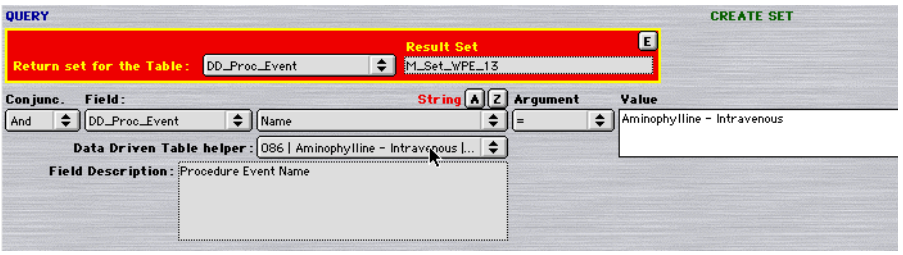
The conjunction is ignored for the first line of a Query Block - it can be set to whatever you want - it has no effect.

Field

The first list allows you to navigate to all tables that can be queried in STATIC. As you switch to different tables, the list of field names in the second drop down list changes accordingly. The field that you require can then be selected.

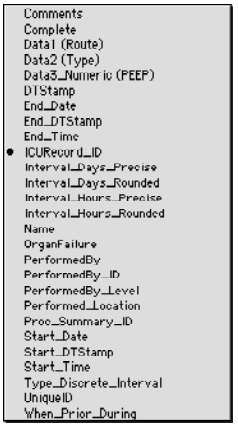
Note: The Type of the Field is displayed next to the A and Z Buttons.

If the Filed selected belongs to a Data Driven Table, an extra control called *Data Driven Table Helper* will appear that allows you to limit the fields displayed to the relevant ones for the actual Data Driven record required:



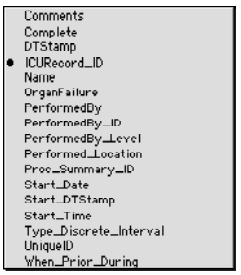
Query: Command: Query: Controls

The way this works is that any fields not used by the selected record type are not shown. Other fields are postfixed with the label specified for that field in the Define record for that Table. For instance in the case of Respiratory Support:



Query: Command: Query: Data Driven Table Controls: Respiratory Support example

Conversely in the case of Arterial Line:



Query: Command: Query: Data Driven Table Controls: Arterial Line example

The difference between the two is that Arterial Line is set to be a Discrete Event rather than, as in the case of Respiratory Support, a Duration Event. As a result many fields relevant for Duration events only are not displayed. In addition Respiratory Support collects Route and Type in the Data1 and Data2 fields. This is not required for Arterial Line. Note how in the case of Respiratory Support the Data1 and Data2 fields are postfixed with the actual label used for these two fields.

Argument

The Query argument (is equal to, is greater than, etc.) help to qualify the query. This is contextual i.e. it changes depending on the type of the field selected. For instance it does not make sense to use the <= argument with a text field so this does not appear when a text type field is selected.

A Query argument tells STATIC to Compare each record to the value given, in the manner specified. All of the records that satisfy the comparison, will become a part of the new selection.

Value

This area is where you type the value that you want STATIC to compare against when it is conducting the query. The Query Editor automatically adds a Wildcard when required. Therefore, if you need a Wildcard query, DO NOT manually add the wildcard when you type the value.

This area gives you prompts so that you enter correct information. Thus if a numeric value is expected only numeric values are allowed. Conversely if a time or date value is expected then this area will show a null value for time (00:00:00) and date (00/00/0000).

Note: The following information is for the benefit of users who use other 4th Dimension databases who are used to using the Wildcard symbol:

STATIC automatically prepends or appends the @ to the value being queried when it is required.

YOU DO NOT NEED TO ADD THIS SYMBOL IN THE QUERY EDITOR SUPPLIED WITH STATIC.

Doing so may confuse STATIC.

Field Description

A short text description of the field will show here.

58.2.2 Query Store: Command: Query by Formula

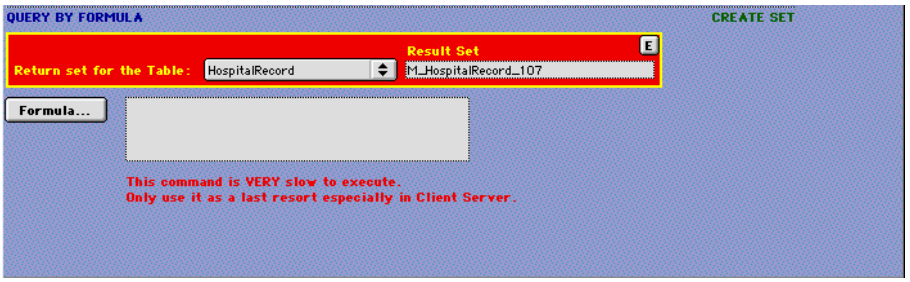
Action of the command

This command allows you to Query using a Formula. If the formula evaluates to TRUE then the record being considered is included in the Set returned.

This will be rarely used:

a It is slow. In fact it excruciatingly slow. Avoid it at all costs!
b It is easy to make errors in the formula definition

After selecting Query by Formula from the drop down menu or after clicking on a Query by Formula line in the Query Display pane, you will see the Query by Formula editor controls:



Query: Command: Query by Formula: Controls

Return set for the Table

This drop down list allows you to specify which Table should be used to return a Set of records after the Query by Formula has completed.

Take Care: If this is set to the wrong Table then you will get unexpected results.

We have found that the most common reason for failed Queries is because of inattention to this list.

***E* Button to Edit the Name of a Set**

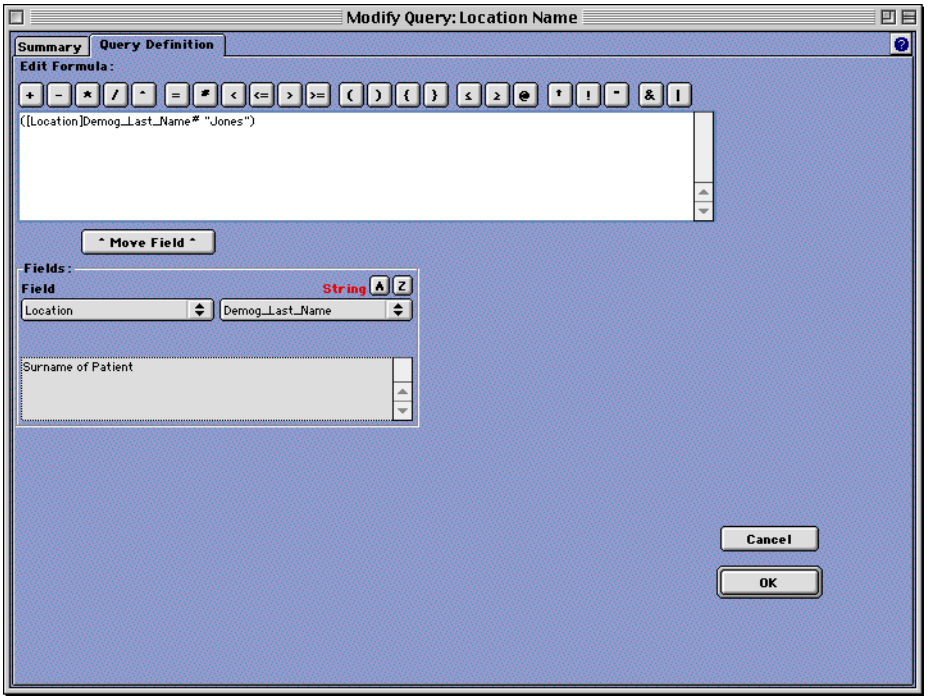
This button is described in Query Store: E Button to edit Set Names on page 445.

Cross Relational Query

You can return a Set of records for the Table specified in *Return set for the Table* based on the value of a field that is related to this Table. This will be discussed later.

Formula Area

To enter a Formula click on the *Formula* Button. The following page will display:



Query: Command: Query by Formula: Formula page

General Considerations

Any result of any formula must evaluate to a True / False (Boolean). A formula may reference any fields from a related table - but see Cross Relational warning above.

Creation of a Formula

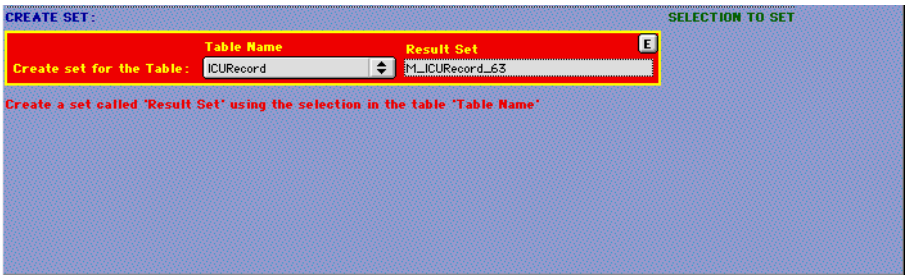
This area consists of several items:

Single Character Buttons - Displayed at the top of the page. These remind you of the Operators and Special Symbols that you can use in a Formula. Just Click the Buttons to automatically add or insert the character in to the Formula Text.

Fields area - Select the Field you require and then click *Move Field* Button to enter the selected field into the Formula area.

58.2.3 Query Store: Command: Create Set

After selecting Create Set from the drop down menu or after clicking on a Create Set line in the Query Display pane, you will see the Create Set editor controls:



Query: Command: Create Set: Controls

Action of the command

This command allows you to create a Set from the current selection of records for the Table selected.

To create a set:

1 Select the Table you want to create the set for in the Table Name drop down menu
A new set name should appear in the Set Name field.

E **Button to Edit the Name of a Set**

This button is described in Query Store: E Button to edit Set Names on page 445.

58.2.4 Query Store: Command: Use Set

After selecting Use Set from the drop down menu or after clicking on a Use Set line in the Query Display pane, you will see the Use Set editor controls:

Query: Command: Use Set: Controls

The drop down list will display ALL the defined Sets already created in previous commands. Select the one you require.

If the *Allow edit of Set Name?* checkbox is set, you will be prompted for a Result Set name. You can later change the Result Set to another set if you wish.

Action of the command

This will turn the selected Set into a Selection of records and make this Selection the current selection for the Table that the Set belongs to.

This is usually the last command required if the Slave Query is followed by a task such as exporting the contents of a selection of records.

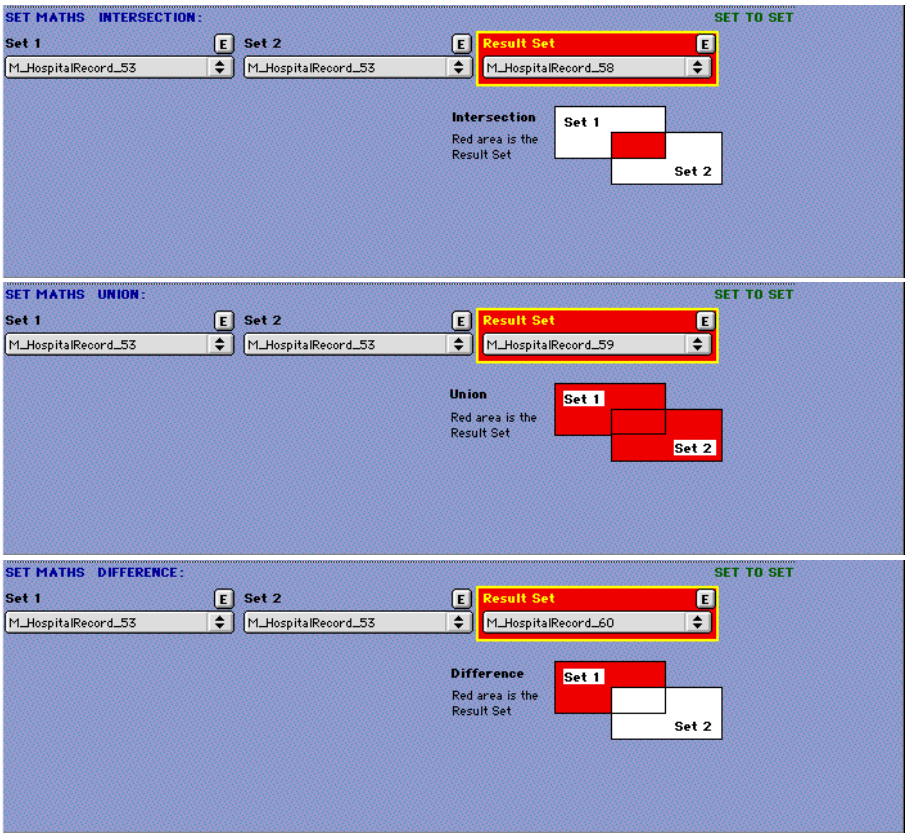
It is NEVER used in a Master Query because Master Queries exist only to create Sets that are called in subsequent Slave Queries.

E **Button to Edit the Name of a Set**

This button is described in Query Store: E Button to edit Set Names on page 445.

58.2.5 Query Store: Command: Intersection, Union, Difference

After selecting Intersection, Union or Difference from the drop down menu or after clicking on a Intersection, Union or Difference line in the Query Display pane, you will see the Intersection, Union or Difference editor controls:



Query: Command: Intersection, Union, Difference: Controls

General considerations

a The controls are essentially the same but the result of the three commands is very different.

b These commands operate on Sets only. They have no effect on record selections directly.

c They are also VERY fast in operation - even for large sets they are almost instantaneous.

d We recommend that you look to these commands and the Join Set command to generate difficult to derive selections of records.

e Many times you will not need to create a selection from the Result Set straight away as the Result Set will be further manipulated to create the final Result Set. See the mini tutorial at the end of this manual. If you need to create an actual selection of records, then follow one of these commands with *Use Set (Result* Set). This will create a selection of records from the Result Set.

f You can choose the Result Set to be one of the original Sets being considered.

e.g.:

Assuming that the sets HospitalAll, Hospital1997, Hospital1998, Hospital1999 are all valid sets then the following will result in all the records for the 3 years in HospitalAll

Union (between Hospital1997 and HospitalAll Result Set = HospitalAll)

Union (between Hospital1998 and HospitalAll Result Set = HospitalAll)

Union (between Hospital1999 and HospitalAll Result Set = HospitalAll)

g Sets belong to particular tables. The editor will NOT allow you to make a mistake and select sets belonging to different tables. You will only ever be presented with sets in the drop down lists that make sense.

h If the *Allow edit of Set Name* Checkbox is set, you will be prompted for a Result Set name. You can later change the Result Set to another set if you wish.

Action of these commands

Set Command	Description
Intersection	Will create a Result Set of records that is composed of the records that are common to both Set 1 and Set 2.
Union	Will create a Result Set of records that is composed of the all the records of Set 1 and Set 2.
Difference	Will create a Result Set of records that is composed of the records contained in Set 1 but NOT in Set 2.

Query: Query Editor: Set Commands

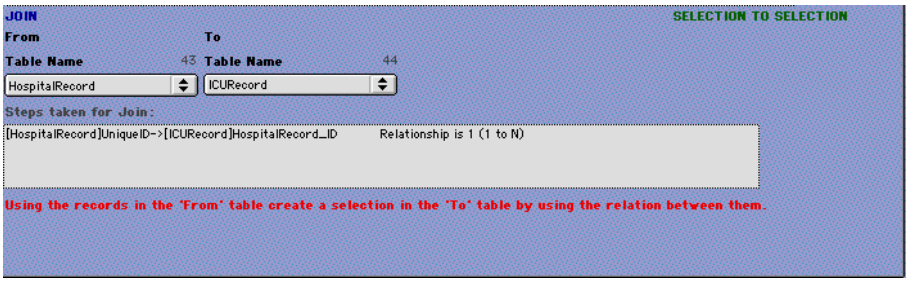
E **Button to Edit the Name of a Set**

This button is described in Query Store: E Button to edit Set Names on page 445.

58.2.6 Query Store: Command: Join

You will rarely use this command - left for legacy purposes. Use the Join Set command instead.

After selecting Join from the drop down menu or after clicking on a Join line in the Query Display pane, you will see the Join editor controls:



Query: Command: Join: Controls

Action of the command

This command allows you to create a selection of records based on another selection of records if there is a relationship between the two Tables that the two selections of records belong to.

General Comments

a The Join editor in STATIC is very sophisticated. It combines an automatic Relations editor (invisible to the user) with a very fast algorithm that can generate a selection of records from any other selection of records - as long as they are related.

b The Join command works on Selections of records NOT on Sets. If the last action resulted in a Set then the you MUST use the command Use Set (Result Set) in order to create a selection of records that the Join command can then work on. If the last command created a selection then you can use the Join command straight away.

c The Join command does not care about the direction of the relationships nor if the relationship has several intermediate Tables. The Target Table selection will always be created.

d The Join command allows you to perform Queries that are difficult or impossible using just the Query and Query By Formula commands.

How do you know two Tables are related?

If the Join editor gives you the option to select two tables then they are related - it is a simple as that. All the hard work has been taken care of for you. You do not even need to know the name of the key fields that relate the two tables. The invisible Relations editor has already been programmed with all the paths between all the Tables you can Query. You can view the path between the two Tables selected in the *Steps taken for Join field*.

Circular Relationships

Our Join command completely avoids circular relationships. These are relations that loop back on themselves. Because the Relationship paths are all preset by the Relations Editor, all circular relations are already detected and filtered out.

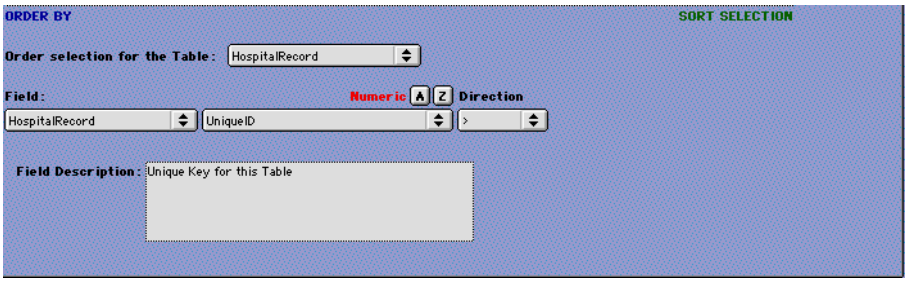
58.2.7 Query Store: Command: Order By

Action of the command

Sorts a Selection of Records into ascending and Descending order based field selected. Can be multiple lines long to create compound Sorts. The Sort then proceeds in a strict Top Down order.

This will be the command that you will use most frequently.

After selecting Order By from the drop down menu or after clicking on a Order By line in the Order By Display pane, you will see the Editor controls:



Query: Command: Order By: Controls

Return selection for the Table

This drop down list allows you to specify which Table should be Sorted

Take Care: If this is set to the wrong Table then you will get unexpected results.

We have found that the most common reason for failed Order By is because of inattention to this list.

