BNCS User Guides

Atos IT Solutions and Services

BNCS Visual Editor

BNCS

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BNCS

1 Overview

1.1 Description

The Visual Editor application is used to create or modify the appearance and layout of BNCS Panels. Functionality outside what is provided by smart controls and components is handled by C++ code, edited in Microsoft Visual Studio, and will not be covered by this document.

It will normally be run using a Visual Editor shortcut on the desktop, or from the Start menu.

The executable file will normally be found at %CC_ROOT%/%CC_SYSTEM%/windows/bncs_vis_ed.exe.

2 Operations

2.1 Create, Load Save a Panel

2.1.1 Create a new panel

Select File|New, or Ctrl+N, or the New File tool icon .

The New File… dialog appears (Figure 1: New File dialog).

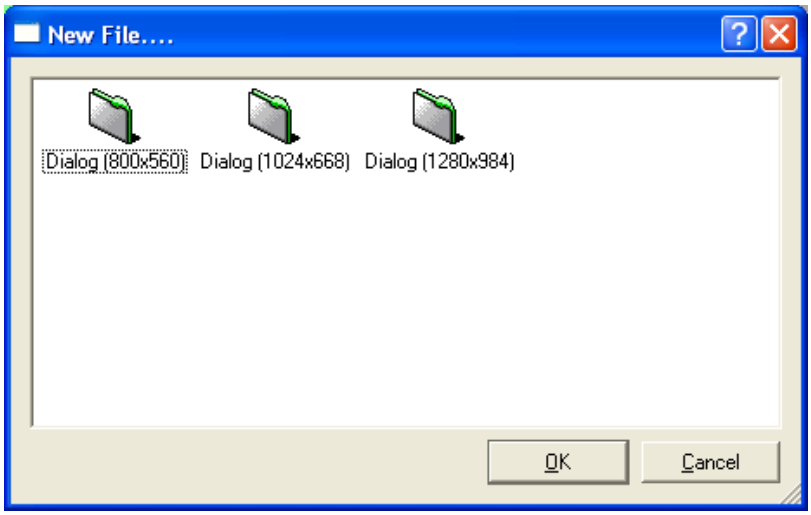

Figure 1: New File dialog

Select the icon corresponding to the size of dialog appropriate for your system.

Select OK. (Or double-click on the icon for the size of dialog you want).

An empty dialog background of the correct size will appear.

2.1.2 Save a Panel to a File

Select File|Save, or Ctrl+S, or the Save tool icon . The panel will be saved to its associated file.

If no file has been selected, you'll get the standard Windows 'Save As' dialog. Navigate to where you want to save the file and enter the name you want to use.

Save As is also available in the File menu to resave a panel into a file with a different name.

2.1.3 Load an Existing Panel File.

Select File|Open, or Ctrl+O, or the Open tool icon . The standard Windows Open dialog will appear. Navigate to the file you want to load. Single-click it and select OK or press Return or double-click it.

2.1.4 Recent Files

Up to ten of the most recently edited panel files are available from the File|Recent Files menu.

2.2 Basic Panel Editing

2.2.1 Add a New Control to your Panel

The available controls appear in the Configuration / Widgets window, which normally appears to the right of the dialog (Figure 2: Configuration / Widgets Window).

This is a dockable window so may be undocked from there and moved elsewhere.

