

GUI – MESSAGE PATTERNS – Relationships between Messages, BR_Message and BR_Substitutions

Revision history

2018-04-18	Robin Lamacraft	Original draft
2018-05-12	Rod Thompson	Inserted diagrams, actions
2018-06-04	Rod Thompson	Add codes for use distinguishing Message patterns in other Specifications
2018-06-06	Rod Thompson	Server Broadcast – add use case
2018-06-11	Rod Thompson	Add REQUIRED SERVICES – Dependencies Replace BR_Message with BR_MessagePatterns
2018-10-27	Rod Thompson	Addition of LOOK AND FEEL to 'Action Progress' section Replace all graphics ('configuration' change)

NOTE: for GUI Message Patterns which are a response to a status state identified within the HRE Client and HRE Server code, template text is required to be stored within the Substitution database tables. These will need to have an external tool built for the coders to preload that template into the HRE Project database. The method of achieving that preloading needs to be discussed and standardized with the Core Team.

Each “Message” GUI screen is modal (e.g. freezes other actions except for actions that are initiated from the “Message” GUI Screen) and full operation will be initiated according to the way the “Message” GUI screen is exited.

For each Message GUI screen:

- One or more text messages (these may be fixed translated text or they may have used substitution templates)
- One or more command buttons (these have language consistent labels) Command button order needs to be consistent with user progression from top to bottom of the screen. The number of command buttons can vary according to actual action being messaged
- A ‘Day-Time’ display showing local Day and Time. The format for this being a setting in the configuration of that screen
- The width and height can be changed to view of the contents of the Template Text.
- All GUI-Message patterns use BR_MessagePatterns to manage the access to data to be displayed and in the case of composing messages
- BR_MessagePatterns will use BR_Substitution to manage the Template Text fields.

GUI MESSAGE PATTERNS:

Nine separate Message patterns follow:

No:	Name	Window Heading	Code
1	Query message	Query	QY
2	Warning message	Warning	WG
3	Client Error message	Client Error	CE
4	Server Error message	Server Error	SE
5	Action Progress message	Action Progress	AP

6	Client Broadcast message	Client Broadcast	CB
7	Server Broadcast message	Server Broadcast	SB
8	Receive Inter-User message	Receive from Colleague	IR
9	Send Inter-User message	Send to Colleague	IS

The above list includes a two-character code, used to simply distinguish the patterns, when used in references from other specifications.

A reference from another specification (in the Required Services area) would (for example) have the following form:

GUI_Message (QY) or GUI_Message (SB)

REQUIRED SERVICES - Dependencies

First-Order Dependencies	Second-Order Dependencies (if not already listed)	Higher-Order Dependencies (if not already listed)
05.32 GUI_Select Configuration		
07.17 BR_WindowConfig	07.06 BR_GuiElement 07.02 BR_EntityLink 07.29 BR_Translation 07.16 BR_Message Patterns	
07.16 BR_MessagePatterns	07.02 BR_EntityLink 07.01 BR_EncodedString 07.11 BR_Logging Call Stack 07.24 BR_Setting GUI_Translation ???	
07.26 BR_Substitution	07.02 BR_EntityLink 07.29 BR_Translation	

Query

Typically the use of this screen pattern is the confirmation that the user wishes to complete an action like delete this file, or there is already a file of the proposed name in this folder, Overwrite, Rename, Cancel or Show Details. This illustrates the case for more than 2 COMMAND BUTTONS.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of “Query”
TOP BAR	RIGHT BUTTON	Only a “X” to “Close” the screen equivalent of “Cancel”
CONTEXT	TEMPLATE TEXT	Text describing from where it was initiated. This text may involve some substitution variables
QUESTION	TEMPLATE TEXT	Text explaining the query. This text may involve some substitution variables
COMMAND 1	BUTTON	(Typically optional) Used for “Show Details” etc. Only show ROW1 and ROW2. Only provide space for ROW1 and ROW2 when clicked and then populate ROW1 and ROW2 with the required retrieved from the use of the Template Texts
ROW 1	TEMPLATE TEXT	Shown details of the first object.
ROW 2	TEMPLATE TEXT	Shown details of the second object.
COMMAND 3	BUTTON	“Rename” button would be above
COMMAND 4	BUTTON	Typically “Accept”
COMMAND 5	BUTTON	Typically “Cancel”

QueryX

Time Stamp💡?