Field

The first list allows you to navigate to all visible tables in STATIC. As you switch to different tables, the list of fields in the second drop down list changes accordingly. The field that you require can then be selected. Note that the Type of the field is displayed next to the A and Z sort buttons.

Direction

The direction tells STATIC to sort the record selection in an Ascending or Descending order. Note that in the Order By lines pane of the form, that this is shown as <<< D <<< for Descending and >>> A >>> for Ascending.

Field Description

If the Field description is set in the Structure section of Preferences then a short text description will show here.

58.2.8 Query Store: Command: Order by Formula

Action of the command

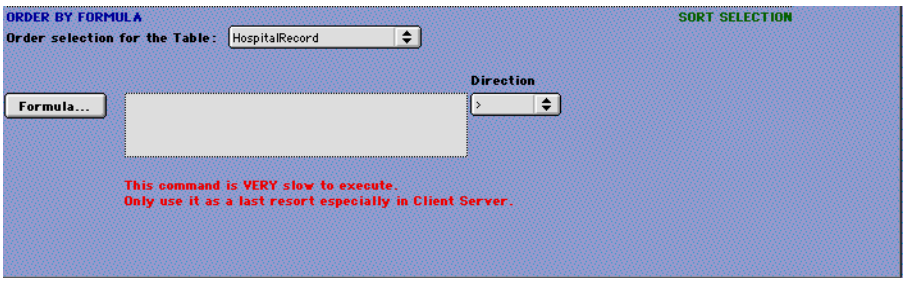
This command allows you to sort using a formula. The result of the formula determines the position of the record within the selection. The result can be a numeric, string, boolean, date or time.

This will be rarely used:

a It is slow. In fact it excruciatingly slow. Avoid it at all costs!

b It is easy to make errors in the formula definition

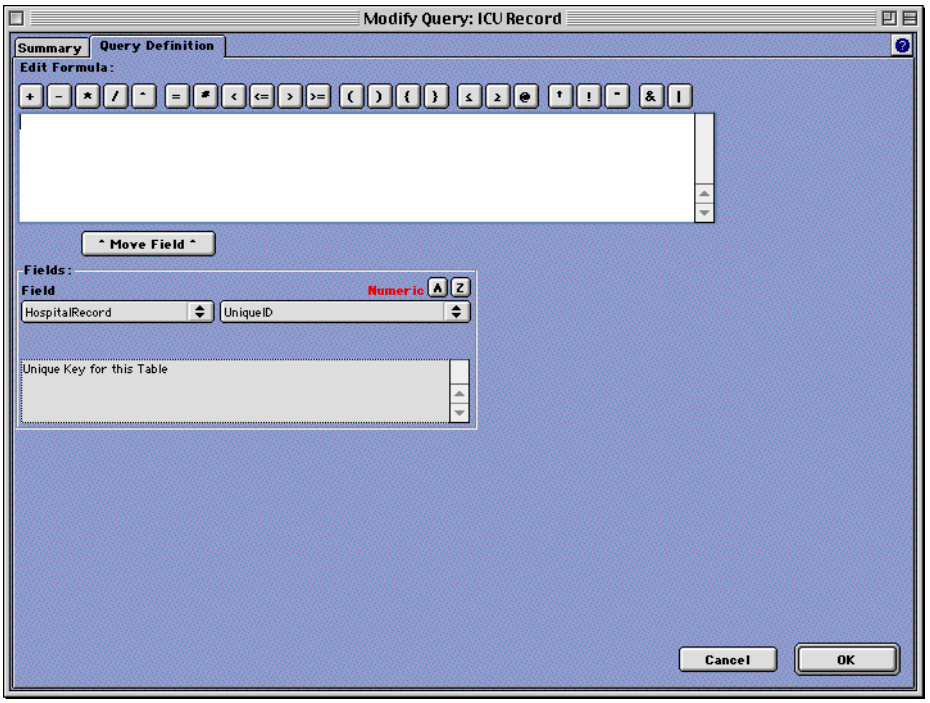
After selecting Order by Formula from the drop down menu or after clicking on a Order by Formula line in the Order By Display pane, you will see the Order by Formula editor controls:



Query: Command: Order by Formula: Controls

Formula Area

To enter a Formula click on the *Formula* Button. The following page will display:



Order By Store: Command: Order by Formula: Formula page

General Considerations

The result of a formula MUST be a numeric, string, boolean, date or time. A formula may reference any fields from a related table.

Creation of a Formula

This area consists of several items:

Single Character Buttons - Displayed at the top of the page. These remind you of the Operators and Special Symbols that you can use in a Formula. Just Click the Buttons to automatically add or insert the character in to the Formula Text.

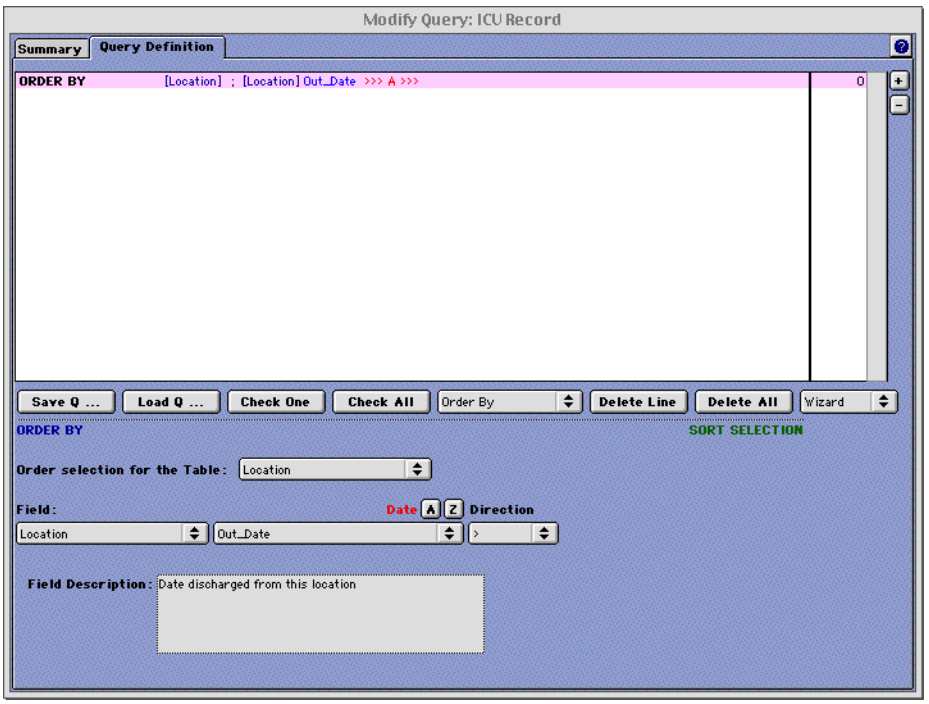
Fields area - Select the Field you require and then click *Move Field* Button to enter the selected field into the Formula area.

Function area - Not completed yet. We may add special functions that you can call from here later. Do not use at present.

Once you have completed your function, click on *OK* to record your Formula in the Editor.

58.2.9 Query Store: Command: Order By: Single-Level Sort

Let's start out with a simple, single-level sort:

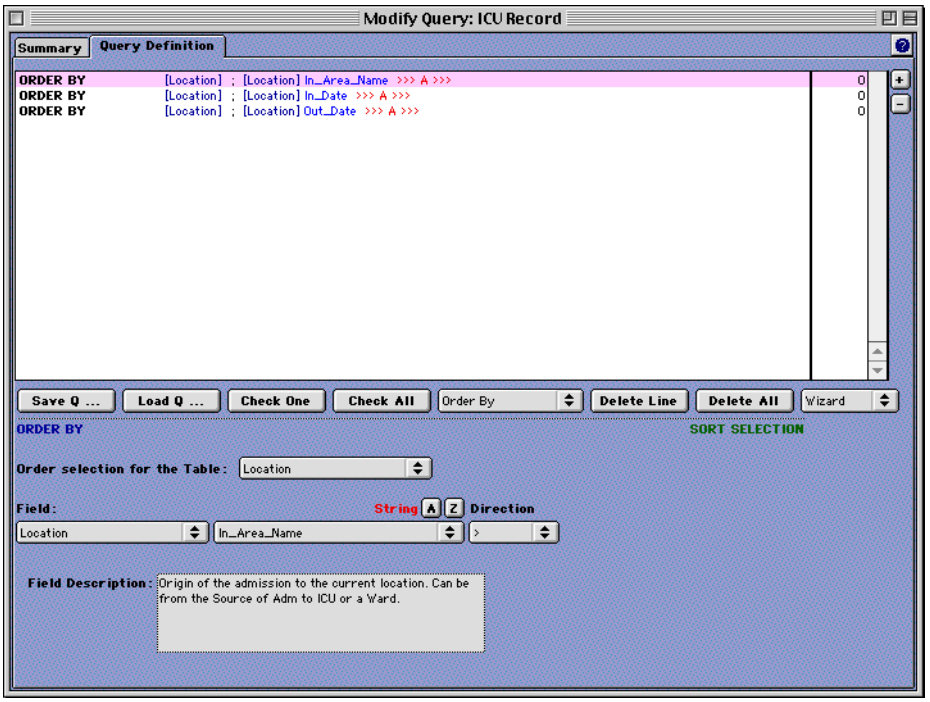


Order By Store: Command: Order by: Single level sort

As you can see this will Order the selection of Location records by `[Location]Out_Date` in an Ascending (>>> A >>>) direction.

58.2.10 Query Store: Command: Order By: Multi-Level Sort

Now let's extend the sort to another level.When we sort on three fields in our example database, our screen looks like this:



Order By Store: Command: Order by: Multilevel Sort

This will give an Order based on all three criteria.

First STATIC will Order the selected records by the field `In_Area_Name`. If some of these are identical it will then order these identical records by the field `In_Date`. If again there are identical records (both `In_Area_Name` and `In_Date` are the same) it will then sort them by the field `Out_Date`.

58.2.11 Query: Command: Order By: Reversing the Sort Order

To reverse the order of an Order, just change the Direction arrow for the line that you want to reverse.

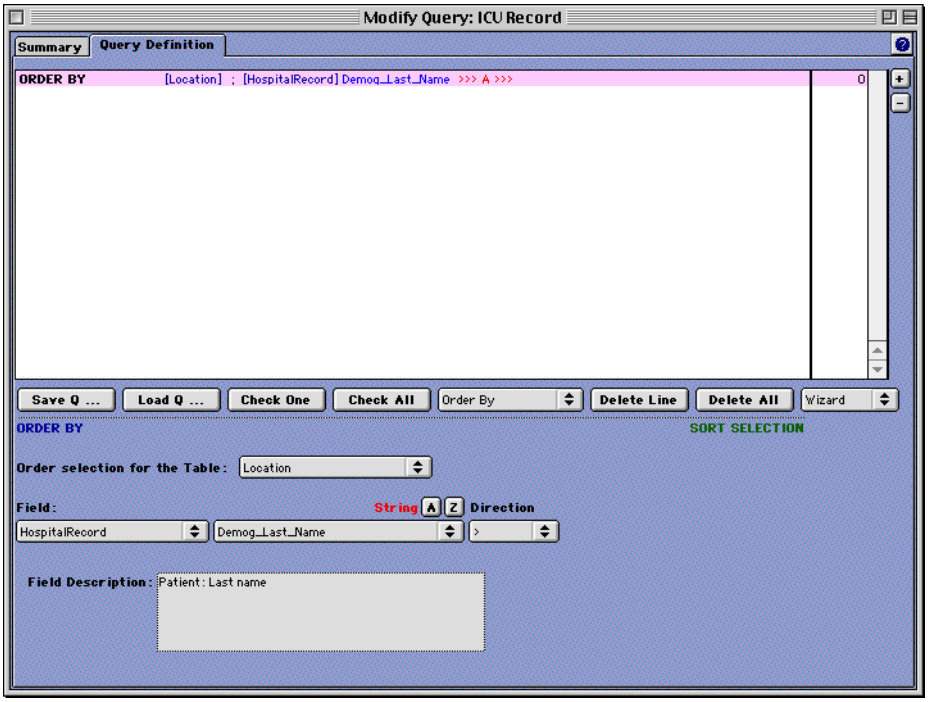
The Direction arrows work as follows:

Direction	Description	Symbol
Ascending sort	Sort A to Z or 1 to 10	>>> A >>>
Descending sort	Sort Z to A or 10 to 1	<<< D <<<

Order By: Direction Arrows

58.2.12 Query Store: Command: Order By: Cross-Relational Sort

Sometimes, you need to sort on a field that is in a different table--a **related parent** table:

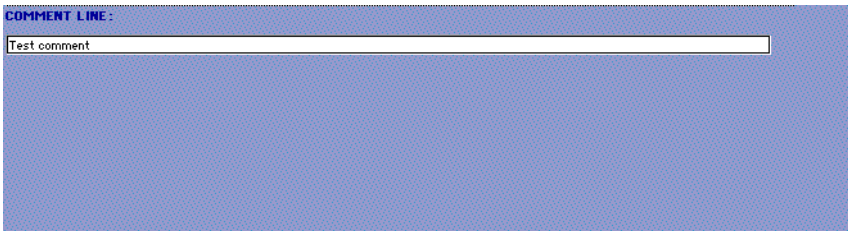


Query: Command: Order by: Cross relational sort

As you can see this Order by is for the `[Location]` table but uses the `[HospitalRecord]` table for its Order. This can be done as the `[HospitalRecord]` table is directly related to the `[Location]` table and the `[HospitalRecord]` table is the **ONE table**. See the Database Schema for more details Database Schema: Table Relationships on page 517.

58.2.13 Query Store: Command: Comment

After selecting Comment from the drop down menu or after clicking on a Comment line in the Query Display pane, you will see the Comment editor controls:



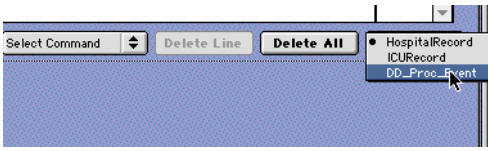
Query: Command: Comment: Controls

This command allows you to add comments to the Query. This is useful to describe the query and to separate a complex query into logical blocks to make it more easily understood at a later date.

58.2.14 Query Store: Wizard

The query Wizard gives you the ability to quickly define a series of commands for a single Table. Only those tables that have been found to benefit from this ability to define a complex series of commands are supported within this area. More can be added on request.

Click on the Wizard drop down list and select the Table for which you want to define a series of commands:

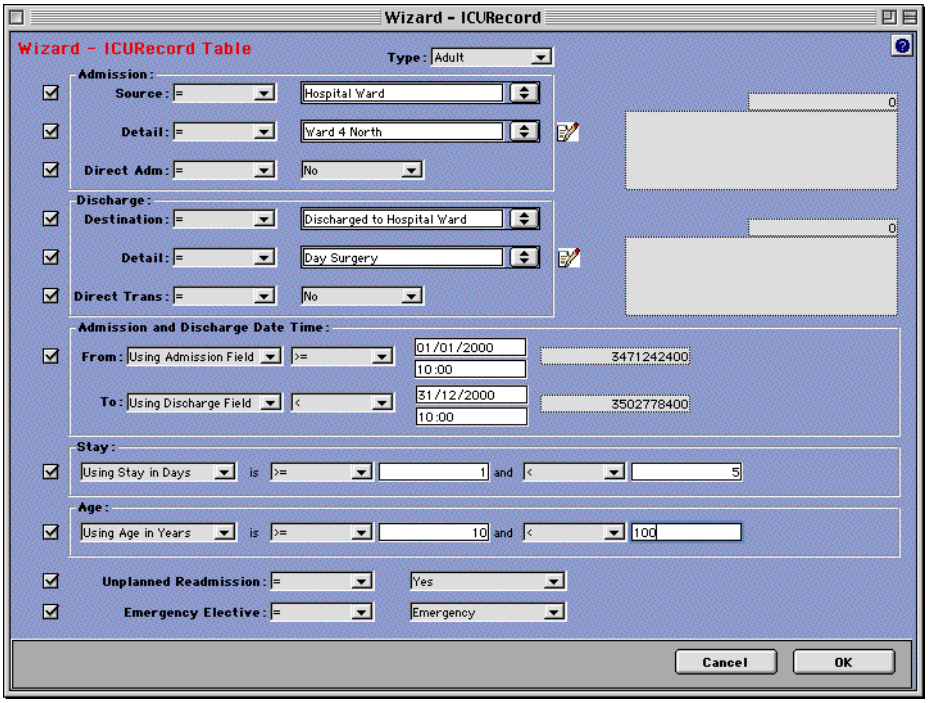


Query: Wizard

There are two different types of tables within STATIC: Normal and Data Driven tables.

Normal Tables

These are tables that store information within named stable fields. The Wizard will allow you to create a series of Query Command lines and the Set Maths at the end in order to derive a final Set of records that reflect the criteria set within the Query:



Query: Wizard: Normal Query: ICURecord

Note: Each area of the Wizard is associated with a checkbox, unless this is selected, the area is not included within the generated Query. Where possible the relevant related drop down options are available. If the field is populated from a Table, then the normal Type Ahead feature exists. Date Time fields are converted to a DTStamp format that is used instead of the individual Date and Time fields.

