Data Input Table – Do Not Delete

Item	Location	Bookmark name	X[1,2]	Record of input[3,4]
Report Title – first line	Pages i and ii	T1		HALOGEN Client Console Application [5]
Report Title – second line	Pages i and ii	T2		User Guide
Report Title – third line	Pages i and ii	T3		
Report Title or Heading – first line	Left aligned in headers	HL1		HALOGEN Client Console Application
Report Title or Heading – second line	Left aligned in headers	HL2		User Guide
Group Name	Right aligned in headers – first line	HR1		Mott MacDonald
Client/Associate (where applicable)	Right aligned in headers – second line	HR2		Highways Agency
Project Number	Footers	PRJNR		56414
Report Number	Footers	RPTNR		TU/002
Revision Letter	Issue and Revision Record on page ii and footers	REV		4
Date of issue or report	Page i, Issue and Revision Record on page ii and footers	DATE		September 2004
Initials of word processor	Footers	INI		W97

Notes [1] This column contains the 'Bookmarks'. Do not enter data directly into this column or any other column in the table. Similarly, do not delete data in the columns.

To enter data, right click at the centre of the particular cell in column 'X' and choose 'Update Field' from the menu to enter data through the dialogue box. Do not enter a void in any of the dialogue boxes, otherwise an error message will be displayed. Enter a

couple of blank spaces instead.

[2] If you delete a 'Bookmark', you will need to recreate it in the same place with the same name using 'Insert + Fields + Mail Merge + Ask'.

[3] This column and the appropriate locations in the report contain the 'Bookmark References'. These references can be updated by changing the 'View' from 'Normal' to 'Page Layout' and back again.

[4] If you delete a 'Bookmark Reference', you will need to recreate it in the same place with the same name using 'Insert + Fields + Links and References + Ref'. To help locate a reference (or any other 'Field Code') highlight the codes using 'Tools + Options + Field shading + Always'.

[5] Do not insert 'Carriage Returns' to split 'Bookmark references' in the report titles on pages i and ii, otherwise the title will not display correctly. Where a title line is too long, shorten it by changing the appropriate 'Bookmark' entry. Please see the guidance on the previous page regarding font name and size for the main title.

Halogen Client Console Application

User Guide

Fault History

Fault History

Status : 689 row(s) retrieved Rows 1 To 15

Started at 01/04/03 10:28:01 Finished at 01/04/03 10:28:17

Date And Time	Fault Id	Fault Status	Equipment Type	Equipment Ref	Clearance M
25/05/02 00:08:20	15854	HARD	MSS	A102M/1268B	
25/05/02 00:08:21	15855	HARD	MSS	A102M/1268B	
25/05/02 06:16:41	15856	HARD	MSS	A12/1421B	
25/05/02 06:17:31	15857	HARD	MSS	A406/1714A	
25/05/02 06:20:51	15854	CLEARED	MSS	A102M/1268B	AUTO
25/05/02 06:20:52	15855	CLEARED	MSS	A102M/1268B	AUTO
25/05/02 09:25:11	15856	CLEARED	MSS	A12/1421B	AUTO
25/05/02 17:38:54	15858	HARD	MSS	A12/3385B	
25/05/02 17:43:33	15858	CLEARED	MSS	A12/3385B	AUTO
25/05/02 21:30:43	15859	HARD	MSS	A102M/1268B	
25/05/02 21:30:45	15860	HARD	MSS	A102M/1268B	
26/05/02 04:49:05	15859	CLEARED	MSS	A102M/1268B	AUTO
26/05/02 04:49:06	15860	CLEARED	MSS	A102M/1268B	AUTO
26/05/02 04:49:56	15861	HARD	MSS	A13/1607B	
26/05/02 04:50:06	15862	HARD	MSS	A13/1608B	

Mott MacDonald

HIGHWAYS AGENCY

HALOGEN Client Console Application

User Guide

Document Ref: 225560/TU/0005 Version 5

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Figures

1 Introduction

1.1 About this User Guide

This User Guide describes the functionality of the Internet Halogen Client Console Application (HCCAi) and how to use it to access Halogen data.

1.2 Terminology used in this User Guide

The following terms are used in this document

Dialogue box – Small Windows style window that contains information helpful to the user.

Menus – Provide a quick and easy way to access functionality within the main application.

Right-Click – Refers to using the right mouse button.

HotKeys – A combination of keyboard keys that provide a shortcut to menu items.

Logs and Log Types – Logs record the activity or the status of NMCS2 equipment. They are classified into 3 main Log Types: operational, fault or status.

Logging System – Refers to an NMCS COBS, SAC or logging system which sends logs to Halogen.

1.3 Halogen and the Internet Halogen Client Console Application

1.3.1 What is Halogen?

Halogen (Highways Agency LOGging ENvironment) is the National Motorway Communications Systems (NMCS) Central Logging Service. It provides centralised storage, retrieval and dissemination of current and historical log data generated by Highways Agency systems in Control Offices (CO) throughout England. There are 8 RCCs in England that are currently logging data to Halogen, alongwith CCTV systems and smaller subsystems.

1.3.2 What does Halogen do?

Halogen provides:

Secure storage of NMCS logs

Halogen accepts logs from NMCS subsystems and provides secure storage of received logs in its database. As Halogen acknowledges that it has received a log, the sender can be confident that the logs have been stored securely and in such a way that no single point of failure will lead to their loss.
Appendix A provides a full list of all log types accepted and stored by Halogen.

The ability to access this log data

Halogen accepts users' requests to search and report on the data, and it returns matching logs and/or statistical information about the logs. Access to this information is available via the Internet Halogen Client Console Application (HCCAi).

For up to date information on Halogen and the HCCAi go to the Halogen web site at www.halogenonline.co.uk.

1.3.3 Legal use of Halogen data

Users must note that Halogen data should only be used in court proceedings if it has been provided by Mott MacDonald. Under no circumstances should users extract Halogen data, either via a reporting tool or directly, for this purpose. If you wish

to use Halogen data in court please contact the Mott MacDonald Help desk for further assistance (see chapter 10 Mott MacDonald Help Desk for details).

Halogen Technical Note 091 'Provision of log data in support of court proceedings' provides more information on this topic and can be found on the Halogen website at www.halogenonline.co.uk. This website also provides up to date information on Halogen and the HCCAi.

1.4 Halogen user functions

Halogen provides users with flexible access to stored log data through:

- A suite of standard reports available through HCCAi
- Direct access to Halogen log data via open standards (e.g. ODBC, JDBC).

The HCCAi allows data to be saved in a variety of formats including text, comma/tab separated text, Microsoft Excel, Lotus 1-2-3, HTML.

1.5 How to become a Halogen user

1.5.1 Contact the Help Desk

To register as a Halogen user please contact the Mott MacDonald Help Desk. See Chapter 10 'Mott MacDonald Help Desk' for details.

1.5.2 What information do I have to provide?

To become a user you will need to provide the following details:

- Name and contact details
- The reason access to Halogen is required.

1.5.3 Are any approvals required?

The Highways Agency must approve all Halogen users.

1.5.4 What happens then?

Once your registration has been you will be provided with a Halogen user name and password. The application can be downloaded from the Halogen web site www.halogenonline.co.uk. For further details on connecting to Halogen, please refer to Chapter 2 'Using the Internet Halogen Client Console Application'.

The majority of users will be allocated a 'Standard User Role' unless they will be performing any Halogen administration function on behalf of the Highways Agency.

1.5.5 How do I communicate with Halogen?

User access to Halogen via the HCCAi is achieved through the Internet so please ensure that you have Internet access before proceeding. Please refer to the Installation guide to install the HCCAi. Please pay particular attention to the firewall and proxy settings as these are the most common reasons for being unable to connect to the HCCAi.

2 Using the Internet Halogen Client Console Application

2.1 Logging in to Halogen

Before proceeding, please refer to the HCCAi Getting Started Guide [1] and ensure you have the HCCAi installed on a PC with appropriate access to the internet.

To start the HCCAi, double click on the shortcut icon on your PC or connect through the Start menu e.g. START>PROGRAMS>MOTT MACDONALD>HCCAi.

Figure 1 - HCCAi Shortcut Icon

The application will start up and display the following HCCAi Login screen.

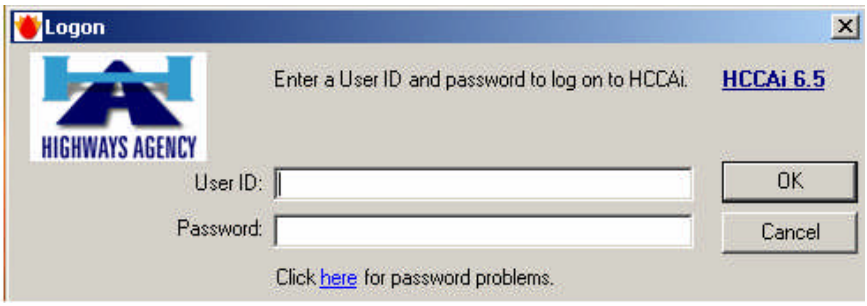

Figure 2 - Login Prompt

You will then have to enter your username and password provided to you by Mott MacDonald. Passwords are case sensitive, must be at least 8 characters in length and contain a mixture of letters and numbers. For ease of use, Mott MacDonald has applied a single sign-on policy to all Halogen applications; however additional privileges must be requested from the Help Desk. If you have not been provided with this information then contact the Mott MacDonald Help Desk (see Chapter 10 for details).

A user password is only valid for 90 days and should be changed before expiry. If the password is not changed within 90 days the user account will be locked. When a user tries to log into a locked account a message will be displayed saying that the password has expired.

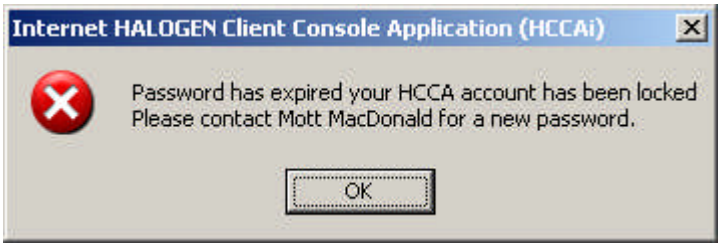

Figure 3 - Password Expiry Warning

Users can contact the Mott MacDonald Help Desk to unlock an account. There is also a link available for users on the login prompt to direct them to the useradmin Halogen web site which will allow the user to reset their password. Warnings will be

given to users for 10 days before password expiration telling them to change their password. Refer to Chapter 8 'Password configuration' for details on changing a password.

Figure 4 - Password Expiry Help

2.2 HCCAi basics

When the HCCAi runs a standard menu driven Microsoft Windows style screen is displayed. All menus are accessible via point and click or a combination of hotkeys.

All HCCAi windows have standard "Windows" functionality. For example when a window is resized, all the window controls resize. When changes have been made, but not saved, an appropriate warning message is displayed if an attempt is made to close the window.

Other standard features, such as Tool tip Text and Help are available on the toolbar. To see Tool tip Text, position the mouse cursor over a toolbar icon for a brief period.

2.2.1 Closing HCCAi

Choose File then Exit HCCAi from the main window screen.

2.3 Main HCCAi functions and how to access them

On running the HCCAi, the main window is shown, from versions 6.2 onwards the Report & Criteria Selection Window will automatically open upon successful log in, see section 4 for more details. This window provides access to all HCCAi functionality which is available via menus, or from the toolbar buttons circled below:

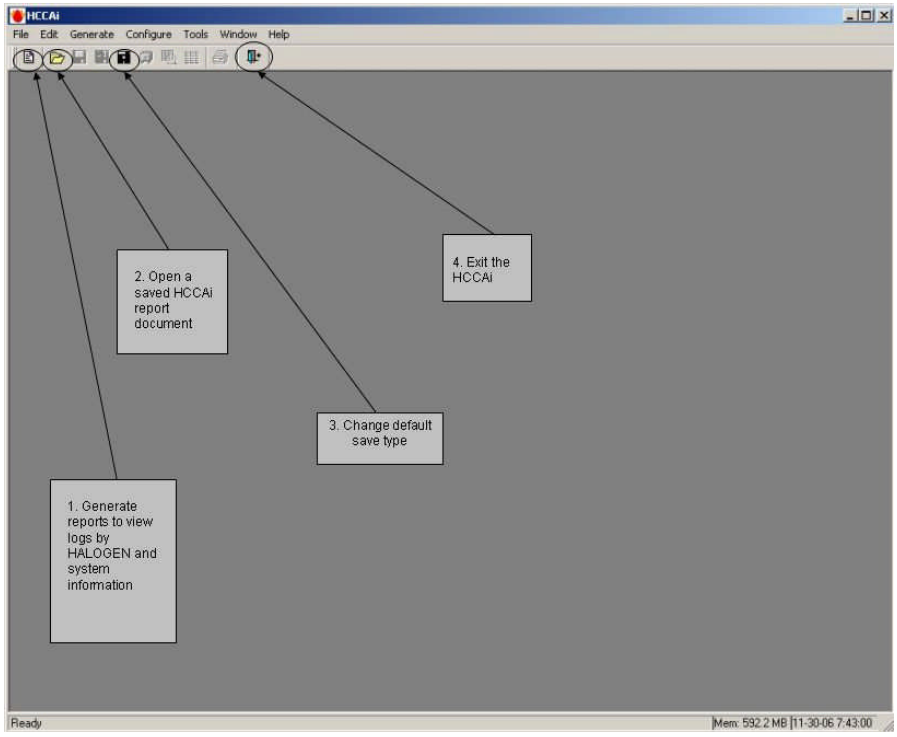

Figure 5 - Main HCCAi Window

1. Use this option to retrieve logs and data on system operation from the Halogen database. Standard reports (refer to Chapter 3.1.1 'Standard report definitions') allow users to retrieve log data. System reports (refer to Chapter 3.1.2 'System Report Definitions') provide access to operational information, such as logging system connections, invalid logs received from logging systems and exceptions raised by the Halogen database. Chapter 4 provides full details on how to create these reports.
2. Use this option to open up saved reports. By default the HCCAi saves reports in an internal format, with file extension .HSR. These report files can be opened by the HCCAi and the report results displayed. The report can then be saved in an alternative format (e.g. Excel) if desired.
3. Use this option to change the default format in which report results are saved. The default is originally set to HSR, but can be changed to be any of the supported file formats. (Refer to Chapter 7 'Default Save Extension' for details.)
4. Use this option to log out of the HCCAi.

3 Generating Reports

To generate a report, choose “Reports” from the “Generate” menu or click on the “Generate any report” button on the toolbar. This will open up the “Report & Criteria Selector” window shown below and display all the reports available to you.

