User’s Manual

acro dialogs

A Graphical Designer for Creating Acrobat JavaScript Dialogs

Plug-in for Adobe ® Acrobat ® Professional, Standard, Versions 6, 7, 8, and 9

Version 1.1

http://www.windjack.com

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AcroDialogs User’s Manual

Dialogs in Acrobat JavaScript

When Adobe released Acrobat 7 they documented the most useful UI feature they have ever created for Acrobat JavaScript-fully featured dialog boxes (see the Acrobat 7.0 JavaScript Reference). One of the most exciting things about this feature is that it’s not new. It was originally implemented in Acrobat 6, but undocumented, so it’s available to a much larger audience than just those who’ve updated to Acrobat 7.

The following two sections explain the basics of what Acrobat JavaScript dialogs are and how to use them. As you’ll see, while they are the most sophisticated and useful UI device ever conceived for Acrobat JavaScript, they are also very complex beasts that are a pain in the rear to program. That’s where AcroDialogs comes in. It is a graphical dialog designer that massively simplifies the process of creating JavaScript Dialogs for Acrobat. In fact, for most of the dialogs you’ll be creating you won’t need to enter a single line of code. AcroDialogs writes all the code for you. All you have to do is hook the dialog code into Acrobat, or a PDF file, so it can be used.

All of this is explained in the following sections with lots of examples. Please be patient and read all of it. To get the most out of this exciting new Acrobat feature you will need the background and specific usage information given here.

What are they?

Dialog boxes are any window that contains form-like elements for collecting data from or presenting data to the user. You use them all the time. In Acrobat JavaScript the `app.alert()`and `app.response()`methods both display a simple dialog box. But now you can create complex dialog boxes with buttons, check boxes, radio buttons, lists, text boxes, images, and more. You can arrange these elements in any layout configuration to provide your users with sophisticated input panels. You can do all of this with Acrobat JavaScript, which means that once the dialog is created it is compatible with Reader, and the Mac versions of Acrobat.

The code for using a JavaScript Dialog can be broken into two distinct parts. These parts are the **Dialog Object Literal** and the dialog execution. The **Dialog Object Literal** is a single object declaration that describes everything about the dialog and its elements. The execution code sets up the input parameters to the dialog, displays it, and collects the response data. AcroDialogs creates both parts for you.

The **Dialog Object Literal** is a very complex object and has very specific rules for its structure. The code for creating a **Dialog Object Literal** can be broken into two areas, the visual layout and properties of the dialog elements, called the description, and a set of functions that support the operation of the dialog, called handlers.

Shown below is a very simple **Dialog Object Literal**.

```
var TestDlg1 =
{
  description:
  {
      name: "My Test Dialog",
      elements:
      [
          {
               type: "view",
               elements:
               [
                   {
                      item_id: "sta1",
                      name: "Check the box",
                      type: "static_text",
                   },
                   {
                      item_id: "Chk1",
                      name: "Check Box",
                      type: "check_box",
                   }
               ]
          },
          {
            type: "ok_cancel",
          },
      ]
  }
};
```

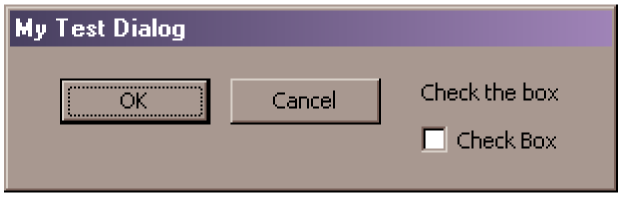
At the top level this object has a single member named `description`. This is the member that contains all the visual layout information and properties for the dialog and its elements. Normally there is also a set of dialog handler functions that are also top level members. They were left out of this example to simplify the code. They are optional, but necessary for any type of interactive dialog. For example: there is one handler for initialization, one for committing results on Ok, and one for each element that requires an action (see Dialog Properties)

Within the `description` member, the dialog's title is given in the `name property`; this is the only dialog level information present in this example. The `elements` entry contains the list of elements to be used on the dialog. The first element is of type `view`. Views are container elements used to group other elements. This one contains two other elements, a `static_text` and a `check_box`. Both of these elements have an `item_id` and a `name` property. The optional `item_id` is a unique 4 character identifier used by Dialog Object functions to operate on the element. **NOTE:** It is important to understand that an `item_id` must be exactly 4 characters long. If an `item_id` is any other length besides 4 characters, the dialog will fail. The `name` property is usually a label that appears on the element, such as **Cancel** on the cancel button. The last element in the `description` is an `ok_cancel` button. This element has special properties and is actually two buttons, an **Ok** button, and a **Cancel** button. When the user selects the **Ok** button, the final `commit` function is called before the dialog is closed. When the user selects the **Cancel** button, the dialog is immediately closed and any data in it is discarded.

The simplest way to execute (display) this **Dialog Object Literal** is with a call to the App Object method:

```
    app.execDialog(TestDlg1);
```

You can copy and paste the code above into the console window to try it out. You should see a dialog that looks like the one below.



All dialogs created in Acrobat JavaScript are **modal**. Modal dialogs block all user input to the main application until they are dismissed. This is the typical case with dialogs. Acrobat JavaScript does not allow non-modal dialogs, also called floating windows, because they float above the main application but do not block input/access to it.

Layout Rules

The dialog `description` shown above does not contain any size or position information for the dialog elements. So how does Acrobat know how big to make them and where to place them? In order to simplify creating the dialogs in JavaScript, Acrobat uses relative element placement. There are no absolute coordinates for placing elements. They are simply lined up on the dialog in the order in which they appear in the `description`. This is an important concept to understand when designing a dialog. All elements that are at the same level, i.e. in the same elements array, are arranged together. They are lined up either horizontally or vertically, depending on the `align_children` property of their parent element. An individual element can modify the arrangement imposed by its parent container with its own `alignment`, but it can't override it.

Alignment is only one part of the layout. Size is also important. Each element has a minimum size that's determined by its own nature plus any text it may contain. In the absence of specific height and width parameters, this minimum size is used. For most element types, size properties that are set smaller than the natural minimum are ignored.

The example above has two top level elements, a `view` and the `ok_cancel` buttons. These elements are arranged side by side. The view contains two elements which are arranged one on top of the other, a `static_text` and a `check_box`. Both these elements are sized to fit the text of their respective `name` properties. The view element is automatically sized to fit the two items it contains.

AcroDialogs

If you groaned when you saw what it takes to create a simple dialog, imagine the difficulty in getting a complex dialog right. Using the minimal JavaScript editor that's built into Acrobat will unfortunately mean that the coding/test cycle for a structure like this is very time consuming, because you can't see the effect of what you're doing in the coding phase. You have to constantly switch back and forth between the JavaScript editor and Acrobat's viewing mode to see if what you've written in code matches what you want to see on the dialog. As the dialog becomes more complex the difficulty grows exponentially. To compound the problem even further, Acrobat's built-in debugger does not work with the JavaScript Dialog object. So, get a bracket out of place, whoa, have fun finding it. We know from experience how frustrating it can be to write code for these dialogs. That's why we created **AcroDialogs**.

AcroDialogs for Acrobat is a graphical editor that creates the dialog JavaScript code for you, and does it perfectly every time. You'll never be burdened by that debugger limitation, or have to slog through a mountain of code in a bare bones editor. With **AcroDialogs** all you do is add and arrange the dialog elements you want, and then add in the extra bits of code, if any, that you need for your own special functions. The Designer keeps track of everything else for you. You can easily rearrange, resize, copy, and paste elements (so you don't have to keep recreating them). You can work with multiple dialogs simultaneously. You can create dialog wizards, complete with **Next**, **Previous**, and **Finish** buttons. AcroDialogs makes complex wizards easy and accessible to the novice JavaScripter.

AcroDialogs displays the best approximation of the dialog box so there will be slight differences in the sizing of certain elements between Acrobat and AcroDialogs. If you want to see how Acrobat will display the dialog, just click the **Test** button and Acrobat will show a fully functioning instance of your dialog.

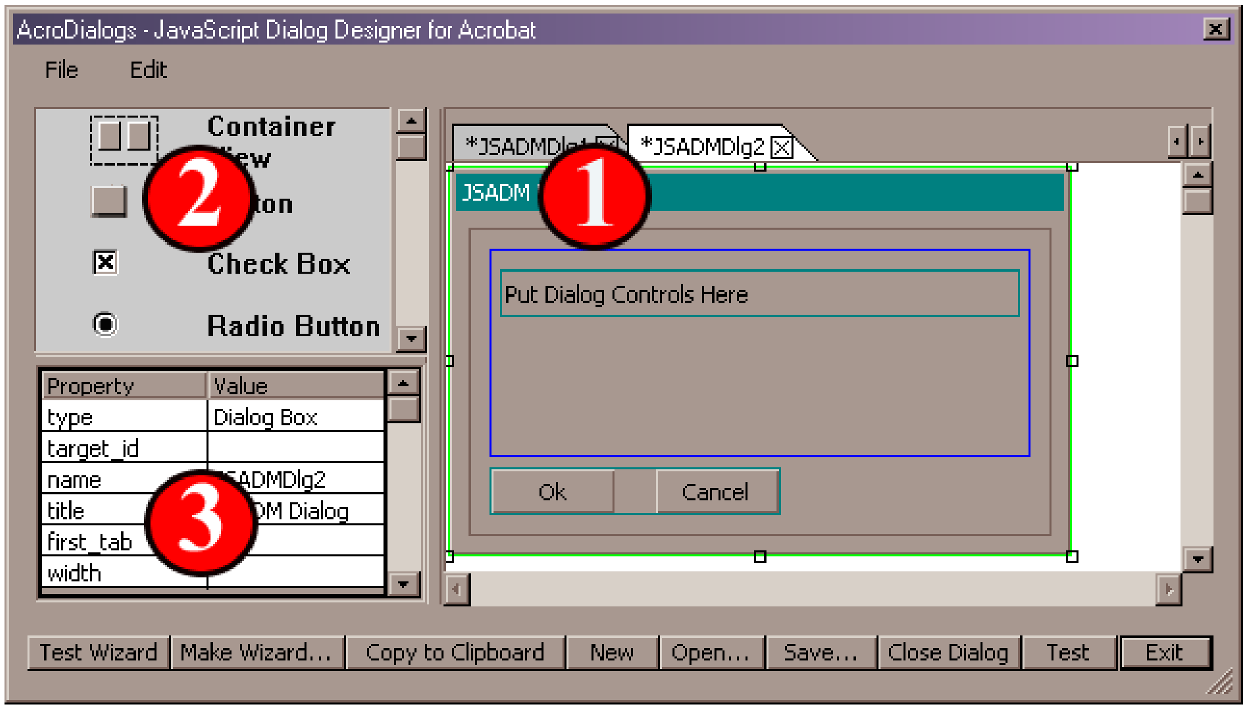
If you are already a JavaScript developer this tool will shave hours, if not days, off a project that includes dialogs. If you discounted the use of dialogs in your project because of the difficulty in development, think again. If you're new to JavaScript, then a powerful user interface you may never have considered using is now available to you.

