GUI_ProjectOpen – Open a Project

Revision history

2017-06-21	Robin Lamacraft	Original draft
2018-05-27	Rod Thompson	Inserted diagrams, actions
2018-06-08	Rod Thompson	Replace graphic and Window Interaction Map Replace 'screen' with 'window' Replace 'BR_PanelConfig' with 'BR_WindowConfig' Replace 'BR_Notification" with 'BR_Message Patterns'
2018-06-09	Don Ferguson	Updated Required Services (Dependencies), added issue list to Scope
2018-06-14	Rod Thompson	Edit Add WARNING CONDITION Add PROCESS FLOW CHART
2018-06-16	Don Ferguson	Removed ProjectRecent as a dependency, as this module performs those functions anyway
2018-06-17	Don Ferguson	Added to Scope Issues 2 & 4 and Actions item 4
2018-06-26	Rod Thompson	Remove Issues Notes Replace window graphic & WINDOW INTERACTION MAP Replace PROCES FLOW CHART Add PROJECT FILESET and NOTES Revise LOOK and FEEL Revise ACTIONS
2018-07-03	Rod Thompson	Add Use Case 1 Replace Process flowchart
2018-07-05	Rod Thompson	Amend Use Cases Add TESTING
2018-07-17	Don Ferguson	Edited Use cases; added commentary on plugins
2018-12-09	Rod Thompson	Replace graphic, Add location detail Add LOGGING section
2018-12-12	Rod Thompson	Replace graphic (add Connect to New Server button) Add Use Case 3 Add Issues (SCOPE) Add 'Connect to New Server' button (LOOK AND FEEL) Replace Process Flowchart (pages-2 & 3) Addition to NOTES Add Use Case 6 detail
2019-02-14	Rod Thompson	NOTES -Revise to expand range of projects accessible Replace window graphic
2019-02-21	Rod Thompson	Add Issue – updating project data (UserAUX file) ACTIONS-Revise
2019-04-07	Rod Thompson	REQUIRED SERVICES – Add 05.31 GUI_Output
2019-04-08	Don Ferguson	Replace mockups with actual screen shots Revise text to match actual screen functions Update 03.6x references to 05.8x (with notes of changes required in graphics)

SCOPE

This GUI module is called from the Main Menu (GUI_UserInterface) to open an existing HRE project for use.

Issues:

1) The process of opening a Project utilising the double-mouse-click on the Project filename in a file-explorer requires consideration and documentation.

2) Handling of Image files between the Server and Client.
3) Updating the UserAUX file for current 'Last Edited' data

PROJECT FILESET

A set of files required for normal use of HRE projects consists of:

- an H2 database
- A 'User' Auxiliary file
- A 'Project' Auxiliary file
- Appropriate log files
- folders of external files (images, etc) [optional].

Refer to *03.32 Overview – Auxiliary (Non Database) Files* for details.

NOTES

On the first occasion that each user initiates HRE operation, a User Auxiliary file is created for that user. As projects are created or opened for the first time, a Project Auxiliary file (for each Project) is created, and User entries added. This system provides a linkage between Users and Projects.

A list of projects (local and remote) that can be accessed by the User is displayed for selection. This data is read from the User Auxiliary File where projects have previously been worked on by the user. Other Projects may be accessible:

- on the local computer, accessed via browsing the OS file explorer, or
- on a server known to the HRE-Client, accessed (once logged in) via browsing the OS file explorer, or
- on a new server where advice of such projects is notified to the User, and access is granted by an administrator.

