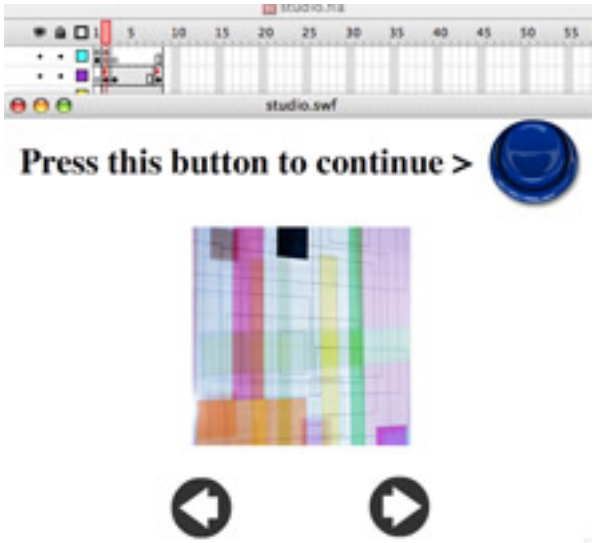
Flash II- Buttons and Menus

Joe Struss

Oct. 29, 2010



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General Flash Information

Adobe Flash is a software authoring tool for creating scalable, interactive animated graphics and navigation controls for the Web. Flash is also one of the most popular add-on tools for internet browsers and is currently available on most browsers throughout the Internet. Flash is known for creating Web graphics that are small in size but dynamic in sound, motion and graphics.

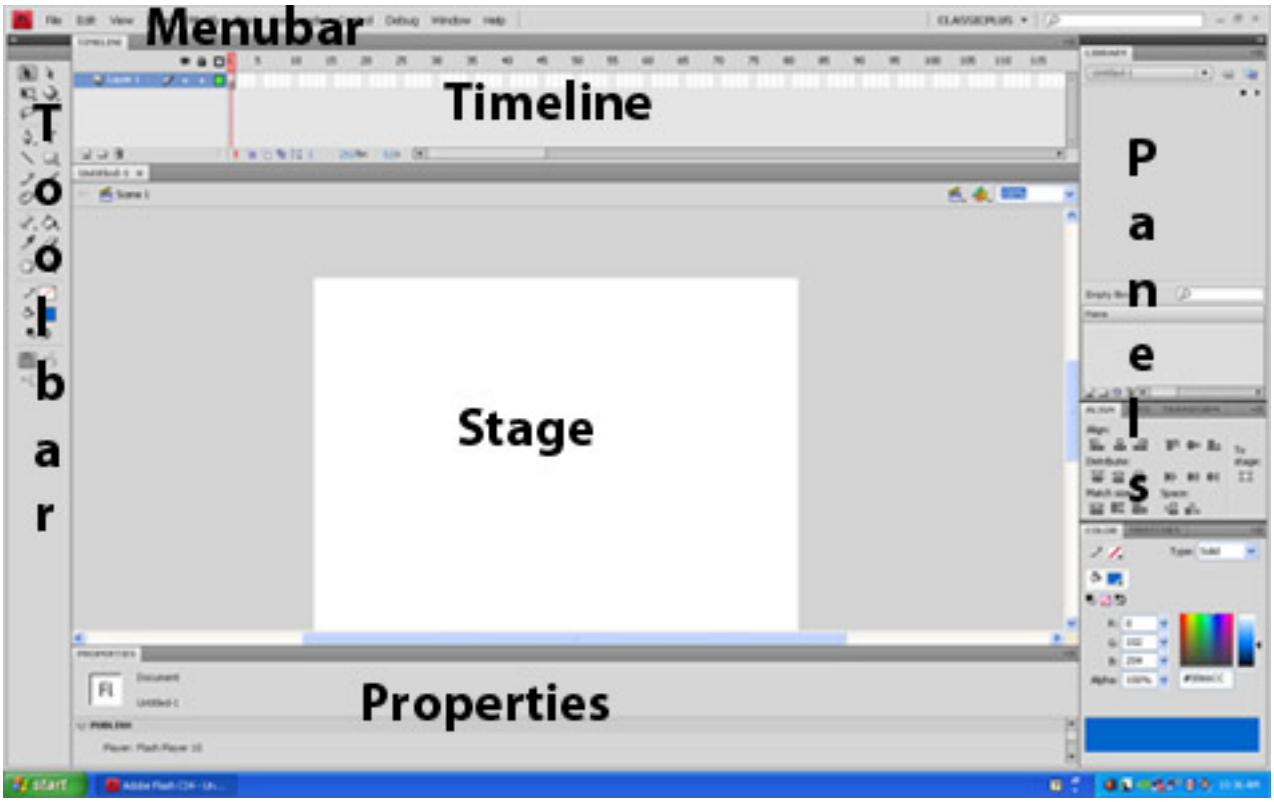
Starting Flash

To begin Flash on a Macintosh, look on the Macintosh lower toolbar inside the **Applications** folder and double-click on the **Flash** application. On a Windows system to startup Flash, click under the **Start icon** then select **All Programs, Adobe Design,** then **Adobe Flash**.