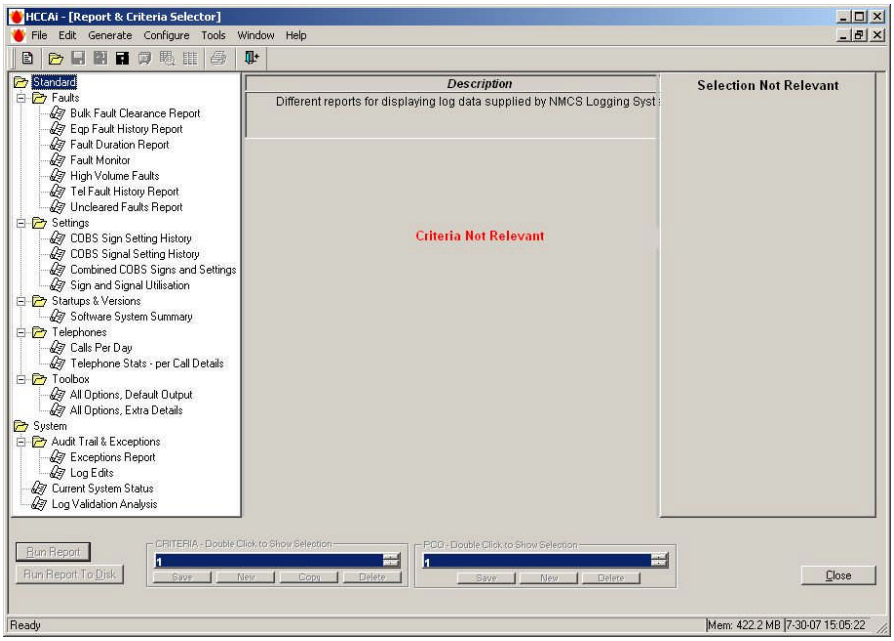

Figure 6 - Main Screen

This window is split into four distinct areas; Report Selection, Specify Report Criteria, RCC/CO Selection and Search Criteria Storage and Selection.

3.1 Report selection

The “Report Selector” menu operates in the same way as Windows Explorer, with a double click to expand a folder and a click to select a report. Choose the report that you want to run. Once a report has been selected, all other 4 sections of this window will be populated with the most recently used selection criteria and RCC / CO pick list for that report for your login.

A suite of Standard and System Reports is available. These are described below.

3.1.1 Standard report definitions

Standard Reports are reports on log data received by Halogen from NMCS Logging Systems. The following reports, described in more detail in subsequent sub-sections, are available:

- Bulk Fault Clearance
- Equipment Fault History
- Fault Duration
- Fault Monitor
- High Volume Faults
- Telephone Fault History
- Uncleared Faults

- COBS Sign Setting History
- COBS Signal Setting History
- Combined Signs and Settings History
- Sign and Signal Utilisation
- Software System Summary
- Calls per day
- Telephone Stats – per Call Details
- All Options, Default Output
- All Options, Extra Details

Standard Reports, except the All Options Extra Details, only return valid log entries. Log entries marked as invalid are excluded from the report results.

All Standard reports have help associated with each log type available for selection. Blue underlined text is located to the left of each of the 3 log type pull down menus. Clicking on this text will open a small window providing information on the data available in the relevant pull down menu. Appendix B 'Log types' provides a full list of log types stored in Halogen.

Standard Reports are available to all Halogen users. If any problems are encountered locating data of interest, or any report does not meet your specific needs, then please contact the Mott MacDonald Help Desk.

(i) Bulk Fault Clearance

This report provides details on the number of times the Halogen Bulk Fault clearance routines (manual/automatic fault clearance) and how many faults were cleared. The output from this report will include a clickable link of the number of faults cleared which will link to the faults themselves in a separate report window – Bulk Fault Clearance Detail.

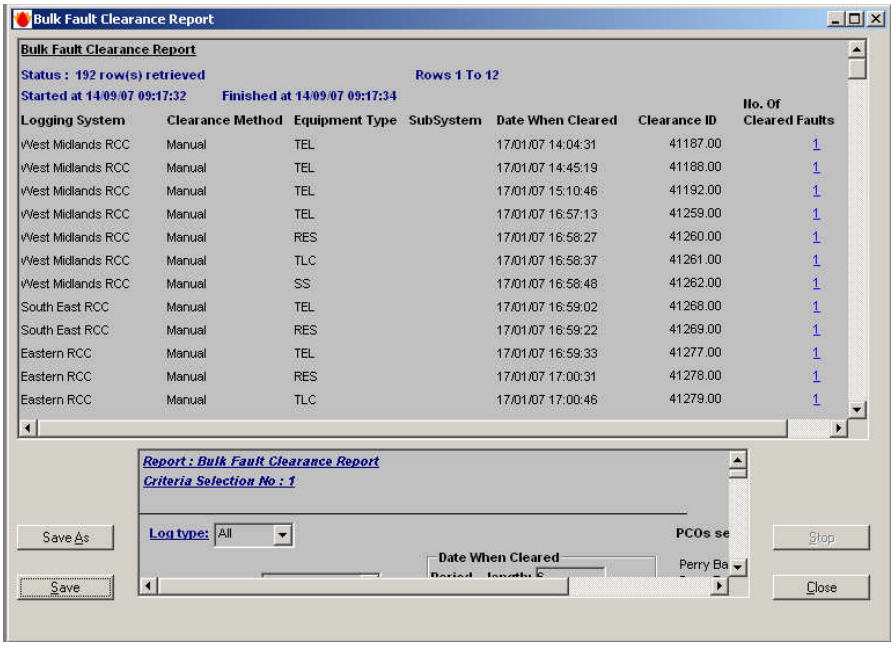

Figure 7 - Bulk Fault Clearance Report

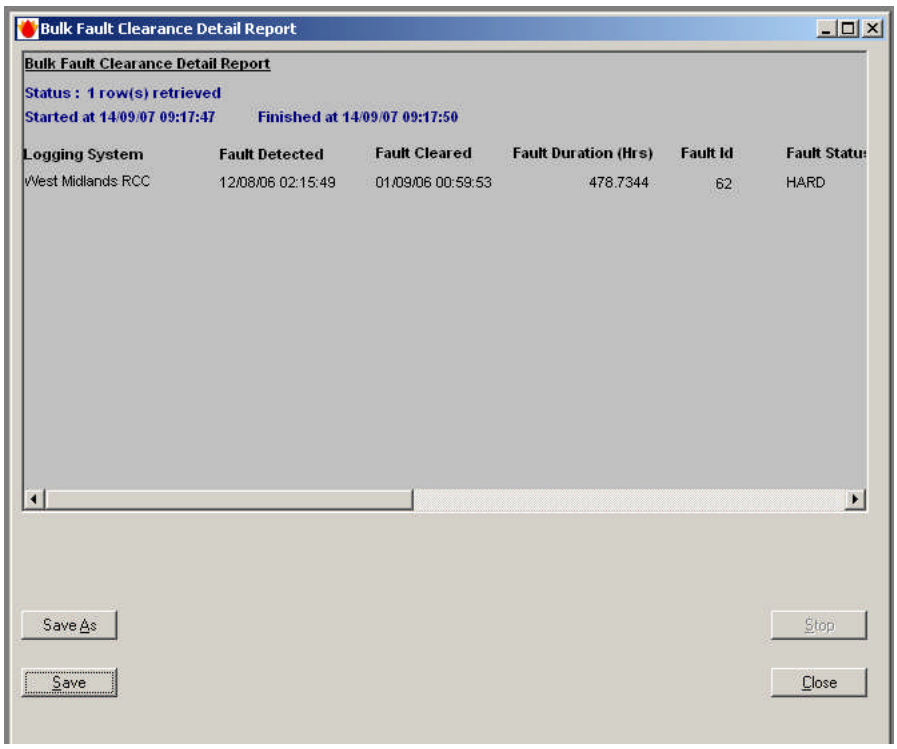

Figure 8 - Bulk Fault Clearance Detail Report

(ii) Equipment Fault History

This report provides a historical view of the fault logs (FLOG 0001, FLOG0002 and FLOG0003) for the selected control office(s) depending on user search criteria. No processing is done to the returned data. The report is ordered by Log Date (oldest log first) and Halogen Receipt Date. Column headers are provided for all columns in this report.

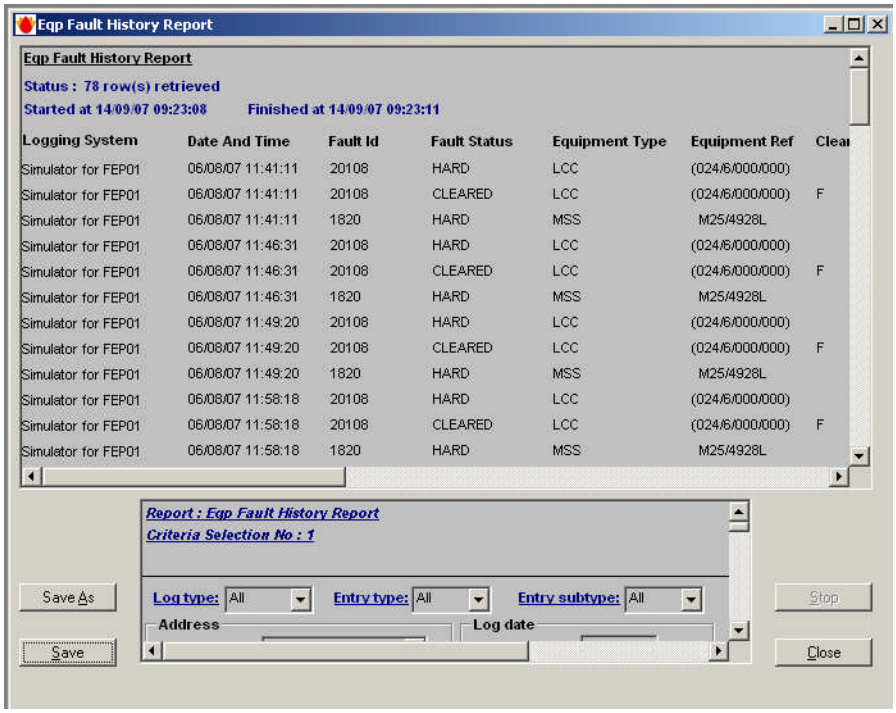

Figure 9 - Equipment Fault History Report

(iii) Fault Duration

This report provides details of faults where the duration (i.e. the time difference in seconds between fault detection and its related clearance) exceeds a user specified threshold. It reports on log types FLOG0001, FLOG0002, FLOG0003 and TFLG0004.

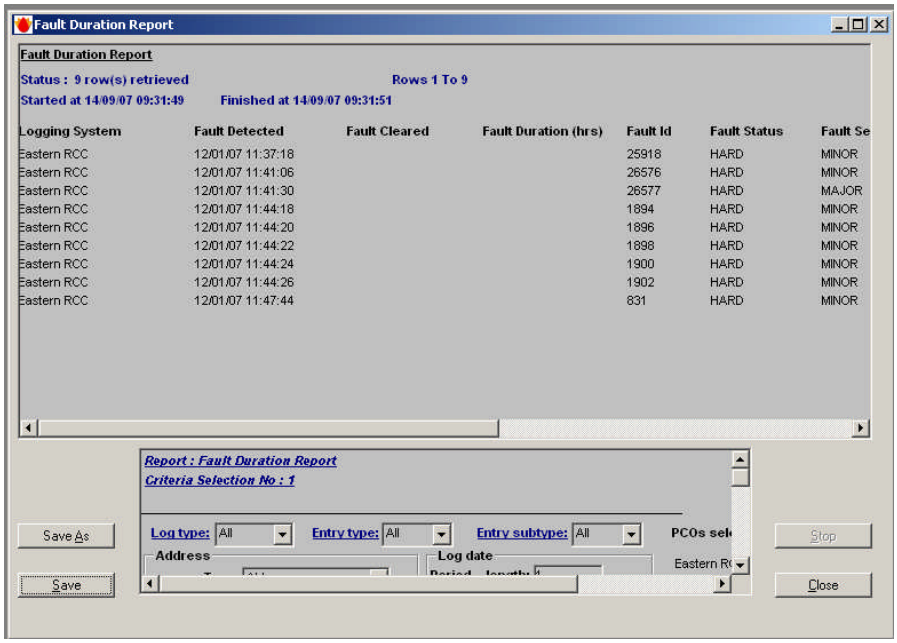

Figure 10 - Fault Duration Report

(iv) Fault Monitor

This report provides statistics and a corresponding graph on uncleared Equipment Faults for FLOG0001, FLOG0002 and FLOG0003 over a specified time period, at specified intervals. Each plot on the graph represents the number of uncleared faults at each specified interval. Only equipment faults with duration of 2 hours or more are included. The user is able to see a graphical representation of the data by clicking on the "Show Graph" option when the initial report has completed. The user is also able to print this graph using the "Print" button when the graph is displayed.

The criteria for this report differ from other standard reports. The user is only allowed to choose one RCC / CO. The time unit is limited to weeks and months. The user is able to specify the time interval for which the report can be searched e.g. 5, 10, 15, 30, 45 or 60 min intervals.