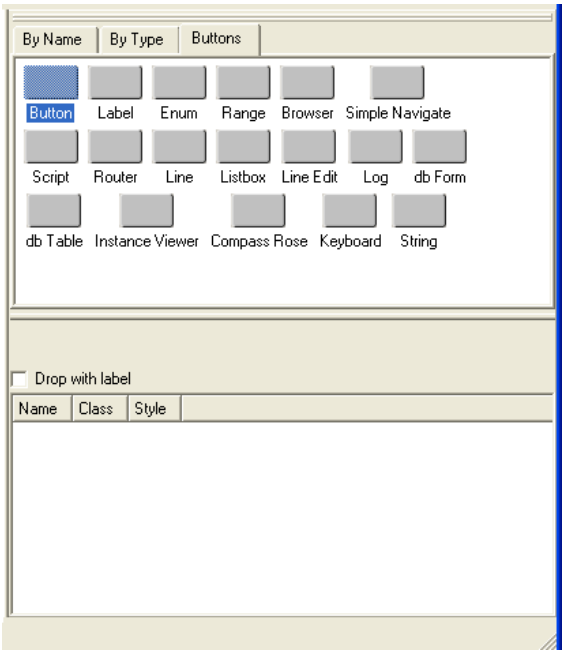

Figure 2: Configuration / Widgets Window

Select the control you want and drag it onto your panel. When the first one is positioned there is usually a delay before it appears while the library loads. Subsequent controls usually appear immediately.

This window has three separate tabs, Buttons, By Name and By Type. The Buttons tab contains all the available fundamental control types – Button, Range, Enum, Script etc1.

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1 See Appendix B - Configuration for information on the configuration of available controls.

The By Name and By Type tabs allow access to smart controls for device parameters, listed linearly (By Name) or in a hierarchy of instance within device type (By Type). In these latter two tabs the instance is selected in the upper pane and the parameters then appear in the lower pane, from where they may be dragged onto the dialog, where they will appear as the appropriate control type with all necessary parameters already set appropriately.

2.2.2 Basic Control Editing.

When a control is selected, eight blue spots, called 'Edit Handles', will appear on it (Figure 3: Selected Button showing Edit Handles). These may be used to resize the control, or move any of its corners.

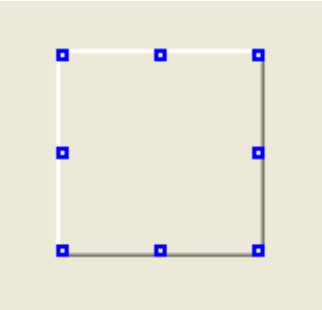

Figure 3: Selected Button showing Edit Handles

To move the whole control, click anywhere on it apart from on one of the handles and drag it to where you want it. The cursor keys will also move the selected control(s)

2.2.3 Multiple Selection

The mouse may be used to select multiple controls.

Either :

Press the left mouse button somewhere on the dialog background and hold the button down while dragging the selection box over all the controls you want to select.

Or:

Hold down the Shift key while selecting individual controls with the mouse. This is the way to select controls that are not adjacent so can't be selected using the normal rectangular selection method using the mouse.

Selection is by touch, not containment. Any button that is wholly or partly within the selection box will be selected.

2.2.4 Editing Properties of Controls

To change anything other than the size or position of the control, you need its property editor dialog. To get this, either :

- Double click on the control
- Right-click on the control to get the context menu. Select 'Properties'.
- ALT+Enter

Each different type of control has its own properties dialog. Each of these has a number of tabbed pages allowing you to edit all the control's properties.

There are too many to display them all here, but a few are shown (Figure 4: Properties dialog for Generic Control, Figure 5: Properties dialog for Enum control)

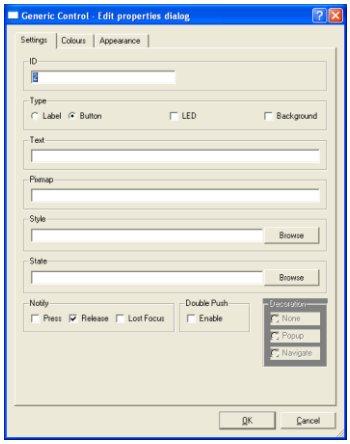

Figure 4: Properties dialog for Generic Control

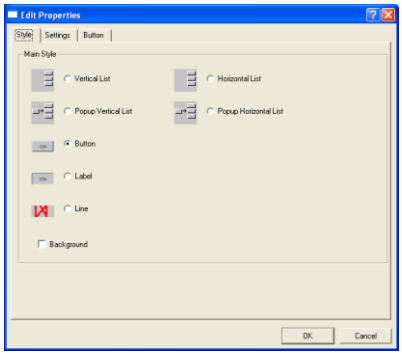

Figure 5: Properties dialog for Enum control

2.2.5 The Control ID Viewer

The Control ID Viewer shows a list of all the controls on the current dialog.

You can activate it at View|View ID List or using the tool icon  .