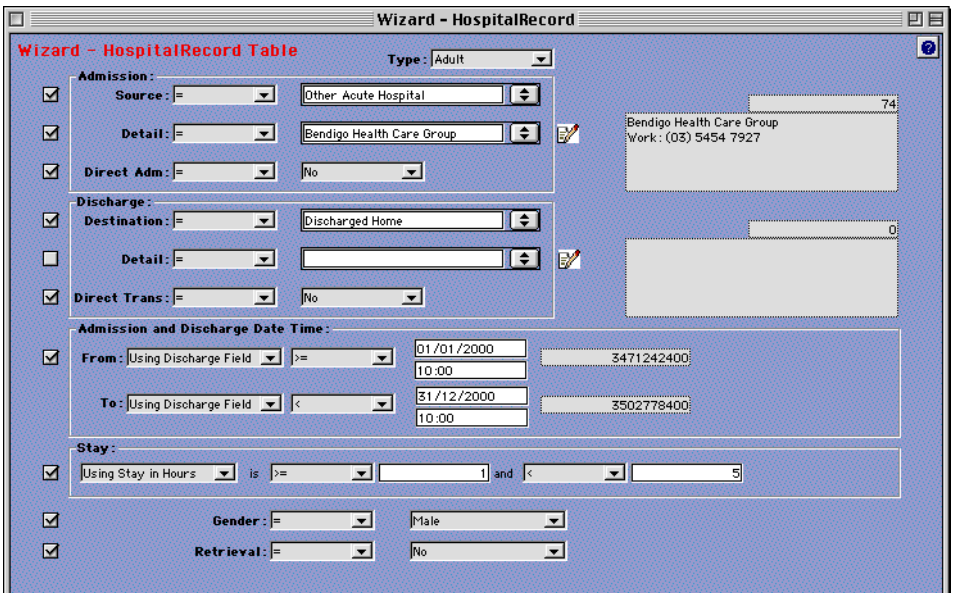
When the above Wizard is accepted the following will result:

```
------------------------ COMMENT: Wizard: START OF ICURecord QUERY ------------------------
------------------------ COMMENT: Wizard: Handle Admission Area ------------------------
QUERY          [ICURecord] AND [ICURecord] Adm_Source = Hospital Ward Result: M_Set_WICU_109
QUERY          [ICURecord] AND [ICURecord] Adm_Source_Detail = Ward 4 North Result: M_Set_WICU_110
QUERY          [ICURecord] AND [ICURecord] Adm_DirectAdm = No Result: M_Set_WICU_111
------------------------ COMMENT: Wizard: Handle Discharge Area ------------------------
QUERY          [ICURecord] AND [ICURecord] Disch_OutCome = Hospital Ward Result: M_Set_WICU_112
QUERY          [ICURecord] AND [ICURecord] Disch_Outcome_Detail = Ward 4 North Result: M_Set_WICU_113
QUERY          [ICURecord] AND [ICURecord] Disch_DirectTransfer = No Result: M_Set_WICU_114
------------------------ COMMENT: Wizard: Handle A&D Area: From 01/01/2000 10:00:00 To 31/12/2000 10:00:00 ------------------------
QUERY          [ICURecord] AND [ICURecord] Adm_DTStamp >= 3471242400 Result: M_Set_WICU_115
QUERY          [ICURecord] AND [ICURecord] Disch_DTStamp < 3502778400 Result: M_Set_WICU_116
------------------------ COMMENT: Wizard: Handle Stay Area ------------------------
QUERY          [ICURecord] AND [ICURecord] Disch_Stay_Days >= 1 Result: M_Set_WICU_117
QUERY          [ICURecord] AND [ICURecord] Disch_Stay_Days < 5 Result: M_Set_WICU_118
------------------------ COMMENT: Wizard: Handle Age Area ------------------------
QUERY          [ICURecord] AND [ICURecord] Adm_Age_InYears >= 10 Result: M_Set_WICU_119
QUERY          [ICURecord] AND [ICURecord] Adm_Age_InYears < 100 Result: M_Set_WICU_120
------------------------ COMMENT: Wizard: Handle Other Fields Area ------------------------
QUERY          [ICURecord] AND [ICURecord] Adm_Unplanned_Readm = Yes Result: M_Set_WICU_121
QUERY          [ICURecord] AND [ICURecord] Adm_EmergencyElec = Emergency Result: M_Set_WICU_122
------------------------ COMMENT: Wizard: Handle Set Maths ------------------------
INTERSECTION     using M_Set_WICU_111 and M_Set_WICU_114 Result: M_Set_WICU_EndResult_123
INTERSECTION     using M_Set_WICU_116 and M_Set_WICU_EndResult_123 Result: M_Set_WICU_EndResult_124
INTERSECTION     using M_Set_WICU_118 and M_Set_WICU_EndResult_124 Result: M_Set_WICU_EndResult_125
INTERSECTION     using M_Set_WICU_120 and M_Set_WICU_EndResult_125 Result: M_Set_WICU_EndResult_126
INTERSECTION     using M_Set_WICU_122 and M_Set_WICU_EndResult_126 Result: M_Set_WICU_EndResult_127
------------------------ COMMENT: Wizard: END OF ICURecord QUERY ------------------------
```

Query: Wizard: Normal Query: ICURecord Query

This series of query commands can of course now be further edited to suit.

Another example this time from the HospitalRecord Table:



Query: Wizard: Normal Query: HospitalRecord

When the above Wizard is accepted the following will result:

```
------------------------- COMMENT: Wizard: START OF HospitalRecord QUERY -------------------------
------------------------- COMMENT: Wizard: Handle Admission Area ---------------------------------
QUERY          [HospitalRecord] AND [HospitalRecord] Adm_Source = Other Acute Hospital Result: M_Set_WHos_144
QUERY          [HospitalRecord] AND [HospitalRecord] Adm_Source_Detail = Bendigo Health Care Group Result: M_Set_WHos_1
QUERY          [HospitalRecord] AND [HospitalRecord] Adm_DirectAdm = No Result: M_Set_WHos_146
------------------------- COMMENT: Wizard: Handle Discharge Area ---------------------------------
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_Outcome = Other Acute Hospital Result: M_Set_WHos_147
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_Outcome_Detail = Bendigo Health Care Group Result: M_Set_WHos
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_DirectTransfer = No Result: M_Set_WHos_149
------------------------- COMMENT: Wizard: Handle A&D Area: From 01/01/2000 10:00:00 To 31/12/2000 10:00:00 ----------
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_DTStamp >= 3471242400 Result: M_Set_WHos_150
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_DTStamp < 3502778400 Result: M_Set_WHos_151
------------------------- COMMENT: Wizard: Handle Stay Area --------------------------------------
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_Stay_Hrs >= 1 Result: M_Set_WHos_152
QUERY          [HospitalRecord] AND [HospitalRecord] Disch_Stay_Hrs < 5 Result: M_Set_WHos_153
------------------------- COMMENT: Wizard: Handle Other Fields Area ------------------------------
QUERY          [HospitalRecord] AND [HospitalRecord] Demog_Gender_Display = Male Result: M_Set_WHos_154
QUERY          [HospitalRecord] AND [HospitalRecord] Adm_Retrieval = No Result: M_Set_WHos_155
------------------------- COMMENT: Wizard: Handle Set Maths --------------------------------------
INTERSECTION     using M_Set_WHos_146 and M_Set_WHos_149 Result: M_Set_WHos_EndResult_156
INTERSECTION     using M_Set_WHos_151 and M_Set_WHos_EndResult_156 Result: M_Set_WHos_EndResult_157
INTERSECTION     using M_Set_WHos_153 and M_Set_WHos_EndResult_157 Result: M_Set_WHos_EndResult_158
INTERSECTION     using M_Set_WHos_155 and M_Set_WHos_EndResult_158 Result: M_Set_WHos_EndResult_159
------------------------- COMMENT: Wizard: END OF HospitalRecord QUERY ---------------------------
```

Query: Wizard: Normal Query: HospitalRecord Query

Data Driven Tables

Data Driven tables contain records that are composed of multipurpose fields. The data that these fields contain is determined by a definition record that documents the purpose of each field. The power of this arrangement is that instead of a Table that may contain hundreds of fields we now have a Table composed of just a few fields because each field is used for many different purposes. The trade off is that instead of a single record that contains all the different fields we now have many records that contain a few fields to store the same information. The biggest advantage is that instead of adding even more fields to table we would now only add a new definition record and continue to use the already existing fields for storage.

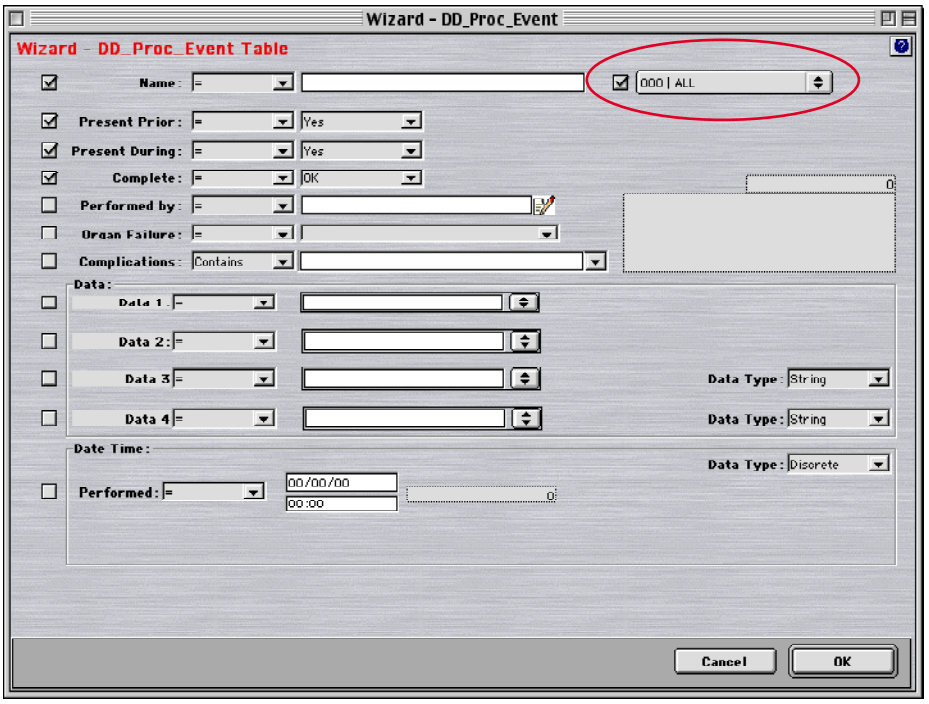
We will use Procedures to illustrate the concept.

Previously in STATIC we used a single table to store all the associated fields required to define all the procedure events possible during ICU. This caused many problems. The number of fields was over 500 - very difficult to find what was required when defining a query. Every time we needed to add another procedure, we had to add more fields to this already bloated table. Worse we could see that eventually we would exceed the maximum number of fields possible for a single table. This became reality when we added the Paediatric requirements.

To convert STATIC to using the Data driven arrangement for Procedures, we defined a Table called `DD_Proc_Define` that contains definitions for all the different Procedures that are in use. More can be added at any time. During an admission to ICU, each Procedure Event will create a new `DD_Proc_Event` record. The fields within this record are populated with the information required for that particular Procedure. For instance, a record may contain data pertaining to *Respiratory Support* another record may contain data for *Tracheostomy*. A field named `Data1` may contain the *Respiratory Route* and the *Tracheostomy Type* respectively.

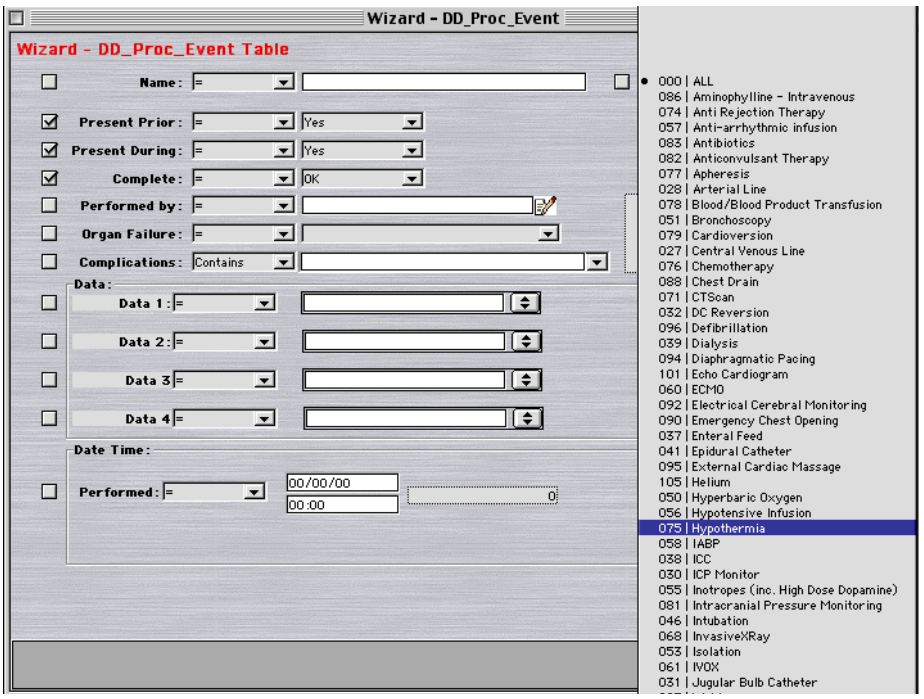
Creating a Query could become a bit of a challenge using this arrangement because not only would you need to remember the different Procedures by name but also the use of each field and the type of entries for a particular field. We have taken the guesswork out of all of this by providing a Wizard that configures itself to the particular Procedure you are interested in. Selecting the Name of the Procedure automatically shows or hides the fields in use and renames them to what you would expect. In addition if there are standard drop down menus associated with a field these become available.

Here is an example. This is what the Wizard will look like on first entry:



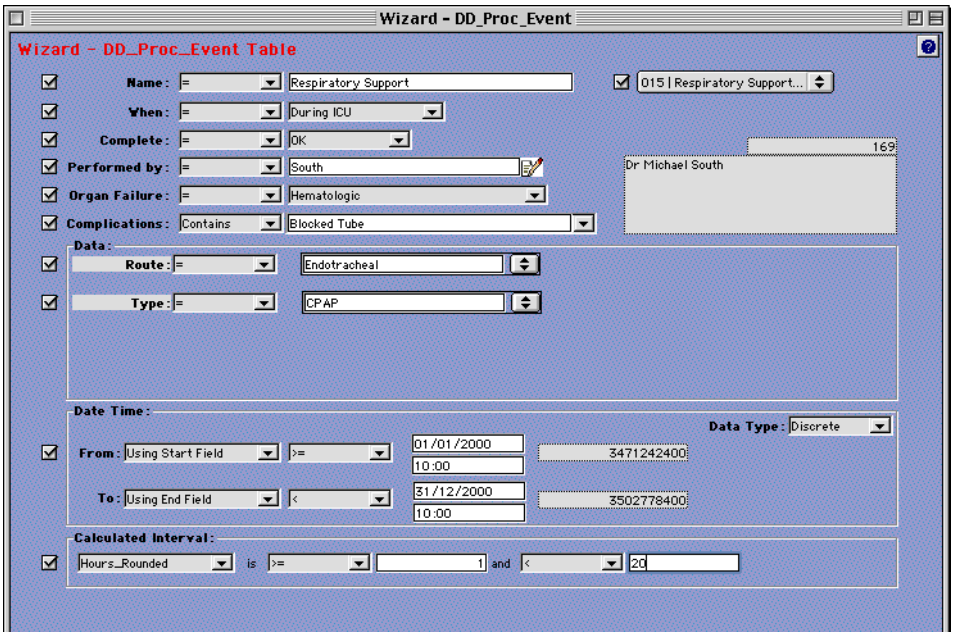
Query: Wizard: Normal Query: Procedures

Note that all the fields for the `DD_Proc_Event` Table are available here.You may want to enter data directly here if you do not need to look at particular Procedures. For instance, this may be so if you need all Procedures performed between two dates without regard to the nature of the Procedure. Selecting a particular Procedure from the drop down menu circled in red will present you with all the Procedures available within your database:



Query: Wizard: Normal Query: Procedures

We will select the Respiratory Support Procedure:



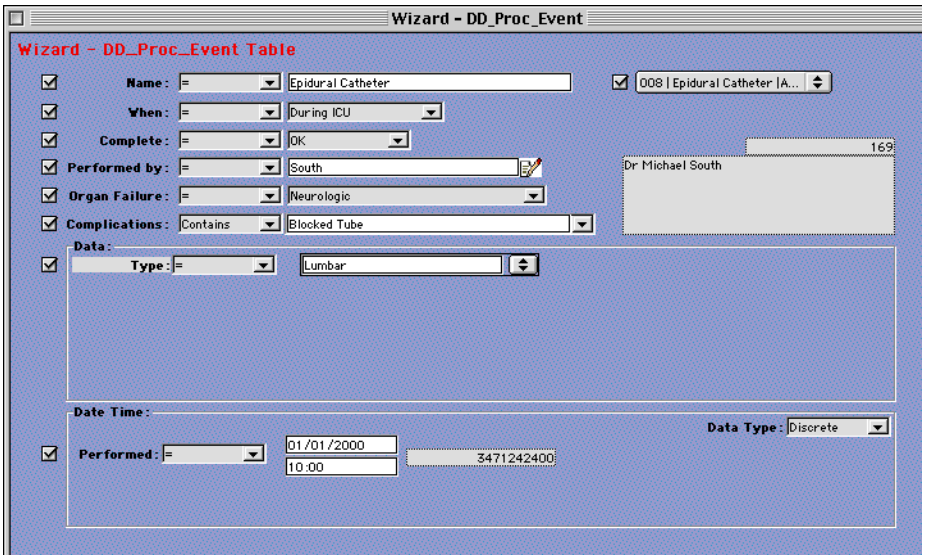
Query: Wizard: Normal Query: Procedures: Respiratory Support

Note that the `Data 1` and `Data 2` fields have changed to `Route` and `Type` and are now linked to their respective drop down lists. Also since this Procedure is an Interval type procedure, the Date Time fields allow for a From/To entry and the Calculated Interval allows for the different types of calculated Intervals maintained within STATIC. When the above specification is accepted, the following Query will result:

```
------------------------- COMMENT: Wizard: START OF DD_Proc_Event QUERY -------------------------------------------
------------------------- COMMENT: Wizard: Handle Standard Fields Area --------------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Name = Respiratory Support Result: M_Set_WPE_160
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] When_Prior_During = During ICU Result: M_Set_WPE_161
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Complete = OK Result: M_Set_WPE_162
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] PerformedBy = South Result: M_Set_WPE_163
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] OrganFailure = Hematologic Result: M_Set_WPE_164
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Complications CONTAINS Blocked Tube Result: M_Set_WPE_165
------------------------- COMMENT: Wizard: Handle Data1and Data2 Area ---------------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Data1 = Endotracheal Result: M_Set_WPE_166
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Data2 = CPAP Result: M_Set_WPE_167
------------------------- COMMENT: Wizard: Handle Date Time Area --------------------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Start_Date = 00/00/00 Result: M_Set_WPE_168
------------------------- COMMENT: Wizard: Handle Calculated Interval Area ----------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Interval_Hours_Rounded >= 1 Result: M_Set_WPE_169
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Interval_Hours_Rounded < 20 Result: M_Set_WPE_170
------------------------- COMMENT: Wizard: Handle Set Maths -------------------------------------------------------
INTERSECTION      using M_Set_WPE_165 and M_Set_WPE_167 Result: M_Set_WPE_EndResult_171
INTERSECTION      using M_Set_WPE_168 and M_Set_WPE_EndResult_171 Result: M_Set_WPE_EndResult_172
INTERSECTION      using M_Set_WPE_170 and M_Set_WPE_EndResult_172 Result: M_Set_WPE_EndResult_173
------------------------- COMMENT: Wizard: END OF DD_Proc_Event QUERY ---------------------------------------------
```

Query: Wizard: Normal Query: Procedures: Respiratory Support query

Next we will select the Epidural Catheter Procedure:



Query: Wizard: Normal Query: Procedures: Epidural Catheter

Note that the `Data 1` has changed to `Type` and is now linked to its drop down list. This Procedure is a defined as a Discrete type procedure, thus only a Date time area of when this Procedure was performed is available. However some Hospitals would want to record the date and time of catheterization and the removal for quality control and infection control purposes. With our new arrangement, all you would need to do is redefine this procedure in `DD_Proc_Define` as being of type Interval and the appropriate fields would be available to you. When the above specification is accepted, the following Query will result:

```
------------------------- COMMENT: Wizard: START OF DD_Proc_Event QUERY -----------------------------------------
------------------------- COMMENT: Wizard: Handle Standard Fields Area -----------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Name = Epidural Catheter Result: M_Set_WPE_174
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] When_Prior_During = During ICU Result: M_Set_WPE_175
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Complete = OK Result: M_Set_WPE_176
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] PerformedBy = South Result: M_Set_WPE_177
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] OrganFailure = Neurologic Result: M_Set_WPE_178
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Complications CONTAINS Blocked Tube Result: M_Set_WPE_179
------------------------- COMMENT: Wizard: Handle Data1 and Data2 Area -----------------------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Data1 = Lumbar Result: M_Set_WPE_180
------------------------- COMMENT: Wizard: Handle Date Time Area: 01/01/2000 10:00:00 ---------------------------
QUERY          [DD_Proc_Event] AND [DD_Proc_Event] Start_DTStamp = 3471242400 Result: M_Set_WPE_181
------------------------- COMMENT: Wizard: Handle Set Maths ----------------------------------------------------
INTERSECTION     using M_Set_WPE_179 and M_Set_WPE_180 Result: M_Set_WPE_EndResult_182
INTERSECTION     using M_Set_WPE_181 and M_Set_WPE_EndResult_182 Result: M_Set_WPE_EndResult_183
------------------------- COMMENT: Wizard: END OF DD_Proc_Event QUERY ------------------------------------------
```

Query: Wizard: Normal Query: Procedures: Epidural Catheter: Query

The above list of Query commands can be further edited to suit your requirements.