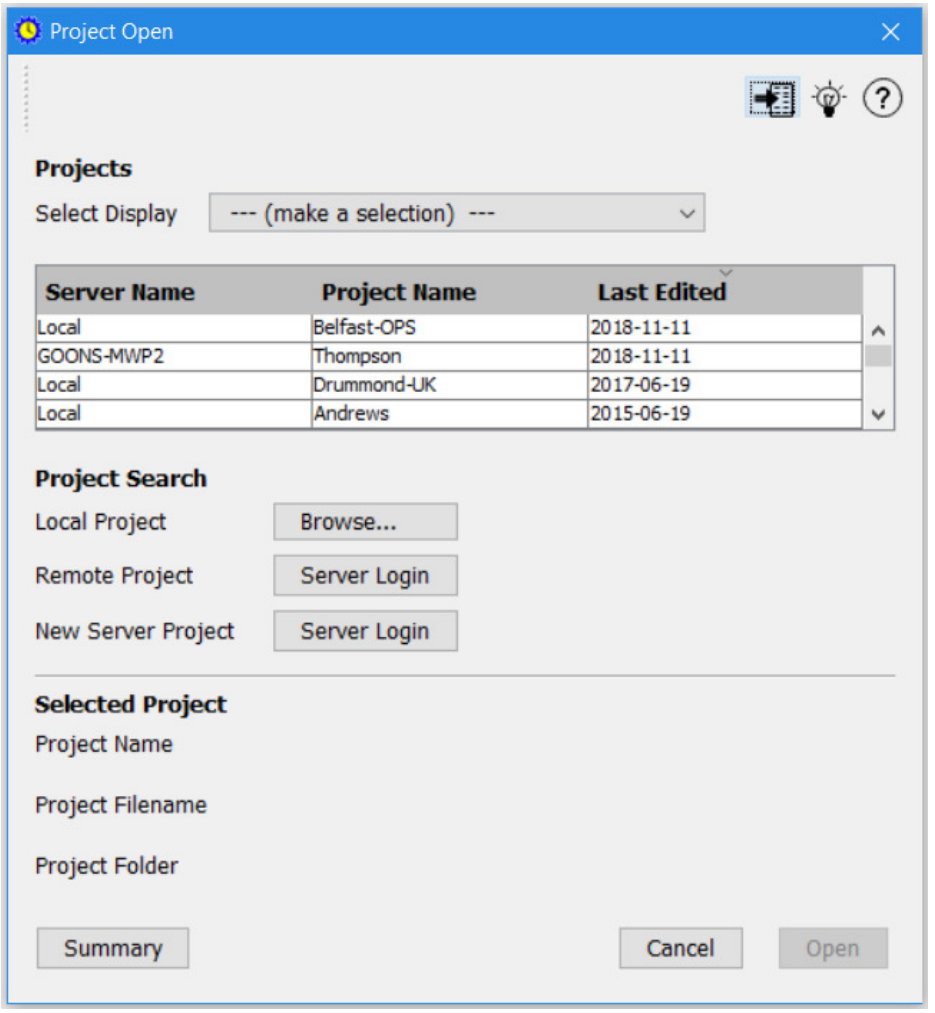
Any 'other' project selected by the above method is added to the project display.
First time access to a project on a Server, requires a different approach to the Project Open.
See Use Case 3.

LOOK AND FEEL

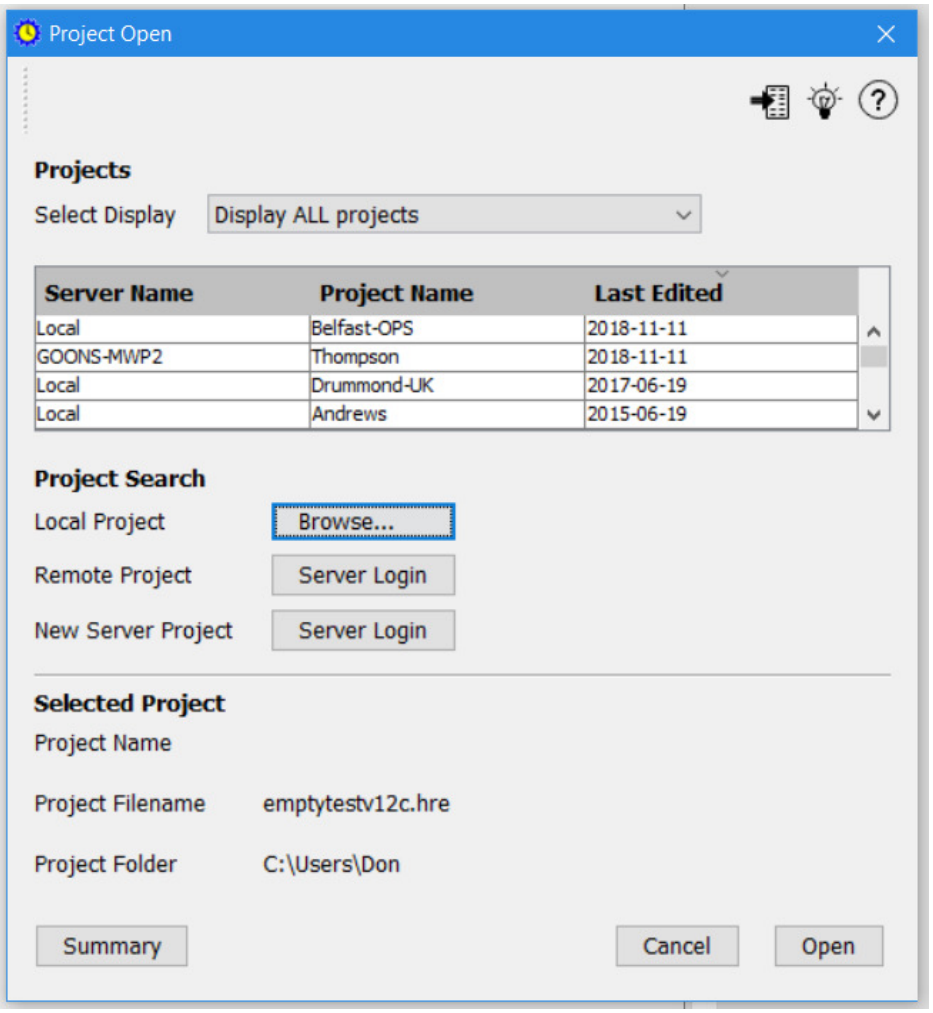
The window has several parts:

- A frame with the window name, and window close X icon
- The upper right icon buttons provide the following universal features:
  - The 'Output' icon enables Output of the Recent Projects list by sending the contents of the Recent Projects tabular display to a file or to a printer
  - The 'Reminder' icon displays the Reminder content for this window
  - The Help icon displays context Help about the use of this window.
- A drop-down list allows the user to select the Display of Projects, for this computer or another
- A 'Projects' scrollable tabular display area which shows all of the user's accessible projects. If the selected project is located in a server, access to that server may be established (if the user is already logged into that server); or otherwise via a login process. (GUI_ServerLogin)
- A 'Browse' button provides access through the OS file explorer to search for other projects located on the user's computer
- The 'Server Login' button allows selection of various servers known to this installation of HRE. On use, access is provided to select a server and project (where administration has provided accessibility)
- Another 'Server Login' button allows access to a Server (not previously used and hence not previously recorded in the User AUX file); a search of the files for HRE Projects, and opening of a selected project. Assumes User rights.
- The buttons:

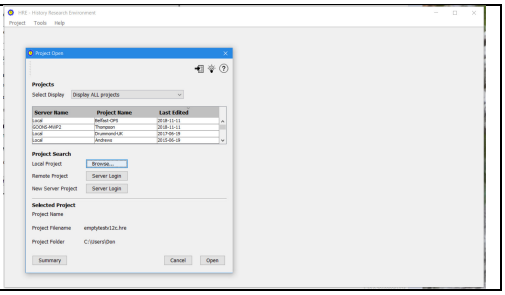
- “Summary” opens a Project Summary window, displaying a summary of the project
- “Open” performs the project open functions on the selected project
- “Cancel” exits without action.



Draft PROJECT OPEN Window – initial view



Draft PROJECT OPEN Window – project chosen

Shape, Size, Color, Layout etc. determined in design. On screen location Initially inherited from the HRE main display Window located immediately below the Project menu button On screen location is the only User changeable setting	

ACTIONS

The fundamental operations are:

1. Open the window according to its saved window Layout (BR_WindowConfig)
2. HRE has 3 possible installation variants:
    - Local mode -where HRE acts as an application entirely within one computer
    - Mixed mode- where HRE has both some project files stored locally and some are stored remotely on a local network server or in some external internet service
    - Remote mode – where no user data is stored on the local computer and all data must be transferred across a network.
3. Accordingly, the GUI_ProjectOpen module has to adapt to each of these modes. Local Mode requires no login capability, but the other 2 modes require this interface to adapt itself according to the type of request. To achieve this the GUI_ServerLogin module and the

BR_ServerServices module have to provide access and the business rules to control these aspects

4. Displays a list of projects available to this User (as controlled by access rights). Projects not available could possibly be greyed out, but listed
5. The project list display is sorted by the 'Last Edited' field, and the last used project (of this User) placed at the top of the list and preselected for opening
6. When new shared projects are identified on a Server, and selected, the selected project:
   - Is added to the list of available projects
   - Is added to the User Auxiliary file
   - Is first in the project list (substituting the previous selection)
7. Allows the user to select an alternative project (to the preselected) to open
8. The Project Summary button allows the user to view in a new window, summary information about the selected Project
9. If a Remote project:
   - Check the status of a remote project to identify whether it is currently unavailable because of backups in progress or other system actions
   - Check status of the selected project to see whether it is already open by other users
   - If already in use, notify all concurrent users of this user joining for update activity. This is to be done using the BR_Message Patterns and GUI_Message Patterns modules (a Server function)
10. Open the selected project file
11. Write a 'Project Open' time to the Session table
12. Populate the user's HRE instance with default settings, then overlay these with the User's personal settings from this User's last status data from their last use of this project
13. When the project is used for the first time by the User, as appropriate add records to the Project Auxiliary File.

USED BY

All HRE users.

DATA CONTROLLED BY THIS MODULE

1. None.

REQUIRED DATA CONTROLLED BY OTHER MODULES

1. None.

REQUIRED SERVICES – Dependencies

First-Order Dependencies	Second-Order Dependencies	Higher-Order Dependencies
04.14 GUI_ProjectSummary	--	
05.75 GUI_Server Login	05.32 GUI_SelectConfiguration	
	07.24 BR_Setting	BR_AppData
		BR_UserData
		07.02 BR_EntityLink
	07.17 BR_WindowConfig	See below
	05.87 GUI_MessagePatterns	See below
05.87 GUI_MessagePatterns		
05.31 GUI_Output	05.77 GUI_FileChooser	
07.17 BR_WindowConfig	07.06 BR_GuiElement 07.29 BR_Translation 08.01 BCS_Bridge	10.02 SS_DirectRequest 11.01 DBA_DatabaseValidateRequest 11.02 DBA_DatabaseMapRequest 11.03 DBA_DatabaseTransaction 12.01 DBE_PerformDatabaseRequest