This shows the ID of each control on the panel and allows you to see, by selecting them, which is which.. It also allows the IDs to be changed, by double-clicking on them.

It is the only way of selecting individual items that are not visible because they are off-screen.

It is not possible to select multiple items using the ID Viewer.

2.2.6 Widget Count

The Control ID Viewer shows all your controls so you can count the number of controls from there.

Use Tools|Widget Count  or Ctrl+W to get a count of all objects and widgets on the Panel.

2.3 Common Editing Tools

A selection of editing tools is available, similar to those commonly found in Word processors and other applications.

2.3.1 Delete

Delete the selected control(s) using Edit|Delete, or the Delete key or  tool icon, or the Delete entry in the context menu.

2.3.2 Cut and Paste

Standard Cut, Paste and Copy functionality is available, from the Edit menu, and from the toolbar and the usual keystrokes.

- Cut -  Remove selected controls from the dialog and copy to clipboard.
- Copy -  Copy selected controls from dialog to clipboard.
- Paste -  Paste the contents of the clipboard to the dialog.

See Appendix A – The Clipboard for more information on the use of the clipboard.

2.3.3 Duplicate

To duplicate a control or a number of controls, select the control(s) you wish to duplicate and then use Layout|Duplicate, the tool icon  , or the Duplicate entry in the context menu.

2.3.4 Undo

The program maintains a list of recent actions performed. You can undo to the previous state using Edit|Undo, or Ctrl+Z or the  tool icon.

2.4 More Advanced Panel Editing – Alignment and Spacing tools

In order to produce smart looking panels, there are a number of tools to help get controls to line up with one another and to space them evenly on the panel.

2.4.1 The Grid

There is a grid to help with alignment of controls. If it is turned on you will see dots on the dialog background. The grid is spaced at ten pixel intervals. The interval is not changeable.

To turn it on or off, use Tools|Toggle Grid  or Ctrl+G.

Note that all the spacing tools use the grid so you may find that attempting to stack some buttons leaves them irregularly spaced if the grid is turned on.

2.4.2 Alignment Tools – Left, right, top, bottom.

These tools allow you to align the edges of the controls, and also to adjust controls to have similar sizes.

Select more than one control.

Note that if you use the shift key to select individual controls, the Align tools will align the buttons to the edge of the first one selected, which will not necessarily be the one in the direction being aligned to. In this case you will notice that the first item selected has blue edit handles and all the others have black handles.

Select one of the Alignment tools, either in the Layout menu, the tool icons  , or the Align submenu of the context menu.

All the controls will move to align their edges as appropriate for the tool selected. Controls will be moved, their sizes will not be affected.

For example, if you select Align Left, all but the leftmost control (or the first one selected) will move to the left so that their left edges are in line.

If we start with three buttons on a dialog, as in Figure 6: Three buttons, selected.

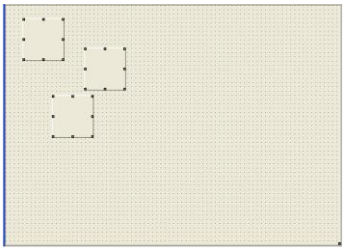

Figure 6: Three buttons, selected

Align Right will result as shown in Figure 7: Aligned Right.

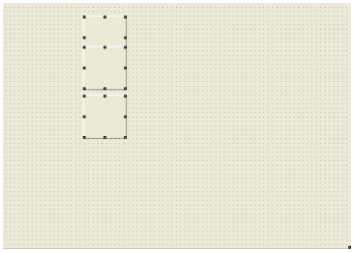

Figure 7: Aligned Right

Align Top will result as shown in Figure 8: Aligned Top

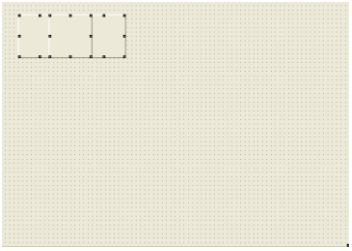

Figure 8: Aligned Top

Align Bottom will result as shown in Figure 9: Aligned Bottom.