AcroDialogs doesn't just create the dialog code, it allows you to test it during the development process as well. AcroDialogs creates code that is instrumented for maximum functionality by providing functions and variables that set and returns the values in the dialog elements. When you save your design to a file it appends a working example of how to use the Dialog Object Literal it generated. All you have to do is cut and paste this code to the location in Acrobat or a PDF where you want the dialog to be executed.

Activating the AcroDialogs Window

After you have installed **AcroDialogs** you can activate it from either the AcroDialogs item under the **Advanced** menu, or the button on the **Advanced Editing** toolbar. Selecting either of these options will display the AcroDialogs window. This is a floating window so you can still use all the other Acrobat features while this window is displayed.

Window Layout



Property	Value
type	Dialog Box
target_id	
name	JSADMDlg2
title	JSADM Dialog
first_tab	
width	

Figure 1

The **AcroDialogs** Designer Window (Figure 1) is composed of 3 sub-windows, a menu bar and a set of easy access buttons. The window can be resized with the "Grip" area on the lower right corner. Resizing from other areas of the window will not work. The sub-windows can be resized with a Click/Drag on the separators between them. All window sizes are persistent.

Sub-Windows

1) **Right Side** – *The Design View*. This is where you will design the dialog. Figure 1, item 1 shows two open dialogs in this area. Each dialog is assigned a tab. You can display an open dialog by selecting its tab. If there are too many tabs to be displayed, a scroll control will appear to the right of the tabs. A right click in this sub-window will display a context menu with many of the same options that are on the main **Edit** menu.
2) **Top Left** – *The Dialog Element Palette*. A list (with descriptive icons) of all the elements available for placement on the Dialog design. Drag and drop elements from this list onto the active dialog design in the work area (Figure 1, item 1).
3) **Bottom Left** – *The Dialog Element Properties Browser*. A list of all properties for the selected element. The list has two columns. The left column displays the property's name, and the right column displays the property's value. Select an entry in the list to edit the property value.

Main Menu Options

There are two application menus (**File** and **Edit**) on the top left of the window.

File – Menu choices for file operations

• **New**	- Create a new nominal dialog design.
• **Open…**	- Open an existing dialog design.
• **Save**	- Save the current dialog design.
• **Save as…**	- Save the current dialog design to a different file.
• **Copy Dlg JS to Clipboard**	- Copy Dialog JavaScript code to the clipboard.
• **Test Dialog**	- Use Acrobat to execute code for the current dialog design.
• **Make Wizard…**	- Create a dialog wizard from all open dialog designs.
• **Test Wizard…**	- Generate code for a wizard and use Acrobat to execute it.
• **Copy Wizard to Clipboard**	- Generate and copy wizard JavaScript code to clipboard.
• **Close Dialog**	- Close the current dialog design.
• **Exit**	- Close all open dialog designs and exit **AcroDialogs**.

Edit – Menu choices for editing operations

• **Copy**	- Copy the selected element to the clipboard.
• **Paste**	- Paste an element into the dialog design from clipboard.
• **Delete**	- Delete the selected element.
• **Set Minimum Size**	- Remove the size properties for the selected element.
• **Copy to User list…**	- Copy the selected element to the **User Element List**.
• **Paste from User List**	- Paste element into dialog design from **User** Element **List.**
• **Remove from User List…**	- Delete an element from the User Element List.

Context Menu

The Context Menu is displayed when the user right clicks on the Designer Window. Entries on the menu are enabled based on the current selection state of the dialog design.

• **Copy**	- Copy the selected element to the clipboard.
• **Paste**	- Paste an element into the dialog design from the clipboard
• **Delete**	- Delete the selected element.
• **Set Minimum Size**	- Remove the size properties for the selected element.
• **Copy to User list…**	- Copy the selected element to the **User Element List**.
• **Paste from User List**	- Paste element into dialog design from **User Element List**
• **Copy Dlg JS to Clipboard**	- Copy Dialog JavaScript code to the clipboard

Easy Access Buttons

At the bottom of the **AcroDialogs** Window are 9 easy access buttons (Figure 2). These buttons are shortcuts to selected **File** menu choices.

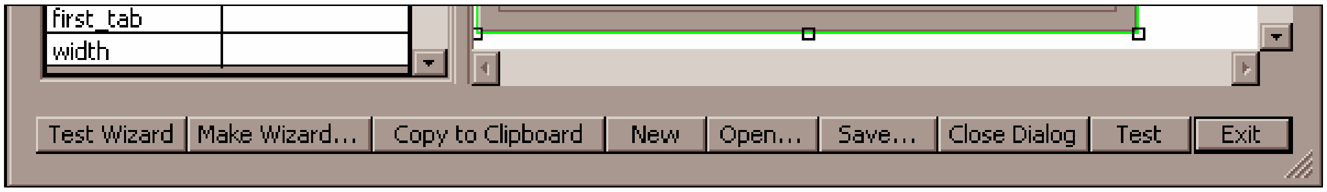
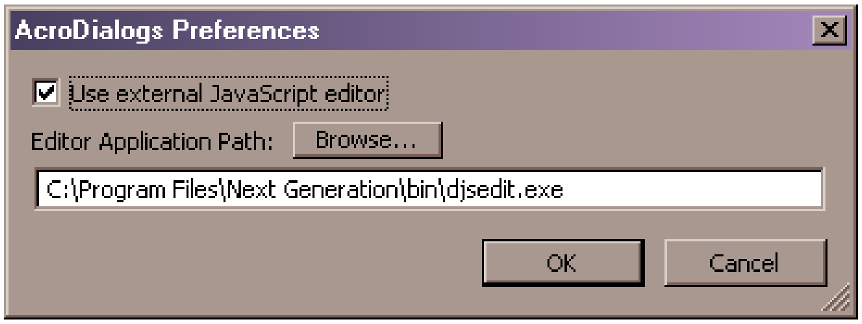


Figure 2

JavaScript Editor

For editing JavaScript, **AcroDialogs** has a simple built-in text editor, but it also allows you to specify an external editor of your choice to use instead. To use your own editor:

1. From the Acrobat menu bar select **Edit** > **Preferences** > **AcroDialogs…**
2. Select **Use external JavaScript editor (Figure 3)**.
3. Browse to, or type the path to the editor application of your choice.



[✓] Use external JavaScript editor

Editor Application Path: C:\Program Files\Next Generation\bin\djsedit.exe

Figure 3

It is recommended that you use an editor that loads and shuts down quickly, to preserve your sanity. There are many good editors available, and several leading editors are documented in the Acrobat JavaScript Scripting Guide. NotePad.exe and similar editors work very well. Our favorite at Windjack Solutions is the Developers JavaScript Editor from Next Generation. There is a free version that provides searching, line numbers, and chroma-coding for JavaScript at:

http://www.ngweb.biz/software/djsedit.shtml

If you are interested in open source software there is the SCIntilla based editor SciTE at:

http://www.scintilla.org/SciTE.html

If you like SCIntilla but would like more features without compromising speed, see AnyEdit at:

http://www.anyedit.org/

Both these general purpose editors are fast and provide all the basic tools needed for programming, including the features mentioned above. If you prefer a free editor with built-in scripting capabilities, then NoteTab may be what you need. You can find it at:

http://www.notetab.com

If you are new to programming you may be more comfortable with the look and feel of a word processor. However, word processors are usually not recommended for writing code, but there is one exception that we know of. PolyEdit is a conventional word processor, but it also has features like line numbers, chroma-coding, regular expression search, clipboard manager, and a code snippet library that are useful for writing code. There is also a free version called CryptEdit. You can find them at: http://polyedit.com/

Opening and Saving Files

Dialog designs are loaded and saved in XML files with the **.xadm** extension. A description of this XML format (called the XADM format) is provided in the same folder as the plug-in in the **JSADM.DTD** file. Each of the dialog elements is wholly contained in a section of the XADM file, including all initialization parameters and associated JavaScript. This configuration allows each dialog element to be manipulated independently of the rest of the dialog design.

Dialog design files may be loaded from and saved to any location on your hard drive but the preferred location is a sub-folder of the Acrobat global JavaScript's folder called JSADM. Typically the full path to this folder is:

C:\Program Files\Adobe\Acrobat 7.0\Acrobat\Javascripts\JSADM

The full JavaScript for the dialog is saved in a separate JavaScript (*.js) file at the same time the XADM (dialog design) file is saved. The code in the JavaScript file can be divided into 3 parts. The top part will contain special variable declarations and *Code Above*. Code Above is a block of JavaScript that's entered from a top level dialog property (see Special Properties in the section: *Dialog Elements and Their Properties*). This top section is followed by the declaration of the Dialog Object Literal. This object will contain variables for each dialog element that contains data and some helper functions, as well as the ordinary members (as described in the Acrobat 7 JavaScript Reference). At the end of the file will be an example of how to use this particular dialog. This example code will feature a variable for each data element on the dialog and code for displaying the dialog and handling its return value.

Creating JavaScript Dialogs

Your First Dialog with AcroDialogs

To create a new dialog design, activate AcroDialogs by clicking on the button on the Acrobat **Advanced Editing** toolbar. Now click on the **New** button at the bottom of the AcroDialogs window. Voila, you have a new dialog design.