From the Flash starting screen— press **Flash File (Actionscript 2.0)** under **Create New**; this will start a Flash project for you and allow you to see the distinct areas within Flash. For the Flash layout for today's class, pull down in the upper right to **Designer** then pull the **Properties** panel under the main **Stage** and pull the dividing line on the left to be **two columns** wide. Next pull down under the layouts on the upper right and select **New Workspace** then **save** this setting as **Classicplus**.

Flash Layout

There are five distinct areas within Flash: the Drawing **Toolbar**, **Menubar**, **Timeline**, the **Stage**/Work Area, and the Floating **Panels** which includes the special **Properties** Panel.

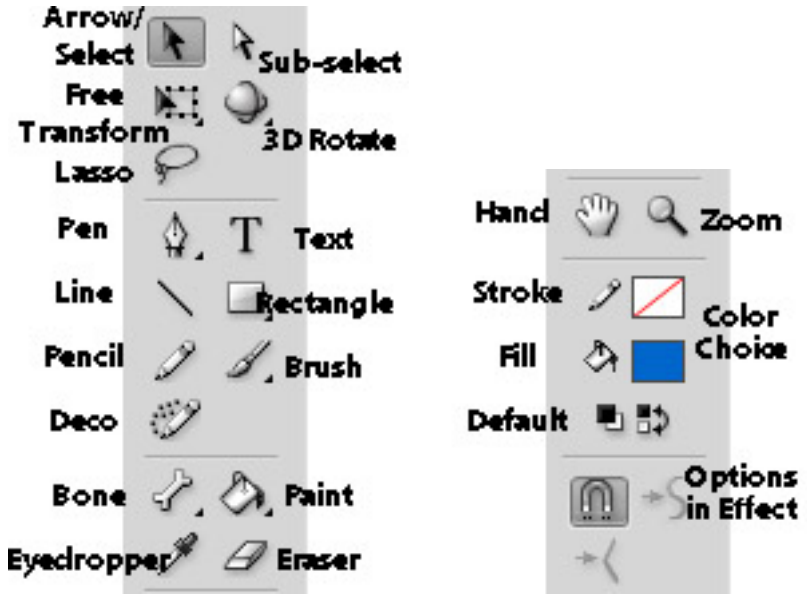


You work in the Stage area using tools from the Toolbar. You must select the image frame on which you are working from the Timeline and the Floating Panels give you information on the currently selected Stage item and allow you to alter that item.

Drawing Toolbar Area

Toolbar Tools

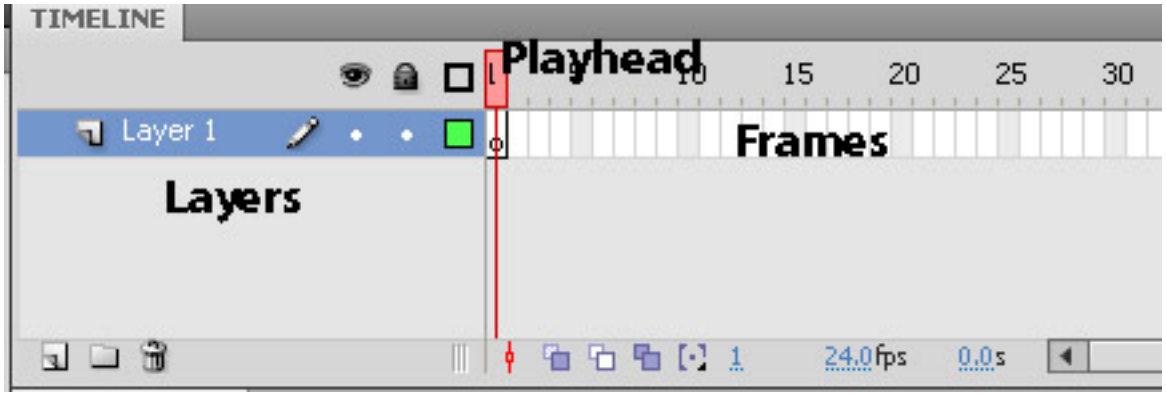
The Drawing Toolbar has four distinct areas: the **tools** area and the **view, color and options** sections. The Tools area has all the drawing tools that you can use on the Stage-



More of these tools are very similar to the ones used in Photoshop and are self-explanatory. The **White Arrow** or Subselection tool is a unique tool for Flash that allows you to view and modify anchor points. Any tool with a lower right arrow means that the tool in question has additional related tools underneath. For instance, if you pull down under the **Free Transform** tool then you will find the **Gradient Tool**.