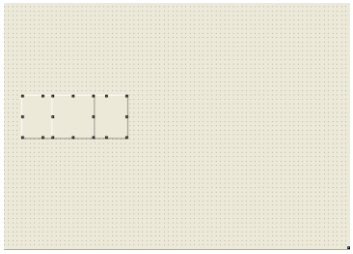

Figure 9: Aligned Bottom

Align Left will result as shown in Figure 10: Aligned Left.

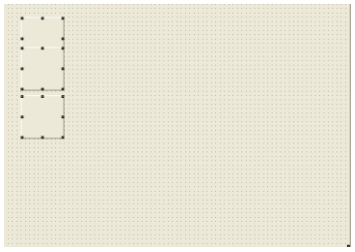

Figure 10: Aligned Left

2.4.3 Size Matching Tools – H and V, Smallest and Largest

These tools allow you to resize controls so that they have the same size along the selected axis.

Select more than one control.

Select one of the Size tools, either in the Layout menu, the tool icons , or the Size submenu of the context menu.

All the controls will be resized as appropriate for the tool selected. Their sizes will be changed but their positions (the position of the top-left corner) will not be changed.

For example, if you select Size H Smallest, all but the narrowest control (measured horizontally) will be resized to be the size of the narrowest.

To show these tools in action we'll start with some differently-sized buttons, shown in Figure 11: Two Buttons, selected.

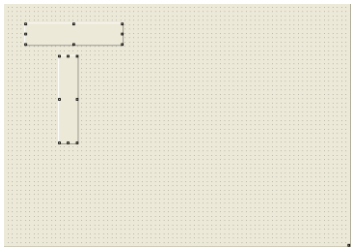

Figure 11: Two Buttons, selected

Size H Smallest will result in the layout shown in Figure 12: Size H Smallest.

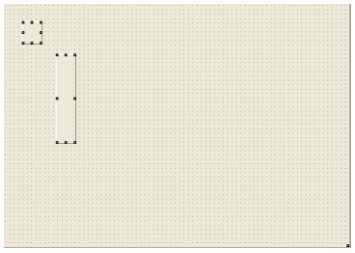

Figure 12: Size H Smallest

Size H Largest will result in the layout shown in Figure 13: Size H Largest

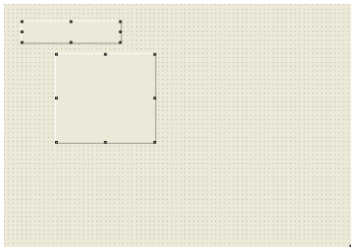

Figure 13: Size H Largest

Size V Smallest will result in the layout shown in Figure 14: Size V Smallest.

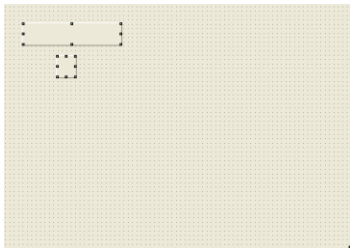

Figure 14: Size V Smallest

Size V Largest will result in the layout shown in Figure 15: Size V Largest.

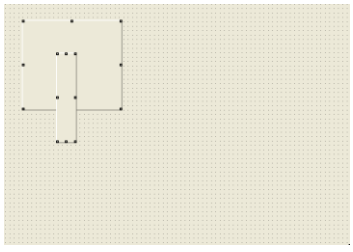

Figure 15: Size V Largest

2.4.4 Centre controls in dialog – Horizontally or Vertically

These tools will position one or more controls centrally on the dialog.

Select one of the Centre tools from the Layout menu, the tool icons ,or the Align submenu of the context menu.

If several controls are selected for this action, they will be centred as a group, not individually.

Starting with the same three buttons as in Figure 6: Three buttons, selected, Centre Horizontally in Dialog will result in the layout shown in Figure 16: Centred Horizontally. Note the buttons retain their absolute spatial relationships with one-another, but that the whole group has been moved to be centred left to right.