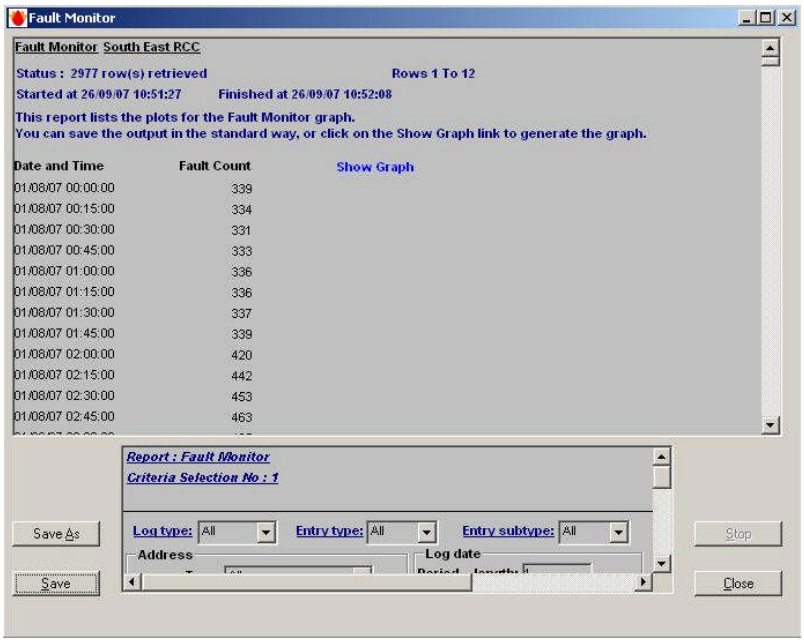

Figure 11 - Fault Monitor Report

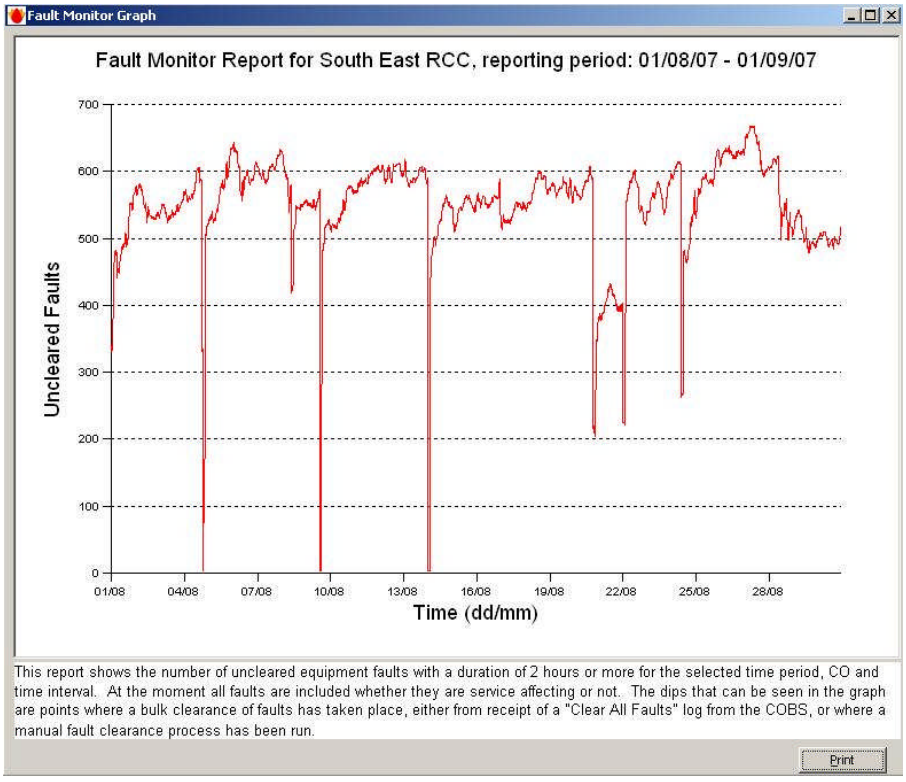

Figure 12 - Fault Monitor Graph

(v) High Volume Faults

This report provides a facility to report on devices by the number of faults they have generated. It is also useful to identify devices which are logging high numbers of faults to Halogen. Log types which can be searched on are FLOG001, FLOG003 and TFLG0004.

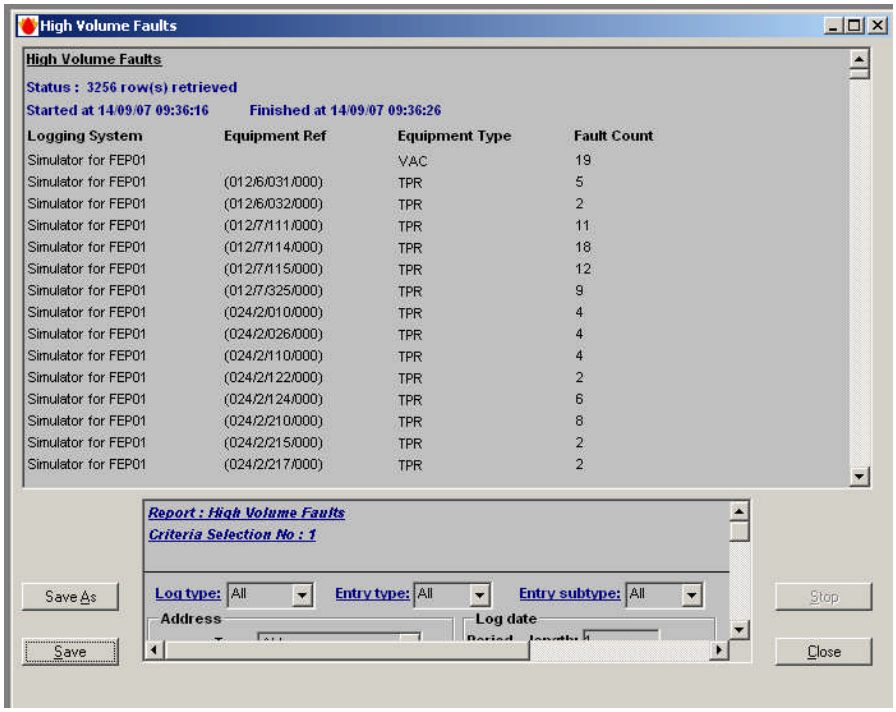

Figure 13 - High Volume Faults

(vi) Telephone Fault History

This report provides a historical view of the fault logs (TFLG 0004) for the selected control office(s) depending on user search criteria. No processing is done to the returned data. The report is ordered by Log Date (oldest log first) and Halogen Receipt Date. Column headers are provided for all columns in this report. Log types that can be searched are TFLG0004 AND TFLG0005.

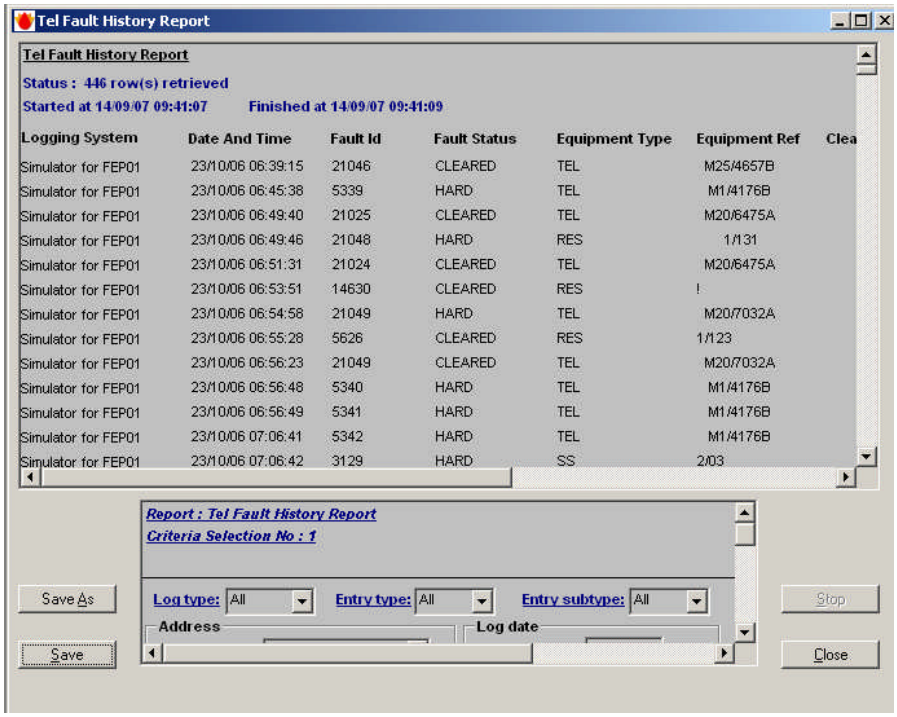

Figure 14 - Telephone Fault History Report

(vii) Uncleared Faults

This report returns any outstanding uncleared faults received by the RCCs. Log types of FLOG 0001, FLOG0003 and TFLG 0004 are returned.

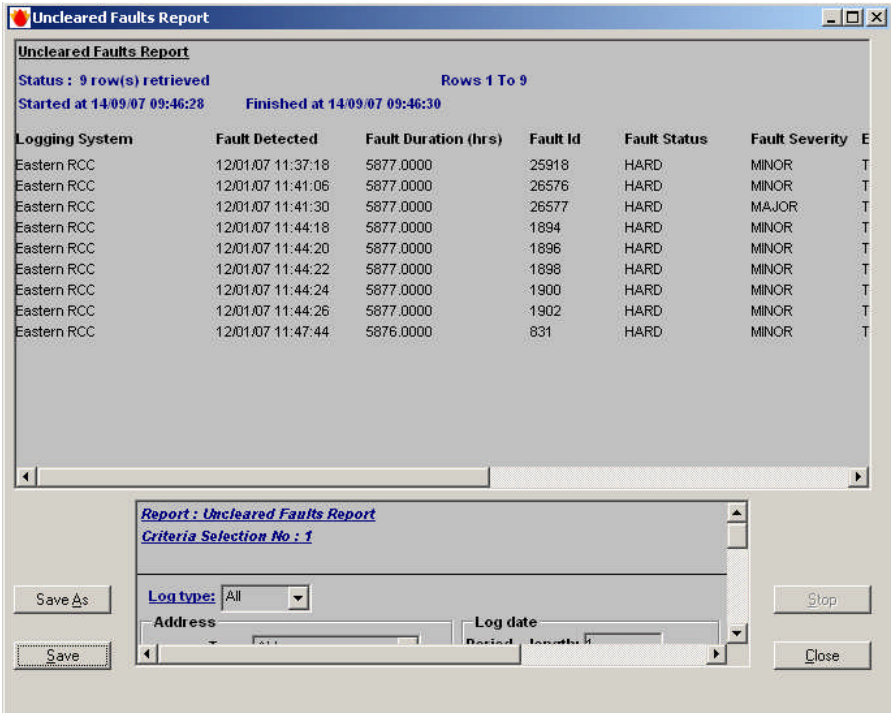

Figure 15 - Uncleared Faults Report

(viii) COBS Sign Setting History

This report provides a historical view of the message sign setting logs (OPLG 0802) for the selected control office(s) and matching user search criteria.

This report is formatted to remove all quotation marks from the equipment setting column.

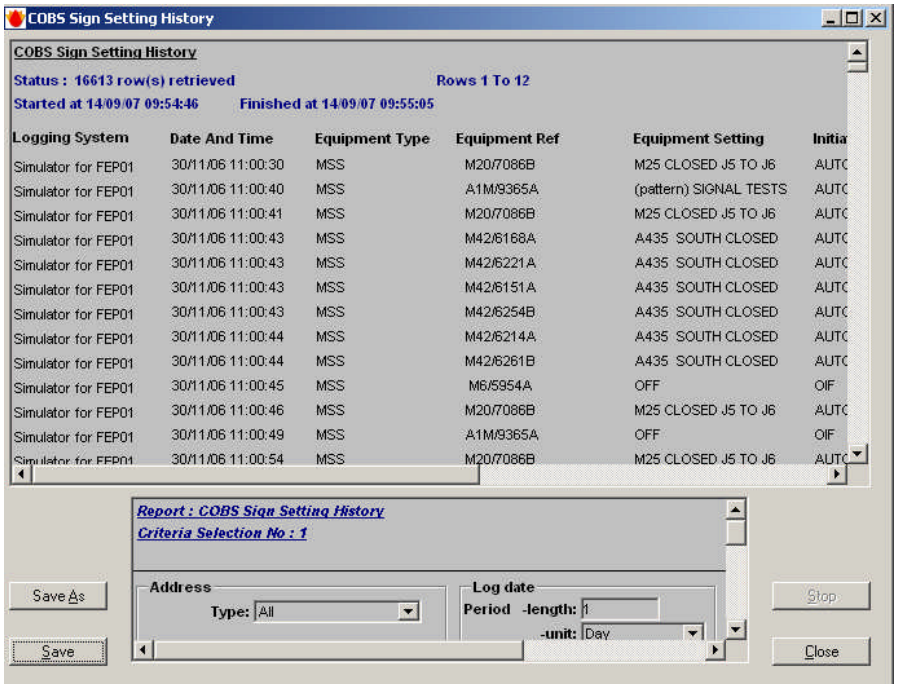

Figure 16 - COBS Sign Setting History

(ix) COBS Signal Setting History

This report provides a historical view of the device settings log (OPLG 0801) for the selected control office(s) depending on user search criteria. No processing is done to the returned data. The report is ordered by Log Date (oldest log first) and Halogen Receipt Date. Column headers are provided for all columns in this report.

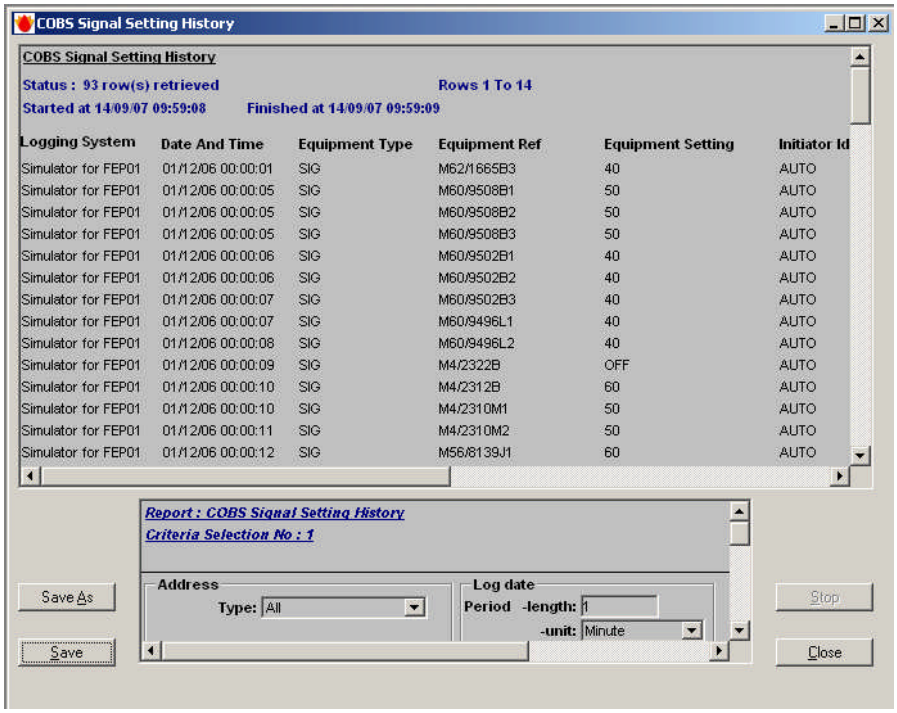

Figure 17 - COBS Signal Setting History

(x) Combined COBS Signs and Settings

This report combines both the COBS Sign Setting History and COBS Signal Setting History report. The report simplifies the integration of Halogen information for the MIDAS Replay tool.