First-Order Dependencies	Second-Order Dependencies	Higher-Order Dependencies
07.04 BR_Files Also thru 05.77 GUI_FileChooser to • local file system interface modules • remote server connection modules • remote or external file system modules	05.20 GUI_Logging 07.25 BR_Schema	07.02 BR_EntityLink 07.26 BR_Substitution 07.01 BR_EncodedString
07.43 BR_ServerServices	Needed	
07.16 BR_MessagePatterns	07.02 BR_EntityLink	
	07.01 BR_EncodedString	
	07.11 BR_Logging	
	Call Stack	
	07.24 BR_Setting	
	GUI Translation	
07.21 BR_Project	07.06 BR_GuiElement	07.06 BR_GuiElement
		07.02 BR_EntityLink
		BR_FieldTranslation
		07.16 BR_MessagePatterns
	07.02 BR_EntityLink	NIL
	07.29 BR_Translation	07.02 BR_EntityLink
		BR_Field
		07.06 BR_GuiElement
		07.16 BR_MessagePatterns
	07.03 BR_FieldDefinition	NIL
07.11 Add BR_Logging		

APPLICATION PROGRAMMING INTERFACE (API)

1. Single call, with parameters:
    a. Has local projects (Boolean)
    b. Has remote projects (Boolean)
    c. Recent server ID (HRE_serverID)
    d. Recent projects list object (HRE_recent project ID)
    e. Default project storage location (HRE_project storage path ID).

LOGGING

Use of this module will create log entries.

Commit Logging

This occurs for each of the following functions – in the listed tables:

Function	Database Table
Close Session	128
Move and/or resize window	305/306?

General Log

This includes:

- Project Open

EVENT ACTIONS

1) Keyboard actions
   NIL
2) Mouse actions
   Drag and drop mouse actions to move the window
   Setting changes saved to database for User>Project>Window

Left key

a. Mouse key click on Select Display pulldown expands project type list, and allows selection
b. Mouse key click on a Project Name, causes the pathname and project name to be shown in the text boxes
c. Mouse key click on each button, operates the button
d. Mouse key click on icons (detailed below).

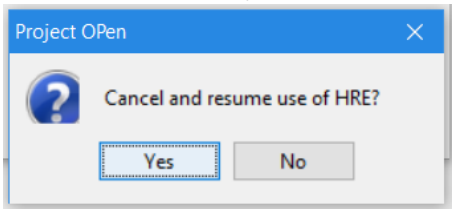
Right key

to be determined

3) Icon actions
   a. left mouse key click on icons in the Window Control group:
      a. 'X' icon - closes the window
         NOTE: Same action as in use of the 'Cancel' button
   b. Left mouse key click on the 'Output' icon:
      (opens the 'Output' window for output to File or Printer)
   c. left mouse key click on 'Reminder' icon:
      (opens 'Reminder' window for this 'Send to Colleague' Message display)
   d. left mouse key click on the 'Configuration' icon
      (opens the Configuration Window for this Project Open window)
   e. left mouse click on 'Help ' icon:
      (opens the Help System, searches for the section on 'Send to Colleague Message')
4) Keyboard shortcuts
   to be determined

WARNING CONDITIONS

1. When the 'Cancel' button is used, a confirmation message is displayed.

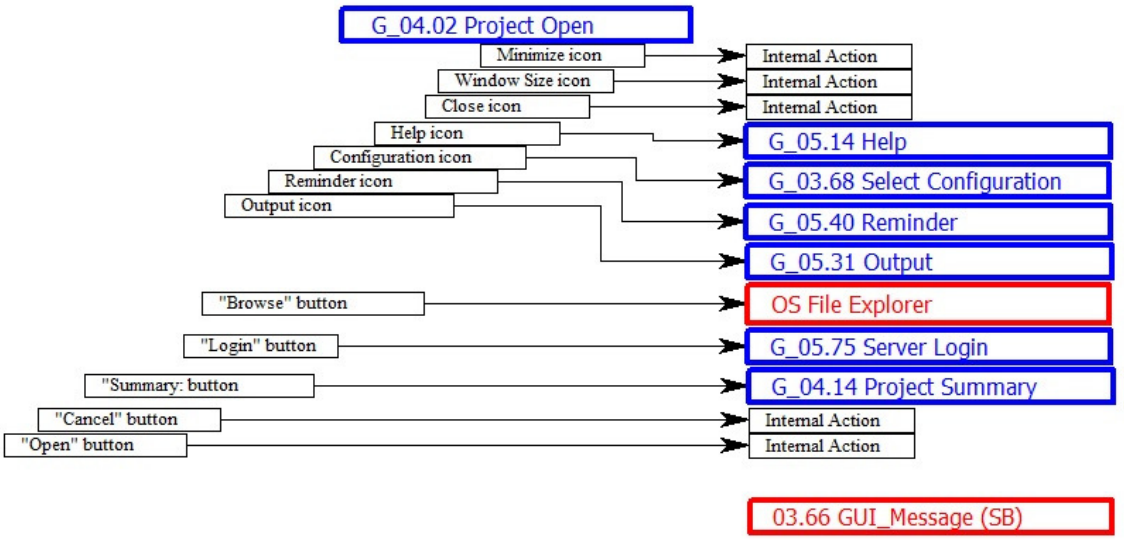


Press YES for close Project Open and return to the HRE Main Menu.
Press NO to stay iwith the Project Open window..