Text - Context

Text - Question

Show Details

Text - First Object details

Text - Second Object details

Rename

CancelAccept

- 1) Keyboard actions (*we need to check what keyboard shortcuts are already taken in by the OS in each of Windows Mac and Linux as there may be some conflicts*)
 - a. Accept
 - b. Cancel
 - c. Show Details
 - d. Rename
 - e. At window opening, focus set on 'Show Details' button.
Tab key use thereafter cycles through the 'Rename', 'Accept' and 'Cancel' buttons, returning to the 'Show Details' button.

- 2) Mouse actions
 - Left key
 - a. Mouse hover over slider bar, hold key down and drag slider bar up or down
 - b. Mouse key tap in slide bar box cause up or down movement.
 - c. Mouse key click on each button, operates the button
 - Right key
Action to be determined

- 3) Icon actions
 - a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Query' Message display)
 - b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Query' Message display)

left mouse click on 'Help' icon:
(opens the Help System, searches for the section on 'Query Message')

Warning

Typically the use of this screen pattern is the result of warning condition raised by the code after a user action, like the date of birth of person does not appear to be correct given the data of birth of their mother. In such cases, the user can "Accept" or "Undo" the command action that raised the warning.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Warning"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen equivalent of "Undo"
CONTEXT	TEMPLATE TEXT	Text describing from where the Warning was initiated. This text may involve some substitution variables
WARNING	TEMPLATE TEXT	Text explaining the warning and the consequences of "Accept" or "Undo". This text may involve some substitution variables
COMMAND 1	BUTTON	Typically "Show Trace" – opens Trace Log GUI screen. The "Show Trace" button would be above "Accept" and "Un-Do" command buttons
COMMAND 2	BUTTON	Typically "Accept" – allows database to be updated
COMMAND 3	BUTTON	Typically "Undo" – Reverts change to before that action

The image shows a 'Warning' dialog box with a yellow title bar containing the text 'Warning' and a close button 'X'. Below the title bar is a 'Time Stamp' label and two icons: a lightbulb and a question mark. The main area contains two text input fields, the first labeled 'Text - Context' and the second 'Text - Warning', each with a vertical slider bar to its right. Below these fields is a 'Show Trace' button. At the bottom right are 'Accept' and 'Undo' buttons.

1) Keyboard actions

- a. Accept
- b. Undo
- c. Show Trace
- d. At window opening, focus set on 'Show Trace' button.
Tab key use thereafter cycles through the 'Accept', 'Undo' buttons, returning to the 'Show Trace' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button

Right Key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Warning' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configuration Settings' window for this 'Warning' Message display)
- c. left mouse click on the 'Help' icon:
(opens the Help System, searches for the section on 'Warning Message')

Client Error

Typically the use of this screen pattern is the result of some operation failure in the HRE Client application or its interaction with the server's operating system environment. If it is raised because of an HRE user action, sometimes there may be an escape via undoing the user action. But if it is an error such as the loss of the connection to the server it may imply termination of a Client session.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Client Error"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen, equivalent of "Close Project"
CONTEXT	TEMPLATE TEXT	Text describing from where the Error was initiated. This text may involve some substitution variables
ERROR	TEMPLATE TEXT	Text explaining the client error and the consequences of "Accept" or "Undo". This text may involve some substitution variables
COMMAND 1	BUTTON	Typically "Undo" – Reverts change to before that action – this only shown if that option is available
COMMAND 2	BUTTON	Typically "Show Trace" – opens Trace Log GUI screen. The "Show Trace" button would be above "Close Project" command button
COMMAND 3	BUTTON	Typically "Close Project" – allows database to be closed by opening the "Close Project" GUI screen

The diagram illustrates a 'Client Error' dialog box with the following components:

- Title Bar:** A yellow bar at the top containing the text 'Client Error' and a close button 'X'.
- Time Stamp:** A label positioned below the title bar.
- Icons:** A lightbulb icon and a question mark icon located to the right of the 'Time Stamp' label.
- Text Fields:** Two text input areas. The first is labeled 'Text - Context' and the second is labeled 'Text - Error'. Both fields have vertical scroll bars on their right side.
- Buttons:** Three buttons are present: 'Undo' and 'Show Trace' are located below the text fields, and 'Close Project' is located at the bottom right of the dialog box.