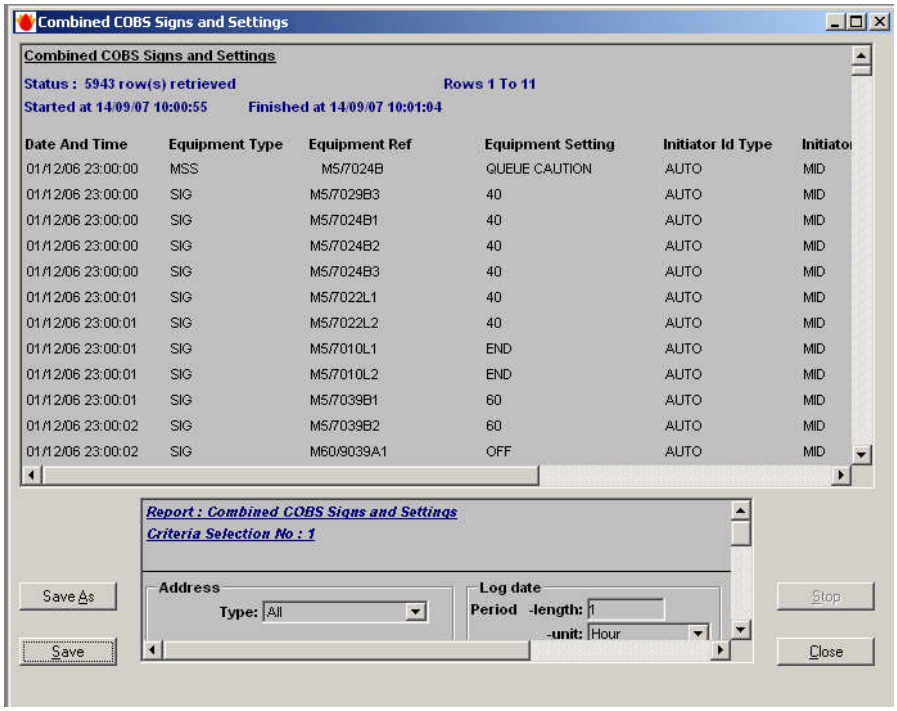

Figure 18 - Combined COBS Signs and Settings

(xi) Sign and Signal Utilisation

This report provides details on the availability for Sign and Signals. Results are given on a day per day basis and a summary of the availability is provided.

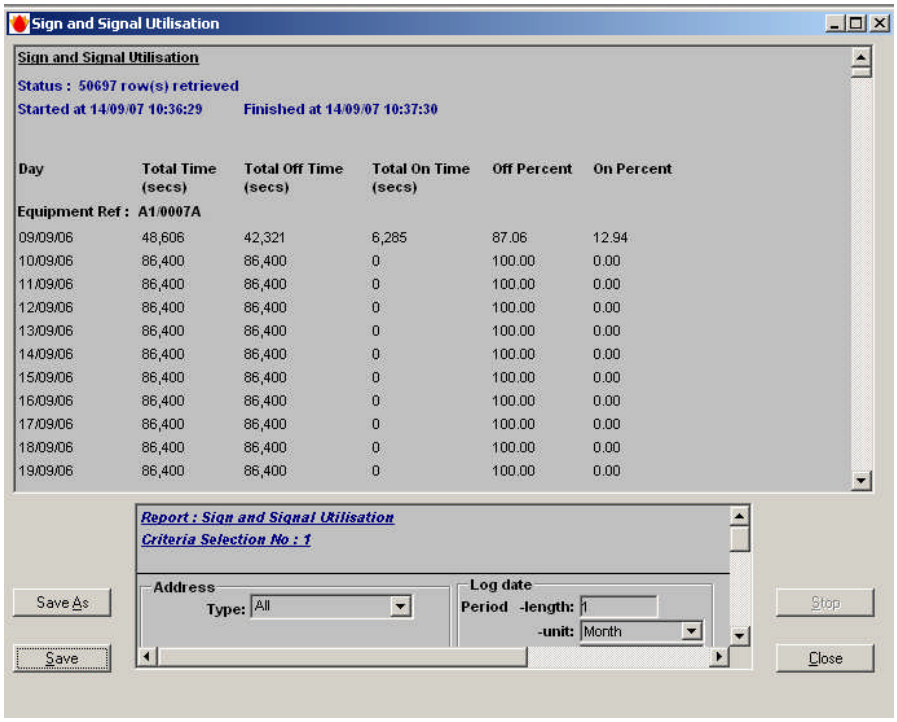

Figure 19 - Sign and Signal Utilisation

(xii) Software System Summary

This report provides details of COBS, SAC and subsystem startup information. It reports on log types OPLG1201, OPLG1202, OPLG1204 and OPLG1208. Data is sorted by log type, then grouped together by identical Equipment Type, System Id, Software Version, System Data Version information. These groups are then used to calculate the first startup and last startup times for the Software Version and System Data Version information. The report is ordered by loggingsystem and the date the software was first installed

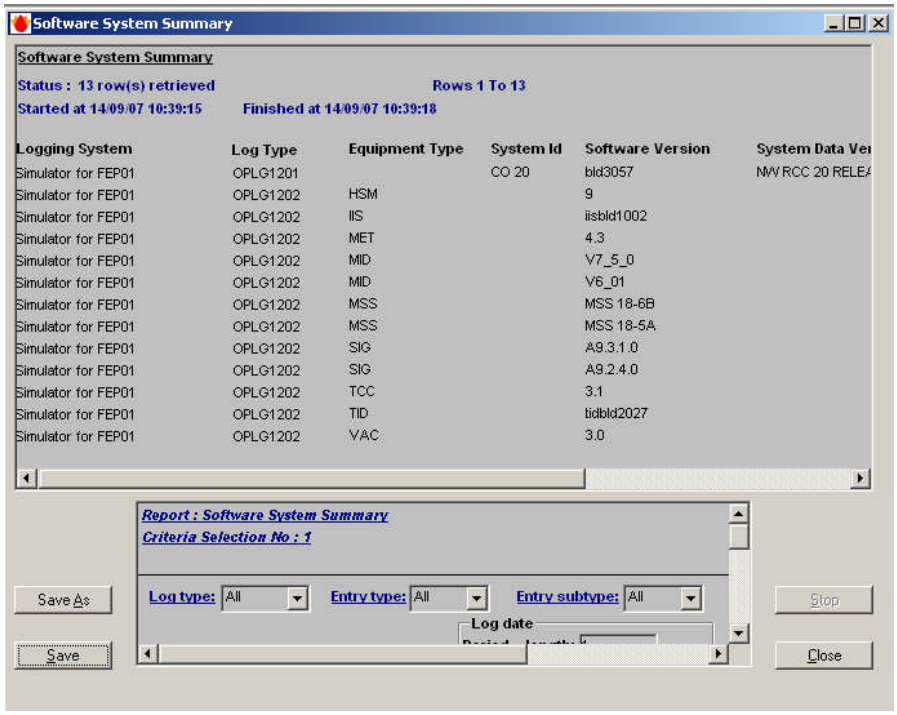

Figure 20 - Software System Summary

(xiii) Calls per Day

This report provides per day statistics on incoming and outgoing telephone calls (TLOG2001).

Output is :

Date

Logging System

Incoming Normal Count

Incoming Average Answer Time

Incoming Average Call Duration

Incoming Invalid Count

Incoming Overlong Answer Count

Incoming Overlong Duration Count

Incoming Test Count

Incoming Unanswered Count

Incoming Unclassified Count

Outgoing Normal Count

Outgoing Overlong Answer Count

Outgoing Overlong Duration Count

Outgoing Test Count

Outgoing Unanswered Count

Outgoing Unclassified Count where :

- Answer is the average time to answer the calls in seconds
- Duration is the average duration of the calls in seconds

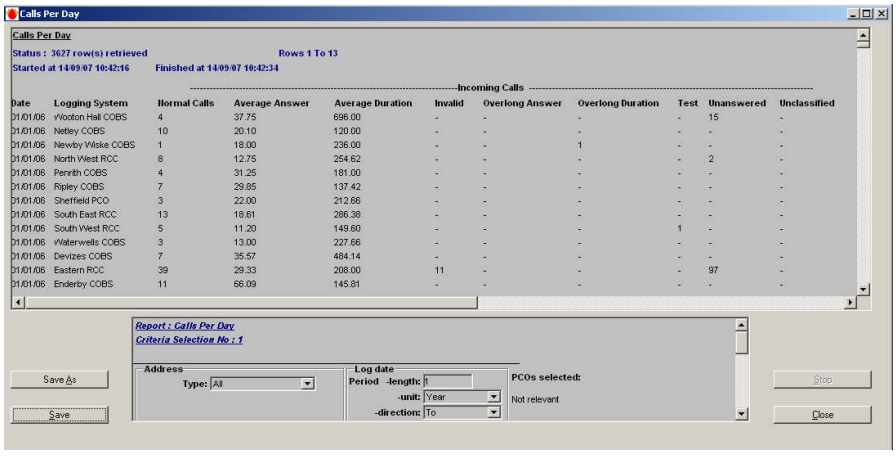

Figure 21 - Calls per Day

(xiv) Telephone Statistics - Per Call Details

This report provides details of all incoming and outgoing telephone calls (TLOG 2001) including test calls, for the defined user search criteria. For definitions of call types see [2]

Output is : Date and Time, Logging System Id, Equipment Ref, Call Direction, Time to Answer, Duration, Pickups, Off Hook where:

- Time to Answer, Duration, Pickups, Off Hook are calculated columns.
- Time to Answer is the minimum difference between the call answer time and the call start time.
- Duration is the maximum difference between the call answer time and the log date and time (which is the time that the logging system generated the log).
- Pickups is a count of the Telephone Line Controller (TLC) references.
- Off Hook is the sum of the call answer time and the call cancel time.

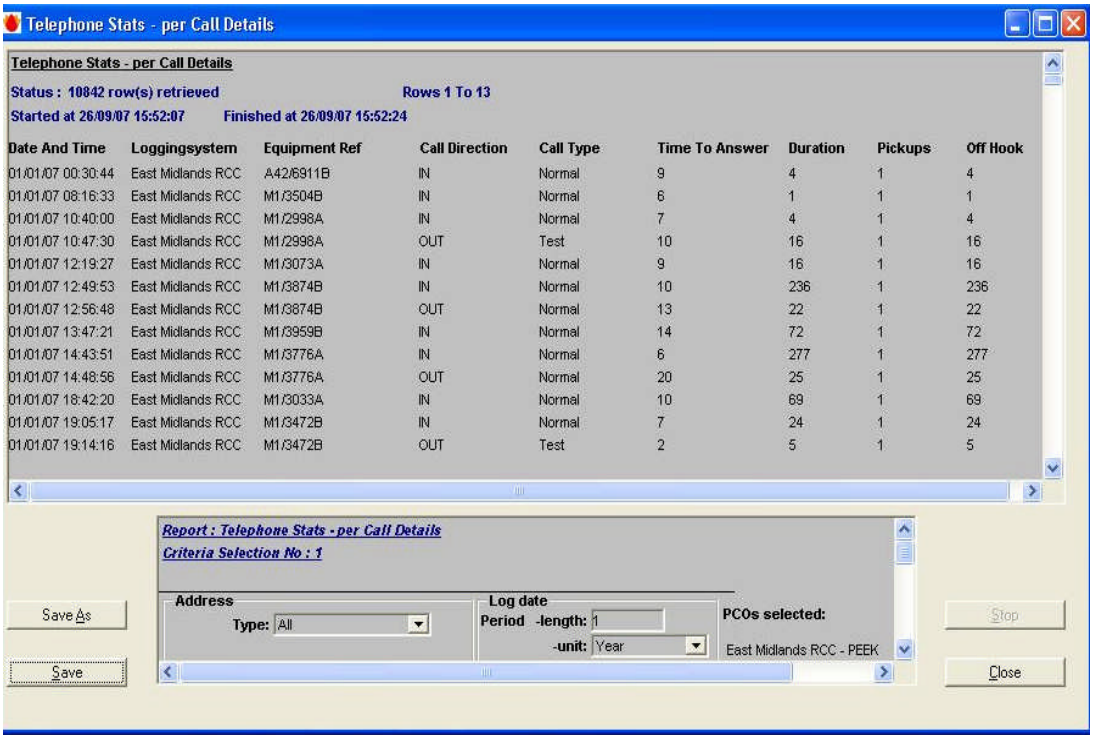

Figure 22 - Telephone Stats - per call details

(xv) All Options Default Output

This report allows retrieval of data for all log types, depending on the user search criteria. This report can be used to see all the logs a logging system(s) sent to Halogen within a time period, or it can be used to search for specific types of log sent by a logging system(s). No processing is done to the returned data. The report is ordered by Log Date (oldest log first) then Halogen Receipt Date. Only column headers which are common to every log type are displayed, all other columns are just displayed as tab separated values.

Log data fields are output in ascending field number order within ascending line number order, with fields formatted as defined in the Highways Agency document MCH 1780 “NMCS2 Logging Formats and Guidelines”[3].

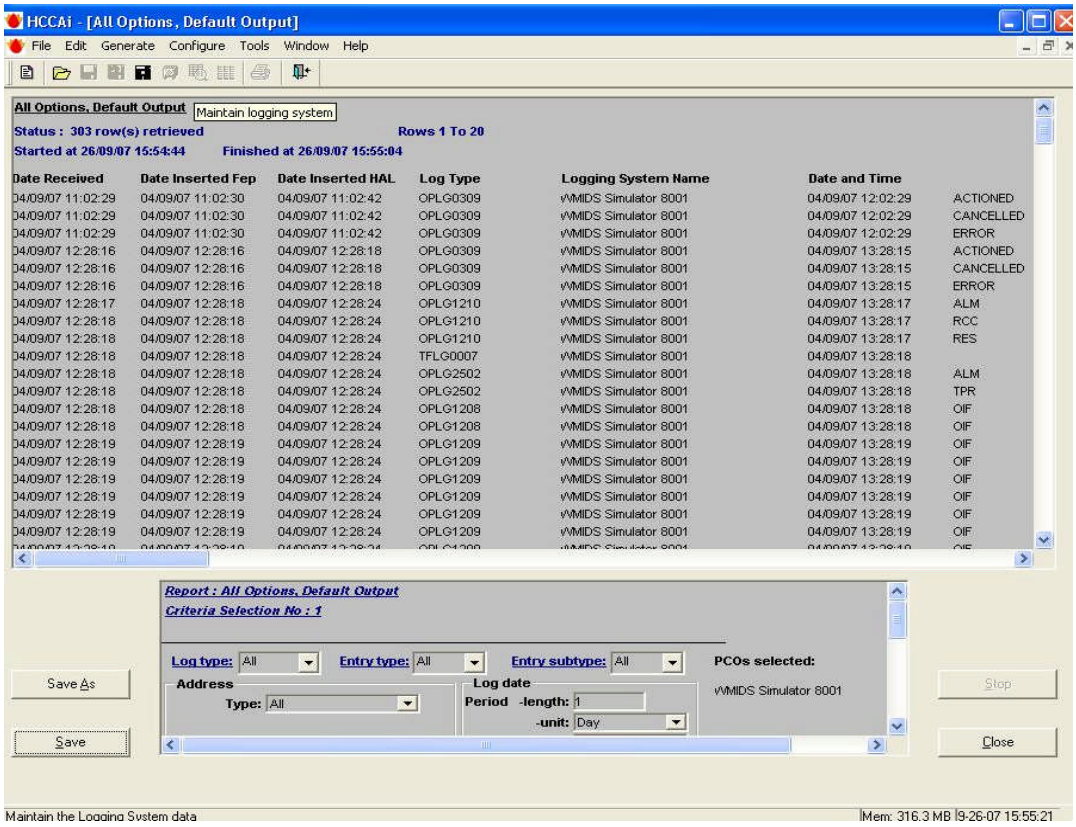

Figure 23 - All options, Default Output

(xvi) All Options-Extra Details

This report is exactly the same as the All Options Default Output report except that the data retrieved contains extra Halogen log information, such as repeating line IDs and updated flags.