The **New Dialog** is the starting point for building your own custom dialog. It is created with a set of default elements to help you get started. Most are optional and can be deleted and replaced with other elements. The default elements include two `view` elements. The top level `view` is **required** for all dialog designs. In the Design Window it is shown as a grey rectangle just inside the bounds of the dialog. It cannot be selected and other elements cannot be placed outside of it. It forms the root `view` that contains all other elements. The second `view` on the New Dialog is shown as a blue rectangle and contains a single `Static_Text` element with the words "Put Dialog Controls Here." At the same hierarchy level as the second `view` element and below it is an `ok_cancel` element. Every dialog should have a button for exiting the dialog. If you don't use one of the predefined `ok` buttons then you will need to create a custom button for this purpose. If you do create a dialog without an exit button then the keystrokes **Alt-F4** will close the dialog.

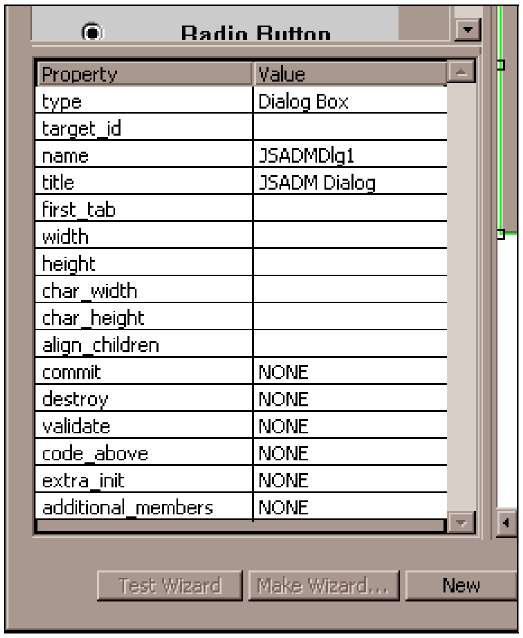
Testing a Dialog

To immediately test your dialog, click on the **Test** button. **AcroDialogs** generates the full code for the JavaScript dialog and executes it through Acrobat. If there are no errors in the JavaScript, the dialog will be displayed exactly as it will appear when you put it to real use. Because **AcroDialogs** is using Acrobat to execute the full JavaScript code, the dialog will also function exactly like it will in real use.

It's possible for you introduce errors into the dialog JavaScript when you edit certain dialog element properties. Most often these are properties that represent JavaScript code or additional members that are added to the **Dialog Description Object**. In most cases, these errors will be displayed in the console window. You can use **AcroDialogs** with the Console Window open, so do this whenever necessary.

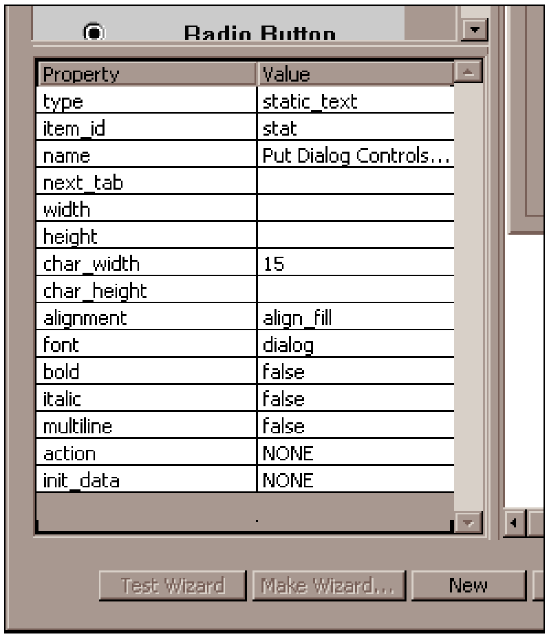
Setting Element Properties

Each element on a dialog, and the dialog itself, have a set of associated properties. These properties are displayed in the **Properties** list when an element is selected on the design view. Create a new dialog and try selecting the dialog and different elements while observing the **Properties** list. Figure 4 shows the list for a newly created dialog, and Figure 5 shows the properties for the static text element on that dialog.



Property	Value
type	Dialog Box
target_id	
name	JSADMDlg1
title	JSADM Dialog
first_tab	
width	
height	
char_width	
char_height	
align_children	
commit	NONE
destroy	NONE
validate	NONE
code_above	NONE
extra_init	NONE
additional_members	NONE

Figure 4
(New Dialog Properties)



Property	Value
type	static_text
item_id	stat
name	Put Dialog Controls...
next_tab	
width	
height	
char_width	15
char_height	
alignment	align_fill
font	dialog
bold	false
italic	false
multiline	false
action	NONE
init_data	NONE

Figure 5
(Static Text Properties)

Notice that both lists contain some common properties. The first property will always be the `type` attribute. It indicates the element type and it is the only property that cannot be edited. All other properties can be edited by clicking on the item in the list. Any property that contains plain, single line text (`name`, `item_id`, etc.) can be edited in place. For properties which have to be selected from a list of options (`bold`, `italic`, `alignment`, etc.) a drop down list is provided. Other properties like the `init_data` for a list, multi-line text, and image data require a special data entry mechanism. For these properties a button will appear to the right of the property on the list. Pushing the button will activate whatever mechanism is necessary for entering the required data.

Adding elements

Elements are added to the dialog design from the **Dialog Element Palette**. Select an item from the palette and use the cursor to drag and drop it onto the dialog. The location where the element will be inserted into the design is shown with an insert bar.

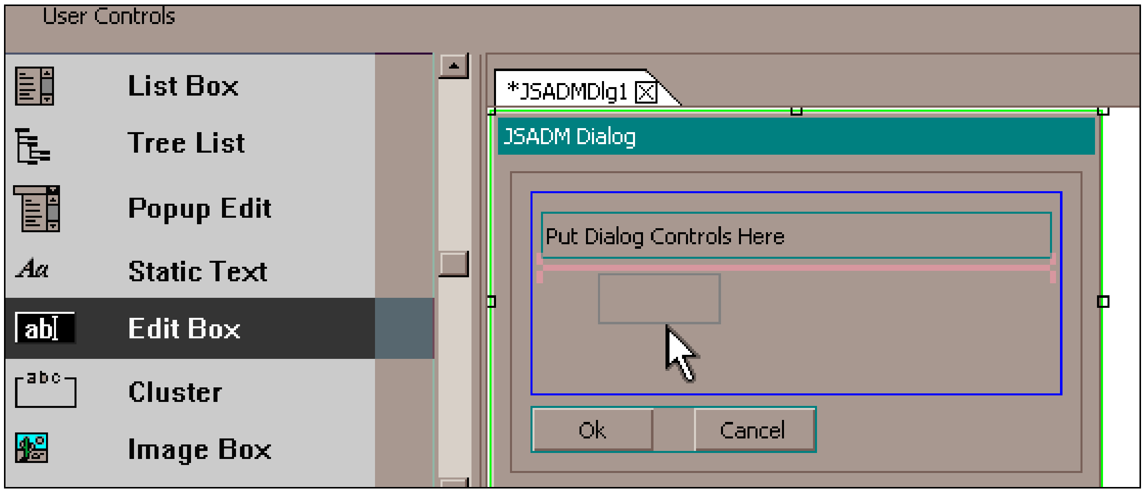


Figure 6
(Adding an **Edit Box** to the Dialog Design, horizontal reddish Insert Bar shows the insert location)

Moving Elements

An element already on a dialog design can be moved to any other location on the dialog by dragging and dropping with the cursor. A green rectangle is drawn around an element when it is selected. When the cursor is over this area it will change to ✛ to indicate the element can be moved. The selection rectangle moves with the mouse drag, and an insert bar shows where the element will be moved to.

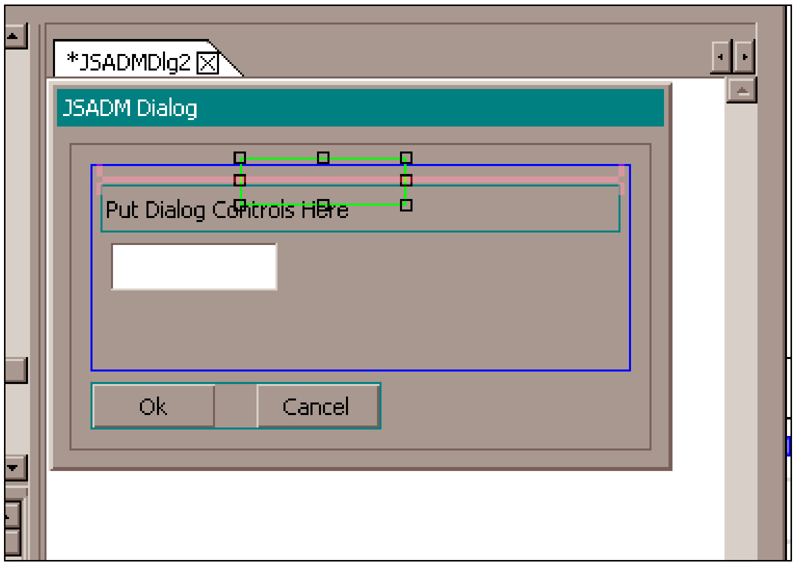
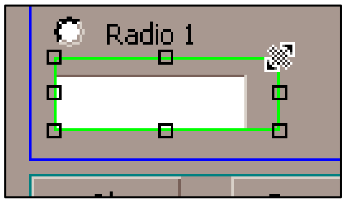


Figure 7
(**Edit Box** is moved to above the **Static Text Box**)

Selecting and moving a **View** element also moves all of the elements contained in the view.

Resizing Elements



The selection box has 8 gripper squares for resizing. Moving the cursor over one of these squares will change the cursor to indicate the direction in which the element can be resized. Resizing an element this way sets the element's `width` and `height` properties. The Element's size properties can also be set manually in points or characters, a character is about 10 points. The `width` and `height` properties use points and the `char_width` and `char_height` properties use characters. If both the character and point properties are set, the largest value is the one most likely to be used. However, there are differences between the element types in Acrobat 6 and 7, and some elements will ignore these parameters if they are less than the minimum size.

If `height` and `width` properties are not specified, each element will take on its minimum size. You can remove all of the size properties at once with the **Set Minimum Size** menu item, available on the Context Menu and the Edit Menu.