- 1) Keyboard actions
 - a. Close Project
 - b. Undo

- c. Show Trace
- d. At window opening, focus set on 'Undo' button.
Tab key use thereafter cycles through the 'Show Trace', 'Close Project' buttons, returning to the 'Undo' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Local Error' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Local Error' Message display)
- c. left mouse click on 'Help ' icon:
(opens the Help System, searches for the section on 'Local Error Message')

Server Error Pattern

Typically the use of this screen pattern is the result of some operation failure communicated to the HRE Client by the HRE Server. Depending on the nature of the problem, the set of alternative responses available to the user may be limited. It is quite possible that the session on the current project will need to be terminated and in the worst-case scenario the project may need to be repaired or the Server may need maintenance.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Server Error"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen equivalent of "Close Project"
CONTEXT	TEMPLATE TEXT	Text describing from where the Error was initiated. This text may involve some substitution variables
ERROR	TEMPLATE TEXT	Text explaining the Server error and the consequences of "Accept" or "Undo". This text may involve some substitution variables
COMMAND 1	BUTTON	Typically "Undo" – Reverts change to before that action – this only shown if that option is available
COMMAND 2	BUTTON	Typically "Show Trace" – opens Trace Log GUI screen. The "Show Trace" button would be above "Close Project" command button
COMMAND 3	BUTTON	Typically "Close Project" – allows database to be closed by opening the "Close Project" GUI screen

The diagram illustrates a 'Server Error' screen pattern. It features a yellow header bar at the top with the text 'Server Error' on the left and a close button 'X' on the right. Below the header is a white bar containing 'Time Stamp' on the left, a lightbulb icon in the center, and a question mark icon on the right. The main content area has a white background and contains two text boxes. The first text box is labeled 'Text - Error Source' and has a scroll bar on its right side. The second text box is labeled 'Text - Action consequences' and also has a scroll bar on its right side. Below these text boxes are three buttons: 'Undo', 'Show Trace', and 'Close Project'. The 'Undo' and 'Show Trace' buttons are positioned side-by-side, while the 'Close Project' button is positioned below them and to the right.

- 1) Keyboard actions
 - a. Close Project
 - b. Undo

- c. Show Trace
- d. At window opening, focus set on 'Undo' button.
Tab key use thereafter cycles through the 'Show Trace', 'Close Project' buttons, returning to the 'Undo' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Server Error' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Server Error' Message display)
- c. left mouse click on 'Help ' icon:
(opens the Help System, searches for the section on 'Server Error Message')

Action Progress

Typically the use of this screen pattern is initiated when it is likely that an operation may take a longer time to complete. Some fields within this screen are periodically updated to indicate the progress of the operation.

LOOK AND FEEL

The mockup included below is considered to be one possible way to illustrate operational progress. Use of the progress display element of this graphic is defined for use elsewhere in these specifications.

Alternatives displays are considered worthy of further discussion.

Generally speaking, a consistent display approach should be used throughout HRE.



One exception is however considered to merit of an alternative approach.

The strategy to load relatively static data from the database into memory at the 'Project Open' phase of use is anticipated to incur a time delay. A similar time delay may be expected in the 'Project Close' operation, as data in memory is written into database tables.


A proposal is to use this time to display a 'Credits List' of the coders who have contributed to the development of HRE. A suitable display design is required. The call for this display will come from each of the two modules defined.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Action Progress"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen equivalent of "Cancel"
CONTEXT	TEMPLATE TEXT	Text describing the action being performed. This text may involve some substitution variables
STATUS BAR	PROGRESS BAR	Show proportion of task completed
STATUS NUMBERS	TEMPLATE TEXT	Total size, number processed, time to completion This text may involve some substitution variables
COMMAND 1	BUTTON	Typically "Skip" – only shown if a query. Placed above "Cancel". Action when clicked to signal to the requesting process to not process this item
SKIP DATA	TEMPLATE TEXT	Shown only processing skip error detected. Text describes the item with problem. This text may involve some substitution variables
COMMAND 2	BUTTON	Typically "Cancel" – aborts the operation reverting to prior state

Action Progress X

Time Stamp  

Text - Context

0  100
 % completion: ???
 Total Size: ??? Time to complete: ???