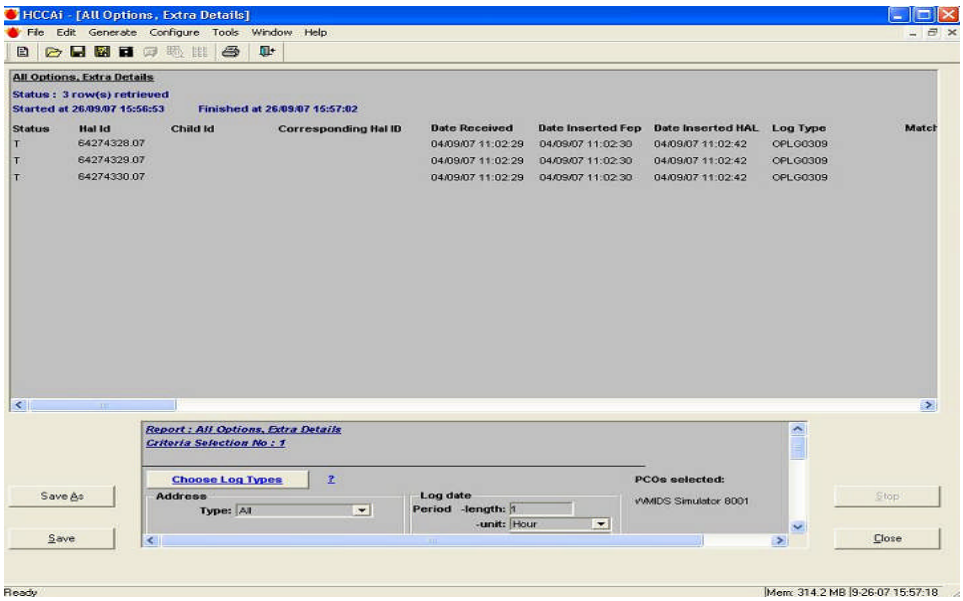

Figure 24 - All options- Extra Details

3.1.2 System Report Definitions

System Reports provide users with details of Halogen operation and the status of its links to other systems. The following reports, described in more detail in subsequent sub-sections, are available:

- Exceptions Report
- Log Edits
- Current System Status (Operational Summary)
- Log Validation Analysis

System reports are available to all users.

(i) Exceptions Report

This report provides users with the ability to report on the Halogen Exception Log. Criteria are a date and time search period and a pick list of exception types and logging systems.

The Exception Log stores details of significant operational events and problems including instances where incoming data to Halogen is of an unsupported format, or if Halogen has failed to connect to a logging system.

This report is a good starting point for any troubleshooting regarding logging system connection problems. See Appendix B 'Exceptions & X25 Error Codes' for a full list of all Exceptions that can be reported on. X25 error information is only available for exception numbers :- 53009, 53012, 53013, 53014, 53015, 53016.

Columns are Dt Inserted, Message Text, Halogen Table Name, Bad Log ID, Logging System ID, X25 Description, X25 Error, X25 Cause, X25 Diag.

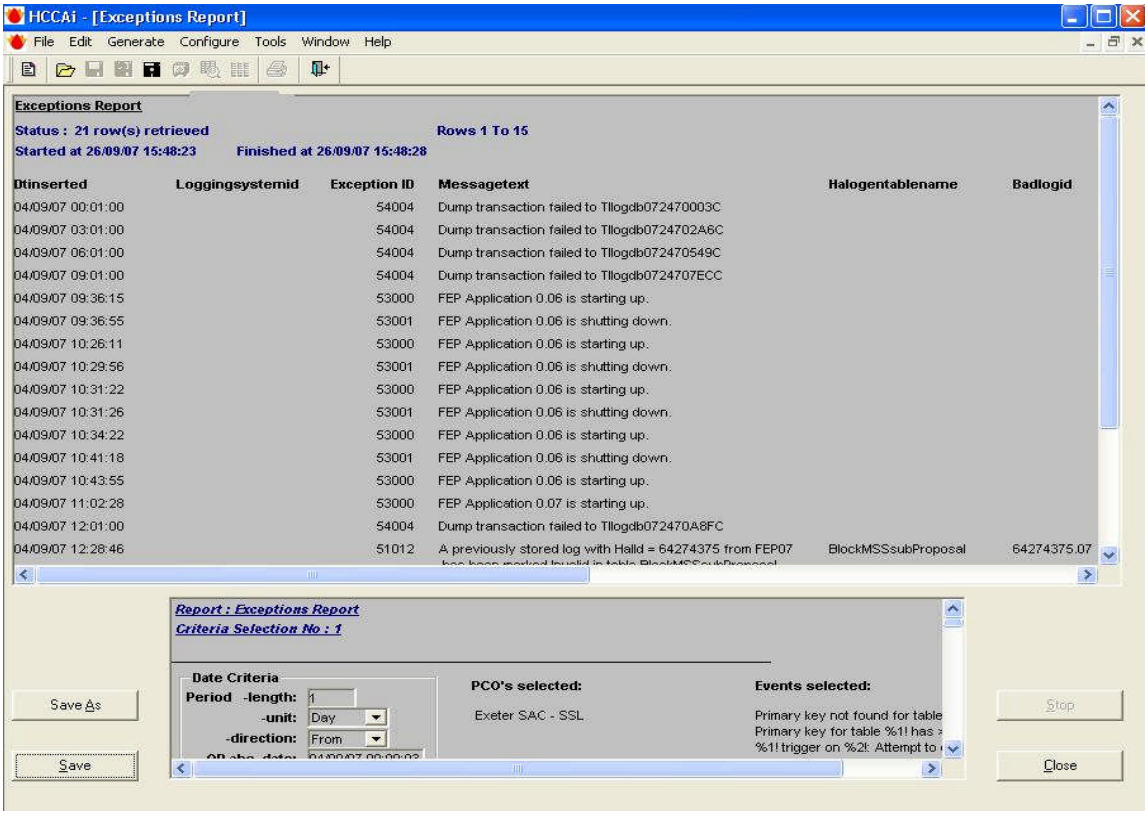

Figure 25 - Exceptions Report

(ii) Log Edits

This report provides an audit trail of logs that which been edited by authorised HCCA users. It is possible to report on who edited logs and for what reason those logs were edited.

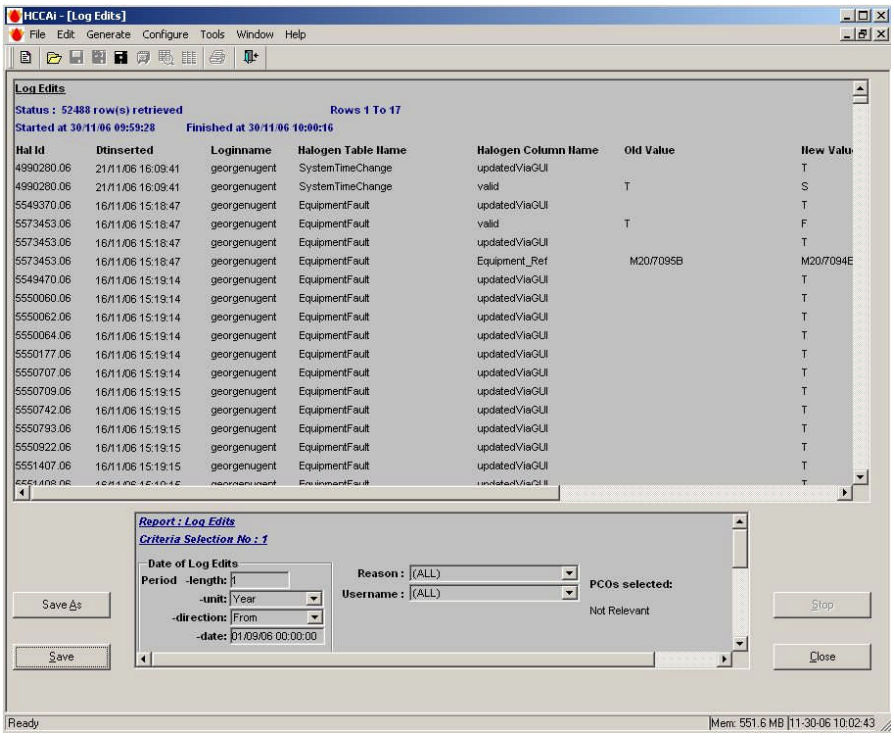

Figure 26 - Log Edits

(iii) Current System Status (Operational Summary)

Current System Status provides the following details for selected Logging Systems with a connection to Halogen:

- RCC address.
- Logging system name.
- State of the loggingsystem
- Date/time of last SVC setup (if blank, there is no current connection to Halogen and no data is being sent).
- Date/time of last log received by Halogen, time is shown in GMT (this is the last time Halogen received any data from the logging system; no data will exist in the database after this time).
- Accepted count of known logs received since the SVC was setup. [4]
- Rejected count of unknown logs received since the SVC was setup.[4]
- Suspended count of unknown logs received since the SVC was setup.[4]

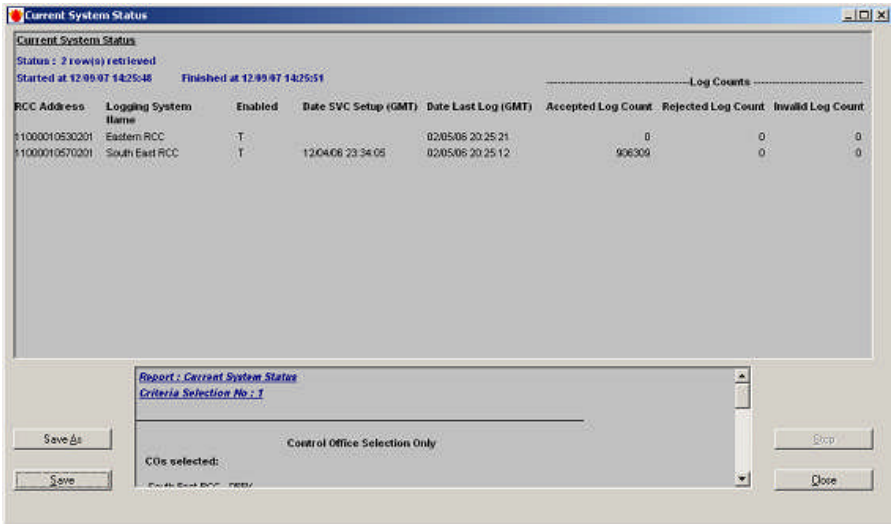

Figure 27 - Current System Status Screen

(iv) Log Validation Analysis

Not all log data sent to Halogen from Logging Systems is error free. Unknown logs cannot be matched to any of the Log Templates known to Halogen. Invalid logs are recognisable as a particular Log Type/Entry Type but contain fields with invalid data. The Invalid/Unknown Count report displays, in accordance with the supplied search criteria, the number of logs for each Logging System which fall into either of the preceding categories.

The user can click on a value returned for the invalid, rejected or suspended column and this displays the rows with more details in a new window.

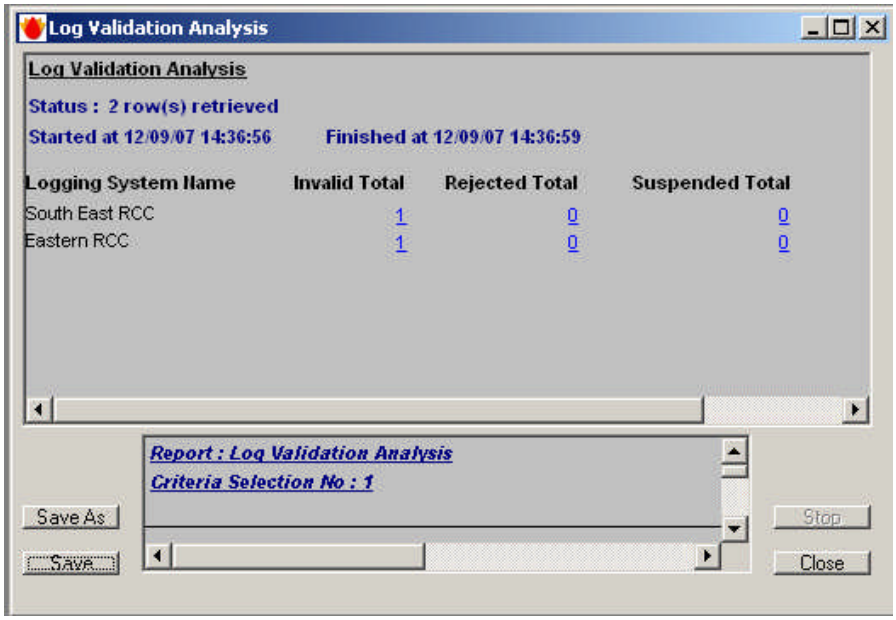

Figure 28 - Log Validation Analysis Screen

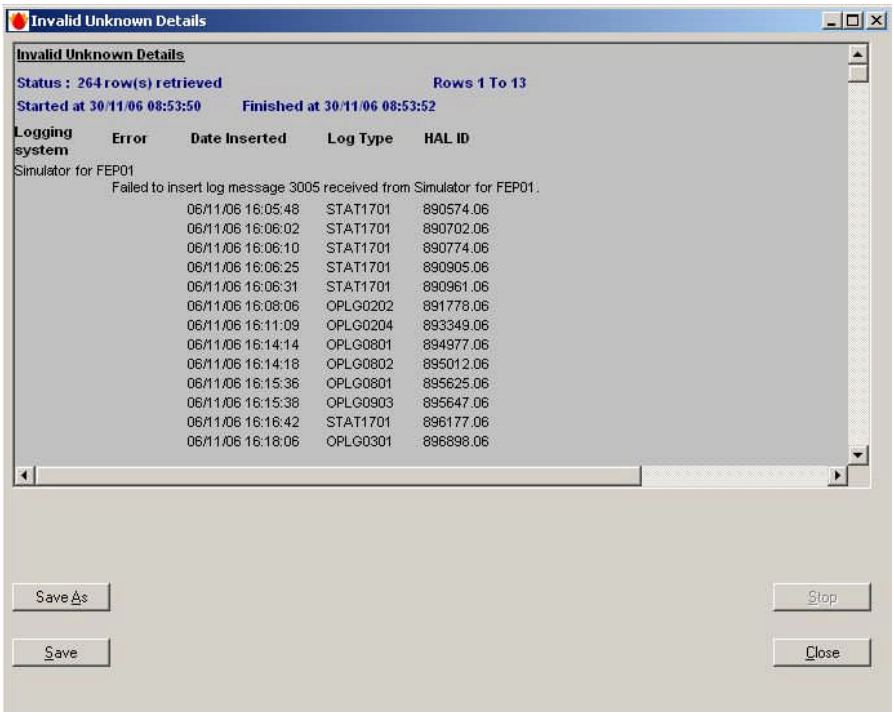

Figure 29 - Invalid Unknown Drilldown Details

3.2 Specify Search Criteria

Generation of all reports requires the user to define the scope of the report by supplying a set of search criteria. These criteria differ from report to report. The “Criteria Window” shows the search criteria available for the particular report chosen from the “Report Selector” menu.