Laying Out Complex Element Configurations

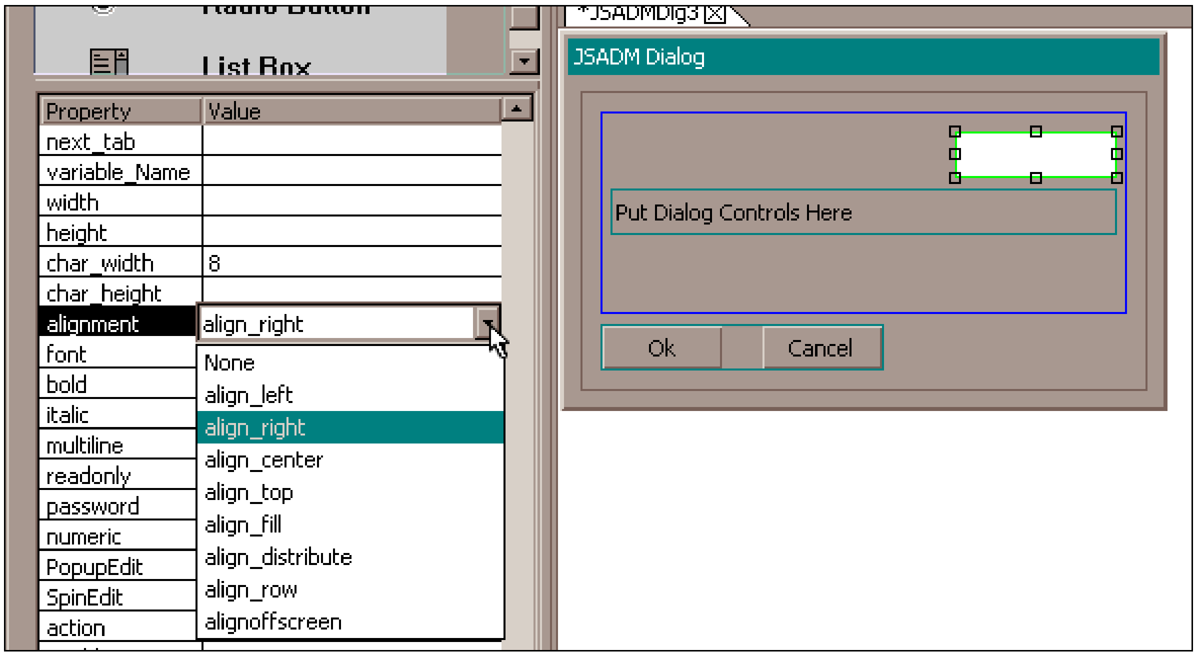
From the section on Dialog Layout Rules we know that dialog elements cannot have absolute placement. Elements have a minimum size and are placed either on top of each other or side by side depending on their alignment attribute. The dialog is then sized to accommodate all the elements. **Views** and **clusters** are elements that can contain other elements. They are used in place of absolute positioning to create complex configurations.

The default **New Dialog (Figure 8)** comes with two **View** elements. The top level view is **required** for all dialog designs. In the Design Window it is shown as a grey rectangle just inside the bounds of the dialog. It cannot be selected and other elements cannot be placed outside of it. It forms the root view that contains all other elements.

The second view on the New Dialog is shown as a blue rectangle and contains a single **Static Text** element with the words "Put Dialog Controls Here." By default the `align_children` property of a view or cluster is set to `align_left` which stacks the contained elements on top of one another with their left edges aligned against the left side of the view. Individual elements can also affect their own alignment. Figure 8 shows a change in element alignment (to `align_right`) for the **Edit Box** that was added in a previous section.

The `align_children` property for the view is set to `align_left`. In the absence of a specific element alignment property, all the child elements in a view will inherit the view's `align_children` property.

NOTE: There is one special exception to the general alignment rules. The `ok`, `ok_cancel`, and `ok_cancel_other` elements are stuck at align_right. Changing the `alignment` property on these elements will have no effect on their actual alignment in the dialog.



Property	Value
next_tab	
variable_Name	
width	
height	
char_width	8
char_height	
alignment	align_right
font	
bold	
italic	
multiline	
readonly	
password	
numeric	
PopupEdit	
SpinEdit	
action	

Figure 8

There are 8 possible alignment values

Type	Group Arrangement (align_children)	Individual Elements (alignment)
`align_left`	Stacked Vertically	Horizontal Left Alignment
`align_right`	Stacked Vertically	Horizontal Right Alignment
`align_center`	Stacked Vertically	Horizontal Center Alignment
`align_top`	Side by Side, Horizontal	Vertical Top Alignment
`align_fill`	Stacked Vertically	Element expands horizontally to fill extra space
`align_distribute`	Side by Side, Horizontal	Elements are spaced evenly across the width of the container
`align_row`	Side by Side, Horizontal	Vertical Center Alignment
`align_offscreen`	Elements overlaid on top of one another	Top Left Alignment

Labeled Edit Box

Labeled **Edit boxes** are a common example of grouping elements for alignment purposes. In the following example a label is placed to the left of an **Edit Box**.

1. Start by creating a new dialog design.
2. Select the default `Static_Text` element (the one that has the text "Put Dialog Controls Here"). Change the `name` property to "First Name:"
3. Add an **Edit Box (`edit_text`)** element to the **View**. Place it under the `Static_Text` element.
4. Change the `align_children` property of the **View** to `align_row`. The alignment of the elements in the Design Window should change instantly.
5. Clear the char_`width`, `char height`, `width`, and `height` properties of the `view` and **Edit Box** elements.
6. Click the Test button to view the dialog.

The dialog should now look like Figures 9 and 10:

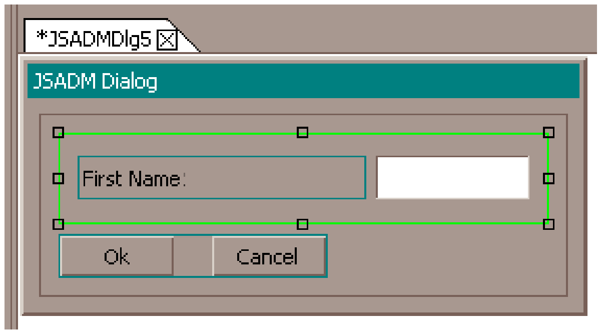


Figure 9
(Design View)

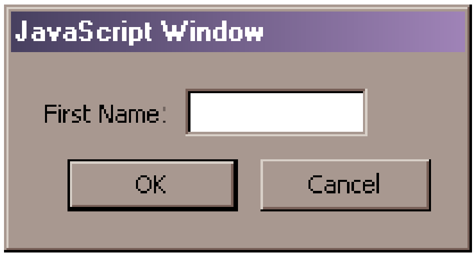


Figure 10
(Dialog Test)

To create a series of labeled fields, copy the **View** that contains the other fields from the right-click context menu. Then paste it back into the dialog. **NOTE:** Be sure to give each copy a unique `item_id` property (must be 4 characters or less). This property identifies the dialog element. If you have two elements with the same name, the first one will always be chosen for dialog operations over the second one.

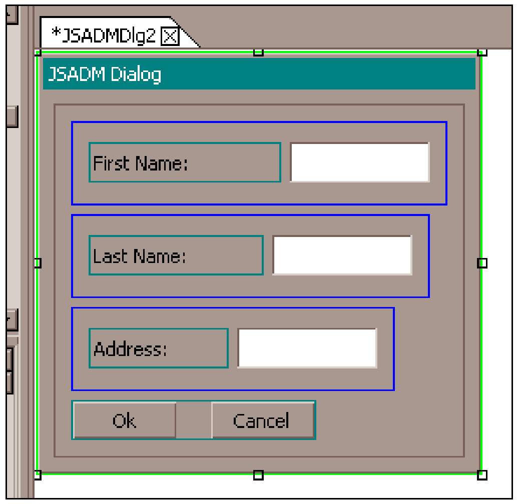


Figure 11
(Designer View)

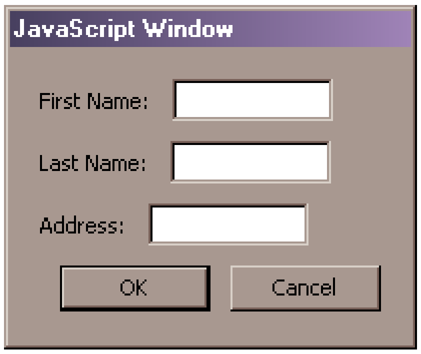


Figure 12
(Dialog Test)

Radio Button Cluster

Another good example of element grouping is the use of **radio buttons**. Typically these are grouped in a **Cluster** element. A **Cluster** element (Figure 13) draws a line around its contents and has a label so it forms a distinct unit on the dialog.

1. Start by creating a new dialog design.
2. Delete the default view element. This action should delete both `view` and the `static_text` elements.
3. Add a `cluster` element to the dialog design.
4. Insert three `radio` elements into the `cluster`.
5. The design view should now look like Figure 13.

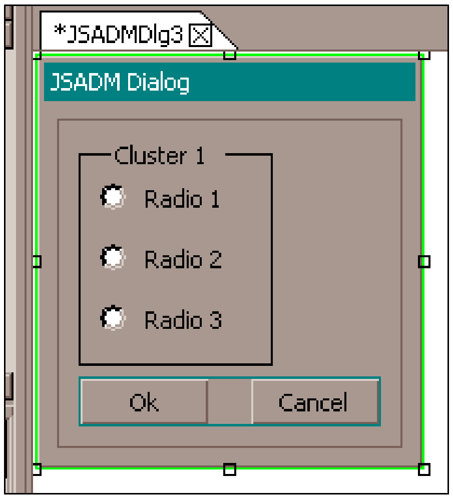


Figure 13
(Design View)

But what if you want two columns of buttons? You can create this arrangement by grouping the **radio buttons** with **View** elements inside the **cluster** (Figures 14 and 15).

1. Insert two `view` elements into the `cluster`.
2. Move all 3 `radio` **buttons** into the first `view` element.
3. Add three more `radio` **buttons** into the second `view` element.
4. Select the `cluster` element and change its `align_children` property to `align_top`.