Skip

Text - Skip Data

Continue

Cancel



- 1) Keyboard actions
 - a. Cancel
 - b. Skip
 - c. Continue
 - d. At window opening, focus set on 'Skip' button.
 Tab key use thereafter cycles through the 'Continue' and 'Cancel' buttons, returning to the 'Skip' button.
- 2) Mouse actions
 - Left key
 - a. Mouse hover over slider bar, hold key down and drag slider bar up or down
 - b. Mouse key tap in slide bar box cause up or down movement.
 - c. Mouse key click on each button, operates the button
 - Right key
 Action to be determined
- 3) Icon actions
 - a. left mouse key click on 'Reminder' icon:
 (opens 'Reminder' window for this 'Action Progress' Message display)
 - b. left mouse click on 'Configuration' icon:
 (opens the 'Configurations Settings' window for this 'Action Froggress' Message display)
 - c. left mouse click on 'Help' icon:
 (opens the Help System, searches for the section on 'Action Progress Message')

Client Broadcast (initiated by receipt of message)

Typically the use of this screen pattern is initiated by the Client because of a status problem detected by the HRE Client like no Client disk space, Internet failure, selected printer not available, etc. Depending on the circumstances this may imply that the user should terminate the Project session smoothly (if possible).

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Broadcast from Client"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen equivalent of "Close"
SUBJECT	PLAIN TEXT	The Message Subject
FROM	PLAIN TEXT	Sender Address
MESSAGE	PLAIN TEXT	The Message Text in scrollable pane
COMMAND 1	BUTTON	"Ack" - sends acknowledgement message to Sender
COMMAND 2	BUTTON	"Reply" – compose message by opening GUI Message Reply screen with only Sender Address in "To" field
COMMAND 3	BUTTON	"Close" – closes view of message

Broadcast from Client X

Time Stamp  

Subject Text

From Text

Text - Message

Acknowledge

Reply

Close

- 1) Keyboard actions
 - a. Close
 - b. Acknowledge
 - c. Reply

- d. At window opening, focus set on 'Acknowledge' button.
Tab key use thereafter cycles through the 'Reply', and 'Close' buttons, returning to the 'Acknowledge' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Left mouse key tap in slide bar box cause up or down movement.
- c. Left mouse key click on each button, operates the button

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Broadcast from Client' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Broadcast from Client' Message display)

left mouse click on 'Help ' icon:

(opens the Help System, searches for the section on 'Broadcast from Client Message')

Server Broadcast (initiated by receipt of message)



Typically the use of this screen pattern is initiated by the HRE Client on behalf of the HRE Server.
There are 2 cases here where:

- the HRE Server detects a condition and is able to broadcast a message to all Users logged in to a particular Project, or to all users logged in to that HRE Server
- the Administrator of the HRE Server advises of a change in the availability of that HRE Server.
- the HRE Server sends a message to one or more Users, pertinent to a specific Server action. For example – when a Project Backup is called for, or actioned.

The user would be expected to respond as having read the message

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of “Broadcast from Client”
TOP BAR	RIGHT BUTTON	Only a “X” to “Close” the screen equivalent of “Close”
SUBJECT	PLAIN TEXT	The Message Subject
FROM	PLAIN TEXT	Sender Address
MESSAGE	PLAIN TEXT	The Message Text in scrollable pane
COMMAND 1	BUTTON	“Ack” - sends acknowledgement message to Sender
COMMAND 2	BUTTON	“Reply” – compose message by opening GUI Message Reply screen with only Sender Address in “To” field
COMMAND 3	BUTTON	“Close” – closes view of message

Broadcast from Server X

Time Stamp  

Subject Text

From Text

Text - Message

Acknowledge

Reply

Close

- 1) Keyboard actions
 - a. Close
 - b. Acknowledge
 - c. Reply

- d. At window opening, focus set on 'Acknowledge' button.
Tab key use thereafter cycles through the 'Reply', and 'Close' buttons, returning to the 'Acknowledge' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Broadcast from Server' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Broadcast from Server' Message display)
- c. left mouse click on 'Help ' icon:
(opens the Help System, searches for the section on 'Broadcast from Server Message')