The search criteria supported by the HCCAi are described in the following sub-sections.

3.2.1 Log type selection

The scope of a report can be limited by log type. Log types are selected from three pick lists, the values in these pick lists are specific to a report. They contain the Log Types, Entry Types and Entry Sub Types that can be searched on. It is not possible to select multiple entries from these pick lists (except the All Options Extra Details Report – see below), but it is possible to select “ALL” entries for a specific log type, entry type or subtype. Once a specific Log Type is selected, the Entry Type pick list is filtered to only show entries that are relevant to the chosen Log Type. Once a specific Entry Type is selected, the Entry Sub Type pick list is filtered to only show entries that are relevant to the chosen Entry Type.

The text name of these pick lists is also a link to a quick help reference to the log types. When the mouse is over the link, the mouse pointer will change from an arrow to a web style hand pointer. The “Log Type“ help describes each specific log type stored by Halogen, the “Entry Type” help describes the information stored per entry type and “Entry Subtype” help describes exactly what each Halogen log entry stores.

See Appendix B ‘Log types’ for a list of the log types stored by Halogen.

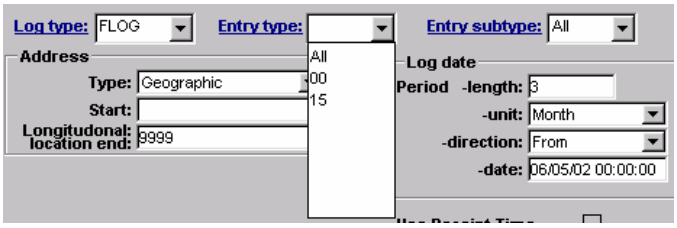

Figure 30 – Standard Report Log Type Pick list

The All Options Extra Report allows the user to select multiple log types as part of the search. The All Options Extra Report does not contain the standard 3 pick lists as mentioned above but one button which will open up a window to allow the user to choose from the available log types.

Figure 31 - Choose Log Types

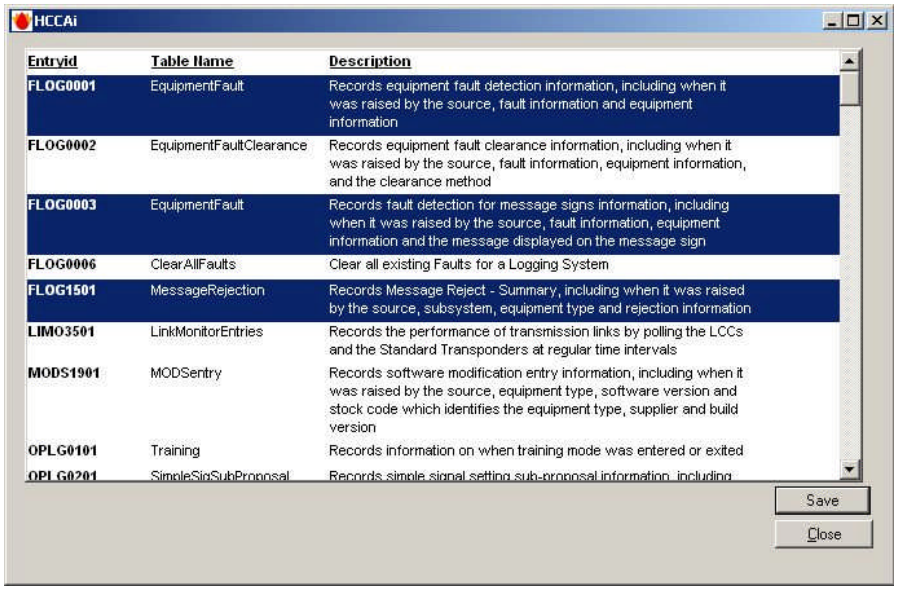

Figure 32 - Multiple Log Type Selection

3.2.2 Time Periods

There are two time criteria that a user can search on: Log date which is the actual date and time the log entry was generated by the Logging System, and Receipt date which is the date the log was received by Halogen.

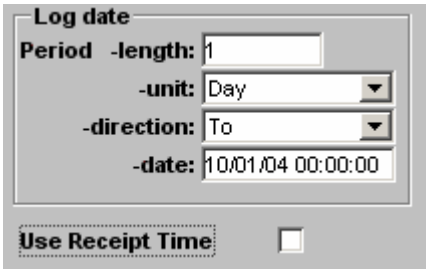

Figure 33 - Time Criteria Selection

As a general default the Receipt date criteria will not be shown on the “Criteria” window. To enable it for use, click the “Use receipt time” check box. Receipt time will override the Date/Time Criteria.

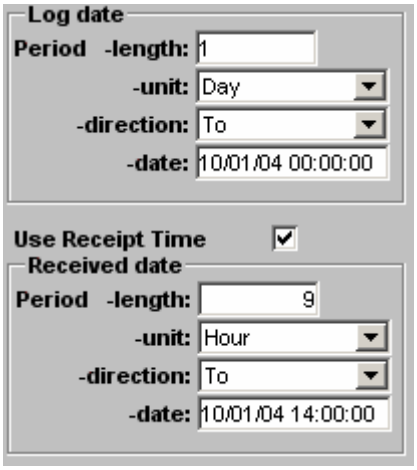

Figure 34 – Receipt Time Criteria

Date and time search criteria are split into 4 fields, ALL of which are used in a search: -

Unit A pick list of date and time units to search on; list contains Minute, Hour, Day, Week, Month, Year, Not Used. If "Not Used" is selected then this form of date search will be deemed as not being used and its values reset.

Period Length A positive numeric value which constitutes the number of units which will be searched on. If a blank value is specified then this format of date search will be deemed as not being used and its values reset.

Direction A pick list which defines if the search is going From or To your specified date. The list contains To, From and Not Used. If "Not Used" is selected then this form of date search will be deemed as not being used and its values reset.

Date A Date and Time value entered in the format 'dd/mm/yy hh:mm:ss'.

If either of the Log or Receipt date and time search criteria is not being used, then the Unit and Direction fields will reset to "Not Used" and the Period Length and Date will reset to empty fields. The Date value will automatically populate to the current system time when this date criteria is brought back into use.

Note that whenever you create a new set of criteria for a report, the log date criteria will default to 1 day to the current date and time, unless you have previously saved any criteria for this report. Saving search criteria for a report is described in Chapter 3.4 'Search Criteria Storage and Selection'.

3.2.3 Equipment type

You can specify a particular type of equipment in which you are interested. Select a specific type from the pick list or select '(ALL)' to search for all values.

3.2.4 Address criteria

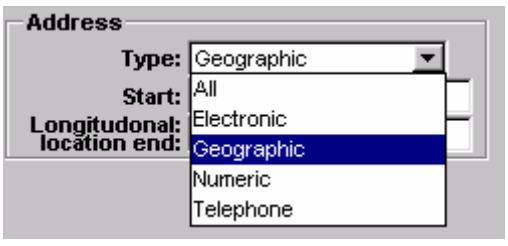

Figure 35 - Address Pick list

(i) ALL addresses

You can specify the address of the item of equipment on which you wish to report. To search for ALL address values, select "ALL" from the address pick list.

(ii) Electronic address

To specify an electronic address search, select "Electronic" from the address pick list. Note this will delete any previous addresses of different types you have entered.

Simply enter a start and/or end address to search on. Electronic addresses must be entered in the format (nnn/n/nnn/nnn) where n is a number between 0 and 7. To search for a specific address, the address must be entered into the start AND the end field. Whenever an electronic address is chosen by the user, default values will be automatically shown. If there is no value present the default start value is (000/0/000/000) and the end value is (777/7/777/777). These will always be the defaults unless a user specifies a different address. If both start and end values are left blank then ALL address types will be searched for.

(iii) Geographic address

To specify a Geographic address search, select "Geographic" from the address pick list. Note this will delete any previous addresses of different types you have entered.

Simply enter a start address in the format "M25/1234A1", where "M25" is the motorway and "1234"is the Longitudinal Location Start (or Marker Post From) and "A" is the carriageway and "1" is the Lane. There should be no spaces. The more data entered into the start field, the more specific the search will be. All data entered in the start field must contain a "/". If only a motorway is specified in this field then the Longitudinal Location start value will default to '0000'. Specify the end of your search by entering a Longitudinal Location end value (please note this must be of the format nnnn, where n is a number between 0 and 9). This will be set to default value '9999' if no user value is present. If no Motorway value is specified then ALL address types will be searched for.

(iv) Telephone address

To specify a telephone address search, select "Telephone" from the address pick list. Note this will delete any previous addresses of different types you entered.

Simply enter a start and end address to search on. Formats for this address are as follows and a help box is available for reference whilst using this report:

Telephone Equipment : n/nnn/n or nnn/n

Responder Equipment : n/nnn

TLC Equipment : n/n

Sector & Block Equipment : n/nn

where n is a number between 0 and 7. To search for a specific address, the address must be entered into the start AND end field. Whenever this address type is chosen by the user default values will be automatically shown. If there is no value present the default start value is (0/000/0) and the end value is (7/777/7). These will always be the defaults unless a user specifies a different address. If both start and end values are left blank then ALL address types will be searched for.

(v) Numeric address

To specify a numeric address search, select "Numeric" from the address pick list. Note this will clear any previously entered criteria.

Simply enter details for ‘Start’ and ‘End’ for all numeric addresses (e.g. OIF addresses, Sector Switch addresses). Whenever this address type is chosen by the user default values will be automatically shown. If there is no value present the default start value is 000 and the end value is 999. It is recommended that equipment type is also supplied. If both start and end values are left blank then ALL address types will be searched for.

(vi) Exclude address like

All Fault and sign/signal setting reports (except MSS Usage) include an additional address field that allows specific addresses to be excluded from the data search. This is a useful option if a specific address is causing a large number of faults or a user does not wish data from a particular motorway.

The search will locate and ignore any addresses that can match the value in this field so a full address does not need to be added.

E.g. Entering ‘M6’ into this field will exclude all log data for the M6, while entering ‘M6/1234A2’ will exclude all log data for M6/1234A2

Figure 36 - Exclude Address Field

3.2.5 Setting

You can specify the equipment setting on which you wish to report. Setting values may contain single characters, or parts of words, as well as whole words. No wildcards are needed to search for single character or parts of words, just type a character or group of characters in the setting field. If left blank, all settings will be returned.

3.2.6 Implementation reason

You can search for Implementation Reasons. These may contain single characters, or parts of words, as well as whole words. No wildcards are needed to search for single character or parts of words, just type a character or group of characters in the “Implementation Reason” field. If left blank, all reasons will be returned.

Valid reasons as declared in Highways Agency document TR2133 are :- ‘Update/Initialisation’, ‘Clear’, ’Part_Clear’, ‘Accident’, ‘Congestion’, ‘Road Works – Coning’, ‘Obstruction’, ‘Debris’, ‘Incident’, ‘Animals’, ‘Pedestrians’, ‘Large load’, ‘Unconfirmed’, ‘Fog’, ‘Oncoming vehicle’, ‘Test’, ‘Closures/Diversions’, ‘Visibility’, ‘Rain’, ‘Other’ and ‘Tidal Setting.’

Please note that the spelling of these reasons may differ slightly so it is recommended that users search for parts of words rather then correct spelling.

3.2.7 Initiator Id type

You can specify a particular initiator id type in which you are interested. Select a specific type from the pick list or select ‘(ALL)’ to search for all values.

Valid values for this field are :- 'CONTROL ROOM', 'OIF', 'AUTO', 'TIMEOUT', 'S', 'NMT' and 'RIF'

3.2.8 Exclude Cleared/Uncleared Faults

For most Fault reports (excluding Bulk Fault Clearance, Fault Monitor, Telephone Fault History and Uncleared Faults report) you can specify the status of fault to be returned in the Faults reports by choosing the relevant radio button. This is useful if only a certain status of faults are of interest.

Figure 37 - Return Faults Checkboxes

3.2.9 Inter Faults

For most fault reports (excluding Bulk Fault Clearance, Fault Monitor and Telephone Fault History), you are able to specify for only INTERMITTENT faults to be returned by checking the Inter Faults Only box.

Figure 38 - Inter Faults Only

3.2.10 Fault Clearance Method

For the Bulk Fault Clearance, you are able to retrieve reports with a specific Clearance Method.

Figure 39 - Fault Clearance Method

3.2.11 Fault Volume Count Range

The High Volume Faults report returns a count on the number of faults per piece of equipment, the fault count range allows you to specify boundary values for this count.

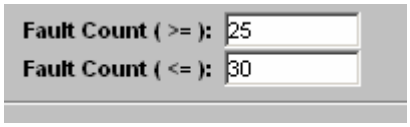

Figure 40 - Fault Count Range

3.2.12 Sign & Signal Utilisation Range

The Sign & Signal Utilisation report returns the On/Off percentage for Signs and Signals. The Sign & Signal Utilisation range allows you to specify boundary values for this percentage.

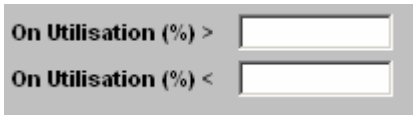

Figure 41 - Utilisation Range

3.2.13 Telephone Call Details

Incoming and Outgoing telephone logs are classified by Halogen as one of the following types: - Invalid, Normal, Overlong Answer, Overlong Duration, Test, Unanswered & Unclassified [3]. The Telephone reports allow you to specify which of these types and call direction you wish to retrieve data for.

Classification of telephone calls is carried out on a daily basis by the Halogen database, any calls marked as unclassified have not yet been through this process.

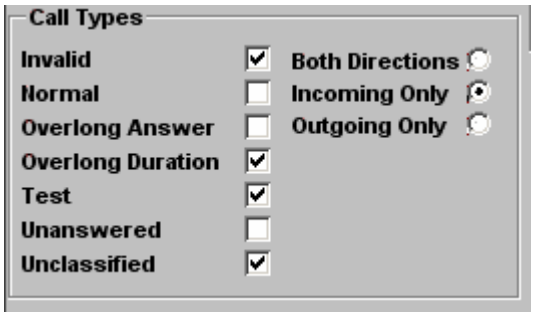

Figure 42 - Telephone Call Types

3.2.14 Log Classification

The All Options Extra Report returns a result which falls into the flowing Log Classification – Valid, Invalid and Suspended. This feature will allow the user to choose which classification he/she is interested in.