ERROR CONDITIONS

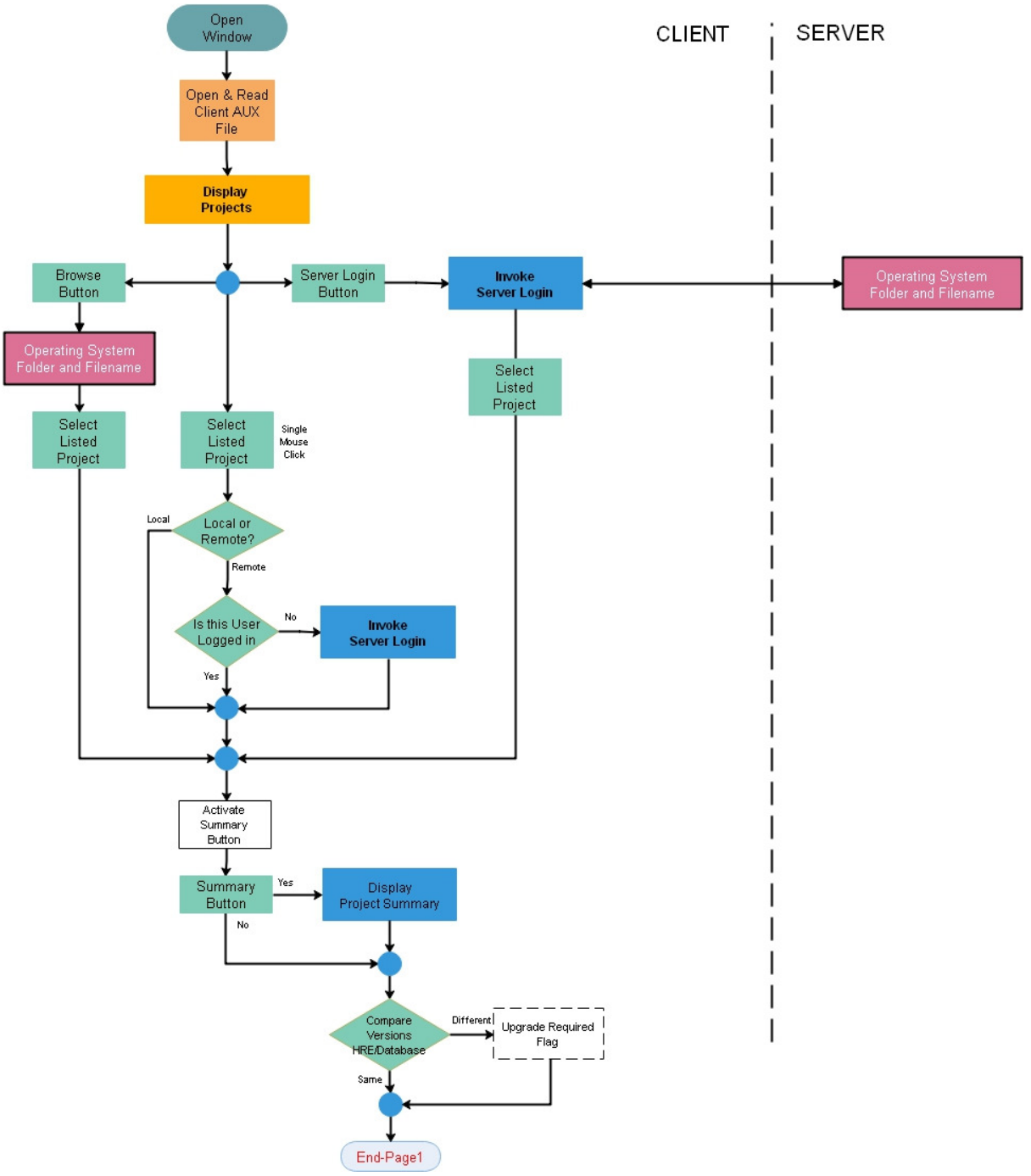
1. Need details of the condition that raised the error, example message and possible next steps.