Chapter 59
Reports: Query Tutorial

59.1.0 Introduction

Queries in a relational database cause a lot of confusion.

The following is a mini tutorial on how Queries are performed in STATIC. You can use the information presented here as a basis for creating Queries anywhere in your database - whether it is for the Detail or Summary Report or the Query area itself.

In this chapter, we will cover the following topics:

59.1.1 Query Tutorial: Relationships between Tables

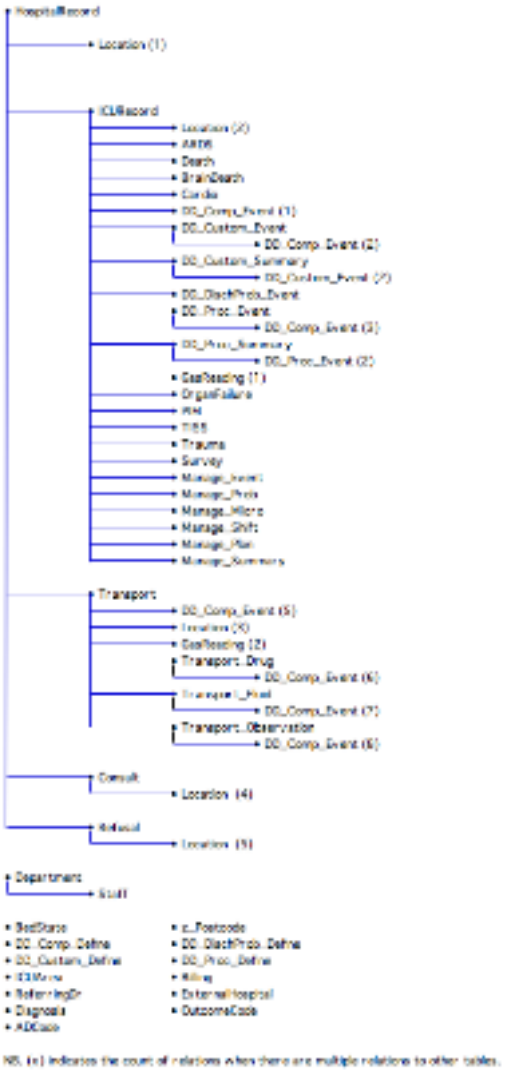
You must know a little about the organization of data in STATIC to make effective use of this Report. You must understand the following concepts:

Master Table - The table for which you are trying to create a selection.

Current selection - This is the selection of records created for the Master Table by the Query.

Related Tables - These are Tables that your Master Table has a relation to.

In STATIC the relations you need to remember are as below:



Database Schema: Table Relationships

A Table to the left of another Table is termed the ONE Table the table to the right is called the MANY Table.

Thus a single HospitalRecord Table (ONE TABLE) record has many ICURecord Table (MANY Table) records related to it. And a single ICURecord Table (ONE Table) record has many Location Table (MANY Table) records related to it.

Note that the BedState and many other Tables have no relation to any other table.

59.1.2 Query Tutorial: Creating One or Many Line Queries

A One-Liner

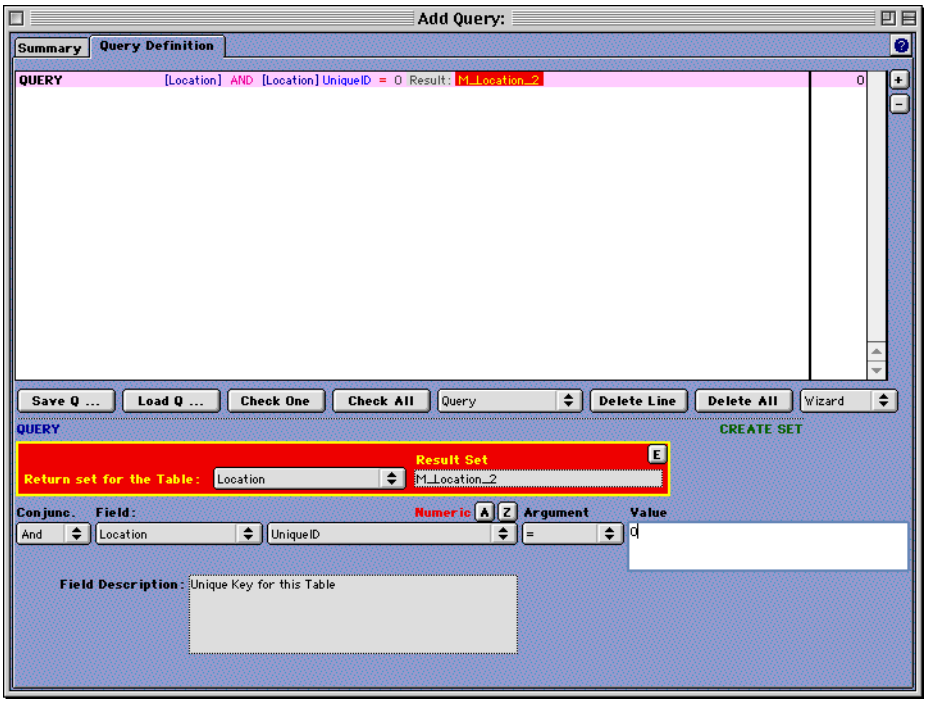
The simplest form of query is a one-line query.

To add a line to a query, we select the Command Drop Down list and select the Query command.

You edit this line by selecting the Conjunction you want (remember the first one has no effect and can be anything you want), followed by the Table you want, then the field you want and the Query argument. Finally you type in the value you require.

If the field that you want to query on is not visible, you will have to scroll down the list.

Here is an example of a one-line query that may be used to find all [Location] records:



Query Tutorial: A One-Liner

A Two-Liner

Often, you will want to qualify the query even more by adding more lines to the query.

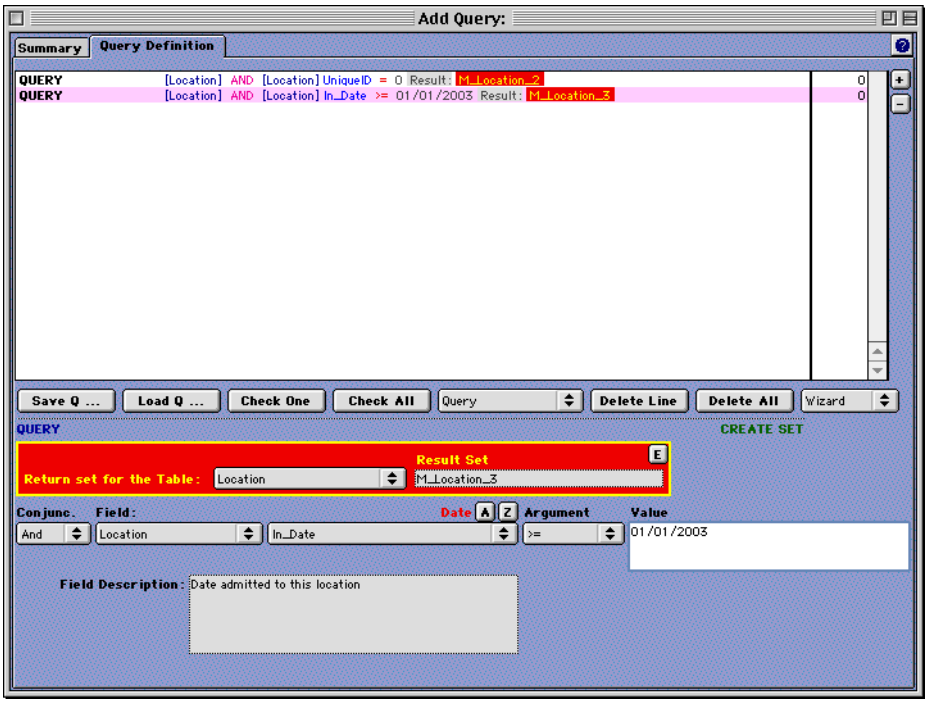
To add a second line to the query, we select the Command Drop Down list and select the Query command again.

The Query lines area will automatically fill with whatever was selected last in the area. In other words the last line selected is duplicated.

You edit this line by selecting the Conjunction you want, followed by the Table you want, then the field you want and the Query argument. Finally you type in the value you require.

If the field that you want to query on is not visible, you will have to scroll down the list.

The Query Line area looks like this:



Query Tutorial: A Two-Liner

A Three-Liner or more

When you load a previously-saved query, you always have the option to add more lines to the query. We can turn our two-line query into three lines or more by continuing to add more Query command lines.

59.1.3 Query Tutorial: The Conjunction Operators: And, Or, Except

The Query Editor gives you speed, power, and flexibility in querying. A large part of the reason for its power and flexibility is the ability to link query lines together with the query conjunctions **And**, **Or**, **Except**.

Each of these three words has a slightly different use in the Query Editor than the same word has in real life. Let's look at the use of the three words in the Query Editor

The Conjunction And

When two query lines are joined by the conjunction **And**, this means that the query result will be records that have **both** Condition 1 **And** Condition 2. For example:

```
QUERY [Location] AND [Location]Demog_Last_Name # Jones
QUERY [Location] AND [Location]Stay_Days >  10
```

This query would find only those records that meet both conditions simultaneously.

User Tip: When two query lines are joined by the conjunction **And**, the resulting current selection of records will always be equal to or smaller than the current selection that would have resulted from just doing one line of the query.

The Conjunction Or

When two query lines have the conjunction **Or**, this means that the query result will be records that have **either** Condition 1 **Or** Condition 2 **Or** both conditions simultaneously. For example:

```
QUERY [Location] AND [Location]Demog_Last_Name # Jones
QUERY [Location] OR [Location]Stay_Days >  10
```

We will find more records with this **OR** query than we did with the **AND** query.

User Tip: When two query lines are joined by the conjunction **Or**, the resulting current selection of records will always be equal to or larger than the selection that would have resulted from just doing one line of the query.

The Conjunction Except

When two query lines have the conjunction **Except**, this means that the query result will be all records that have Condition 1 - except those records that **also** have Condition 2. For example:

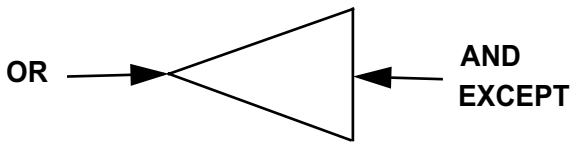
```
QUERY [Location] AND [Location]Demog_Last_Name # Jones
QUERY [Location] EXCEPT [Location]Stay_Days >  10
```

User Tip: When two query lines are joined by the conjunction **Except**, the resulting current selection of records will always be equal to or smaller than the selection that would have resulted from just doing one line of the query.

As you have seen, the Query Conjunction Operator can make quite a difference in the query result!

59.1.4 Query Tutorial: The Funnel Concept

Now let's get a mental picture of what happens when you add lines to a query in the Query Editor Take a look at the diagram below:



Query Tutorial: The Funnel Concept

This is what we call the **Funnel Concept**. This concept is a visual way for you to understand that, for each line you add to a Query, the following rules hold true:

If the conjunction is Or, the selection may get larger, but it will never get smaller;

If the conjunction is And, the selection may get smaller, but it will never get larger;

If the conjunction is Except, the selection may get smaller, but it will never get larger.

Testing the Funnel Concept

Just to see how this works, let's take the two-line query that we have already saved, and let's see what happens as the we change the conjunctions.

```
QUERY [Location] AND [Location]Demog_Last_Name # Jones
QUERY [Location] AND [Location]Stay_Days >  10
```

As we go through the queries, we will perform each query as a one-line query so we can see the results. To save time and space, we will only show the number of records that the query returned.

Note: Because your data file may not be exactly the same as the data file that we used in these examples, the number of records that your queries return might be different from those shown below. The important factor is the relative number of records returned, not the exact numbers.

SINGLE LINE QUERY
`QUERY [Location] AND [Location]Demog_Last_Name # Jones`
Returns 8934 of 8964 Records

SINGLE LINE QUERY
`QUERY [Location] AND [Location]Stay_Days > 10`
Returns 460 of 8964 Records

OK, let's see what happens as we add the second line to the first line in three separate queries, each time changing the conjunction. We start with **And**:

AND QUERY
`QUERY [Location] AND [Location]Demog_Last_Name # Jones` `QUERY [Location] AND [Location]Stay_Days > 10`
Returns 456 of 8964 Records

Compared to the one-line result, the funnel became smaller.

But if we use the same query again, and just change the conjunction to **Or**:

OR QUERY
`QUERY [Location] AND [Location]Demog_Last_Name # Jones` `QUERY [Location] OR [Location]Stay_Days > 10`
Returns 8938 of 8964 Records

Compared to the one-line result, the funnel became larger.

Now: what do you think will happen if we change the conjunction to **Except**?

EXCEPT QUERY
`QUERY [Location] AND [Location]Demog_Last_Name # Jones` `QUERY [Location] EXCEPT [Location]Stay_Days > 10`
Returns 8478 of 8964 Records

Compared to the one-line result, the funnel became smaller.

By the way: you may wonder why we have explained the Funnel Concept so thoroughly by repeating ourselves in a slightly different way. The reason is this:

Having a thorough understanding of the Funnel concept is essential if you want to become a power user of the STATIC Query Editor!

Query Tutorial: Query Line Order and the Funnel Concept

You need to know how the Query Line Order can affect the results. Let's use three query lines to build some tests. Our three query lines are:

SIMPLE QUERY	No Found
`QUERY [Location] AND [Location]Demog_Last_Name # Jones`	8932

SIMPLE QUERY	No Found

QUERY [Location] AND [Location]Stay_Days > 10	460

SIMPLE QUERY	No Found
QUERY [Location] AND [Location]Out_Date > 01/01/1999	3639

So let's experiment. The And-And order will be our starting point. Our test will be to see what happens if we change the order to Or-And, to And-Or, and to Or-Or.

In each case, we will show you the Query Editor, and then the number of records that result from that query.

AND AND Query	No Found
QUERY [Location] AND [Location]Demog_Last_Name # Jones	8932
QUERY [Location] AND [Location]Stay_Days > 10	456
QUERY [Location] AND [Location]Out_Date > 01/01/1999	214
Result: 214 of 8964 Records	

AND OR Query	No Found
QUERY [Location] AND [Location]Demog_Last_Name # Jones	8932
QUERY [Location] AND [Location]Stay_Days > 10	456
QUERY [Location] OR [Location]Out_Date > 01/01/1999	3881
Result: 3881 of 8964 Records	

OR AND Query	No Found
QUERY [Location] AND [Location]Demog_Last_Name # Jones	8932
QUERY [Location] OR [Location]Stay_Days > 10	8936
QUERY [Location] AND [Location]Out_Date > 01/01/1999	3624
Result: 3624 of 8964 Records	

OR OR Query	No Found
QUERY [Location] AND [Location]Demog_Last_Name # Jones	8934
QUERY [Location] OR [Location]Stay_Days > 10	8936
QUERY [Location] OR [Location]Out_Date > 01/01/1999	8951
Result: 8951 of 8964 Records	

Can you guess a General Rule that is implied by these results?

Here is the rule: The later the Or in the query order, the more records the query will return.

Can you guess why?

59.1.5 Query Tutorial: Query Order and Set Theory

The answer to the Or puzzle lies in Set Theory. STATIC relies heavily on mathematical Set Theory. Graphically, we could represent the three sets as:

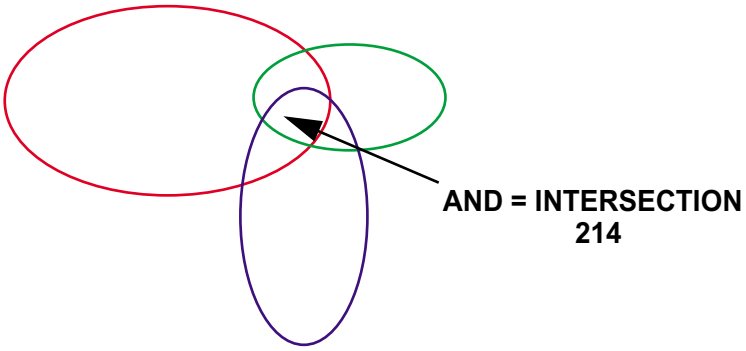
Query Tutorial: Query Order and Set Theory

Set Theory: A Graphical Explanation

Let's use these three graphical representations to understand how 4D interprets the query conjunctionsAND, OR, and EXCEPT.

AND = Intersection

The conjunction AND tells 4D to do an intersection of the two sets. The word intersection means exactly what you think it means: find the place where the two sets intersect; that is, find the records that the two sets have in common.