Figure 43 - Log Classification

3.2.15 County Boundary and Contract Name

The majority of reports have the feature to allow the user to select which County Boundary and Contract name that the results will fall into. Most COs have now been migrated into an RCC and this feature will help the user in obtaining data which is of most interest in their specified region.

Figure 44 - County Boundary and Contract Name

3.3 RCC / CO Selection

You can specify the logging system, or a selection of logging systems, for which you wish to retrieve log data.

The RCCs Selector Window displays a list of Regional Control Offices (RCCs) with information such as the RMC area of the RCC, the RCC name, the RCC id number and the RCC abbreviation. The list allows multiple RCC / COs to be selected by clicking on them. More than one office can be selected by holding down the “CTRL” key and clicking on them, or a list can

be chosen by selecting one “beginning” RCC / CO, then by holding down the “SHIFT” key and clicking on an “end” RCC / CO, whereby all offices in between get selected.

The RCC / CO list can be ordered by clicking on the relevant column header. For example to order the list by RMC areas click on the RMC column header. The list will now be ordered in ascending RMC order, clicking the column heading again toggles between ascending and descending order.

3.4 Search Criteria Storage and Selection

You are able to specify and store multiple different search criteria and RCC selections for reports. This can be particularly useful for reports which are run frequently, as it allows the criteria to be saved for use another time.

Stored criteria selections are specific to each user and each report. RCC / CO selections are only specific to a user, and the same RCC / CO selections are available to that user in *ALL* relevant reports.

For each report you can store multiple criteria selections, each of which is related to one RCC / CO selection.

New or changed criteria and RCC / CO selections are saved explicitly by selecting the appropriate “Save” button or implicitly by selecting the “Run Report” button.

Criteria and RCC / CO selections are numbered, and can be chosen from pick lists located at the bottom of the “Report Selector” window. A short description of the criteria or RCC / CO selection can be entered by the user by clicking on the text field to the right of the selection number. When the description field has become active its background colour will change from blue to white, and a blinking cursor will appear. This means it is now possible to type into this field. Any changes to the description of a selection or the actual criteria or RCC / CO selection can be saved by either clicking the “save” button or by running the current report. Any changes made to the criteria window will NOT be saved if a different report is chosen or another selection is retrieved without specifically saving the previous one.

When a report is selected for the first time by a user, a new criteria selection will be automatically created. This will be criteria number 1, and its related RCC / CO selection will be the RCC / CO selection currently shown. If there are no RCC / CO selections already created for the user, then a new one will be created and will be RCC / CO selection number 1.

Figure 45 - Default Criteria & PCO Pick List

When a report is run, it is run for the currently shown RCC / CO selection and criteria. If either of these has been changed from their original values then a message box will be shown warning that these changes will be saved.

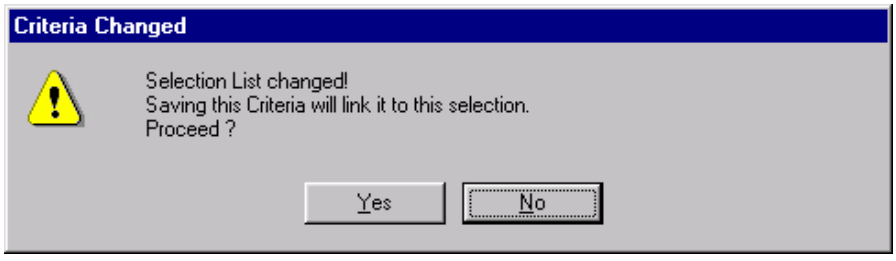

Figure 46 - Criteria Change Message Box

To proceed with running the report click on the “Yes” button, otherwise click on the “No” button. If a user selects “No” then the original criteria will still not be shown. To show the criteria with its original values simply double click on the criteria number from the criteria pick list.

4 Running your first report

Once you have selected a report and specified the search criteria needed, click on the “Run Report” button. The HCCAi will open the report window and start retrieving data for the report. This window will send a request to the database to search for data that matches the report criteria.

When the HCCAi is searching for data the top of the retrieval window will specify the report start time and that the database is “Searching for data”. Whilst the report is running, the ‘Save’ and ‘Save As’ buttons will remain in inactive.

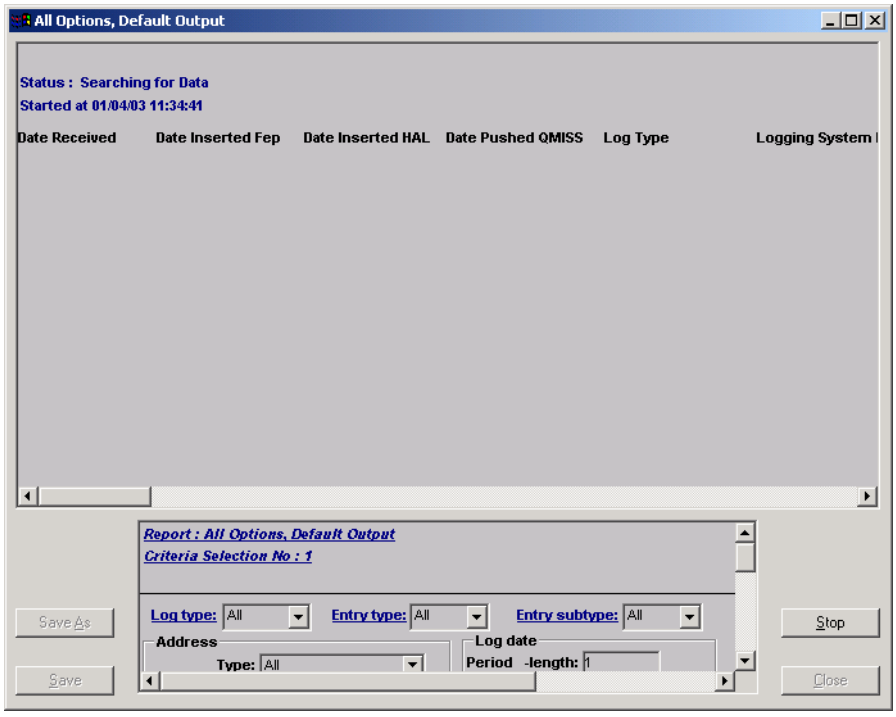

Figure 47 - Data Retrieval Window

When a report starts to retrieve data the status will change to “Retrieving Row “ and give the row number of the row being retrieved.

When a report has completed (due to either the stop button being clicked or all rows that match the search criteria being retrieved), the status will change to the number of rows retrieved and the time the report completed.

For a report to run quickly it is recommended that time periods are kept as short as possible, logging systems chosen are kept to a minimum and that specific log types are selected.

4.1 Running a report to disk

It is possible to run a report straight to the PC. To do this click on the “Run Report To Disk” button. The arrow cursor will change to an egg timer, and after a few seconds a Save dialog will appear. Simply choose the name of the file you wish to create, its type and its location and click “Save”.

A new file will then be created on the PC containing all the data that matches your criteria. By running the report to disc, HCCAi performance is improved but it does also have some limitations. The most frequently encountered limitation is that of saving files within Excel. Excel can only cope with 55,000 rows and some HCCAi reports can produce hundreds of thousands of rows. To minimise the risk of excel not being able to cope with an abundance of rows, it is recommended that users break down queries into separate searches e.g. if you wish to search for a week, do two searches, the first search for 3 days and the second for 4 days.

Please note: restrictions with the current ODBC drivers will give the impression that the HCCAi has “hung” at this time and will appear to be unresponsive. This is because current ODBC drivers can only perform database operation synchronously, as soon file is created the HCCAi will come back to life.

5 Coping with multiple search criteria & RCC selections

As described in Chapter 3 multiple search criteria and RCC / CO selections can be set up for each HCCAi standard and system report. This allows users to create and save frequently used search criteria or RCC / CO selections and recall them when needed.

5.1 Adding new selections

To add a new criteria or RCC / CO selection, click on the "New" button located at the bottom of the pick list on the "Report Selector" window.

The new selection will be given the lowest available selection number. (For example if there are already 3 criteria selections available each numbered 1,2,3 respectively then a new one would be number 4. If the criteria selections were numbered 1,3,4 then the new selection would be number 2). This selection number will appear to the top of the criteria area. All criteria parameters will be set to their default values.

Figure 48 - Criteria Info

The RCC / CO selection on display will be automatically "linked" to the new criteria selection. To specify a different RCC / CO selection, simply choose another from the RCC / CO pick list or click on the "New" button to create a new selection.

This different RCC / CO selection will only be permanently "linked" to that criteria if the report is run, it is stored as a background report or the "Save" button under the criteria selector is clicked.

A new RCC / CO selection will automatically default to the top entry on the RCC / CO list.

5.2 Retrieving selections

To retrieve a previously stored criteria or RCC / CO selection, click on the relevant report that you want to run. Select a criteria selection from the criteria pick list area (using the up and down arrows if multiple criteria for that report exist). Double click on the criteria row. The criteria will now retrieve and the RCC / CO selection linked to it will be shown.

If any changes are made to the selected criteria, then these changes will be saved if the report is run or if the criteria selection is saved. If you edit any criteria values, and then retrieve a different criteria selection or choose another report without saving your edits, then all changes will be lost.

5.3 Copying criteria

It is possible to create an exact copy of the criteria set up for a report. This is particularly useful where the required criteria are similar, or in some cases the exact same, for more than one report.

Copying criteria creates a new criteria selection from the selection currently shown on the screen. To copy a criteria simply retrieve the criteria you wish to copy, then click on the "Copy" button located at the bottom of the pick list on the "Report Selector" screen.

5.4 Saving selections

To save a selection, click on the "Save" button located either under the criteria pick list or the RCC / CO pick list.

If a criteria selection is saved then this will save the criteria shown for the chosen report AND “link” it to the RCC / CO selection currently on the screen. If the RCC / CO selection has changed from that originally linked to the criteria selection on display, then a message box will be displayed indicating that there has been a change and asking if the user wishes to proceed.

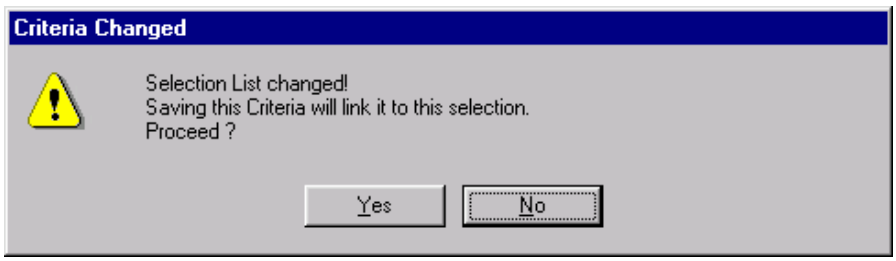

Figure 49 - Criteria Changed

If a RCC / CO selection is saved then it will only save the RCC / CO selection, it will NOT save any changes made to the displayed criteria selection.

5.5 Deleting selections

To delete a criteria or RCC / CO selection simply ensure that the selection you wish to delete is currently shown on the screen. You can tell this by looking at the selection numbers on the Criteria and RCC / CO selection windows.

If the criteria and RCC / CO selections shown are not the ones that you want to delete, then the relevant criteria or RCC / CO selection must first be retrieved. (Refer to Chapter 5.2 ‘Retrieving selections’ for more information).

When you have the criteria or RCC / CO selection that you want to delete, simply click on the “Delete” button under the criteria or RCC / CO pick lists to delete it.

6 Printing a report

Whenever report results are on display in the Report window, they can be printed at your User Console by selecting “Print” from the File Menu.

The HCCAi provides general print options, similar to those provided by standard Windows packages such as Microsoft Word.

To change print options, select “Page Setup” from the Print menu. This allows a user to set margins and the page format (i.e. landscape or portrait). To specify a printer select “Print” from the file menu and click on the “Printer” button.

7 Default Save Extension

You can set a default save option for standard and system reports. This saves the need to always pick the same extension type from the save list.

To specify a default save, select “Change Default Save” from the “Tools” menu.

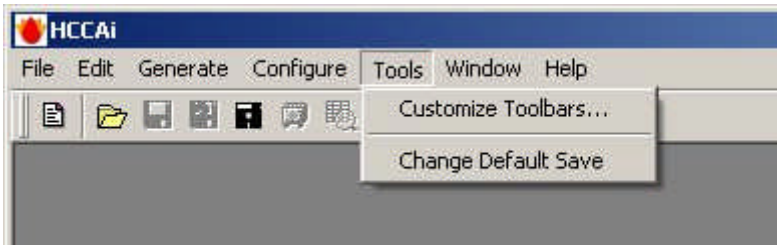

Figure 50 - Tools Menu

This will show the “Default Save” window. To set a default save value simply choose the extension type required from the pull down menu and then click on the “Save” button. Your default save can be set at any time.

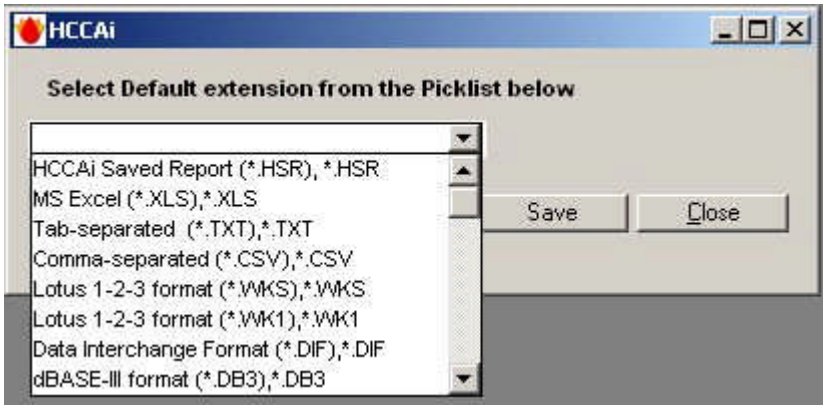

Figure 51 - Default Extension Options

To use your default save, click on the “Save” button on a standard or system report window. This will bring up a standard Windows style save dialog box (the same as would be shown using the “Save As” option) except the extension type will be defaulted to your current default and no other extension type is available.