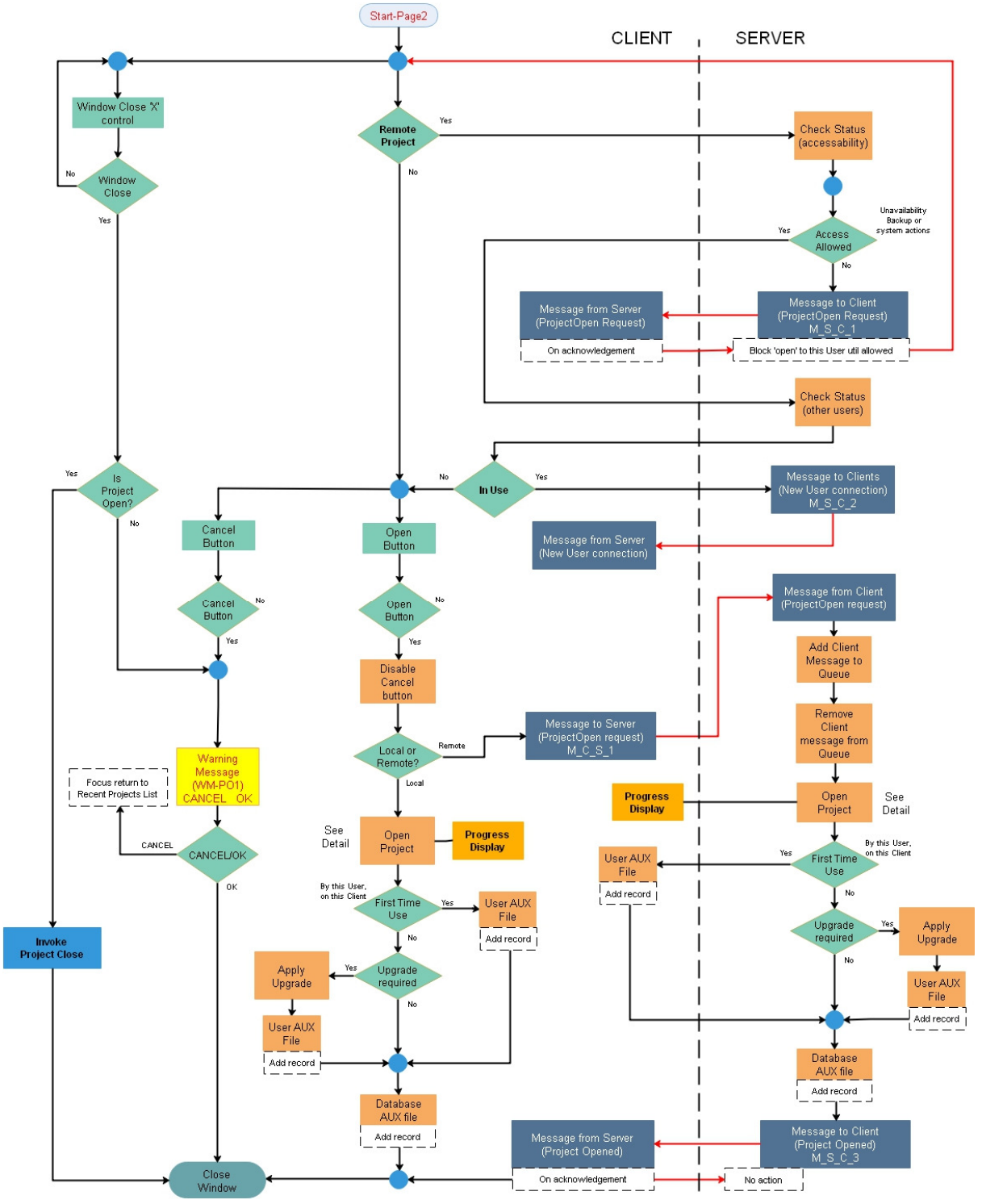
WINDOW INTERACTION MAP

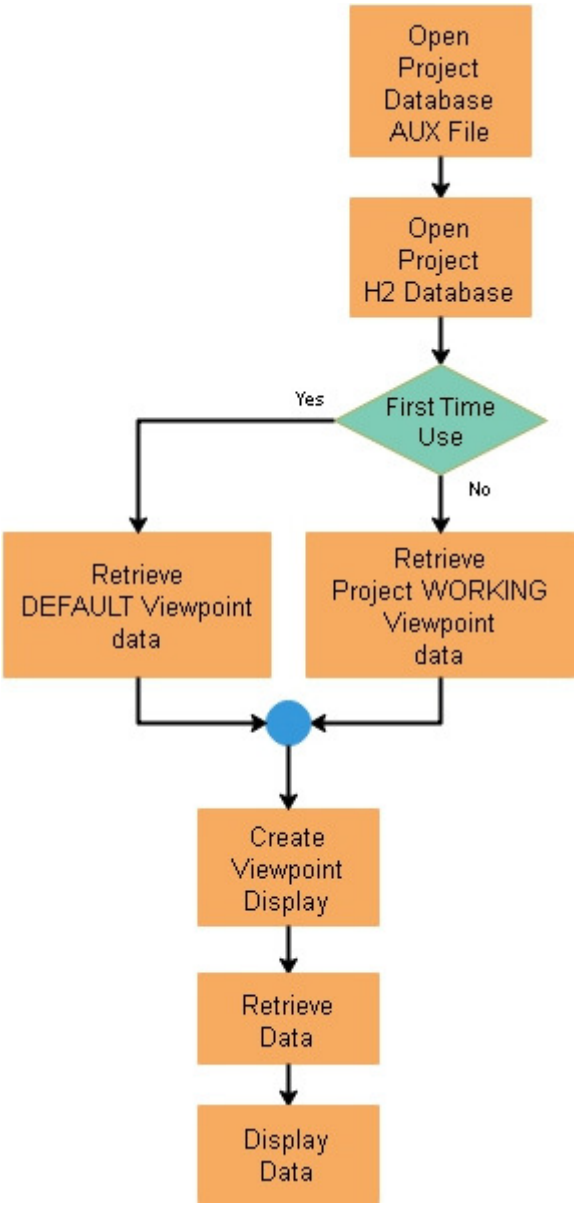


NB: above map requires change of 03.66 to 05.87 and 03.68 to 05.88

PROCESS FLOW CHART




Start-Page2
CLIENT
SERVER
Window Close 'X' control
Window Close
No
Yes
Remote Project
Yes
No
Check Status (accessability)
Unavailability Backup or system actions
Access Allowed
Yes
No
Message from Server (ProjectOpen Request)
On acknowledgement
Message to Client (ProjectOpen Request) M_S_C_1
Block 'open' to this User util allowed
Check Status (other users)
Is Project Open?
Yes
No
In Use
No
Yes
Message to Clients (New User connection) M_S_C_2
Message from Server (New User connection)
Cancel Button
Cancel Button
No
Yes
Open Button
Open Button
No
Yes
Disable Cancel button
Local or Remote?
Remote
Local
Message to Server (ProjectOpen request) M_C_S_1
Message from Client (ProjectOpen request)
Add Client Message to Queue
Remove Client message from Queue
Open Project
See Detail
Progress Display
Warning Message (WM-PO1) CANCEL OK
Focus return to Recent Projects List
CANCEL
CANCEL/OK
OK
See Detail
Open Project
Progress Display
By this User, on this Client
First Time Use
Yes
No
User AUX File
Add record
By this User, on this Client
First Time Use
Yes
No
User AUX File
Add record
Upgrade required
Yes
No
Apply Upgrade
User AUX File
Add record
Upgrade required
Yes
No
Apply Upgrade
User AUX File
Add record
Database AUX file
Add record
Database AUX file
Add record
Invoke Project Close
Close Window
Message from Server (Project Opened)
On acknowledgement
Message to Client (Project Opened) M_S_C_3
No action


Open Project Database AUX File
Open Project H2 Database
First Time Use
Yes
No
Retrieve DEFAULT Viewpoint data
Retrieve Project WORKING Viewpoint data
Create Viewpoint Display
Retrieve Data
Display Data

Open - detail

USE CASES

1) HRE Software and Project version differences (Single computer or Client to Single Server)
2) HRE Software and Project version differences (Server based multi-user)
3) Open an unknown Project on a Server previously not accessed by the User
4) Single user – open one HRE Project (local computer)
5) Single user – open one HRE project (remote computer)