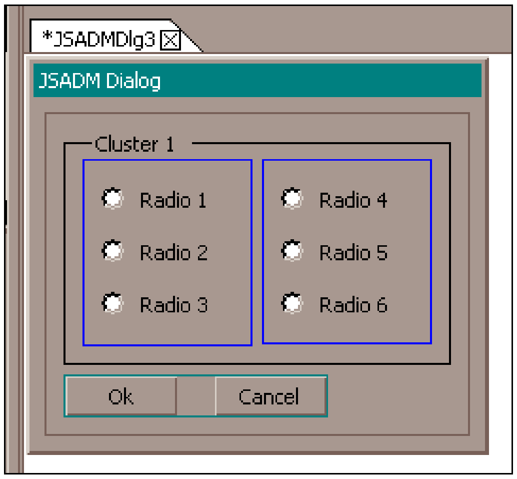


Figure 14
(Design View)

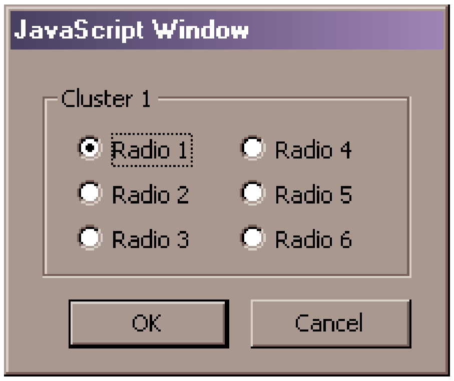


Figure 15
(Dialog Test)

Copy/Paste Elements

The Acrobat plug-in environment is set up in such a way that the typical **Ctrl-c** and **Ctrl-v** key sequences cannot be received by the plug-in window. **Copy** and **Paste** operations are done from either the main **Edit** menu or the **right-click** context menu available in the Design View. These operations copy/paste to/from a local clipboard, not the Windows system clipboard. Once an element is copied to the clipboard it is available for pasting into any dialog design until another element is copied or Acrobat is shut down.

Selecting **Paste** displays a rectangular element outline and the insert bar. The element is placed on the dialog design into the location indicated by the insert bar when the user clicks the left mouse button.

User Elements

AcroDialogs keeps a list of **User Elements** in an XML file in the plug-in folder (UserControls.xml). You can copy any element or any group of elements to this list for later use. Controls for using the **User Element List** are provided on both the main **Edit** menu and the **right-click** context menu.

- **Copy to User List –** Asks the user to name the entry then adds the currently selected element to the **User Element List**. If the element is a container, all the contained elements are also copied.
- **Paste from User List –** Displays a list of **User Elements** from which to choose for pasting onto the dialog design. When an item is selected, the insertion bar is displayed for selecting a placement location. A left-click places the element.
- **Remove from User List –** On the main **Edit** menu only. Displays a list of **User Elements**. The selected item is removed from the **User Element List**.

AcroDialogs includes 2 **User Elements**, a Paper Size control and a Page Range control. Both are composed of several elements in a complex configuration.

Dialog Element Properties

Most of the properties listed for each element are the same as those shown in the Acrobat JavaScript Reference, but there are a few properties in the list that are specific to **AcroDialogs**. These properties are included to cover various aspects of dialog design so you should never have to manually edit the dialog JavaScript code before final use.

JavaScript Properties

These are all the properties that can be included in the **Dialog Object Literal** and are listed in the Acrobat JavaScript Reference. All elements share some common properties like `type` and size attributes. There are several other properties shared by most of the element types, like `name` and `item_id`. Some properties are specific to a particular element type, like the `password` property for an `edit_text` element. There are also some property compatibility differences between Acrobat 6 and 7.

Most of these properties have obvious functions and/or are well explained in the JavaScript Reference, but there are a few properties, like the size properties discussed in Resizing Elements, that need more explanation.

Using Font Properties

The `bold` and `italic` properties are defined for every element type that can display text. These properties work only if the `font` property is set to `palette`.

Radio Button Properties

Radio buttons are fundamentally different from other controls because they act as a group, rather than individually. The `group_id` is provided as a way for Acrobat to determine which radio buttons are associated with each other. All radio buttons with the same `group_id` will act together. Acrobat 6 is a bit more lenient than 7 on this score and will group buttons that don't have this property set, while Acrobat 7 will leave them ungrouped. For this reason **AcroDialogs** will force this value to `GRP1` if it is not set.

Tabbing

The focus on individual dialog elements can be changed with the **tab** key, both in design mode and at run time. By default, the first element in the Dialog `description` is the active element on dialog startup. Pushing the **tab** key changes the focus to the next element in the Dialog `description` and so on.

In design mode the order is fixed, but the runtime tabbing order can be controlled with the following properties:

`first_tab` – Dialog Property List
`next_tab` – Element Property List, applies only to elements that can receive the focus.

Each of these parameters should be set to the `item_id` of an element on the dialog that can receive the keyboard focus. If `first_tab` is set, then `next_tab` must also be set in each element that will be in the tabbing order. If `first_tab` is not set then setting `next_tab` doesn't do anything. Here again, Acrobat 6 is more forgiving than Acrobat 7. Acrobat 6 will automatically tab to elements that do not have `next_tab` set, or have it set to a non-existent `item_id`. Acrobat 7, on the other hand, follows the tabbing order verbatim and will ignore elements that are not set up correctly.

Hot Keys

Several dialog elements can be set up so a single keystroke will activate the control. This is called a **Hot Key**. Hot keys can only be used with active elements that have a `name` property, the `button, radio, and check_box` elements. To give one of these element types a **Hot Key** simply place an ampersand (&) in the `name` text. The character following the ampersand is now the **Hot Key** for that element. **Hot Key**s are **case insensitive** so pressing the key with no other modifier keys will now activate the control.

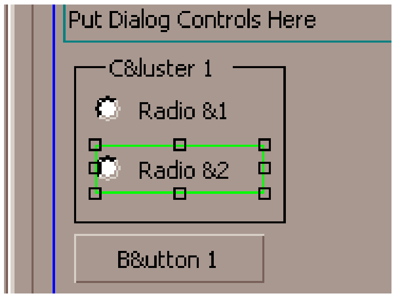


Figure 16
(Design View)

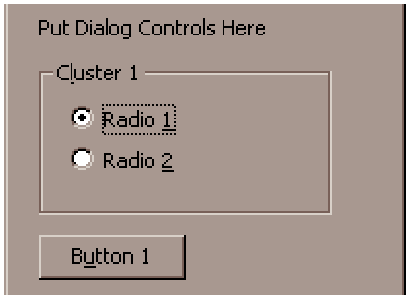


Figure 17
(Dialog Test)

Notice that the **Hot Key** for the control is underlined in Figure 17 (the underlining of HotKeys does not show up in Acrobat 6 but the Hotkey still works). The **Hot Key** defined for the `cluster` element has no effect even though it shows up in the final dialog.

Special Properties

These are all the properties that have a special purpose in the **AcroDialogs** tool and do not appear directly in the **Dialog Object Literal**. They are divided into two groups: Dialog Properties and Element Properties.

Dialog Properties

These properties all appear on the dialog property list and affect the top level of the **Dialog Object Literal** in the dialog JavaScript.

- **title:** Text displayed on the title bar. Actually the `name` property for the `description` entry in the dialog object.
- **name:** (required) The variable name used for the dialog object in the JavaScript code.
- **commit:** The dialog's commit function, called when the **Ok** button is pressed.
- **destroy:** The dialog's destroy function, called when the dialog is destroyed (closed).
- **validate:** The dialog's validate function, called when any element data is modified. Returning false rejects the data change.
- **code_above:** This is JavaScript code that is placed above the **Dialog Object Literal** declaration so that it executes before any other dialog box code.
- **extra_init:** **AcroDialogs** automatically creates an `init` function for the dialog object based on the individual element initialization values. This is code that is placed after the automatic initializations so it is the last thing executed in the `init` function.
- **additional_members:** List of member objects that will be added to the top level of the **Dialog Object Literal**. Data is copied verbatim from this list into object member definitions so illegal characters or badly formed JavaScript may cause exceptions.

Element Properties

These properties appear in the lists of those element types they apply to. They can affect the Dialog Object Literal at the top level or at the element level.

- **variable_Name:** Available on data elements only. A top level member of the **Dialog Object Literal** that represents the value of the element. For use by code that uses the **Dialog Object Literal**, not for code used inside a dialog. This variable is used to initialize a dialog box element on startup and then to save the element value when the dialog is closed.
- **action:** Many of the different element types can execute some JavaScript when they are clicked on. This property is used to enter this code. The code is used to create a member function at the top of the **Dialog Object Literal**. The element's `item_id` property is used as the name for this function.
- **enable:** Initial state of the element. The `dialog.enable()` function is called on startup from the dialog's `init` member. This value is used to build an input object for this call.
- **init_data:** Available on data elements only. Initial data for the element. The form this data takes is different for each element type. It is used to build the initialization call to the `dialog.load()` function.
- **image:** Image Element only. This property is used to acquire the image that will be displayed on the element. Images can be selected from any image element on an open PDF, or from an image file. Image data is converted to a hexadecimal string. In the dialog's JavaScript file the image data will appear at the top of the file in a string declaration.
- **ok_action:** `ok`, `ok_cancel`, and `ok_cancel_other` element types. JavaScript code executed when the **Ok** button is pressed. This code is executed after the commit function.
- **cancel_action:** `ok_cancel`, and `ok_cancel_other` element types. JavaScript code executed when the **Cancel** button is pressed.
- **other_action:** The `ok_cancel_other` element only. JavaScript code executed when the **Other** button is pressed.
- **ok_enable:** `ok`, `ok_cancel`, and `ok_cancel_other` element types. Initial state of the **Ok** button.
- **cancel_enable:** `ok_cancel`, and `ok_cancel_other` element types. Initial state of the **Cancel** button.
- **other_enable:** The `ok_cancel_other` element only. Initial state of the **Other** button.

Setting and Getting Data from the Dialog

When **AcroDialogs** generates the dialog JavaScript it adds some extra code to make using the dialog easier. Basically it adds two things: a function for activating the dialog, and member variables for each data element on the dialog. The member variables are for initializing the data elements and capturing the data after the dialog is closed.

At the end of each dialog JavaScript file is a working usage example for the dialog. Figure 18 shows a simple dialog, along with the property list (Figure 19) for the selected element and the example code that appears at the end of its JavaScript file. The dialog contains a single data element, the selected **Edit Box**. The `variable name` property for this element is set to `strData1`. This is the variable external code will use to access the data element.