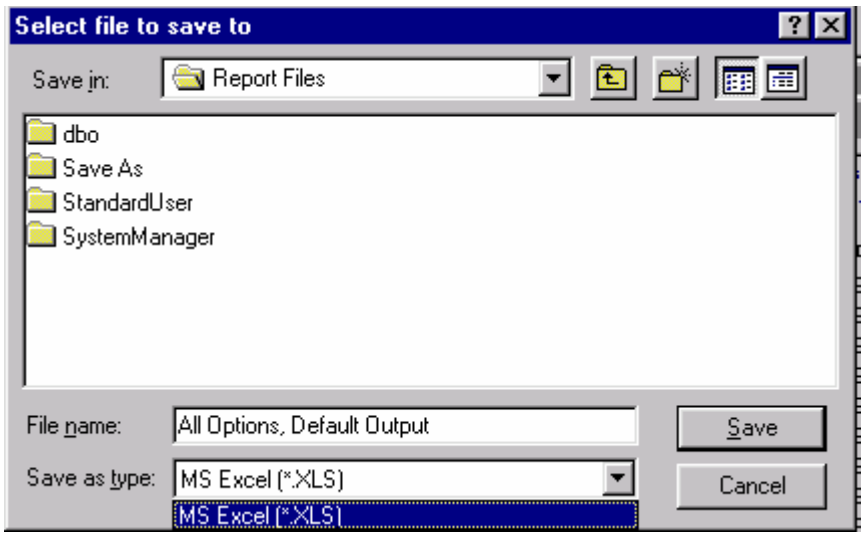

Figure 52 - Save To

8 Password configuration

Your HCCAi username and password provides access to all the following systems:

- Halogen Online (www.HalogenOnline.co.uk)
- Halogen Browser
- HCCAi
- Roadside Fault Display (www.rccStatus.org.uk)
- MIDAS Traffic Count Data (www.midas-data.org.uk)

Therefore a central password configuration site is needed as a password change affects all the above systems. This site is the Halogen User administration web site and is found at: http://useradmin.HalogenOnline.co.uk.

Please contact the Mott MacDonald Help Desk if you have any questions or problems.

8.1 How do I change my password?

- Go to http://useradmin.halogenonline.co.uk
- Enter your username and password into the fields provided and click the “Login” button
- Click the “Change Password” link
- Enter your new password into both fields and click “OK”
- Click the “Log Out” link to exit the Halogen User Administration web site

9 Reporting Halogen problems

If you have any problems with Halogen operation or any queries relating to Halogen's facilities then contact the Mott MacDonald Help Desk. The Help Desk contact details are provided in Chapter 10 'Mott MacDonald Help Desk'.

Current Halogen problem information can be viewed on the Halogen web site at www.halogenonline.co.uk.

A feedback link which directs the user to the Halogenonline.co.uk website is available under Help->Feedback menu for the HCCAi.

10 Mott MacDonald Help Desk

Mott MacDonald operates a Help Desk for Halogen. The Help Desk should be contacted if you wish to become a Halogen user or have any query regarding the Halogen system and its functions. The Help Desk will also provide users with general support on using Halogen to report on log data.

All Halogen faults should be reported via the Help Desk.

Feedback and direct link to the web site can be found within the HCCAi Help->Feedback menu item.

The Help Desk contact details are:

Telephone Number:	0141 222 4666
Fax Number:	0141 222 4667
Email Address:	helpdesk.ITG@mottmac.com
Web Site:	www.halogenonline.co.uk

11 Glossary of Terms

BGO	BackGround Options
CLD	Closed
COBS	Control Office Base System
CSV	Comma Separated Values
DIY	Do It Yourself
FEP	Front End Processor
FTP	File Transfer Protocol
HAL ID	Halogen Identification number
HCCA	Halogen Client Console Application
HSR	Halogen Saved Report
HTML	Hyper Text Mark Up Language
INV	Investigated
ISDN	Integrated Services Digital Network
NMCS	National Motorway Communications System
ODBC	Open DataBase Connectivity
OIF	Operator Interface
OPN	Open
PCO	Police Control Office
PSTN	Packet Switched Telephone Network
PVCS	Mott MacDonald's Version Control Software
QMISS	Quantified Motorway Information Supply System
RCC	Regional Communication Controller
SAC	Stand Alone Controller
SVC	Switched Virtual Circuit

Appendix A References

1. HCCAi Getting Started Guide
2. Classification of Telephone Calls
3. MCH 1780 “NMCS2 Logging Formats and Guidelines”
4. TN0210 Reclassification of Halogen Logs Revision D 30th August 2005

Appendix B Log Types

All log fields are formatted as defined in the Highways Agency document MCH 1780 “NMCS2 Logging Formats and Guidelines”.

Log Type	Entry Type	Sub Type	Halogen Table Name
FLOG	00	01	EquipmentFault
FLOG	00	02	EquipmentFaultClearance
FLOG	00	03	EquipmentFault
FLOG	00	06	ClearAllFaults
FLOG	15	01	MessageRejection
LIMO	35	01	LinkMonitorEntries
MODS	19	01	MODSentry
OPLG	01	01	Training
OPLG	02	01	SimpleSIGSubProposal
OPLG	02	02	BlockSIGSubProposal
OPLG	02	03	SchemeSUBProposal
OPLG	02	04	SimpleMSSSUBProposal
OPLG	02	05	LightingSUBProposal
OPLG	02	06	TunnelSubProposal
OPLG	02	07	BlockMSSSubProposal
OPLG	03	01	ProposalAction
OPLG	03	02	TidalFlowSUBProposal
OPLG	03	03	DiversionProposalAction
OPLG	03	04	TunnelProposalAction
OPLG	03	05	DartfordVMSPlan
OPLG	03	06	SACProposalAction
OPLG	03	07	ManualProposalAction
OPLG	03	08	MessageSignScheduleAction
OPLG	04	01	DimBright
OPLG	05	01	SystemTimeChange
OPLG	06	01	CommissioningofDevice
OPLG	06	02	DeviceCommissioning
OPLG	07	01	RemoteMaintenanceCall
OPLG	08	01	DeviceSetting
OPLG	08	02	MessageSignSetting
OPLG	08	03	TrafficLightChange
OPLG	08	04	DeviceSettingRequest
OPLG	08	05	VACsettingRequest
OPLG	08	06	CCTVsettingRequest
OPLG	09	01	DeviceStatusEntry
OPLG	09	02	DeviceStatusEntry
OPLG	09	03	DeviceStatusEntry
OPLG	09	04	DeviceStatusEntry
OPLG	09	05	DeviceStatusChanges
OPLG	09	06	MeteorologyDeviceStatus
OPLG	11	01	MajorFaultAlarm
OPLG	12	01	COBSStartup

Log Type	Entry Type	Sub Type	Halogen Table Name
OPLG	12	02	SubSystemStartup
OPLG	12	03	TLCstartup
OPLG	12	04	SACstartup
OPLG	12	05	COBSshutdown
OPLG	12	06	COBSInitialisationProgress
OPLG	12	07	SubsystemInitProgress
OPLG	13	01	SchemeCreation
OPLG	13	02	HDSchange
OPLG	13	03	MessageSignScheduleCreation
OPLG	14	01	StationReset
OPLG	16	01	AlertNotification
OPLG	23	01	Incident
OPLG	23	02	TunnelClosure
OPLG	23	03	BridgeClosure
OPLG	23	04	SACincident
OPLG	23	05	HardShoulderLinkActions
OPLG	23	06	HardShoulderSectionActions
OPLG	24	01	TunnelLocalControl
OPLG	25	01	CenlogBufferOverflow
OPLG	27	01	ManualOverride
OPLG	29	01	SuspectSettingWarning
OPLG	30	01	TIW Occurrence
OPLG	30	02	TIWprocessedLog
OPLG	30	03	EventConfirmationRequest
OPLG	30	04	EventConfirmationReply
OPLG	30	05	EventAlert
OPLG	31	01	VACarbitrationChange
OPLG	31	02	VACaccessChange
OPLG	32	01	TCCI_OIFmodeSetting
OPLG	33	01	TCCI_NewEvent
OPLG	33	02	TCCI_EventUpdate
OPLG	33	03	TCCI_EventClearance
OPLG	34	01	SubProposalProcessFailure
OPLG	34	02	SubProposalFailure
STAT	17	01	DeviceStatus
STAT	17	02	DeviceStatus
STAT	17	03	TelephoneStatus
STAT	17	04	OutstationStatus
STAT	17	07	SubsystemStatus
STAT	17	08	InterfaceStatEntry
SUST	18	01	SUSTentry
TFLG	00	04	TelephoneFault
TFLG	00	05	TelephoneFaultClearance
TLOG	20	01	TelephoneCallRecord
TLOG	20	02	TelephoneDialogRecord
TSTA	21	01	PhoneStatisticsRecord

Appendix C Exceptions & X25 Error Codes

Message ID	Description	X25 Event
50001	Primary key not found for table %1!	No
50002	Primary key for table %1! has > 1 columns	No
50003	%1! trigger on %2!: Attempt to change multiple rows by %3!. Rolling back.	No
50004	ExecuteSqlScript only executes scripts up to %1! lines long, #SqlScript currently contains %2! lines.	No
50005	Halogen test message from %1!.	No
50101	Unknown template ! Unexpected EntryID %1! received from loggingSystem %2!, %3!.	No
51001	Invalid data length for field %1!, for entry %2!. Valid length up to %3! characters.	No
51002	Invalid data for enumerated field with TemplateId %1!, for field %2!. Entry %3! is not valid for this field.	No
51003	Invalid data for datetime field with TemplateId %1!, for field %2!. Entry (%3!) is not a valid date/time.	No
51004	Unable to Rollup Child into parent for field %1!. Creating childId %2! in %3!	No
51005	SybaseJaguar Component %1! cannot be found. Invoked from %2! for HalId %3!	No
51006	Variable %1! with a halID=%2! from FEP%3!, is a NULL value. We expect this to be a Log Data Part message. Using field %4! from parent part.	No
51007	Blank datetime received for field %1!. Interpreting as a NULL.	No
51008	An open was issued for logging system %1! when it is already open. Closing and continuing with open.	No
51009	A close was issued for logging system %1! when it is already closed. Ingoring close operation.	No
51010	A FORCED close was issued for logging system %1! The LoggingSystemStatus update will not be replicated.	No
52001	RepServer Status: %1!.	No
52002	Server Status: Failed connection to %1!.	No
52003	Server %1!: Has Become Active.	No
52004	Server %1!: Has Become Dead.	No
52005	Server %1!: Has Become Hung.	No

Message ID	Description	X25 Event
52006	Server %1!: Has Become Invalid.	No
52007	Server %1!: Has Become Quiesced.	No
52008	Server %1!: Has Become Shutdown.	No
52009	Server %1!: Has Become Suspect.	No
52010	Server %1!: Has Become Unknown.	No
52010	Server %1!: Has a Route problem.	No
52012	Server %1!: Has a Connection problem.	No
52013	Server %1!: Has a exceeded Partition Threshold.	No
52014	Server %1!: Has exceeded Queue Latency.	No
52015	Server %1!: Has exceeded Database Latency.	No
53000	FEP Application %s is starting up.	No
53001	FEP Application %s is shutting down.	No
53002	No log messages for %d seconds sending new log request to %s.	No
53003	Bad log message received from loggingSystem %s.	No
53004	Failed to insert log message from loggingSystem %s into log table using Insert%s	No
53005	Duplicate log message received from loggingSystem %s.	No
53006	Log message received out of sequence from loggingSystem %s. expected TID %u, received TID %u.	No
53007	Concatenated log message received from loggingSystem.	No
53008	Switched x25 connection to route %d for loggingSystem %s.	No
53009	Failed to create connection to loggingSystem %s.	Yes
53010	Lost connection to loggingSystem %s.	No
53011	Received %u byte log message from loggingSystem %s.	No
53012	Failed to close connection to loggingSystem %s.	Yes
53013	Failed to receive data from loggingSystem %s.	Yes
53014	Failed to send data to loggingSystem %s.	Yes
53015	Failed to initialise x25socket for connection to %s.	Yes
53016	Failed to clear x25socket for connection to %s.	Yes

Message ID	Description	X25 Event
53017	Successfully established connection to %s.	No
53018	No log messages for %d seconds resetting connection to %s.	No
54001	Dump database successful to %1!	No
54002	Dump database failed to %1!	No
54003	Dump transaction successful to %1!	No
54004	Dump transaction failed to %1!	No
54005	Culled %1! Rows from RawMessage on %2!, retaining %3! Days (> %4!).	No
54006	Storage Threshold eXceeded in database %1!, segment %2!, %3! (2K) pages left, %4!.	No
55001	QMISS Push encountered unknown exception	No
55002	QMISS Push returned failed status	No
55003	Failed to connect to QMISS	No
55004	QMISS Push is starting up.	No
55005	QMISS Push is shutting down	No
55006	QMISS Push returned filtered status	No
55007	QMISS Push returned aborted status	No
55008	QMISS Push returned ignored invalid status	No
55009	Lost connection to QMISS	No
55010	Successfully connected to QMISS	No
55011	QMISS Push returned postponed status	No
55012	QMISS Push. Fault matching expired	No
55013	QMISS Push. Fault matching completed	No
56001	Exception thrown by HCCAsevere log fluctuation	No
56011	EquipmentFault mismatch?. EquipmentFaultClearance %1! Of Fault_Id %2! Seems pre-empted in EquipmentFault %3! By EquipmentFaultClearance %4!.	No
56012	Unmatched fault clearance. Cannot match EquipmentFaultClearance %1! Of Fault_Id %2!.	No
56013	TelephoneFault mismatch?. TelephoneFaultClearance %1! Of Fault_Id %2! Seems pre-empted in TelephoneFault %3! By TelephoneFaultClearance %4!.	No
56014	Unmatched fault clearance. Cannot match TelephoneFaultClearance %1! Of Fault_Id %2!.	No

Message ID	Description	X25 Event
56015	HAL EquipmentFault mismatch?. EquipmentFaultClearance %1! Of Fault_Id %2! Seems pre-empted in EquipmentFault %3! By EquipmentFaultClearance %4!.	No
56016	HAL Unmatched fault clearance. Cannot match EquipmentFaultClearance %1! Of Fault_Id %2!.	No
56017	HAL TelephoneFault mismatch?. TelephoneFaultClearance %1! Of Fault_Id %2! Seems pre-empted in TelephoneFault %3! By TelephoneFaultClearance %4!.	No
56018	HAL Unmatched fault clearance. Cannot match TelephoneFaultClearance %1! Of Fault_Id %2!.	No
56020	FEP EquipmentFault matched update Failed for Fault_Id %1! for Clearance_Id %2!. Error Code was %3!	No
56021	FEP EquipmentFault matched update Failed for Clearance_Id %1! for Fault_Id %2!. Error Code was %3!	No
56022	FEP TelephoneFault matched update Failed for Fault_Id %1! for Clearance_Id %2!. Error Code was %3!	No
56023	FEP TelephoneFault matched update Failed for Clearance_Id %1! for Fault_Id %2!. Error Code was %3!	No
57001	Unknown exception when parsing source data	No
57003	Failed to connect to NOMAD	No
57004	NOMAD push service is starting up.	No
57005	NOMAD push service is shutting down	No
57008	NOMAD push service received invalid log	No
57009	Lost connection to NOMAD	No
57010	Successfully connected to NOMAD	No