6) Single user – opening 2 HRE Projects concurrently (local computer)
7) Single user – opening 2 HRE Projects concurrently (one local, one remote)
8) Single user – opening 2 HRE Projects concurrently (both remote)
9) Read-Only open (as distinct from normal Read-Write)

NOTE: Where the Use Case identifies 'version difference' this can be either a difference in HRE software/database version numbers OR a difference in installed HRE plugins. Where the difference is only in installed plugins, a database open should only be allowed if (a) the user has full admin rights, and (b) the software has an extra plugin compared to the database set.
Further consideration is required of all possible version/plugin differences, otherwise there is a possibility that installing a plugin will make it impossible to open an existing Project database.

Use Case 1
Single Computer, or Client to Single Server - HRE Software and Project version difference

Where the database version is lower than the software, then the database is in need of upgrading.
Where the database version is higher than the software, no access is allowed.

Where the upgrade is possible (software determination), then carry out the upgrade.
Save the database, and update AUX file record database version.

When access is not possible, additional information needs to be provided to the User (i.e., software and database version numbers).

Use Case 2
Server based project (multi-user) - HRE Software and Project version difference

An administrator probably determines the software versions of client installations.
Project versions and client HRE versions will generally match.

An exception may be a guest client user. In which case the user rights are likely to be limited.
If rights are open, and the guest user has a newer version of software, then any data saved by the guest user may cause problems for the broader user base, so an upgrade of the database should no be allowed.

Another exception may exist where multiple organisations share a common project on a server.
Rights will have to determine action taken where a project/software version difference is detected.