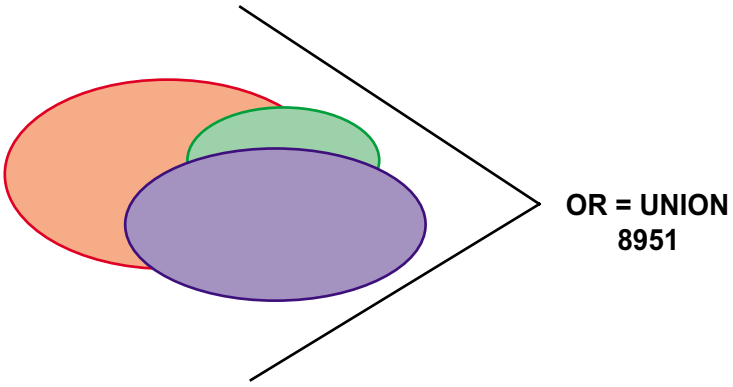


Query Tutorial: AND = INTERSECTION

OR = Union

The conjunction OR tells STATIC to do a Union of the sets. The word Union means exactly what you think it means: Join the sets together. If a record is in either set, it will be in the result set.

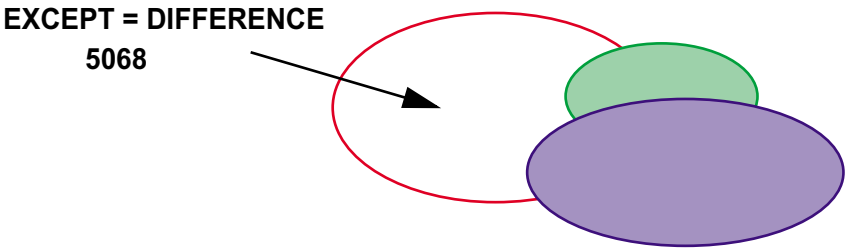
If a record is a member of either set, then it is counted as a part of the result. However, if a record is a member of more than one of the united sets, the record is still only counted once.



Query Tutorial: OR = UNION

EXCEPT = Difference (almost)

The conjunction EXCEPT tells STATIC to do a Difference of the two sets, but only put into the result set the records in set A that are not in set B. So that you will understand EXCEPT, here is a graphic example:



Query Tutorial: EXCEPT = DIFFERENCE

59.1.6 Query Tutorial: Cross Relational Query

Sometimes we want to find a selection of records for a Table based on the values of records in another Table. This is called a Cross Relational Query. For instance:

CROSS RELATIONAL QUERY	No Found
`QUERY [Location] AND [HospitalRecord]Demog_Last_Name # Jones`	8932

Notice that the Master Table and the Field Table are not the same. We can do this because the `[Location]` table has a relationship with the `[HospitalRecord]` table and the `[Hospital Record]` table is to the left of the `[Location]` table in the Relations diagram Query Tutorial: Relationships between Tables on page 469.

Now if we try the reverse of this:

CROSS RELATIONAL QUERY	No Found
`QUERY [HospitalRecord] AND [Location]Demog_Last_Name # Jones`	6487

At first it may seem that we have a wrong result. But we are now returning [HospitalRecord] Table records. Because there can be many [Location] records for each [HospitalRecord] record, we get a much smaller result.

59.1.7 Query Tutorial: Using the Join Set Command

At this stage we should mention the Join Set command. This command, as discussed earlier, allows you to create a Set of records based on a related Set of records. This is like doing a cross relational query followed by some Set commands all in one go. Thus for the above examples we could also have written:

CROSS RELATIONAL QUERY	**No Found**
QUERY [Location] AND [HospitalRecord]Demog_Last_Name # Jones Result: M_Location_2	**8932**
JOIN SET VERSION	**No Found**
QUERY [HospitalRecord] AND [HospitalRecord]Demog_Last_Name # Jones Result: M_HospitalRecord_3	6487
JOIN SET From Set M_HospitalRecord_3[HospitalRecord] To Set M_Location_4[Location]	**8932**

CROSS RELATIONAL QUERY	**No Found**
QUERY [HospitalRecord] AND [Location]Demog_Last_Name # Jones	**6487**
JOIN SET VERSION	**No Found**
QUERY [Location] AND [Location]Demog_Last_Name # Jones Result: M_Location_2	8932
JOIN SET From Set M_Location_2[Location] To Set M_HospitalRecord_3[HospitalRecord]	**6487**

Note that the results are exactly the same - as they should be!

Either method will create the same result with some important differences -

a You will usually find the Join Set method returns results MUCH faster.
b We find that using the Join Set method is also much more intuitive.
c Using the Join Set method is easier to read later when checking the Query.
d The Join Set method is guaranteed to never cause problems when there are circular relationships - these are relations where you can follow the flow in a circular pattern. For instance in STATIC, moving from [Location] to [HospitalRecord] to [ICURecord] back to [Location]. We have seen the use of a Cross Relational Query fail under some circumstances when there are too many Steps from the Master Table to the Field Table. In the case of STATIC this does not appear to be a problem at the moment BUT we will be adding more Tables to the program and so it may become a problem later on. Our advice, avoid cross relational Queries, use Join Set instead.

59.1.8 Query Tutorial: Using Sets

Sets are saved selections. They reside in memory and are VERY fast in operation. They allow you to create a new set based on the combination of two sets. This combining of sets can be done as many times as you like - until you have created the selection of records you require.

A common required task for any Query in STATIC is to create several sets of records for a particular time interval...

And for this time interval find the admissions that:

a Survived Hospital
b Died in Hospital
c Died in ICU

We will use sets (and some Join Set commands) to create all the required selections of Records:

USING SETS
||.Comment: Get All ICU Records in this time interval.||
`QUERY [ICURecord] AND [ICURecord]Adm_Date >= 01/01/1999 Result: M_ICURecord_1`
`QUERY [ICURecord] AND [ICURecord]Adm_Date <= 31/12/2000 Result: M_ThisYearAll_3`
This creates a set of ICURecords called `M_ThisYearAll_3` for the time interval specified - note that we have created a named set clicking the *E* Button to edit the Set Name.
||.Comment: Get all Admissions that have ever been to ICU.||
`QUERY [Location] AND [Location]Current_Area_Type = Adult_ICU Result: M_Location_4`
`JOIN SET From Set M_Location_4[Location] To Set M_ICU_5[ICURecord]`
`INTERSECTION using M_ThisYearAll_3 and M_ICU_5 Result: M_ICU_5`
Here we use the `[Location]` Table to find all ICU admissions that have ever been to `Adult_ICU`. Remember that the `[Location]` record will tell you what level of ICU a patient has been admitted to (the patient may have been in both levels of ICU within the same admission). The Join Set then gives us the selection of `[ICURecord]` records that have had an `Adult_ICU` Admission. We create a set `M_ICU_5` and then Intersect this with the time interval set `M_ThisYearAll_3` to find all admissions that have been in `Adult_ICU` within the time interval we require. Note that we have reused the `M_ICU_5` set for the Results set - that is perfectly OK to do as long as you do not need the contents of the original set.
||.Comment: Get all Admissions that survived Hospital.||
`QUERY [HospitalRecord] AND [HospitalRecord]Disch_Outcome # Died Result: M_HospitalRecord_6`
`JOIN SET From Set M_HospitalRecord_6[HospitalRecord] To Set M_HospitalAlive_37[ICURecord]`
We search for any `[HospitalRecord]` records that did not Die. Through the Join Set this gives us all `[ICURecord]` records that have survived. We save this as a set - `M_HospitalAlive_37.`
||.Comment: Get all Admissions that Died in Hospital.||
`QUERY [HospitalRecord] AND [HospitalRecord]Disch_Outcome = Died Result: M_HospitalRecord_7`
`JOIN SET From Set M_HospitalRecord_7[HospitalRecord] To Set M_HospitalDied_39[ICURecord]`
We search for any `[HospitalRecord]` records that Died. Through the Join Set this gives us all `[ICURecord]` records that have Died. We save this as a set - `M_HospitalDied_39`.

||.Comment: Get all Admissions that survived ICU.||
`QUERY [ICURecord] AND [ICURecord]Disch_Outcome # Died in ICU Result: M_ICUAlive_40`
We search for any `[ICURecord]` records that did not Die. We save this as a set - `M_ICUAlive_40.`
||.Comment: Get all Admissions that Died in ICU.||
`QUERY [ICURecord] AND [ICURecord]Disch_Outcome = Died in ICU Result: M_ICUDied_42`
We search for any `[ICURecord]` records that Died. We save this as a set - `M_ICUDied_42.`
||.Comment: Final Alive.||
`INTERSECTION using M_HospitalAlive_37 and M_ICUAlive_40 Result: M_FINALALIVE_45`
`INTERSECTION using M_FINALALIVE_45 and M_ThisYearAll_3 Result: M_FINALALIVE_45`
Here we do an intersection between the ICUAlive and the HospitalAlive sets. This does not need to be done unless you suspect errors in your data and want to eliminate some of these before preceding. If you do suspect problems then the Query needs to be constructed differently - Query successively for all possible outcomes using a series of OR Queries. You could also look for completed records only using the completion fields. In short you can make your filters as complicated as you like. The best filter of all is having good reliable data in the first place!
||.Comment: Final ICU Death.||
`INTERSECTION using M_ICUDied_42 and M_ThisYearAll_3 Result: M_FINALICUDied_49`
Doing an Intersection with the Interval Set gives us the admissions that Died in ICU
||.Comment: Final Hospital Died.||
`INTERSECTION using M_HospitalDied_39 and M_ICUAlive_40 Result: M_FINALHOSPITALDIED_52`
`INTERSECTION between M_FINALHOSPITALDIED_52 and M_ThisYearAll_3 Result: M_FINALHOSPITALDIED_52`
Here we do an intersection between the ICUAlive and the HospitalDied sets. This will give us a set of admissions that survived ICU but subsequently died on the Ward.

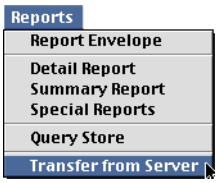
This is quite a long example, but it illustrates how you can construct your Queries to get what you want.

Chapter 60
Reports: Transfer from Server

60.1.0 Transfer from Server

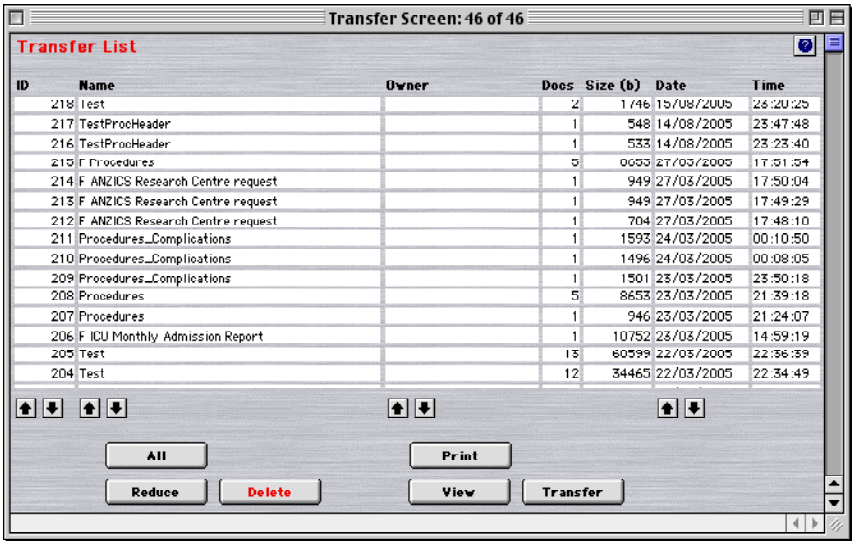
This is useful only for Client Server environments.

In order to enter the Transfer from Server area, choose the following Menu Item:



Transfer from Server: Menu item

the following window will display:



Transfer from Server: Transfer List window

When Report Envelopes are executed on the Server, the result is stored in the STATICItems folder on the Server.

This system allows you to retrieve Report Envelopes from the Server and copy them to your Client STATICItems folder on your Workstation. This is in effect a FTP (File Transfer Protocol) facility within STATIC. The Transfer is effected in such a way that the Directory structure of the items on the Server are replicated on the Client.

Window Items	Purpose
Transfer List	Lists all the Transfer items available on the Server.
ID	Internal record number
Name	Name of the Report Envelope sent
Owner	Owner of the Report Envelope
Docs	Number of documents in the Report Envelope
Size (k)	Size of all the contents of the Report Envelope
Date	Date on which report was created
Time	Time on which report was created

Window Items

Button Name	Action
Sort Buttons	Sort the List into ascending or descending order.
All	Display all the Transfer records.
Reduce	Reduce the selection of Transfers to the ones selected.
Delete	Delete the selected Transfer
Print	Print a list of the Transfer's displayed.
View	View the selected Transfer. You can also do this by double click on the Transfer selected. You can open as many Transfer's as memory allows. You can only view but not edit the Transfer specification
Transfer	Move the stored Report Envelope and all its contents on the Server to the Workstation you are on.

Buttons

To use this area, simply select the report you wish to transfer and click the *Transfer* button.

Chapter 61
Administrator Menu

61.1.0 Introduction

In next few chapters we will guide you through some of the extra functions that are available to the Administrator. We will cover:

Maintain Admissions

Datafile Integrity

Command Centre

Task Centre

Activity Logs

Look up an Error code

Test Client Server Speed

Chapter 62
Administrator: Maintain Admissions

62.1.0 Introduction

The most important tables in the database as far as data collection is concerned are the ICURecord, Refusal, Consultation and Transport Tables. Common to all these 4 Tables is the HospitalRecord Table. This area allows you to make some profound changes to the relations between these 4 Tables and the Hospitalrecord Table. This area will also allow you to Export and Import complete Admissions with all related records for these Admission areas.

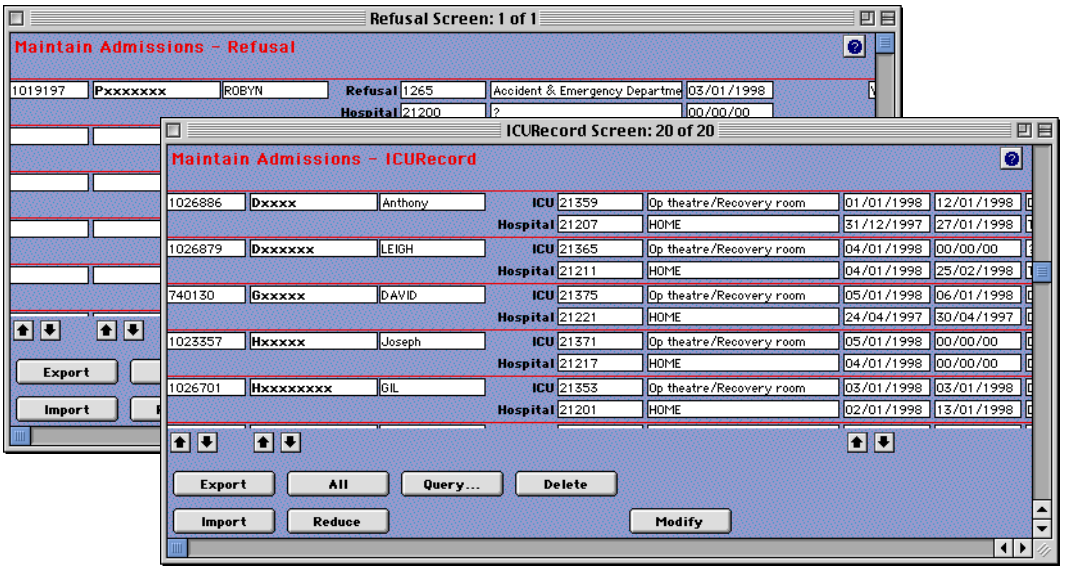
62.1.1 Maintain Admissions: Output Form

Maintain Admissions: Menu Item

Selection of the Maintain Admissions menu item will display the following:

Maintain Admissions: Choice Window

Clicking on any of the 4 Buttons will display a list of admissions for that area:

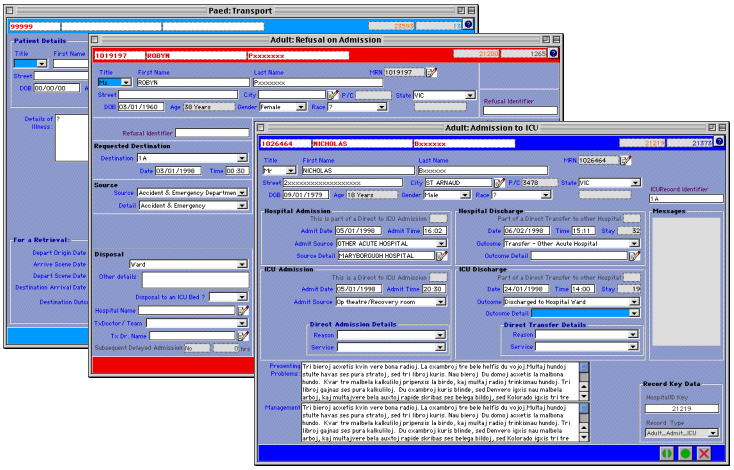


Maintain Admissions: List Window showing Refusal and ICURecord as example

Button Name	Action
Export	This allows you to Export the currently selected records in the Admission list to a special document that contains ALL the data associated with the Admission (all related records including the Hospital Record). This document has a special internal format that is readable by STATIC only. This is a way of exporting and later Importing all information relating to an Admission. Before Export proceeds, the database is locked. The document created is saved to the STATICItems folder with the following path: STATICItems/Store/Admission_Records/DocumentName.six (srx, scx, stx)
Import	Import a document created with the *Export* function above. The import is intelligent. If the Import encounters a Hospital record in the datafile that matches the Hospital record that is related to the current Admission being imported from the document, then it ignores the Hospital record in the document and links the Admission to the already existing Hospital record in the datafile. This prevents duplicate Hospital records as a result of imports. If the document was created by an old version of STATIC it will not be imported as the data arrangement will not match. You will be warned if this is so. Before Import proceeds, the database is locked.
All	Display all the records.
Reduce	Reduce the selection of records to the ones selected.
Query	Find the records you require by using a Query.
Delete	Delete the selected records.
Modify	Modify the selected record. You can also do this by double clicking on the record selected. You can open as many records as memory allows.
Sort Buttons	Sort the List into ascending or descending order.

Button actions

62.1.2 Maintain Admissions: Modify



Maintain Admissions: Modify: Input layout

This area can be used by the Administrator to quickly change the main identifiers of Admissions. This includes dates, times, Source of Admission and Destination of Discharge.

This area gives you quick access to the most troublesome aspects of data quality maintenance.

We have found that the most common things that go wrong in the data collection process are:

a Creation of a New ICU Event when a patient is moved from one Ward to another within the same ICU Complex.

Reason: The ICU staff did not understand the data model adopted by STATIC. Namely One Hospital admission with one or more ICU admissions and maybe several locations for the patient within each ICU Admission.

Remedy: This area will allow you to delete the ICU record and its associated Hospital record as well as all the other related records. When the last ICU Record that has a relation to a Hospital record is deleted then the Hospital record is also deleted - STATIC does not allow orphaned Hospital records. It is then a simple matter of updating the ICU Event with the data deleted. -- AND educating the ICU Staff that created the problem in the first place!

b Creation of a new ICU Event that should have been a Readmission but was mistakenly created as a new Hospital AND new ICU Admission.