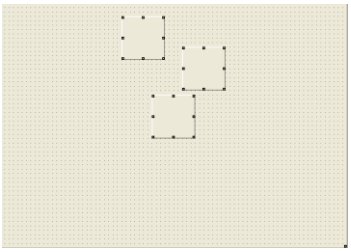

Figure 16: Centred Horizontally

Starting with the same three buttons as in Figure 6: Three buttons, selected, Centre Vertically in Dialog will result in the layout shown in Figure 17: Centred Vertically. This time the buttons have been moved down so they are centred top to bottom.

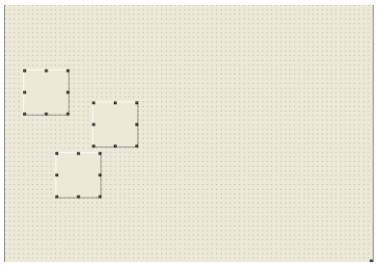

Figure 17: Centred Vertically

2.4.5 Distribute – Horizontally or Vertically

The distribute tools will take a number of controls and distribute their positions along one axis.

Select one of the distribute tools from the Layout menu, the tool icons  ,or the Align submenu of the context menu.

The controls at the ends of the selected axis keep their position and the others will get spaced along the axis. They maintain their order relative to each other but their distances from each other will normally change.

Starting with a slightly different set of three buttons as Figure 18: Three Buttons, unevenly spaced.

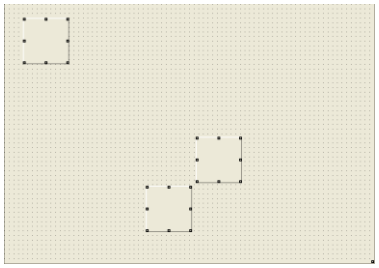

Figure 18: Three Buttons, unevenly spaced

Distribute Horizontally will result in the layout shown in Figure 19: Distributed Horizontally. Note that only the horizontal position of the middle (on the horizontal axis) button has been changed.

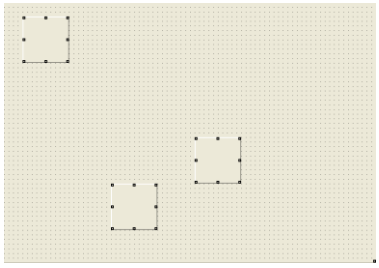

Figure 19: Distributed Horizontally

Distribute Vertically will result in the layout shown in Figure 20: Distributed Vertically. Note that only the vertical position of the middle (on the vertical axis) button has been changed.

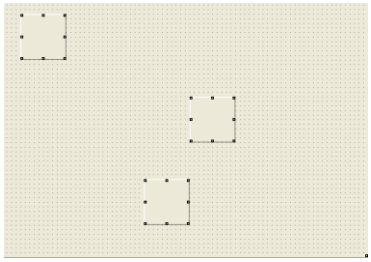

Figure 20: Distributed Vertically

Note that the order in which the controls are positioned depends on the initial origins of the controls, not their centres or any other property. Starting with three buttons of different widths, as shown in Figure 21: Three Buttons, different widths.

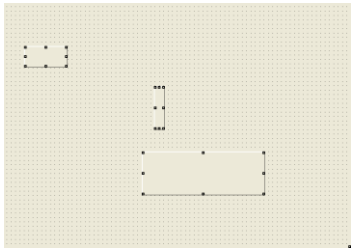

Figure 21: Three Buttons, different widths

If we select Distribute Horizontally, the result is as in Figure 22: Three Buttons, different widths, Distributed Horizontally

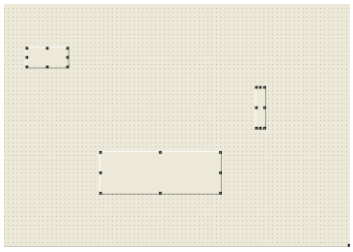

Figure 22: Three Buttons, different widths, Distributed Horizontally

Note that the lower button is now second along the horizontal axis as, even though its centre was further to the right than that of the middle one, its origin is what counts here and that was to the left.

2.4.6 Stack to an Edge

The stack tools will take a number of controls and distribute their positions along one axis.

The Stack action differs from Distribute in that the controls are all moved so they are evenly spaced based on their sizes and all but the control nearest the relevant edge will be moved. Distribute will leave the controls at both ends of the axis and space all the others evenly in-between. Stack will only leave one at one end of the axis and will move all the others to a specific absolute spacing.