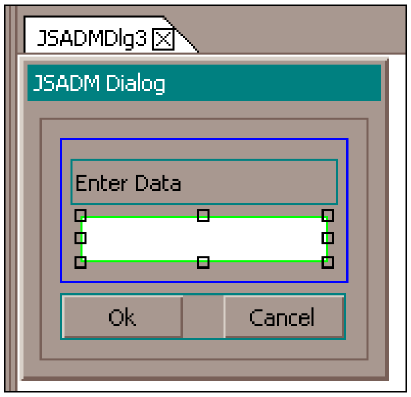
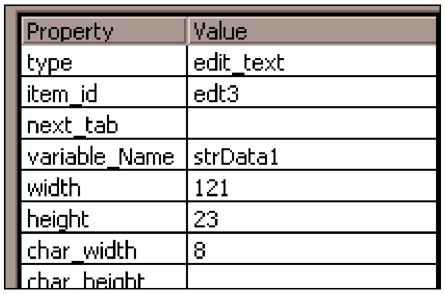


Figure 18



Property	Value
type	edit_text
item_id	edt3
next_tab	
variable_Name	strData1
width	121
height	23
char_width	8
char_height	

Figure 19

```
// Example Code
JSADMDlg3.strData1 = "Hello There";
if("ok" == JSADMDlg3.DoDialog())
{
   console.println("edt3:"+JSADMDlg3.strData1);
}
```

In this example, the initial value for the `edit_text` data element is set in the first line of code.

```
JSADMDlg3.strData1 = "Hello There";
```

`JSASMDlg3` is the name of **Dialog Object Literal** and `strData1` is the variable that represents the data element. The second line of code activates the dialog with the `DoDialog()` function and tests the return value when the dialog is closed:

```
if("ok" == JSADMDlg3.DoDialog())
```

The dialog generally returns the ID of the button that closed the dialog, either `ok` or `cancel`. In Acrobat 7 the dialog function `dialog.end(strRtn)` closes the dialog and returns the `strRtn` parameter. This functionality doesn't work properly in Acrobat 6.

The data variable is only set if the dialog was closed with the **ok** button. The new value is retrieved with the same `JSADMDlg3.strData1` variable that was used to set it. In the example this value is printed to the console window.

The `edit_text` element can also be used with a numeric value in exactly the same way a string value is used. Other data elements have different data types so their variables are handled differently.

- **Check Boxes** – (Boolean value) The variable is set to and returns `true/false`.
- **Radio Buttons** – (String value) The variable is set to and returns the `item_id` of the selected radio button.
- **Popup Edit** (Combo Box), **List Box**, and **Tree List** – These are all variations on the basic **List** element. The variable is set to or returns an array of strings representing the path to the selected item. Only the variable for the **Tree List** will contain more than one element.

Using Radio Buttons

Radio buttons require some special attention. They are the only dialog element where a group of them act like a single element. To create a group of radio buttons:

1. Create a new dialog design.
2. Delete the default `static_text` element.
3. Add 3 radio buttons.
4. Change the `group_id` property of all the radio buttons to `Sel1`.
5. Change the `variable_Name` property of the first radio button in the group to `strSelect1`. Changing this property on any of the other buttons in the group will have no effect. If the `variable_Name` property is not set **AcroDialogs** uses the `group_id` property to create a variable name.
6. Change the `init_data` property of the second button in the group to `true`.

Now we have a dialog with three radio buttons. Unless you changed them, the `item_id`'s of the buttons are `Rad1`, `Rad2`, and `Rad3`. All the radio buttons are part of the `Sel1` group and the second button is the default selection. Save the dialog and look at the example at the bottom of the JavaScript file.

```
      JSADMDlg1.strSelect1 = "Rad1";
      if("ok" == JSADMDlg1.DoDialog())
      {
        console.println("Sel1:" + JSADMDlg1.strSelect1);
      }
```

There is a single variable for the entire radio button group, `strSelect1`. It is initialized to the `item_id` of the selected button. When the dialog box is closed it returns the `item_id` of the selected button in this variable.

Using Lists

There are three types of list elements: **Popup Edit** (Combo Box), **List Box**, and **Tree List**. While they all look different on the dialog, they all use the same types of data and basic operations. **NOTE:** These lists all have one particularly frustrating feature in common. An entry on the list cannot be selected unless the last character for the text is visible, so lists should be made wide enough to fit the largest string it will display.

List Box Element

Let's walk through the process of creating and using a list element.

1. Create a new dialog design and add a **List Box** element to it.
2. Select the **List Box** element.
3. Set the `variable_name` property to `List1Select`.
4. Select the `init_data` property and then press the **Edit…** button.
5. The **List Editor** will appear. This editor is for adding list entries. The same editor is used for all the list types and some other things, with small variations in the editor controls.
6. To get started press the **Add Sibling** button. Use the **List Entry** dialog (Figure 20) to enter the entry's `name` and `value`. The value is only important for code that operates in Acrobat 7. Press **Ok** on the entry dialog.
7. Add a couple more entries with the **Add Sibling** Button. Select one of these and press **Set as Default** (Figure 21) to make that entry the default value of the list.
8. Select **Ok** to save the list entries, then save the dialog design to a file.

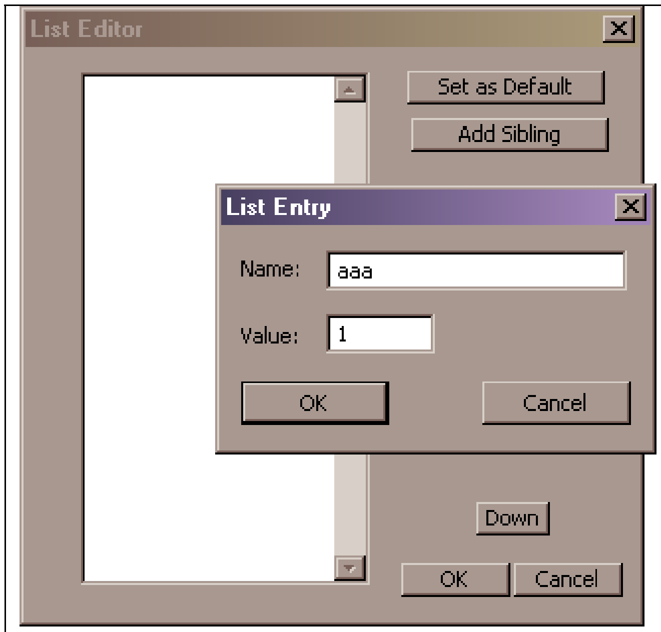


Figure 20
(Adding First Entry to List)

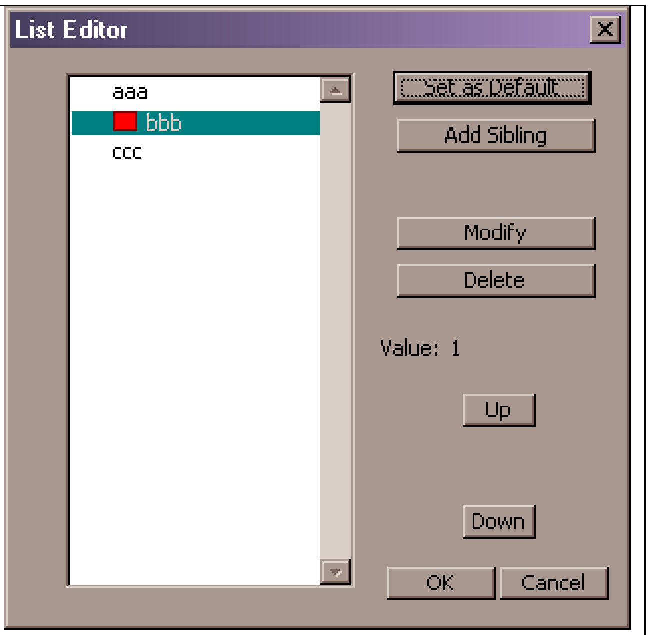


Figure 21
(Initialization Entries for List with Default Set)

These entries will be used to initialize the **List Box** element. A **List** element is initialized with an object that contains a list of name/value pairs. The "Name" is the visible text that appears on a list entry. The "Value" determines the entry's *selected state*, a positive value for selected and a negative value for unselected. In Acrobat 7 the value can also be used as a list entry ID. In Acrobat 6 the value can only be +1 or -1.

AcroDialogs automatically generates all the list initialization code for you, but it is useful to know how it works in case you want to add your own custom initialization. Below is the **List**

Box initialization code from the
`initialize` method in the **Dialog Object Literal**:

```
var listlst1 =
      {
        "aaa": -1,
        "bbb": -1,
        "ccc": -1,
      };
    this.SetListSel(listlst1, this.List1Select);

    var dlgInit =
      {
        "lst1": listlst1,
        "edt1": this.stredt1,
        "edt2": this.stredt2,
      };
  dialog.load(dlgInit);
```

In the first part of the code the initialization values (entered earlier) are formatted for use with the `dialog.load()` function and assigned to the `listlst1` variable. **AcroDialogs** creates this list without setting a default value, all values are set to -1. The list default value is set separately in the following line.

```
   this.SetListSel(listlst1, this.List1Select);
```

`this.List1Select` is the variable name we assigned to the **List Box** element when it was created.

`this.SetListSel()` is a function that's automatically added to the **Dialog Object Literal** when a dialog contains a list element. It's a function for setting the default value for a list. You can use this function for your own custom list initialization code (See the `extra_init` property in section Special Properties).

The variable `dlgInit` is the actual initialization object for the dialog. It has entries in it for each data element on the dialog. In this case, the dialog also contains two **edit boxes**. Everything up to this point was setup, the actual dialog element initialization takes place in the last line:

```
  dialog.load(dlgInit);
```

The Example code at the bottom of the saved JavaScript file shows how to get and set data from the **list** element on the dialog.

```
// Example Code
JSADMDlg1.stredt1 = "Apples";
JSADMDlg1.stredt2 = "Oranges";
JSADMDlg1.List1Select = ["bbb"];
if("ok" == JSADMDlg1.DoDialog())
{
  console.println("edt1:" + JSADMDlg1.stredt1);
  console.println("edt2:" + JSADMDlg1.stredt2);
  console.println("lst1:" + JSADMDlg1.List1Select);
}
```

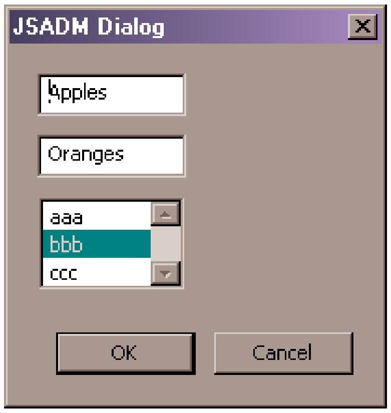


Figure 22
(Dialog immediately after initialization)

Tree List Element

We'll use the same process outlined above to create and use a `hier_list_box` (**Tree List**). Tree lists set, display, and return hierarchical data, but are still very similar to regular lists. There are two key differences in the process for entering initialization data and how the tree's value is used. These differences will be discussed in the following steps.