Reason: ICU Staff did not understand that you do not create a new Hospital Admission when a patient is Readmitted.

Remedy: In this case identify the ICU HospitalID Key for the original New Admission ICU Record. Then navigate to the ICU Record that is attached to the New Hospital record that is not required. Set the ICU HospitalID Key field in the form to this number. What this does is to attach the ICURecord to the proper Hospital Record.

Maintain Admissions: Modify: Input layout: ICU: HospitalID Key

Take care this is one of those occasions where you can completely destroy the relational integrity of your database!

If you inadvertently attached an ICURecord to the wrong Hospital Record it would give you some very strange data and be almost undetectable.

c Outcome data completion

Reason: Outcome data, especially Hospital outcomes, is received only some time after ICU discharge.

Remedy: This is more for convenience. Instead of wading through the pages of the ICU Record form, this area will allow you to quickly see the outcome data and complete it. It is of course better to complete this information using Import Files: Hospital Outcome File on page 505.

Chapter 63
Administrator: Datafile Integrity

63.1.0 Introduction

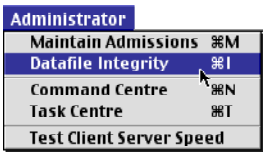
Every database experiences problems with its data from time to time. This area allows you to rectify the vast majority without resorting to outside help (from us).

Some functions available will take a long time to complete - so be patient.

You can select several options at once and STATIC will work through them all sequentially.

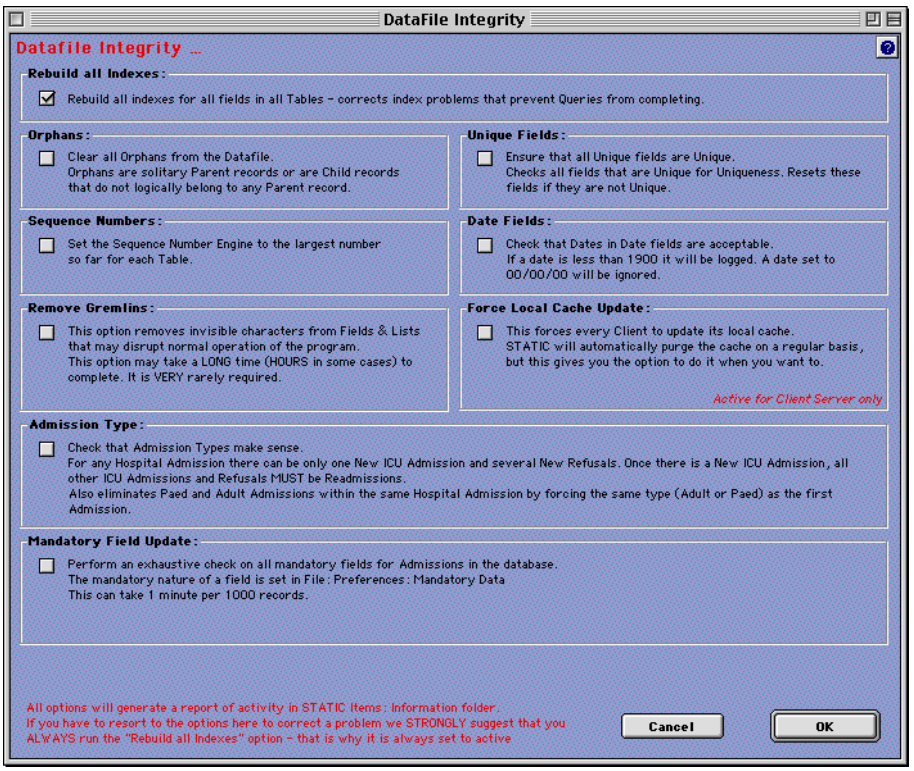
63.1.1 Datafile Integrity: Main Window

Select the menu bar item to access this function:



Datafile Integrity: Main Window: Menu Bar

And the following window will display:



Datafile Integrity: Main Window: Select Options

Select the options you require by checking the appropriate boxes. After the options have completed, you will find what was found or changed in the datafile in a log document created in the STATICItems folder at:

... STATICItems/Information/Data_Integrity/

Note: For Client Server, this document is located in the STATICItems folder located on the Server.

Rebuild all indexes

Indexes allow STATIC to perform Queries more efficiently. They are also subject to errors. The errors tend to occur due to crashes of the computer while STATIC is running. Errors can also occur due to frequent deletion and addition of records. If the underlying database engine is changed, the method used for indexation may change also causing problems.

How do you know it is required to run?

If you are experiencing crashes that are preceded by an error message that informs you that a record could not be found or that the index is damaged. It is a good idea to run this option whenever you have ANY problems with the database.

If you have imported a lot of records into or deleted a lot of records from the database, the state of the indexes may not be optimal for fast Queries. Running this option optimizes the indexes for Queries speeding up all subsequent Query operations.

We have left this option ON as the default as this option should be run as the first item whenever you have to resort to any of the options in this area.

What does it do?

It destroys all indexes and then rebuilds each one from scratch. This may take some time depending on the size of your database.

Orphans

Orphans are records which do not have any logical place in the database. For example, a Procedures record which does not have a parent ICU Record. These can occur if STATIC crashed while writing information to disk. In this case maybe not all of the logical records are actually written to disk resulting in orphans.

How do you know it is required to run?

If you are getting extra records that should not be there in reports or exports.

What does it do?

First it assumes that ALL Admission Records are legitimate records. It will attempt to create all the related records for the Admission Records if they do not have the required related records present e.g. A HospitalRecord and one Location record. This may result in Location records that do not have valid dates appearing in the Modify Admissions Form.

Next it will delete any solitary HospitalRecord records which do not have any Admission Records related to them.

Next it will delete any solitary Location records. It will then check the link of all Location records to their Hospital records and recreate the link if missing through the Admission Record link. Next all solitary records for all other tables are deleted.

We believe that this sequence will give you the best data recovery possible while deleting troublesome orphans.

Unique Fields

Some fields such as internal record numbers must be unique. This ensures that it is so. Records may be damaged by a crash. In this case there are sometimes several records with a Unique field set to the number Zero. This option resets them to a valid number.

How do you know it is required to run:

If you are getting the message that STATIC cannot save a new record as there is a Unique field conflict.

Sequence Numbers

STATIC creates its own Sequence numbers on the fly. The system that does this relies on knowing the last largest number issued. After a crash this is occasionally set to an incorrect value. This option forces the Sequence number system to reset itself to correct values. You would need to use this option very rarely as we have, for obvious reasons, attempted to make it almost bomb proof.

How do you know it is required to run:

If you are getting the message that STATIC cannot save a new record as there is a Unique field conflict.

Date fields

This is more for your convenience. It checks all records for valid dates. It will log any record that contains dates before 1900. It does not change the datafile but allows you to follow up records that have troublesome dates by using the log file.

How do you know it is required to run:

If your reports start to show average ages of over 90years old or similar strange results with dates. (Really, we have had this as a patient was admitted 1/1/1099 making him very old and messing up the average.)

Remove Gremlins

What is a Gremlin?

A gremlin is a character in a field of your datafile that should not be there. It is usually an invisible, non printing character. This makes it difficult to visually detect and remove by editing the field directly even if you knew the problem was there.

Where do they come from?

Often from strange keyboard combinations and data import from other sources. Data import includes Cut and Paste because a Gremlin may be lurking in the middle of the Cut text and be Pasted with the text into your database.

Other Gremlins are due to impossible numeric values such as infinity or negative infinity. We have never seen these in STATIC but just in case... this routine will check for and remove them if found.

How do I stop them?

Realistically, you can't completely insure against them due to Cut and Paste by the user

How do I remove them?

This function removes them. This function can take a very long time as every character in every field for every record will be examined.

We have seen this function take over 30 minutes to complete.

Force Local Cache Update

This is only useful for Client Server.

What is the Local Cache?

Every Client in a Client Server environment maintains a copy of STATIC in its local cache. This copy is automatically updated every time the program at the Server is updated.

This makes it very easy to update STATIC.

Unless the underlying database software requires updating you do not need to go to your Clients to update any software. It is all done automatically for you.

We have noticed that over time or after a certain number of updates that the cache starts to misbehave. STATIC will automatically purge the cache on a regular basis anyway, but this gives you the option to do it when you want to.

The only drawback is that the cache needs to be reconstructed after purging. This is done as objects are required. So initially the apparent operation of STATIC will appear slower than it was prior to cache purging. as these objects will be accessed from the network instead of from the local hard disk.

Admission Type

There can be only one New ICU Admission per Hospital admission. All other ICU Admissions must be Readmissions. This looks for records that break this rule and resets them.

How do you know it is required to run:

This is the single most common mistake made during data entry. If your staff has not been trained in the data model that is used in STATIC they will not understand this concept especially in a multi ward ICU department. If untrained, they will tend to create New ICU Admission for every move from one ICU Ward to another and for every admission to ICU even if it is after surgery and the patient came straight back to ICU.

Mandatory Field Update

This function allows you to perform an exhaustive check on all mandatory fields in the database. The mandatory nature of a field is set in the File: Preferences: Mandatory Data see File: Preferences: Mandatory Data on page 83. It is the same function that is executed from the Preferences area after changing the mandatory nature of a field.

This command can take a long time to complete depending on the number of records you have within your database.

Other Items and Comments

Button Name	Action
Cancel	Cancel this function
OK	Process the options selected.

Button actions

Once you select to process the options selected by clicking the *OK* button, STATIC will close all windows and in the case of Client Server Lock all workstations while the options are processed.

Chapter 64
Administrator: Command Centre

64.1.0 Introduction

Sometimes the Administrator needs to Log Off or just Pause all Clients for a while. For instance when the Administrator is doing some Server maintenance.

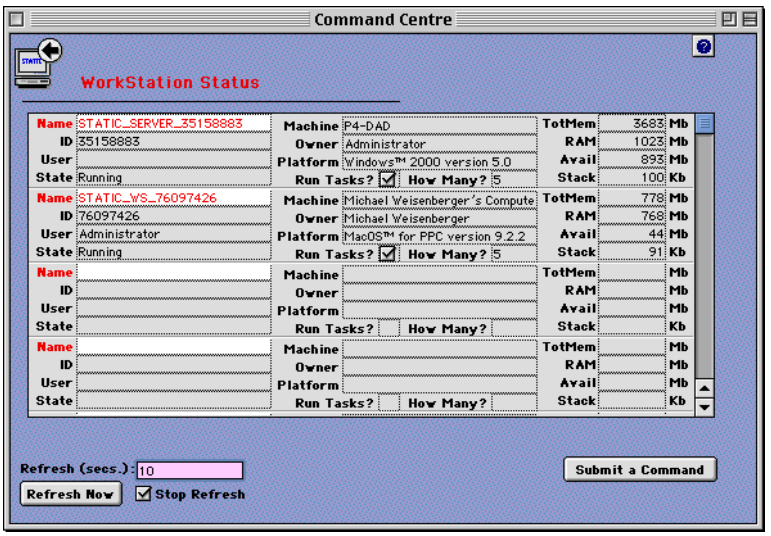
In the past that required the Administrator running all over the Hospital shutting down Workstations and posting notices that STATIC is not to be accessed. When the Administrator finally returns to the Server room expecting that all Clients have ceased activity he will quite often have found that some clown , has restarted a Workstation and is accessing STATIC.

Unfortunately preemptively forcing Server to Quit may cause data damage to the datafile if Clients are still logged on and is not very kind to users still using the database. So the only recourse is to go back to the Workstation in question and try again! We have been there and done that. This system was created as a response to this problem.

This area allows you to:

a See exactly who is logged on without going out of the Server room.
b Log Off Selected Workstation - The system does not allow the Workstation to Log On until a specified date and time is reached.
c Lock Selected Workstation - The users on this workstation can Quit but are not allowed to access any data.
d Unlock Selected Workstation or All Workstations- Remove all blocks to a selected Workstation or All Workstations.

64.1.1 Command Centre: Command Centre



Command Centre: Command Centre window

The currently logged on Workstations and the Server are displayed in the list. In the list above the Server and one workstation is displayed. With one glance you can see who is logged on and where.

Window Items	Purpose
Name	This is the name set for the workstation in Workstation: Name on page 63
ID	This is the unique workstation Identifier set in Workstation: Name on page 63
User	This is the User who is currently logged on for this workstation.
State	The State of this workstation - can be Running or Locked
Machine	The machine that this client is running on, as set in the Network Control panel on Windows and the File Sharing Control panel on Macintosh. The current values can be seen in Workstation: Name on page 63.
Owner	The Owner of the machine that this client is running on, as set in the Network Control panel on Windows and the File Sharing Control panel on Macintosh. The current values can be seen in Workstation: Name on page 63.
Platform	The current Operating system of the Workstation machine
Run Tasks? How Many	Ticked if is set to Run Tasks and the number to run simultaneously. This is set in Workstation: Universal Tasks on page 67.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

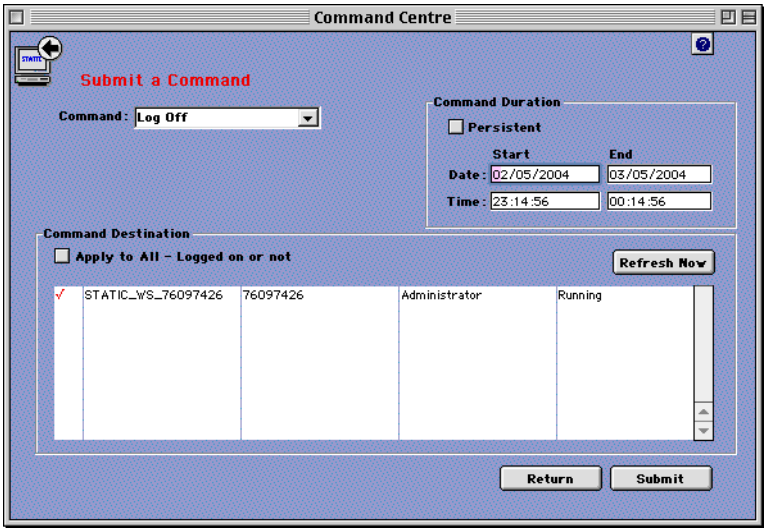
Window Items

Button Name	Action
Submit a Command	Click on this button to issue a Command - see next section.
Refresh (secs)	Set the delay before the list is refreshed.
Refresh Now	Refresh the list now.
Stop Refresh	Stop refreshing the list.

Buttons

64.1.2 Command Centre: Submit a Command

This window allows you to issue and customize Commands:



Command Centre: Submit a Command

Window Items	Purpose
Command	There a 3 Commands you can choose from: Log Off - will Log Off the selected workstation(s). Lock - will Lock the selected workstation(s). This will close all open windows but will not exit the workstation. Release - will Release the selected workstation(s).
Command Duration	In this area you can set the Date and Time for the Start and End of a Command. In effect it allows you to schedule a Command.
Persistent	If the Persistent checkbox is set, then the workstation will be locked until it is released by a Release Command. In other words there is no time limit for the command for that workstation. If you have accidentally set all workstations to be Locked or Logged Off, this could be a problem. In that case, the Administrator will need to Log on and will be given the opportunity to clear the Command.
Command Destination	A list of all workstations currently logged on is displayed. Any workstation that is selected with a tick will have the Command selected applied to it. To select a workstation, click on its row. To deselect, click the row again.
Apply to All - Logged on or not	To apply the Command to all Workstations whether they are logged on or not, tick the checkbox.
Refresh Now	Refresh the list of workstations. Required if you stay too long in this window and new users have logged on.
Submit	Apply the selected Command to the selected workstations.

Window Items

Window Items	Purpose
Return	Return to the previous view.
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window.

Window Items

Chapter 65
Administrator: Task Centre

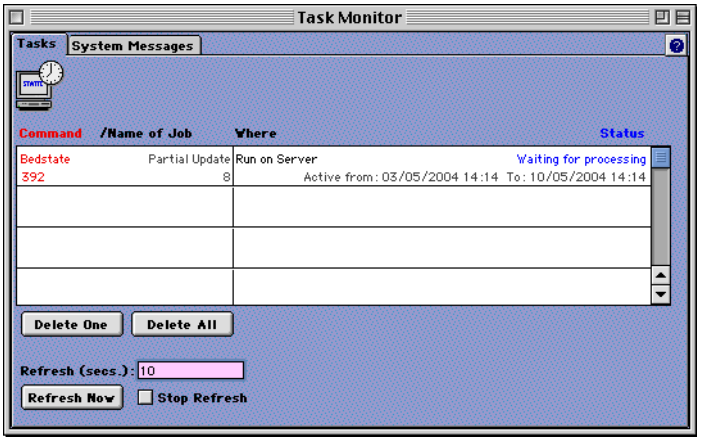
65.1.0 Introduction

This area allows you to monitor activity that has been scheduled or is running on your database.

65.1.1 Task Centre: Task Monitor

There are two types of Tasks in STATIC. Normal Tasks such as Reports being generated and System Messages that are to do with controlling access to the database by users.

Tasks



Task Centre: Task Monitor: Tasks

These are activities such as Summary and Detail reports handled by the Task Handling system. This area allows you to see what is scheduled, in progress and finished.

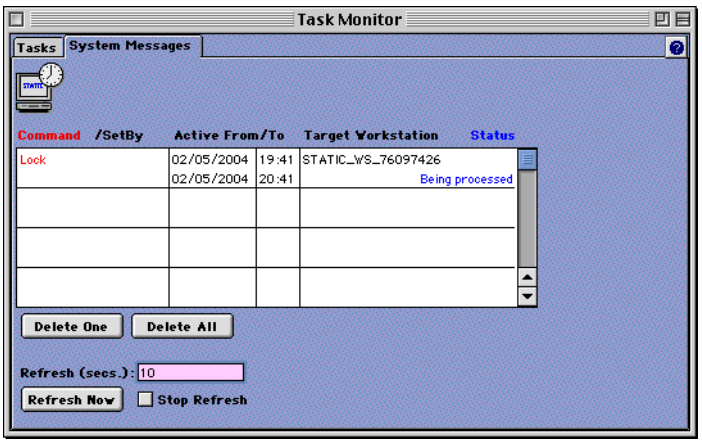
Window Items	Purpose
Command/ Name of Job	The Command Name in red will give you the name of the scheduled task and its ID. The name of the Job in black will give you the specific job description and its priority (1 to 10). A setting of 10 requires all workstations to be logged off before the Task can proceed.
Where	Can be on Server or a workstation.
Status	Gives you the status of a Task - either being processed or waiting to be processed. Once a Task is finished it is removed from the list.
Status Detail	This will give you details of the period over which this Task is active while waiting for execution. To allow for the possibility that a workstation is not logged on when a Task is due to be processed, all Tasks are given a window of opportunity during which processing can start. If processing did not start for whatever reason within this window, then the Task is Some Tasks are scheduled for immediate execution. You will see the message: Active from: Immediate execution...
Lower right hand Corner	Drag the lower right hand corner to resize the form.
Close Box	Click the close box to close the Window. This will also close any open detail records.