Starting with the set of three buttons as Figure 18: Three Buttons, unevenly spaced.

Stack Left will result in the layout shown in Figure 23: Stacked Left.

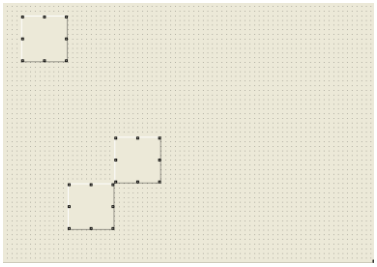

Figure 23: Stacked Left

Stack Right will result in the layout shown in Figure 24: Stack Right.

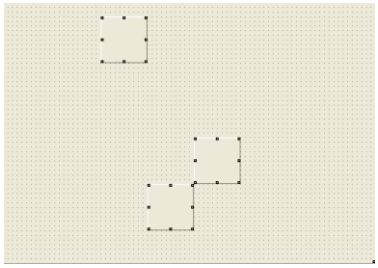

Figure 24: Stack Right

Stack Top will result in the layout shown in Figure 25: Stack Top.

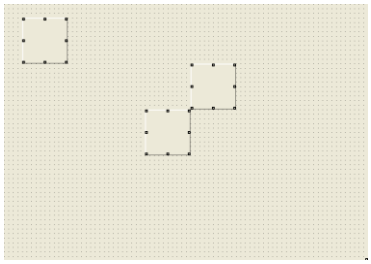

Figure 25: Stack Top

Stack Bottom will result in the layout shown in Figure 26: Stack Bottom.

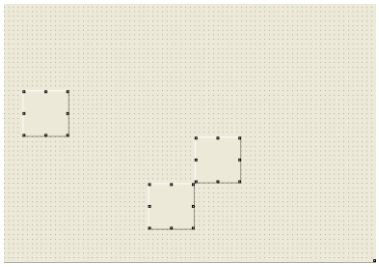

Figure 26: Stack Bottom

Note that as for the Distribute tool, the order in which the controls are positioned depends on the initial origins of the controls, not their centres or any other property.

2.5 Testing

To test your panel use Edit|Test or the tool icon .

This runs your panel in PanelMan.

The panel needs to have been saved in a suitable directory before this can be done; you can't just create a panel in the Visual Editor and test it without saving it.

2.6 Getting at the Other Bits

In order to write a script for your panel you need to run Microsoft Visual Studio 6. This may be done by navigating to the appropriate folder using Windows Explorer but tools are also available within the Visual Editor to do this.

2.6.1 Explorer

Select Tools|Open in Explorer or the tool icon . A new window will open showing the folder containing your panel.

If you haven't saved the panel, the Save As dialog will appear, inviting you to do so.

2.6.2 Visual Studio

To open your panel's script in Visual Studio, or to get Visual Studio to create a script project, select Tools|Open/Create Visual Studio Proj, or select the tool icon .

If there is no project you'll be prompted whether you want to create one.

Once the project exists, Visual Studio will open it.

3 Appendix A – The Clipboard

The clipboard used by cut and paste operations within this application is the standard Windows clipboard and is hence shared with other programs.

When the Visual Editor copies information to the clipboard it does so using the XML representation of the data. The structure and contents of this are beyond the scope of this document.

Because of this sharing it is possible to copy controls into another application, for example a text editor in order to diagnose problems (or simply out of curiosity ….). Conversely, with sufficient care and knowledge it is possible to copy into the Visual Editor information prepared outside it.

4 Appendix B - Configuration

The configuration of available controls will normally be done during the early stages of your project and will rarely be changed. Indeed it is likely that this configuration will not even change between projects.

Configuration of available controls is done in the config/vised/buttons.xml file in your project.

The file contains an XML description of which controls are available and in which libraries they are found. The structure and contents of this are beyond the scope of this document.

5 Version Control

Version	Date	Author	Comments
0.1	06 November 2006	Richard Kerry	First Version
0.2	10 November 2006	Richard Kerry	First publication.
0.3	19 December 2011	Andrew Prince	New format
0.4			

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