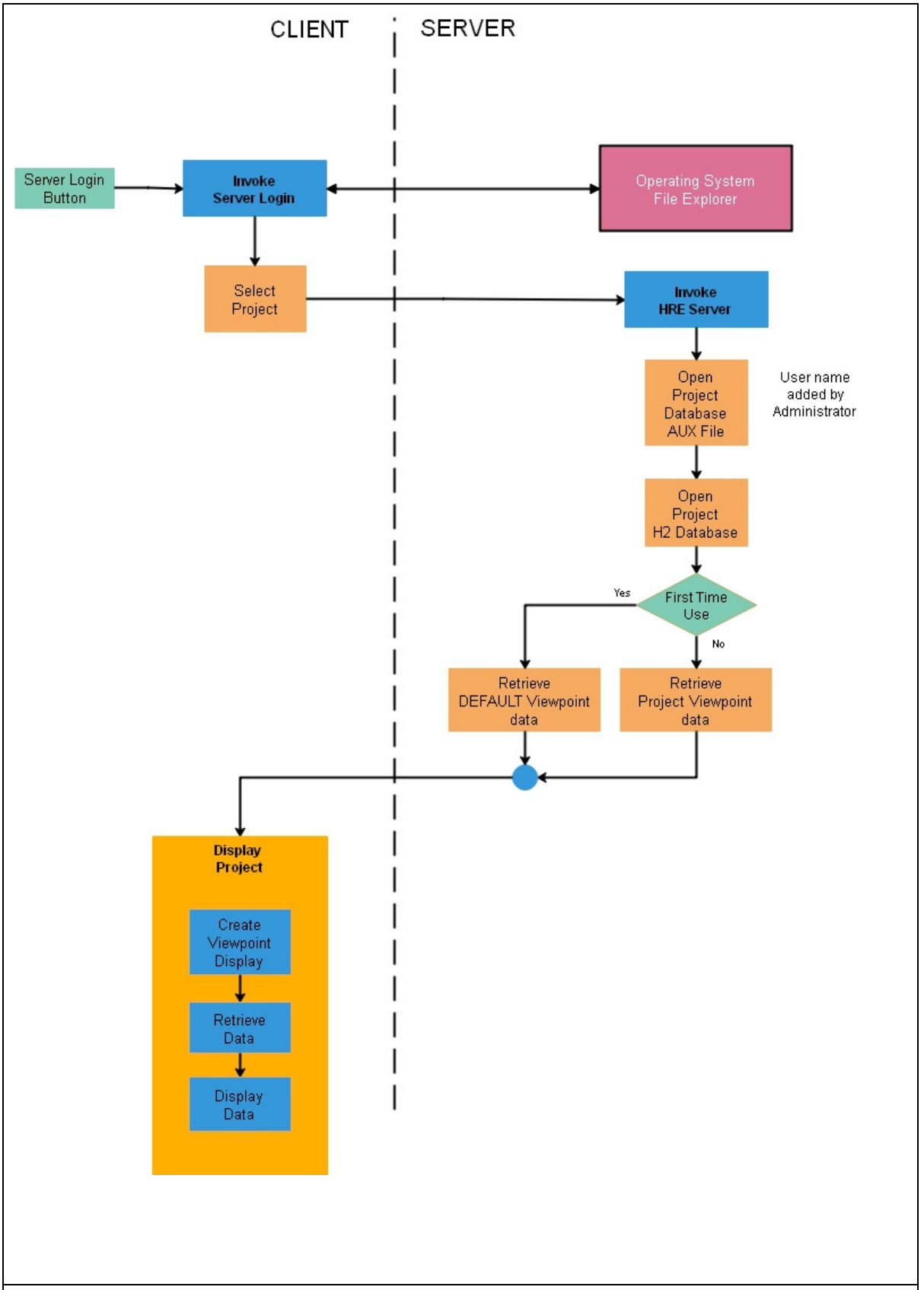
A new specification is required (BR series) to define requirements resulting from HRE software version changes. The presumption is that with each software version upgrade, a set of rules will be established for project database upgrades, embedded in the software.

Use Case 3
Open an unknown Project on a Server previously not accessed by the User

Assume the User can access the Server computer, and has the Rights to access the Project.
Using the "Connect to New Server" button on the HRE Client initiates the process displayed below.

Notes:

1) This would require that the Project Database AUX file be amended by an Administrator, to include the new User. Is this an unacceptable limitation on the use of HRE?
2) Accessing projects (previously unknown) in this manner will require that the Project can be opened by use of the 'double-mouse-click' on the project database filename in the Server file explorer. This methodology for opening a project is presently recorded as requiring later consideration. There may be other implications.



Use Case 6
Single user – opening 2 HRE Projects concurrently (local computer)

A User can open two Projects on their computer, by using two instances of the HRE Client application, then opening a selected project in each.

TESTING

Testing to prove the functionality of this module in use with others of the HRE application.
Limited 'Project' functionality (see below).
Prior testing of the module in the code development process is assumed.

General requirements	Code element requirements
HRE installation	Main GUI
1) Single computer	Project Open
2) Client-Server	Project Close
3) Test Project database fileset	ExitHRE

Process

1) Run HRE
    a. Open the Test Project
    b. Add data to the project
    c. Close the Project
    d. Exit HRE
2) Check result (how?)
3)

See Test Plan document.