Window Items

Button Name	Action
Delete One	Delete the selected task from the list. If it is waiting to be processed it will be removed completely and the Task will not execute at all.
Delete All	Delete all tasks from the list. If they are waiting to be processed they will all be removed and will not execute. If they are already in progress then they are not deleted.
Refresh (secs)	Set the delay before the list is refreshed.
Refresh Now	Refresh the list now.
Stop Refresh	Stop refreshing the list.

Buttons

System Messages



Task Centre: Task Monitor: System Messages

These are commands sent from the Command Centre. This area allows you to see what is scheduled and in progress. Completed commands are automatically deleted from the list. These Commands can prevent a specific workstation or all workstations from logging on. You may need to do this from time to time as you administer the database.

Window Items	Purpose
Command/ Set By	The Command Name in red will give you the name of the Command. Who Set the command is given in Black
Active From/To	Provides the period over which this Command is active. To allow for the possibility that a workstation is not logged on when a Command is due to be processed, all Commands are given a window of opportunity during which processing can start. If processing did not start for whatever reason within this window, then the Task is usually discarded. A Persistent Command has Null Date Time values. This is Command is active until the Administrator deletes the command or sends a Release Command.
Target Workstation	A Command can be sent to a specific or All workstations.
Status	A Command is either Waiting to be processed, is Being processed or has Completed. If complete then the Command is deleted from the list.

Window Items

Chapter 66
Administrator: Test Client Server Speed

66.1.0 Test Client Server Speed

This is only useful for Client Server. Select the menu bar item to access this function:

Test Client Server Speed: Menu Item

Why have we given you this function?

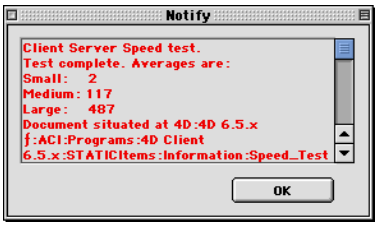
If the performance of STATIC appears to be sluggish, it may be difficult to determine what is causing the degraded performance. We have often found that it is caused by problems with the network. Proving it is another matter. This function will allow you to quickly determine the speed of communication between a Client and the Server.

How do we test the speed?

The Client sends a simple text file of ever larger size (128 bytes, 512Kbytes, 2000 Kbytes) to the Server and back again 10 times. During this operation you will a progress message such as this:

Test Client Server Speed: Progress message

On completion, you will be notified of the average speed as follows:



Test Client Server Speed: Result

You can also retrieve the details of the operation by opening the document created with the details of the test. This is located at:

STATICItems/Information/Speed_Test/SpeedTest_yyyymmddhhmmss.txt

The document can be opened in MS Excel:

SpeedTest_20040501001051.txt

	1	2	3	4	5	6	7	8	9	10	11
1	Client Server Speed test Results.										
2											
3	Test conducted on 1/5/04 at 00:10:51										
4	by Administrator from Michael Weisenberger's Computer										
5											
6	Sizes: 0.125; 512; 2000 Kilobytes										
7											
8	Small test:	1	5	1	1	1	1	1	2	2	1
9	Medium test:	107	107	136	108	112	120	124	122	114	117
10	Large test:	449	466	470	510	499	480	460	446	498	593
11											
12		Average	Low	High							
13	Small	2	1	5							
14	Medium	117	107	136							
15	Large	487	446	593							

est Client Server Speed: Detail Results

All times are in milliseconds (ms).

What is normal?

The speed to expect depends very much on the nature of the network. But in general you should see speeds of about:

1 ms for the small test

100 ms for the medium test

500 ms for the large test

Look for the order of magnitude rather than the absolute value. We have seen problem networks take as much as 10000 ms for the large test - clearly unacceptable.

What can you do if the speed is slow?

Complain to ITS (Information Technology Services) within the hospital. The server may be on a segment of the network that is very busy. There may be a faulty router on the network (we have seen this several times). There may be a faulty machine flooding the network either within the segment of the Server or the Client. Basically this is something you cannot fix - it is the network administrators responsibility.

Lastly, if you running a Client from a laptop using a wireless access point, expect slower speed. Even the fastest wireless connection is only 1/10 the speed of a fixed wire connection.

Chapter 67
Import Files Menu

67.1.0 Introduction

In this chapter we will show you how to import external information into STATIC. At the moment we only use this section for the import of Hospital outcome data. In the future we will use this section to import data form a variety of external data sources.

We will cover:

Hospital Outcome File

Chapter 68
Import Files: Hospital Outcome File

68.1.0 Introduction

Patients are often discharged from Critical Care long before they are discharged from the Hospital. This causes a problem -- how to complete the Hospital information regarding Hospital discharge information. This section allows you to automate the bulk of this task.

68.1.1 Hospital Outcome File - Preparation

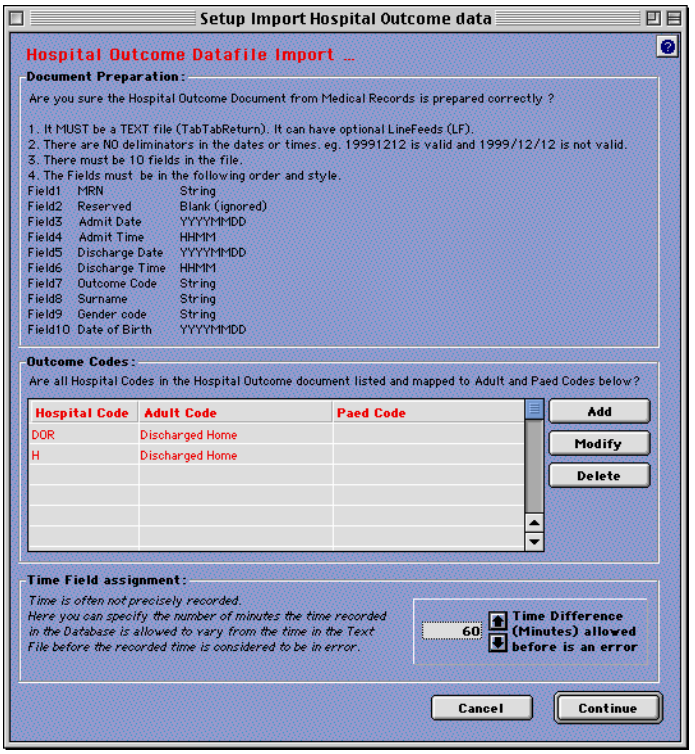
In order for the Import of the External file to be successful you will need to set up the External file and specify the Outcome codes used by your hospital.

This section will show you how to do this:

Click on the Import Files menu and select the Hospital Outcome File item:

Import Files: Hospital Outcome File menu item

The following screen will appear:



Import Files: Hospital Outcome File: Import Hospital Outcome data Dialog

External file preparation

The information contained in the external file must be in a format and order that STATIC can understand. If you look carefully at be above dialog, you will see explicit instructions on how to configure the file.

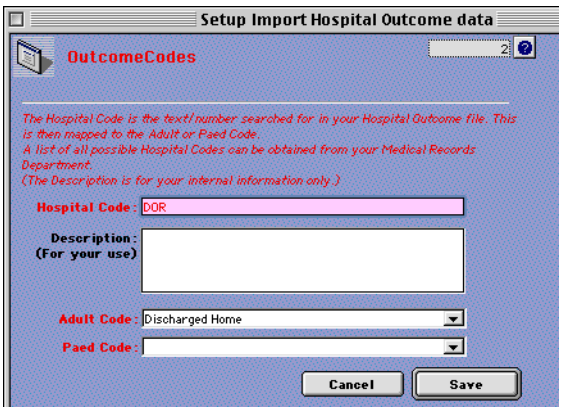
Notes: The file must be a text file. As STATIC is a cross platform application, it automatically handles both Macintosh and Windows style text file. The difference between the two is that Windows appends a Line Feed after the Return deliminator.

Field 2 is reserved, you can have anything you like within this field, but be aware that we may use this field in the future for a specific purpose.

Dates are in Y2K reverse format. Note that there are no separators between the digits. The same is true for time.

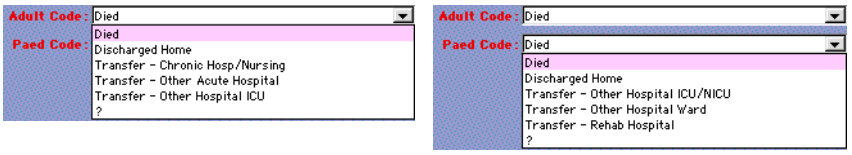
Outcome codes

Every hospital has its own outcome codes. These must be mapped to the Central Database Outcome codes. This section allows you to add and modify your specific outcome codes. Clicking on the Add or Modify button will display following:



Import Files: Hospital Outcome File: Edit Outcome Code

After entering your Outcome code details select the ANZICS Outcome code to map to:



Import Files: Hospital Outcome File: ANZICS Outcome codes

STATIC will compare the Outcome code in your Hospital Outcome document to the Hospital Code field and map this to the Central Database value (Adult and Paed Code) selected to complete the Outcome data in your records. It is thus CRUCIAL that the Hospital Code field contains correct data.

The Description field is for your internal information only and not used by STATIC internally.

68.1.2 Hospital Outcome File - Procedure

External file preparation

We assume that you have prepared your External file as specified in the previous section.

Outcome codes

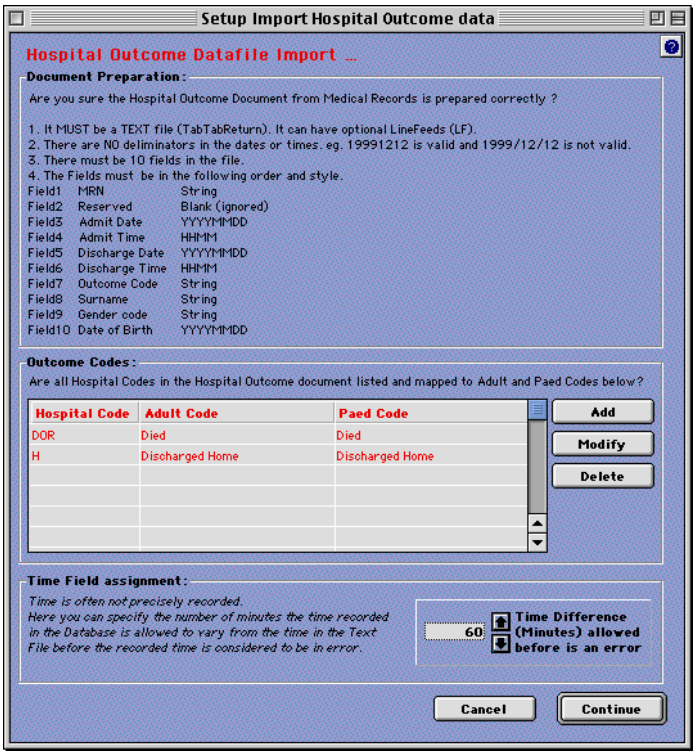
We assume you have set up your Hospital Outcome Codes. The above screen is obviously incomplete - there are many more codes than this for the average hospital!

To start the Import of Hospital Outcome data:

1 Click on the Import Files menu and select the Hospital Outcome File item:

Import Files: Hospital Outcome File menu item

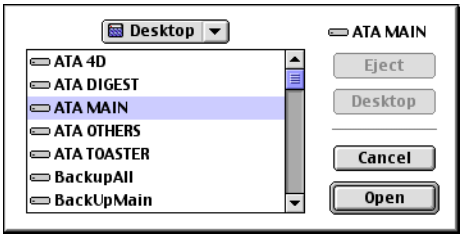
The following screen will appear:



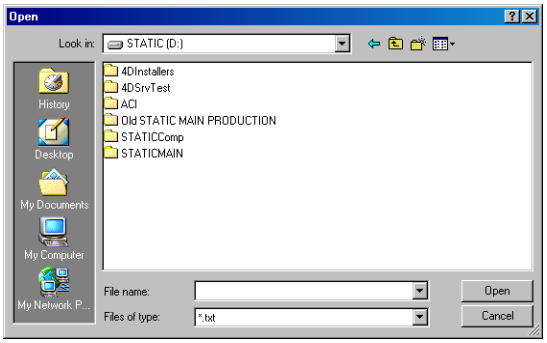
Import Files: Hospital Outcome File: Import Hospital Outcome data Dialog

2 If everything is correct press the Continue button in the Hospital Outcome Data window.

3 You will now be invited to open the External file:



Open External File dialog - Mac



Open External File dialog - Win

Navigate to the file you want to use and click on the Open button.

The function will now parse through your External file and match external data to the existing patient data. This may take some time depending on the size of your files. You will see various messages displayed as this proceeds:

Typical message window

68.1.3 Hospital Outcome File - Correcting Errors

STATIC will create the following documents if there are any problems while trying to match the External and Internal data.during the import. These documents will be saved to the following location:

STATICItems/Information/HospitalOutcome_Error/HospitalOutcomeYYYYMMDDHHMMSS/

Document name	Content
Zero_Records_With_MRN	This informs you that the function was unable to match the External file MRN with any MRN in the database. Could indicate a missing patient in the database.
ProblemDate_NoDateMatch	This informs you that the function was able to match the External file MRN with an MRN in the database but could not match an admission date for this patient. Could indicate an error in the data entered for the patient in the database.
ProblemDate_NoTimeMatch	This informs you that the function was able to match the External file MRN with an MRN in the database but could not match an admission time for this patient. Could indicate an error in the data entered for the patient in the database.
Problem_Outcome	This informs you that the Outcome code in the External file was unknown. Check your Outcome codes specified in the Hospital Outcome Data dialog.
Problem_Outcome	This informs you that the Outcome code in the External file was unknown. Check your Outcome codes specified in the Hospital Outcome Data dialog.
ManyMRN_NoDate	This informs you that the function was able to match the External file MRN with several MRN s in the database but could not match any admission dates for this MRN. Could indicate an error in the data entered for the patient in the database.
ManyMRN_ManyDates	This informs you that the function was able to match the External file MRN with several MRN's in the database but found several matches for admission dates for this MRN. Could indicate that the patient has been entered several times for the same admission.

Import Files: Hospital Outcome File: Error Documents

Now that you know there are Errors, you will need to go back to your records and correct the data. This can be done using a combination of the above documents and the Problem Messages area in any ICU Admission record. See General Features: Problem Messages on page 196.

Chapter 69
Functions in the STATIC Formula Editor

69.1.0 Introduction

A **Function** is a formula or a programming routine that returns a value, an answer. You will use functions in the STATIC Formula Editor.

We use the Formula Editor when Querying and when Sorting. This chapter contains a list of the functions that are useful when you are working with the Formula Editor. We will cover:

Boolean Functions

Numerical Functions

String Functions

Time and Date Functions

69.2.0 Boolean Functions

A ***Boolean function*** evaluates a statement and returns an answer of True or False. This answer is also displayed as yes or no, one or zero. Here are the boolean functions that STATIC recognizes in the Formula Editor.

:

Function	Effect	Example
NOT	Returns the opposite of a condition.	Not (Company = American Airlines) Company # American Airlines
True	Evaluates a statement to see if it is correct.	Male = True.
False	Evaluates a statement to see if it is not correct.	Male = False.
Num	Converts a Boolean value to a Numeric value. True statements return a one and False statements return zero.	Num(0=1) returns 0 because the statement is False. Num(1>0) returns 1because the statement is True.

Boolean Functions

69.3.0 Numerical Functions

Numerical functions return a value that is a number. Here are the numerical functions that STATIC recognizes in the Formula Editor:

:

Function	Effect	Example
Int	Returns the integer part of a number; that is, the portion of the number that is on the left side of the decimal point.	Int(1.91) returns 1 Int(0.91) returns 0
Dec	Returns the decimal part of a number; that is, the portion of the number that is to the right of the decimal point.	Dec(1.91) returns.91 Dec(1.0) returns 0
Round	Returns the number rounded to the number of decimal places that you specify in the call to the Round function. This means that you have to pass two parameters to the Round function: the number to be rounded, and the number of decimal places that you want to get back in the result. When you pass parameters to a 4th Dimension function, you separate the parameters with semicolons. Let's take the number 518.567 and see what happens when we pass different parameters.	Round(518.567;0) returns the value 519 Round(518.567;1) returns the value 518.6 Round(518.567;2) returns the value 518.57 Round(518.567;3) returns the value 518.567 Round(518.567;-1) returns the value 510 Round(518.567;-2) would return the value 500
Trunc	Returns the number truncated (chopped off) to the number of decimal places that you specify in the call to the Trunc function. This means that you have to pass two parameters to the Trunc function: the number to be truncated, and the number of decimal places that you want to get back in the result. Let's take the number 518.567 and see what happens when we pass different parameters.	Trunc(518.567;0) returns the value 518 Trunc(518.567;1) returns the value 518.5 Trunc(518.567;-1) returns the value 510
Abs	Returns the absolute value of a number; that is, Abs returns the Positive value of the number.	Abs(518.567) returns the value 518.567 Abs(-518.567) returns the value 518.567

Numerical Functions

User Tip:Round and Trunc are very similar. The difference between the two is that Round actually rounds off the number before returning the result, and Trunc does not round off the number.

69.4.0 String Functions

Here are the String functions that you can use in STATIC:

:

Function	Effect	Example
String	Converts a numeric, date, or time value into a character string. Format can be a string or a number. See the 4D Manual for details	String (numeric value; format) String (date value; format) String (time value; format)
Substring	Returns a portion of a character string, beginning and ending at the positions of the string that you designate. This means that you have to pass three arguments to the Substring function: the string of characters to be evaluated, the position to begin reading the string, and the number of characters you want to read.	Substring(American ;1;4) returns Amer Substring([Aircraft]Company;1;4) returns the first four characters of the name of the company that owns the aircraft.
Uppercase	Returns a text string in all CAPITAL LETTERS.	Uppercase (American Airlines) returns AMERICAN AIRLINES Uppercase ([Aircraft]Company) returns AMERICAN AIRLINES
Lowercase	Returns a text string in all lowercase letters.	Lowercase (American Airlines) returns american airlines Lowercase ([Aircraft]Company) returns american airlines
Ascii	Returns the ASCII code for the first character of a string.	Ascii (P) returns 80. Ascii (Papa) also returns 80.
Char	Returns the character that the ASCII code represents.	Char(80) returns the letter P. Char(9) returns a Tab.

String Functions

Note: As you can see, Ascii and Char are opposites of each other.

