

Build SML Dialogs Using XML

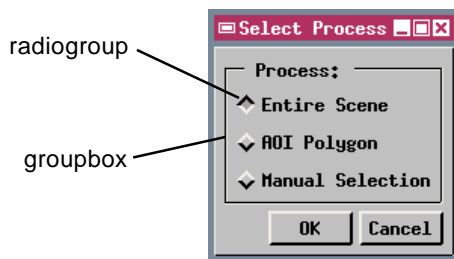
The Spatial Manipulation Language (SML) allows you to create processing scripts for custom TNT applications and to automate process workflows in the TNT family of products. Using SML you can also create dialog windows that provide a graphical interface for all user interactions with the script.

SML now provides a streamlined way for you to create custom dialog windows that work interchangeably in SML in the X Windows environment (SML/X) or in SML for Windows (SML/W). You specify the components and layout of a dialog using text composed of a simple set of tags and attributes that follow the format and syntax rules of XML, the Extensible Markup Language. XML simplifies the task of setting up the dialog because the XML elements in your dialog specification are grouped and nested in a logical structure that mirrors the grouping of components in the

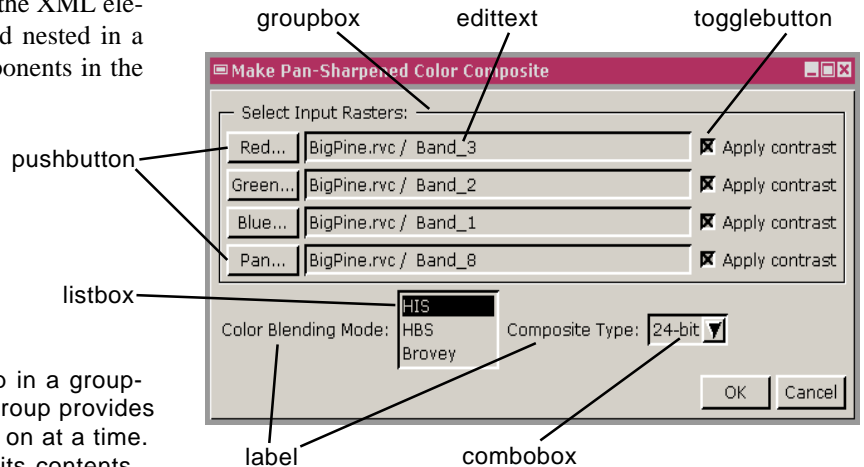
dialog. You can use the SML editor or any text editor to create the dialog specification in XML, which can be in a separate text file or embedded as a string within the SML script.

SML provides two sets of class methods for working with dialog specifications in XML. Methods in class XMLDOC are used to read and parse the XML text. Methods in class XMLNODE allow the script to access the XML elements that correspond to particular components of the dialog.

Sample scripts for the dialog windows shown here are available for free download at www.microimages.com/freestuf/smlscripts.htm.



A simple modal dialog window with a radiogroup in a groupbox (sample script `radiogroup.sml`). A radiogroup provides a set of buttons in which only one can be turned on at a time. The groupbox provides a labeled frame around its contents. This window might be one of a series of dialogs to set different processing selections. A modal dialog is one that takes control and prevents any other program interaction until the dialog is closed. OK and Cancel buttons are provided automatically for modal dialog windows.



A more complex modal dialog window for the sample script `pansharpcomp.sml`. The dialog includes a number of different controls, including pushbuttons, text fields (edittext), toggle buttons, a listbox, and a combobox. The edittext controls in this example are set to be read-only (not editable); they are used to display the file and object names for each of the selected input rasters.

Available Dialog Elements:

Main Elements

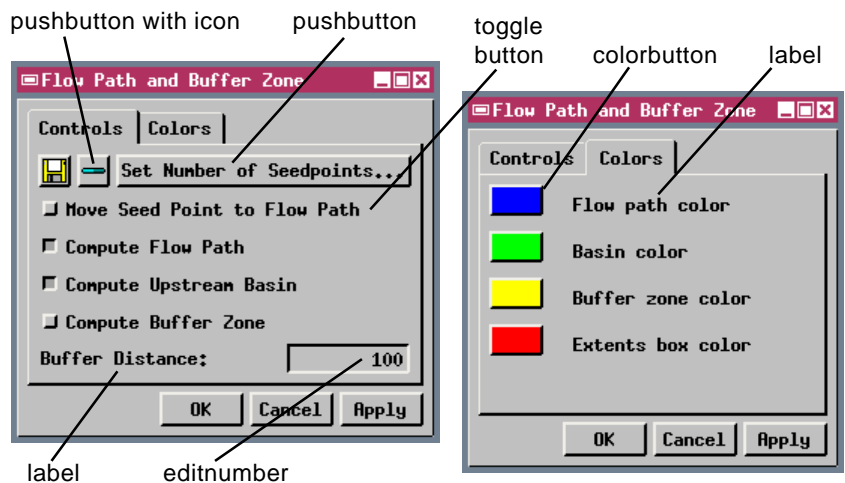
root: root element of the XML document
dialog: dialog window

Layout Elements

book: book of tabbed pages
page: tabbed page in a book
pane: window layout pane
groupbox: frame around other controls

Control Elements

label: simple text label
pushbutton: push button (with text or icon)
togglebutton: independent toggle button
colorbutton: color selection button
edittext: text entry control
editnumber: numeric entry control
radiogroup: group of radio buttons
combobox: combo-box menu
menubutton: button with drop-down menu
listbox: scrolled list for selection
item: item in a list, menu combobox, or radiogroup



Two views of a nonmodal dialog created for the FlowPath ToolScript (`flowpathXML.sml`). A nonmodal dialog permits other interactions while open, and is automatically provided with OK, Cancel, and Apply buttons. This dialog includes a "book" of two tabbed "pages" that contain pushbuttons, toggle buttons, an editable numeric value field (editnumber), and colorbuttons to select colors.