Receive from Colleague (initiated by receipt of message)

Typically the use of this screen pattern is initiated when an inter-researcher message directed to the current HRE Server User is received by that HRE Client. The message is displayed in the screen and the user has a number of alternative responses.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of "Broadcast from Client"
TOP BAR	RIGHT BUTTON	Only a "X" to "Close" the screen equivalent of "Close"
SUBJECT	PLAIN TEXT	The Message Subject
FROM	PLAIN TEXT	Sender Address
RECIPIENTS	PLAIN TEXT	The Recipients List in scrollable pane, one recipient per line
MESSAGE	PLAIN TEXT	The Message Text in scrollable pane
COMMAND 1	BUTTON	"Ack" - sends acknowledgement message to Sender
COMMAND 2	BUTTON	"Reply" – compose message by opening GUI Message Reply screen with only Sender Address in "To" field
COMMAND 3	BUTTON	"Reply All" – compose message by opening GUI Message Reply screen with Sender Address in "To" field and all Recipient Addresses in "CC" field
COMMAND 4	BUTTON	"Close" – closes view of message

Receive from ColleagueX

Time Stamp💡?

SubjectText

FromText

Text - Recipients

▼

▲

Text - Message

▼

▲

Acknowledge

Reply

Reply All

Close

1) Keyboard actions

- a. Close
- b. Acknowledge
- c. Reply
- d. Reply All
- e. At window opening, focus set on 'Acknowledge' button.
Tab key use thereafter cycles through the 'Reply', 'Reply All' and 'Close' buttons, returning to the 'Acknowledge' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Receive from Colleague' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Receive from Colleague' Message display)
- c. left mouse click on 'Help ' icon:
(opens the Help System, searches for the section on 'Receive from Colleague Message')

Compose and Send to Colleague (initiated by user action)

Typically the use of this screen pattern is initiated when the current HRE Client User wishes to:

- compose and send new message to another researcher
- reply to a received message from another researcher.

GUI ELEMENT USE	ELEMENT TYPE	DESCRIPTION
TOP BAR	HEADING TEXT	blank or translation of “Broadcast from Client”
TOP BAR	RIGHT BUTTON	Only a “X” to “Close” the screen equivalent of “Close”
SUBJECT	PLAIN TEXT	The Message Subject
FROM	PLAIN TEXT	Sender Address
RECIPIENTS	PLAIN TEXT	The Recipients List in scrollable pane, one recipient per line
MESSAGE	PLAIN TEXT	The Message Text in scrollable pane
COMMAND 1	BUTTON	“Edit” – compose message by opening GUI Message Reply screen with only Sender Address in “To” field
COMMAND 2	BUTTON	“Save” – compose message by opening GUI Message Reply screen with Sender Address in “To” field and all Recipient Addresses in “CC” field
COMMAND 3	BUTTON	“Delete” – closes view of message
COMMAND 4	BUTTON	“Send” – closes view of message
COMMAND 5	BUTTON	“Close” – closes view of message

Send to ColleagueX

Time Stamp💡?

SubjectText

FromText

Text - Recipients

Text - Message

Edit

Save

Delete

SendClose

1) Keyboard actions

- a. Close
- b. Send
- c. Edit
- d. Save
- e. Delete
- f. At window opening, focus set on 'Edit' button.
Tab key use thereafter cycles through the 'Save', 'Delete', 'Send' and 'Close' buttons, returning to the 'Edit' button.

2) Mouse actions

Left key

- a. Mouse hover over slider bar, hold key down and drag slider bar up or down
- b. Mouse key tap in slide bar box cause up or down movement.
- c. Mouse key click on each button, operates the button.

Right key

Action to be determined

3) Icon actions

- a. left mouse key click on 'Reminder' icon:
(opens 'Reminder' window for this 'Send to Colleague' Message display)
- b. left mouse click on 'Configuration' icon:
(opens the 'Configurations Settings' window for this 'Send to Colleague' Message display)
- c. left mouse click on 'Help ' icon:
(opens the Help System, searches for the section on 'Send to Colleague Message').