1. Create a new dialog design
2. Change the dialogs `name` property to `TreeTstDlg`.
3. Add a **Tree List** element to it.
4. Select the **Tree List** element.
5. Set the `variable_name` property to `TreeData`.
6. Select the `init_data` property and then press the **Edit…** button.
7. The **Tree List Editor** will appear (Figure 23). This editor is nearly identical to the **List Box** entry editor (Figure 20) except for the addition of a few buttons.
    a. **Add Child** – Adds a child entry to the current selection.
    b. **Left** – Moves the selected entry to its parent's level in the hierarchy.
    c. **Right** – Makes the selected entry a child of the next sibling entry on the list.

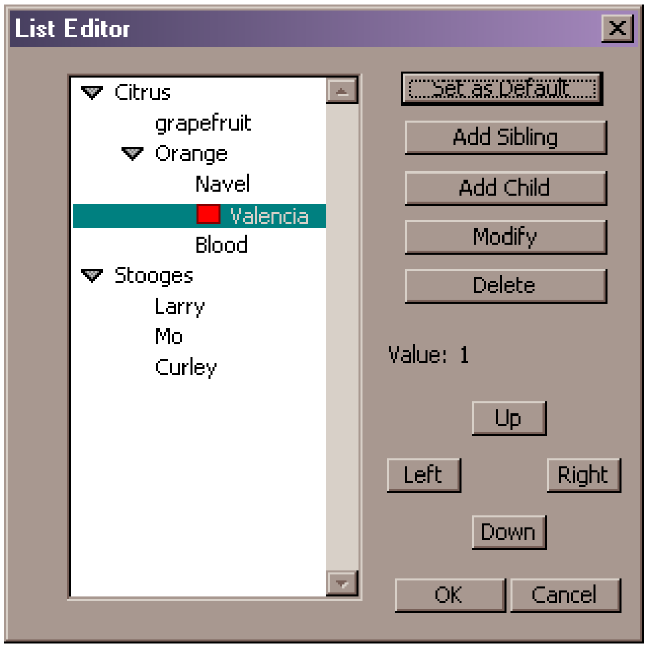


Figure 23
(Entering **Tree List** Entries)

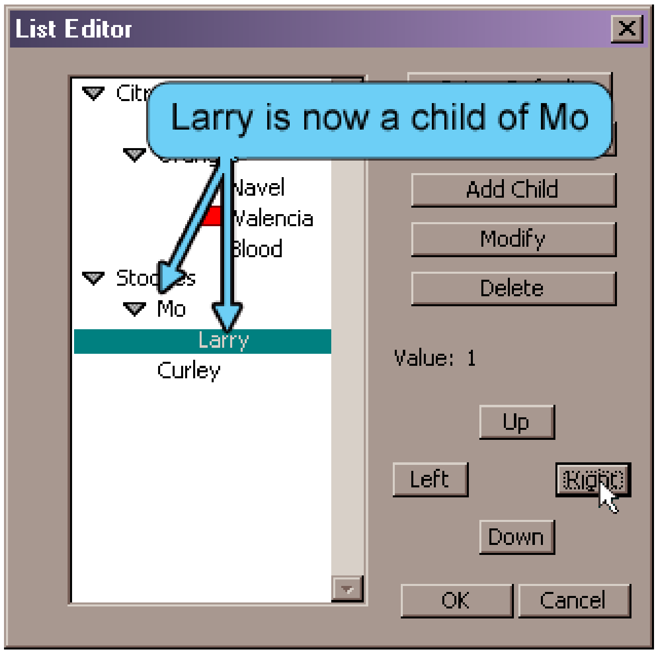


Figure 24
(Moving an Entry to a New Location in the Tree, "Larry" is Moved to the Right of "Mo.")

8. Add some entries to the list. Make a hierarchy of entries using the **Add Child**, **Left** and **Right** buttons.
9. Use the **Set as Default** button to set the default item. In **Figure 24** above **Citrus** > **Orange** > **Valencia** is selected as the default value. For purposes of this example, make your selection a similar depth in the hierarchy.
10. Select **OK** to save the list entries, then save the dialog design to a file.
11. Open the dialog's JavaScript file in your favorite JavaScript Editor.

The example code at the bottom of the file will look like this:

```
// Example Code
TreeTstDlg.TreeData = ["Citrus","Orange","Valencia"];
if("ok" == TreeTstDlg.DoDialog())
   console.println("tre1:" + TreeTstDlg.TreeData);
```

The tree is initialized to its default value with an array of strings. Each string represents one level of the list hierarchy. The selected tree entry returned from the dialog is formatted in exactly the same way. Execute the dialog code with the **Test** button. Select an entry from the tree, and then look at the results in the console window. Try this a few times to get a feel for how it all works.

Figure 25 shows the entry **Stooges** > **Mo** > **Larry** being selected. After closing the dialog with the **OK** button, the variable `TreeTstDlg.TreeData` is set to an array of strings that represent the selection. This array is displayed on the console window as shown below right.

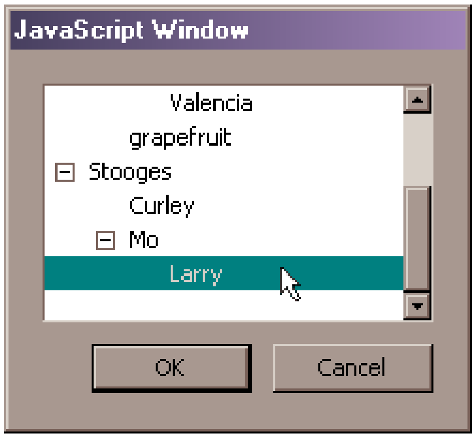


Figure 25
(Selecting an Entry on a **Tree List**)

```
tre1:Stooges,Mo,Larry
```

(Data Displayed in Console window after dialog is closed)

Using the Dialog Script with Acrobat

AcroDialogs generates the JavaScript code that creates a dialog, but how do you use this code in Acrobat? **AcroDialogs** writes this code to a JavaScript file whenever you save a dialog design. All of the JavaScript is plain text so you can use a standard text editor to open the file, then copy and paste the code directly into Acrobat or into another JavaScript file for use in a Folder Level script. **AcroDialogs** can also copy the dialog code directly to the clipboard, so you can paste the code anywhere. There are two options on the **File** menu:

- **Copy Dlg JS to Clipboard –** Copies the JavaScript code for the current Dialog to the system clipboard. Also available via the Easy Access Buttons and the Context Menu.
- **Copy Wizard to Clipboard –** Copies the JavaScript code for a Wizard (multiple Dialogs) to the system clipboard.

Four examples are discussed below. An interactive example, or file attachment is provided for each type.

1. Using a dialog in a traditional Form Field.
2. Using a dialog in a Folder Level JavaScript (Acrobat plugin).
3. Using a dialog in an FDF File, for easily importing stored scripts.
4. Using a dialog in an XFA (Live Cycle Designer) form.

Dialog in a PDF Form Field Button

Use the following steps to add a dialog box (one you've already created) to a Button on a PDF.

1. Activate **AcroDialogs**.
2. Open any dialog design.
3. Press the **Copy to Clipboard** button.
4. Exit **AcroDialogs**.
5. Open a PDF file.
6. Add a button to the PDF.
7. From the Button Properties Dialog select the **Actions** Tab.
8. Select **Run a JavaScript** from the **Select Action** pull down.
9. Press the **Add** button.
10. Paste the Dialog JavaScript into the JavaScript Editor.
11. Close the editor and the Button Properties dialog.

That's it. When the button is pressed the dialog will be displayed.

Here's an example that uses the dialog to fill in some form fields:

Dialog in a Folder Level Script

Folder level scripts are sometimes used as light weight plug-ins, performing some complex task that can be done with Acrobat JavaScript. Often you need this task to have some flexibility to it. Dialogs make this flexibility possible, giving you a way to collect potentially complex information from the user.

In the following example we'll build a folder level script for flattening pages in a PDF document. The script will be activated from a menu item. We'll use a dialog to get a page range from the user. The elements for this dialog are already on the **User Element List**, so building it is going to be easy.

1. Activate **AcroDialogs** and create a new dialog.
2. Change the dialog's name to **FlattenDlg**.
3. Change the dialog's title to **Flatten Pages**.
4. Delete the `view` element, this action will also delete the `static_text` element.
5. Right click on the dialog design and select **Paste from User List** > **PageRange**.
6. Insert the new element above the `ok_cancel` button.
7. Figure 26 shows what the dialog design should look like.

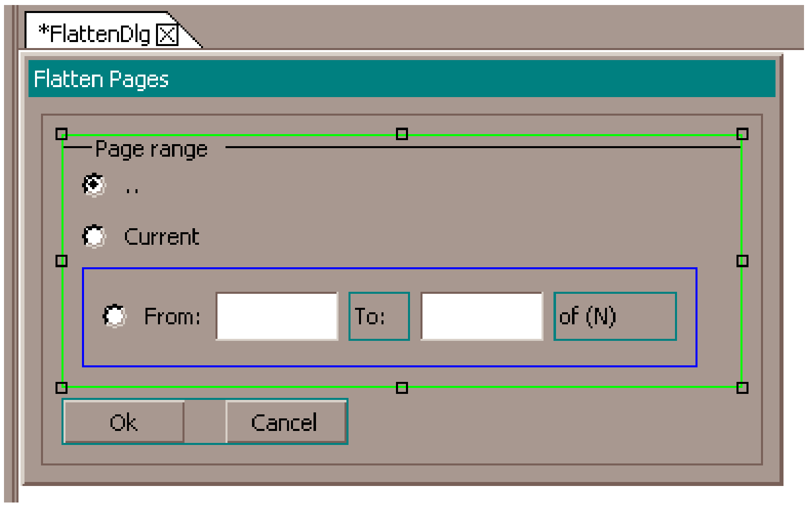


Figure 26

8. Save it to a file, preferably **FlattenDlg.js**.
9. Copy **FlattenDlg.js** to the Acrobat Javascript folder.
10. Open it with your favorite JavaScript Editor.
11. At the bottom of the file change the usage example to look like the following code.

```
function DoFlattenDlg()
{
  FlattenDlg.strGRP1 = "rAll";
  FlattenDlg.strStrtPg = this.pageNum;
  FlattenDlg.strEndPg = this.numPages;
  if( "ok" == FlattenDlg.DoDialog( ) )
  {
    switch( FlattenDlg.strGRP1 )
    {
       case "rAll":
         this.flattenPages( 0, this.numPages – 1 );
         break;
       case "rCur":
         this.flattenPages( this.pageNum );
         break;
       case "rFro":
         this.flattenPages( Number( FlattenDlg.strStrtPg ),
                            Number( FlattenDlg.strEndPg ));
         break;
    }
  }
}

app.addMenuItem( {
   cName:"Flatten Pages",
   cParent:"Document",
   cEnable: "event.rc = ( app.doc != null ); ",
   cExec:"DoFlattenDlg( )"} );
```

Three basic changes were made to the original example code.

