Results Interface

This chapter covers the following topics:

- Purpose of the Results Interface

- Results Window Control Bar Access

- Tab Handling

- Image Handling

- Context Menu Handling

- Command Handling

- Column Handling

- Row Handling

- Data Handling

- Selection Handling

Purpose of the Results Interface

The Results Interface enables programmers to display data within the results window of Natural Studio. See also *Results Window* in the *Using Natural Studio* documentation.

Note:
The results of the menu commands **Find Objects** and **Cat All** are not affected by the Results Interface.

The design and the usage of a tab in the results window can be determined via application programming interfaces (API). In general, a detailed view with columns and lines is used.

A context menu can be created for each entry, so that after the user-defined tab is shown it can be used for further processing.

This processing has to be defined within two programs:

1. In an update command handler before a context menu is shown.

2. In a command handler if an item is selected.

The application programming interfaces for the Results Interface are `USR5001N` - `USR5017N` and can be found in the library `SYSEXT`.

An example of the various functions is available in `USR5001P` with the update command handler in `USR5001A` and the command handler in `USR5001B`.

Notes:

1. Modifications of the pre-defined tabs (for example, the tabs with the labels **Find Objects** and **Cat All**) are not possible with this interface.
2. The results window and the Results Interface can be accessed only from Natural Studio.

Results Window Control Bar Access

The following application programming interface can be used to access the results window control bar.

Interface	Functionality
USR5001N	Turns results window on/off. Checks visibility of the results window.

Tab Handling

The application programming interfaces listed below can be used to define the general layout of a tab.

A tab can contain all or one of the following:

- Check box

- Full row selection

- Single row selection

- Images

A tab can be defined with the following attributes:

- Layout of the view (large/small icons, list or details view).

- Several usages (check boxes, images, grid lines, full or single row selection, view change).

- Layout of the tab label (text, bitmap or icon).

Interface	Functionality
USR5004N	Add, replace, delete and maintain layout of a tab.
USR5005N	Set and get active tab. Set tab active and set the focus on this tab

Image Handling

The following application programming interface can be used to specify bitmaps (*.bmp*) and icons (*.ico*) for a previously defined tab.

Interface	Functionality
USR5002N	Add and delete bitmaps and icons for a specified tab.

Context Menu Handling

The following application programming interfaces can be used to specify user-defined context menus.

Interface	Functionality
USR5003N	Add, remove and delete context menus of a tab.
USR5007N	Set and get checked/enabled state of context menu items.

The hierachy of the context menu must be defined manually.

The following array components can be defined:

Array Component	Value	Description
Type	1 to 4	1 - Context menu handling. 2 - Separator line. 3 - Begin of submenu. 4 - End of submenu.
Command ID	1 to 255	Free selectable number to identify a certain item in a context menu (used within the command handler).
Label	alphanumeric text	Text for the context menu items of type 1 and 3. A text for the status bar can be separated with H'0'A.
Image	Handle of image	Handle of a previously defined image (bitmap or icon). The image will be placed before the text of the context menu item.

Command Handling

A program can be assigned as an update command handler or as a command handler.

User-defined data can be saved/restored in the internal work area of the command handlers.

For example: handles of tabs.

The following application programming interfaces are available:

Interface	Functionality
USR5006N	Define update command handler and command handler.
USR5016N	Set and get data for the command handler work area.

Column Handling

The following application programming interfaces can be used to define the general layout of a column.

A column can contain all or one of the following:

- Title

- Width

- Data position

- Column sort

In addition, the default width and specified width of the column can be set up individually.

Interface	Functionality
USR5008N	Add, insert and delete columns of a tab.
USR5009N	Count number of columns.
USR5010N	Set and get default column width and width for specified columns.

Row Handling

The following application programming interfaces can be used to define the rows with images and context menus.

Interface	Functionality
USR5009N	Count number of rows.
USR5011N	Add, insert and delete rows of a tab.
USR5015N	A row can be scrolled into the visible area of the result window.

Data Handling

The following application programming interfaces can be used to write user-defined data into defined columns/rows.

If check boxes have been defined for a tab, they can be activated/deactivated for every row.

Interface	Functionality
USR5012N	Set and get data into a tab.
USR5013N	Set and get checked state of a row.

Selection Handling

The following application programming interfaces can be used to select rows individually.

Interface	Functionality
USR5014N	- Set, reset and get selected rows. - Count amount of selected rows. - Set and reset row selection.
USR5015N	Set and get row of focus.
USR5017N	Copy selected rows to the Clipboard.