69.5.0 Date and Time Functions

Here are the date and time functions that are supported by STATIC.

Suppose, for example, the current date is August 15th, 1999, and the current time is 9:00am. Here are the time and date functions:

:

Function	Effect	Example
Current Date	Returns the computer system date.	15/8/1999
Day of	Returns the day number of a date (day-of-the-month).	Day of (Current Date) returns the number 15.
Month of	Returns the month number of a date (month-of-the-year).	Month of (Current Date) returns the number 8.
Year of	Returns the year number of a date.	Year of (Current Date) returns the number 1999.
Date	Converts a string into a date. The Exclamation Point (!) is used within STATIC to indicate a date in string format.	Date(!15/9/1999!) returns 15/9/1999 (Sept. 15, 1999).
Day Number	Returns the character that the ASCII code represents.	Day Number (Current Date) returns 1 because 15/9/1999 is a Sunday.
Current Time	Returns the computer system time. The Question mark (?) is used within STATIC to indicate a time in string format.	?9:01:30?
Time string	The Time String function takes the time value as expressed in seconds since midnight and returns the string in HH:MM:SS format.	Time String(43200) returns 12:00:00.

Date and Time Functions

Chapter 70
Database Schema

70.1.0 Introduction

This section will give you information on the fields and tables that can be exported, queried and sorted.

There are of course many more tables than mentioned in this section within STATIC. Most of these tables are of no interest to the user as they hold internal information vital for the correct function of STATIC.

70.2.0 Database Schema: Tables

The following section will give you a listing of all the fields available to you for data extraction.

There are over 100 tables in STATIC - most are for internal use only and of no interest to you the user of the program.

These are the Tables which are of interest:

Table Name	Short Description
HospitalRecord	Contains data for the Hospital admission Contains data for Refusals
ICURecord	Contains data for ICU admissions
Refusal	Contains data for Refusals
Transport	Contains data for Transport database
Consult	Contains data for Consultations
Location	Contains data for the location of the patient. A location record is generated for every admission type - ICU, Refusal, Transport and Consultation. For ICU Admissions only: If the patient is transferred to another ICU area within the same ICU event - another Location record is generated. Thus every ICURecord may have several Location records.
ARDS	Contains data for ARDS
Apache	Contains data for Apache scoring
Death	Contains data in the event of a death in ICU. Includes Organ donation
Cardio	Contains data for if this is a Cardio Thoracic event
DD_Comp_Event	Contains data for Complication events
DD_Custom_Event	Contains data for Custom events
DD_Custom_Summary	Contains data for Custom Summary
DD_DischProb_Event	Contains data for Discharge Problem events
DD_Proc_Event	Contains data for Procedure events
DD_Proc_Summary	Contains data for Procedure Summary
GasReading	Contains data for Gas Readings
OrganFailure	Contains data of the Organ Failures encountered
PIM	Contains data of the PIM scoring system

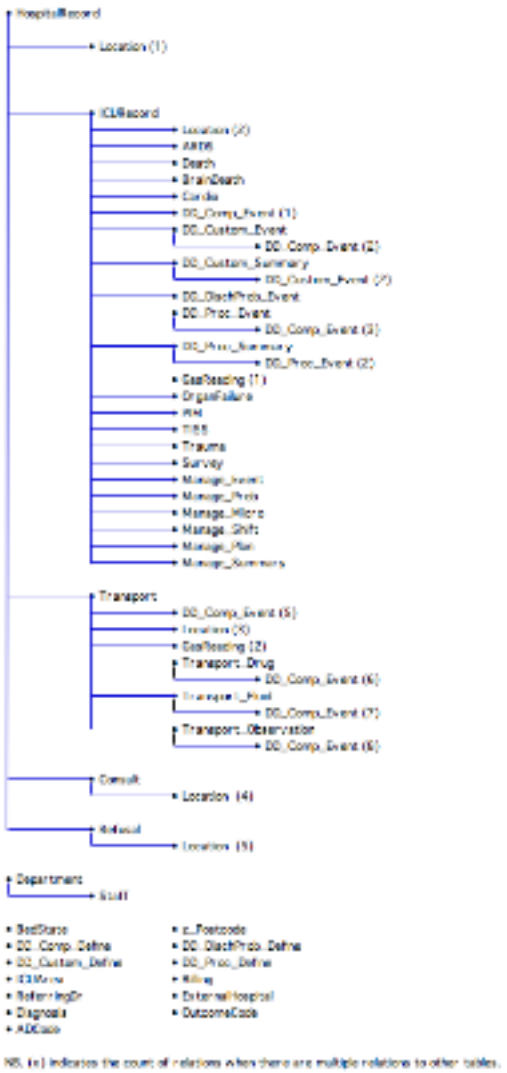
Database Schema - Short Description

Table Name	Short Description
TISS	Contains data for TISS
Trauma	Contains data in the event that this is a Trauma patient
BedState	Contains the bedstate records - one record per ICU Area per day.
Transport_Drug	Contains the Transport Drug events
Transport_Fluid	Contains the Transport Fluid events
Transport_Observation	Contains the Transport Observation events
Department	Contains the Departments in your hospital
Staff	Contains the Staff in your hospital
z_Postcode	Contains the Postcodes
DD_Comp_Define	Contains the Complications defined
DD_Custom_Define	Contains the Custom events
DD_DischProb_Define	Contains the Discharge Problems defined
DD_Proc_Define	Contains the Procedures defined
ICUArea	Contains the ICU Areas defined for this ICU Complex
ReferringDr	Contains the Referring Doctors records
Diagnosis	Contains the Diagnosis records used by Paed and Adult scoring systems
ADCode	Contains the Admission and Discharge definitions
ExternalHospital	Contains the External Hospital details
OutcomeCode	Contains the Outcome codes
Survey	Contains the Survey Paed events
Manage_Event	Contains the Management Events records
Manage_Prob	Contains the Management Problems records
Manage_Micro	Contains the Management Microbiology records
Manage_Shift	Contains the Management Shift records
Manage_Plan	Contains the Management Plan records
Manage_Summary	Contains the Management Summary records

Database Schema - Short Description

70.2.1 Database Schema: Table Relationships

These tables are related logically to each other as follows:



Database Schema: Table relationship

70.2.2 Database Schema: Listing of fields

In order to print out a complete listing of all Fields and their attributes within STATIC do the following:

1. Navigate to File> Preferences...> Structure button.
2. Select *All* from the *Table Name* drop down list. This item will generally be at the bottom of the list.
3. Click the *Export* button.
4. After a short interval you will be notified that the text document containing the database schema has been created. The location will always be ... STATICItems/Store/Structure/Structure_YYYYMMDDHHMMSS.txt
5. Open this document within MS Excel.

Chapter 71
Speaking the Language of Databases

71.1.0 Introduction

So that we can make sure that we are speaking the same language, in this section we will review the language of the world of database management. As is true with many professions, database management people have their own language - a set of terms that they use to describe the things that relational databases do. In this chapter, you will learn the terms that you will need in order to understand relational databases.

The first and most important term that you need to understand is the term **Relational Database Model**. In this chapter, we will introduce you to the relational model and we will explain what that model can mean to you.

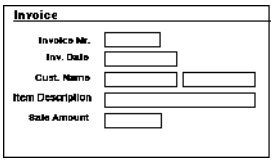
71.1.1 The Flat File Database Model

In order to understand the Relational model, it helps to first understand a simpler database model, the **Flat File model**. If you are familiar with spreadsheets or with **columnar reports** of any kind, you are already familiar with the **Flat File** model. A Flat File database is simply one that is composed of rows and columns.

71.1.2 Setting Up a Flat File Database

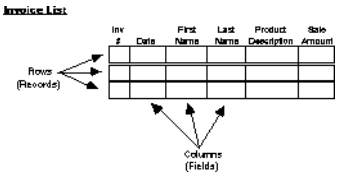
Even though you may be very familiar with a Critical Care environment for the purposes of this explanation it may be easier to consider a different arena.

Suppose, for example, you start a small business and you want to set up a simple flat file database to print invoices. You might create an invoice data entry form like the one below:



A flat file invoice

So that you can see a list of all your invoices, you might set up a listing form like this:



A Flat file invoice listing form

As you can see, a Flat File Database looks like any spreadsheet or any report comprised of rows and columns. To find out all the information about a particular invoice, you read straight across the row. Each row of the flat file database is called a **Record**. Each record has exactly the same number of columns. Each **column** is called a **Field**. When you add a new invoice to your database, the flat file model assumes that the new row (record) has exactly the same number of columns (fields) as all of the previous rows. This is important to understand: even though you may have left some of the fields blank, the fields are still there. Your flat file database is always a perfect rectangle; every record has exactly the same number of fields, in exactly the same order.

71.1.3 Adding Fields to a Flat File Database

You can add columns (fields) to your flat file database to store additional information. Suppose, for example, you decide that you can make your business grow even faster if you keep track of the names and addresses of your regular customers. You want to send them literature about new products, special sale offers, and so on. You decide to add the customer's StreetAddress, City, State, Zip code, and Phone number. Adding this information is simple: you just add columns to the database. After you have added the new columns, your flat file database looks like this:

Inv#	Date	First Name	Last Name	Product Description	Sale Amount	Streed Address	City	State	Zip	Phone
3	1/1/96	Marie	Jones	Bus. Cards	$37.50	1 Oak St.	Rose	CA	94114	437-1234
47	3/14/96	Marie	Jones	Invitations	$88.25	11 Oak St.	Rose	CA	94114	437-1234
54	7/3/98	Marie	Jones	Stationery	$145.20	1 Oak St.	Rose	CA	94114	477-1234

List of invoices

Whenever you add a new field, the flat file model adds a new column to the entire database so that it will remain a perfect rectangle. This is very handy, because it means that you can go back to all your old records and bring them up-to-date with the new categories of information (Street Address, City, State, Zip, etc.). What a powerful concept!

71.1.4 Sorting

As you add more records to the database, you notice that finding things becomes more difficult. Suppose, for example, you have done 280 jobs for customers since setting up your database. You have 280 invoice records. If your computer monitor can display 30 records per screen, you might have to scroll through as many as ten screens to find a particular invoice record. Looking for a way to make it faster and easier to find a particular invoice, you discover that your flat file database software allows you to arrange the records in alphabetical, numerical, or date order. This operation is called a **Sort** or **Order By**.

71.1.5 Indexing

As the number of records in your database grows, these queries become slower and slower, because the database has to look through the records sequentially, comparing every record to your query example, and then display the record(s) that you are looking for. You think that there must be a better way, so you read further into the documentation and you discover that your flat file database can make use of something called an ***Index*** and query much faster.

That makes sense; you associate flat file indexes with the indexes in a book library. Librarians maintain indexed Card Catalogues by Author, by Title, and by Subject. You even recall that the cards are called **Index Cards**. For example, If you want to find all the books by the author Marie Jones, you look in the Author card catalogue under the J's for Jones, and then you look alphabetically through the Jones'es until you get to M , and then under the M s for Marie.

Flat file databases use the electronic equivalent of card catalogues. In flat file databases, instead of calling them card catalogues, we call them Indexes. The name Jones will appear in the Last Name index, and the name Marie will appear in the First Name index. When you Query by Example for Marie Jones, the database will quickly find all the records that meet both conditions: Marie as a first name, Jones as a last name.

71.1.6 Problems with the Flat File Model

As you can see, the flat file model has some definite advantages: it s quick, it s simple, and it s easy to understand. However, as your business grows, you will begin to notice three problems with the model: ***Duplicate information***, ***Uncertainty***, and ***Wasted space***.

Duplicate Information

Suppose you do that query, and you discover that you have three invoice records for Marie Jones; she has made three purchases. Your screen might look like this:

Inv#	Date	First Name	Last Name	Product Description	Sale Amount	Streed Address	City	State	Zip	Phone
3	1/1/98	Marie	Jones	Bus. Cards	$37.50	1 Oak St.	Rose	CA	94114	437-1234
47	3/14/98	Marie	Jones	Invitations	$88.25	11 Oak St.	Rose	CA	94114	437-1234
54	7/3/98	Marie	Jones	Stationery	$145.20	1 Oak St.	Rose	CA	94114	477-1234

List of invoices

You notice that Marie's name, address, and phone number are repeated three times. You also recall that, each time you did an invoice for Marie, you had to type all of this information again. You notice, when looking at the data, that the address and phone information is not exactly the same in all records. Invoice #47 shows the address as 11 Oak and the other invoices say 1 Oak; Invoice #54 shows the phone as 477-1234 and the other invoices show the phone number as 437-1234. You wonder, Which records are correct? . You also wonder, What happens if Marie ever changes her address or phone number? Should we go back to all of the invoices and update the address?

This duplication of data is cumbersome and error-prone; you think, There must be a better way.

Uncertainty

Looking at those three invoices to Marie Jones, you also recall that, when you did the Stationery invoice, you actually wanted to be more specific in the Description field. You wanted to break the Stationery description down into Envelopes ($45.05) and Letterhead ($100.15). To allow for this finer level of detail, you decide to add more fields to the database.

Wasted Space

Whenever you add a new field to the database, the flat file model adds that new field to every record in the entire database so that the database will remain a perfect rectangle. This was a good feature in the case of the Address; however, it is a bad feature in the case of the Line Items. Why? Because even if a record has only one line item, the flat file is reserving storage space for three line items.

71.1.7 Limitations of the Flat File Model

As we have seen, the strength of the Flat File database model is its simplicity. Because it is simple, it is fast and easy to set up, and it is also easy to understand. For a simple data storage problem, the flat file model is ideal. For a complex data storage problem, however, the simplicity of the flat file model becomes a liability because of Duplicated data, Uncertainty, and Wasted Space.

For many years, database experts have puzzled over the question: how can we handle more complex data storage problems, but at the same time retain at least some of the simplicity of the Flat File model?

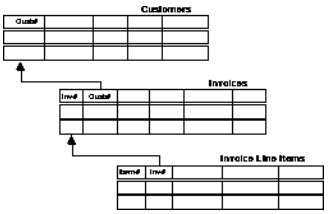
So far, the best answer to this question has been the Relational Database Model.

71.2.0 The Relational Database Model

No model is perfect; however, the model that has so far done the best job of handling complex data storage -- while at the same time retaining the benefits of simplicity of the Flat File model -- has been the Relational Database Model.

71.2.1 Understanding the Relational Model

The ***Relational Database Model*** looks like this:



The Relational Database Model

Simply stated, the Relational Database Model is a collection of Flat Files with the following characteristics:

- **Specialization:** Each flat file specializes in storing a certain type of information.
- **Key Fields:** Each flat file has a column that is called the **Key Field**. The data in this key field is **unique** -- that is, no two records will have exactly the same data in this key field. (For example, there will only be one Invoice with the number 101). This unique quality is what makes it possible to distinguish one record in the file from all other records in the file. In the example above, the key fields for the files Customers, Invoices, and Invoice Line Items are Customer#, Invoice#, and Line Item# respectively.
- **Indexed:** Each Key Field is Indexed for fast queries.
- **Relations:** So that they can share information, many of the files are related to each other. That's how the model got its name, Relational Database Model.
- **Duplicated Related Fields:** To manage the relationships, we copy the **Key Field** data into the **related records**. For example, when we do invoices for Customer# 150, we copy that customer number into the Customer# field of the Invoice record. This makes it possible for us to match up (**relate**) Customer information to Invoice information. As we did with the flat file model, we are duplicating information; however, we are duplicating just one field instead of several fields.

71.2.2 Advantages of the Relational Model

In our example of the Relational Model, we have the following relationships:

One [Customer] can relate to Many [Invoices].

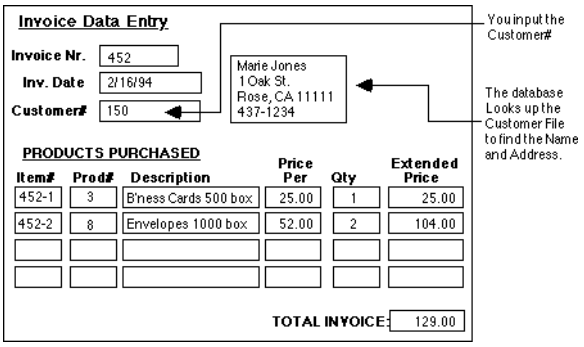
One [Invoice] can relate to Many [Line Items].

Having set up these relations, we retain many of the benefits and some of the simplicity of the Flat File Model. At the same time, we gain four major benefits from the relational model: data lookups, flexibility, Analysis/Reporting, and Scalability.

Data Lookups

We type in the customer s name, address, and phone number one time in the Customer file. After that, instead of having to re-type the customer s name and address, we can just type in the Customer Number and let the database query the Customer file to **Lookup** the customer s name and address. This means that we are not duplicating the same name and address data each time we create a new invoice; it also means that data entry is faster and more accurate.

With data lookups, our invoice data entry screen might look like this:



Invoice data entry screen, Data Lookup

Flexibility

A second advantage that we gain with the Relational Model is flexibility, because we don't have to know in advance how many line items we will have on an invoice. If an invoice has one line item or ten line items or one hundred line items, our system can handle it.

Analysis and Reporting

A third advantage of the Relational Model is that our analysis and reporting capabilities are far more powerful than with a simple flat file database. We can look at the information in many different ways. For example, we can ask our relational database the following questions:

- How many invoices did we issue within a certain time period?
- How many invoices did we issue to a certain customer?
- How many customers have total invoices above or below a certain amount?
- What is the total of the invoices within a certain time period, to a certain customer, above or below a certain amount?
- Where (in what cities) do our best customers live?
- Many other questions of the type: Who? What? When? Where? How Many? How much?
-

We might also have been able to answer those questions with our flat file database, but we could only have done it at the cost of a great deal of data duplication, uncertainty, and wasted space.

Scalability

The fourth advantage of the relational model is scalability. Although we have used a 3-file database in our example, real-life relational databases can be much larger in scale. Because of the Scalability of the relational model, you can continue to add files to your database as your information storage needs grow and change.

In your Invoicing database, you could go on to create:

- A Products file to store information about the products that you sell;
- A Payments file to store information about the payments you receive from customers;
- An Orders file to store information about the materials that you order from your suppliers;

- An Historical file to store summary information about sales, products, payments, and orders.

This scalability - the ability to expand your database as your needs expand - is one of the primary advantages of the Relational Model.

71.2.3 Managing the Complexity of a Relational Database

As you have probably guessed, the price of power in a relational database is Complexity. Because it is so flexible and scalable, the relational model can become far more complex than the flat file model. Therefore, in order to successfully use the powerful query, sort, analysis, and reporting capabilities of your relational database, you will have to learn to manage this complexity - to make it work *for* you instead of *against* you. The goal of this User Manual is just that: to show you how to put the power of your STATIC relational database to work for you.

71.3.0 What's Next?

This completes this manual. If you have any suggestions for improvements then please contact us at any time.

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