1. The entire example code was enclosed in a function.
2. The `console.println()` statements were replaced with a `switch`. This is where the results of the dialog input are used to flatten pages in the current PDF.
3. A new menu item is added to Acrobat’s **Document Menu** for activating the Flatten Script.

This folder level JavaScript file will be executed the next time Acrobat is restarted.

Dialog in an FDF file

FDF (Forms Data Format) is the most flexible of all the data formats that can be used to import and export form data from a PDF. An FDF file that is imported into a PDF can include several different scripts, a “Before” script, an “After” script, document scripts, and field scripts. For this example we’re interested in the “After” script, which executes After the data from the FDF file is loaded into the form fields. An FDF file that contains a simple dialog JavaScript is shown below.

```
%FDF-1.2
1 0 obj
   <</FDF
      <<
        /JavaScript
         <<
           /After 4 0 R
         >>
      >>
   >>
endobj
4 0 obj <<>>
stream
var JSADMDlg1 =
{
  DoDialog: function(){return
app.execDialog(this);},
  description:
 {
   name: "JSADM Dialog",
    elements:
    [
      {
        type: "view",
        elements:
        [
          {
            name: "Your Request Has Been
Granted",
            type: "static_text"
          },
          {type: "ok"},
        ]
      },
    ]
  }
};
JSADMDlg1.DoDialog();
endstream
endobj
trailer << /Root 1 0 R >>
%%EOF
```

This FDF simply displays a message when it is imported into a PDF file. FDF files are commonly used to return information back to Acrobat from a server after a form submission. A dialog is a good way to inform the user that a form has been submitted or display an error message. Messages are useful but you can use this mechanism for much more. You can use a dialog to request additional info or to fill in and re-submit missing fields.

This FDF is in a file attachment in this manual. Use the button below to extract it. Use the menu item:

File > Form Data > Import Data to Form

to test the FDF Dialog.

Dialog in an XFA form (Live Cycle Designer)

XFA PDF files can execute most of the regular Acrobat app and doc level JavaScript. Unfortunately, code cannot be entered from most of the familiar places, it has to be entered from Live Cycle Designer. Use the following steps to enter a dialog script into an XFA document.

1. Create a Dialog and copy its JavaScript to the clipboard.
2. Open or create an XFA document in Live Cycle Designer 7.
3. Add a button to the document or select an existing form field.
4. Display the Script Editor. You'll find it on the **Window** menu. After it's visible, resize it so that it's large enough to work in.
5. From the **Show** pull down, select the **click** event, or any other event that's suitable for your purpose.
6. Paste the dialog code into the Script edit area.

Field values are accessed very differently in XFA than in regular Acrobat forms so if the dialog is for operating on form fields you'll need to understand something about XFA JavaScript. The official Adobe documentation on XFA is at:

http://partners.adobe.com/public/developer/xml/index_arch.html

Creating Dialog Wizards

A Wizard is a series of dialog boxes tied together with **Previous** and **Next** buttons. The last dialog in the series has the **Next** button replaced by a **Finish** button.

AcroDialogs has Wizard functions, available on the File Menu and the Easy Access Buttons. All functions generate the Wizard JavaScript.

1. **Test Wizard** – Immediately executes the Wizard JavaScript.
2. **Make Wizard** – Writes the Wizard JavaScript to a file.
3. **Copy Wizard to Clipboard** – Writes the Wizard JavaScript to the system clipboard. Only available on the **File** menu.

The Wizard is created by concatenating the JavaScript from all the open dialog designs. It orders the Wizard dialogs using the same order as the tab bar at the top of the Designer View. Change the order by grabbing and dragging one of the tabs with the mouse. A green vertical line indicates the insertion point (Figure 28).

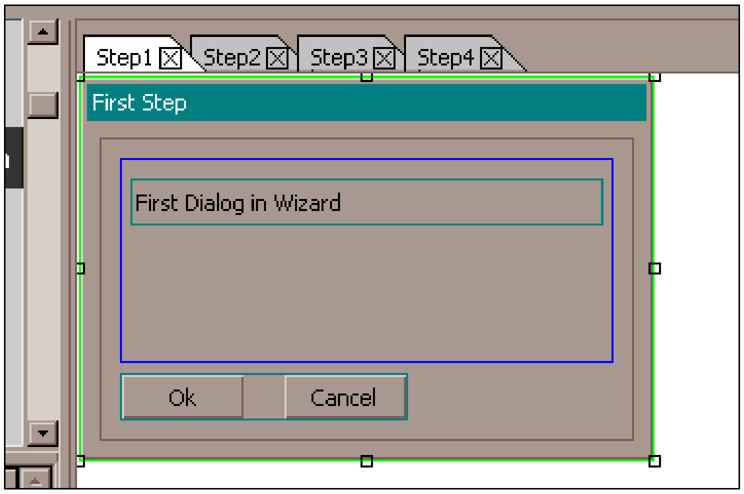


Figure 27
(Design View)

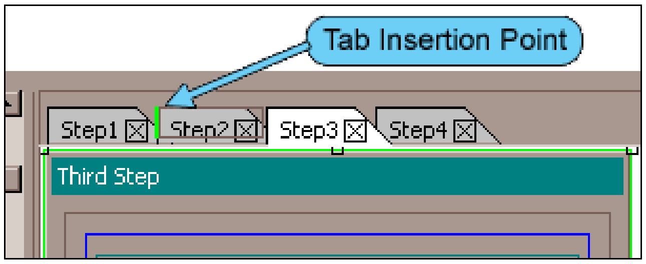


Figure 28
(Moving Tab)

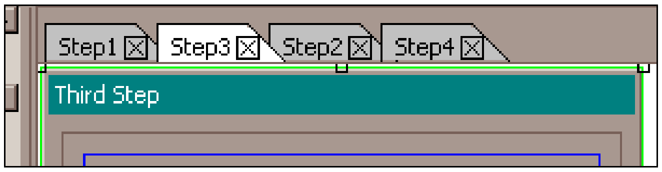


Figure 29
(After Move)

A Wizard is created by placing the code for each dialog into the same JavaScript file. As the code is generated the first occurrence of an `ok`, `ok_cancel`, or `ok_cancel_other` button in each dialog is replaced by a **Previous**, **Next**, **Cancel** button group. Some JavaScript is also added to each dialog to support these buttons.

The code for controlling all the dialogs is placed at the end of the Wizard JavaScript file. The Design View shown above has 4 open dialog designs, Step1 thru Step 4. The controlling JavaScript for these dialogs is shown below.

```
var dlgArr_Step1_Wizard =
[Step1,Step2,Step3,Step4,];
var cRtnCode = "next";
var i=0;
WizLoop:
While((cRtnCode == "prev") || (cRtnCode ==
"next"))
{
   cRtnCode =
dlgArr_Step1_Wizard[i].DoDialog();
   if(cRtnCode.length == 0)
     cRtnCode = dlgArr_Step1_Wizard[i].result;
   switch(cRtnCode)
   {
      case  "prev":
         i--;
         break;
      case  "next":
         i++;
         break;
      default:
          break WizLoop;
   }
}
if(cRtnCode == “done”)
 …..Process Data …..
```

The variables stored in the array [**Step1, Step2, Step3, Step4**] are the Dialog Box Literals. An index variable **`i`** is used to keep track of the current dialog. It’s initialized to zero and incremented or decremented depending on the return value from the `DoDialog()` call. The last dialog returns `done` if it is closed with the **Finish** button.

The Wizard code appears to have a slight redundancy in the following area.

```
if(cRtnCode.length == 0)
     cRtnCode = dlgArr_Step1_Wizard[i].result;
```

This is a workaround for Acrobat 6, which doesn’t return values from the `dialog.end()` function.

About: WindJack Solutions, Inc.

Our mission is to make Acrobat and PDF easier to use and more accessible to everyone. We accomplish this mission by writing articles, teaching JavaScript classes, creating educational materials, lecturing at conferences, answer question on the PDF forums, being as involved as we can in the PDF community, and of course creating our line of products which are intended to assist PDF document designers and developers get the most out of PDF.

PDF CanOpener: This is our first product. It allows the user to view and edit the internal COS object structure of a PDF file. This tool is essential for all PDF Developers or anyone who wants to know more about PDF internals.

AcroButtons: Our first JavaScript tool, it's for creating customized Acrobat toolbar buttons. AcroButtons is a companion to AcroDialogs. Like AcroDialogs, it generates complex JavaScript code that would be nearly impossible, or at least pretty painful! to create otherwise. Toolbar buttons are most often used to automate Acrobat, essentially creating an Acrobat Macro. But JavaScript toolbar buttons can be used for much more since they can also be embedded into a PDF.

AcroPack Demo: This is a free download that shows the incredible power that can be achieved by using AcroButtons and AcroDialogs together. Once installed this JavaScript file puts a set of 3 buttons on Acrobat's toolbar. Each button is a separate tool and when activated will display a dialog box. Download at: http://www.windjack.com/products/freestuff.html

If you have any questions or issues about AcroDialogs, or any of our other tools, please visit us at: http://www.windjack.com

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