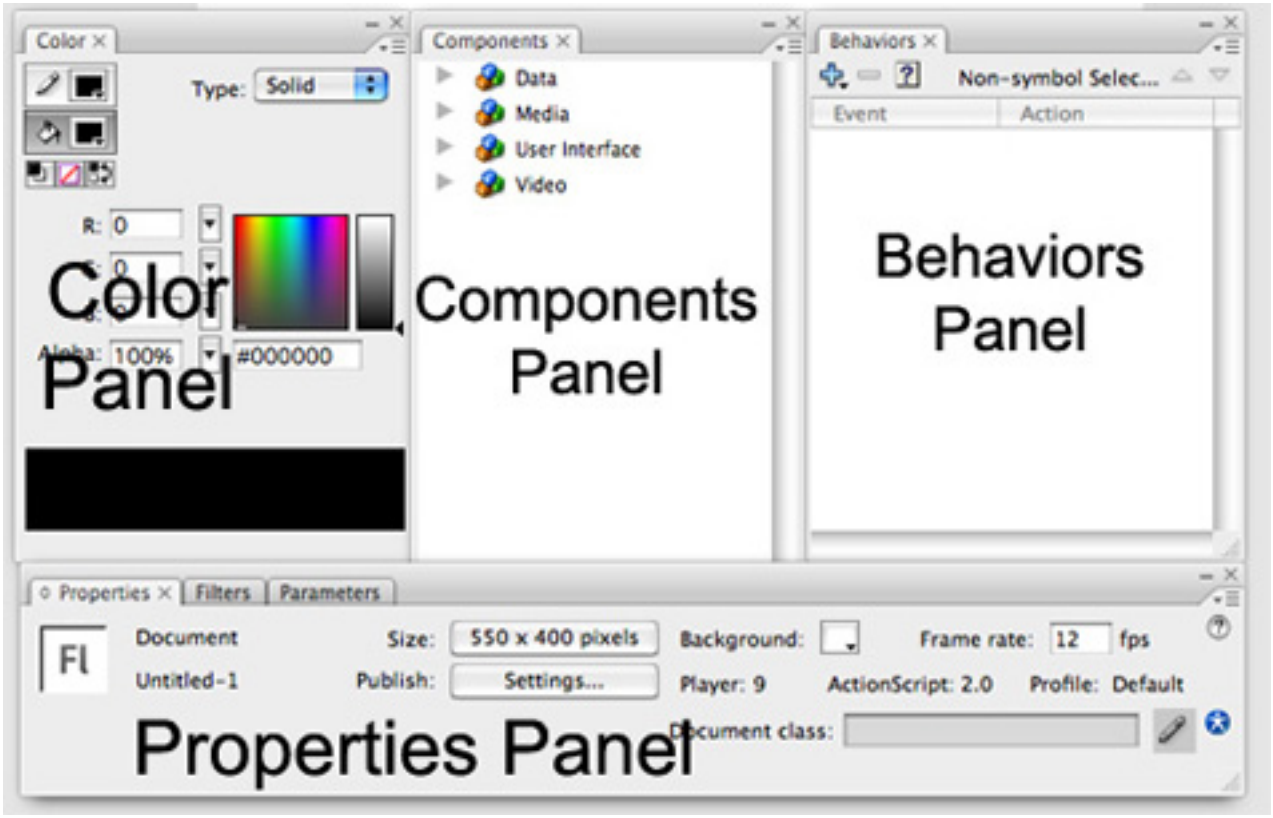
Timeline Area

The Timeline area shows you what is happening at a particular time on the Stage. The Frames area shows how many frames are in your Flash presentation and extends to the right. The Playhead within the Frames shows which Frame is currently showing on the Stage. Each Frame can have multiple Layers with each Layer containing the actual content of the Flash Movie. Movie elements that shouldn't be grouped together need to be on separate Layers. Like, for instance, you would probably create a separate Layer for your Flash Sounds or Buttons. You can even have Layer folders which are groups of Layers.



Floating Panels Area

The Panels area contains information or options for the currently selected stage item or tool. Panels float so that you can move them anywhere you want on your screen. The Panel tools that are most often used are Properties (object/tool information), Color (color mixer), Behaviors (Simple Scripts) and Components (specialized tools).



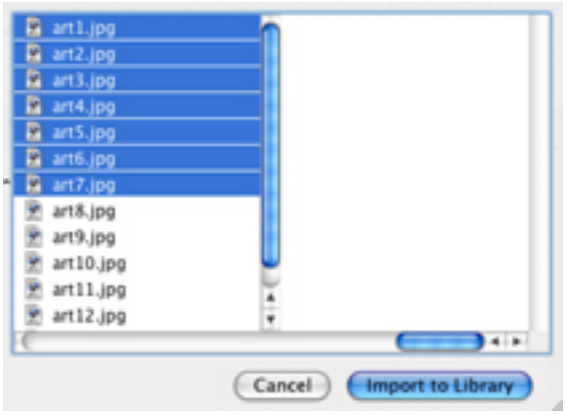
Project- Photo Gallery

Our first project will be to create a simple photo gallery using buttons.

Adding Some Gallery Images

Make sure the Timeline **Playhead** is on frame one then press **F5** six times to create six new frames. Next open up a browser and go to `css.ait.iastate.edu/Flash/Data2/` and right-click or ctrl-click the GalleryArchive file. Extract the GalleryArchive file and then take the images inside the archive and move them to your desktop.

Next go under **File** and pull down to **Import** then over to **Import to Library**. You are going to import seven images for your photo gallery. **Choose any 7** images to import then click on the **Import Button** in the lower right. You can import most standard image/sound files into Flash.



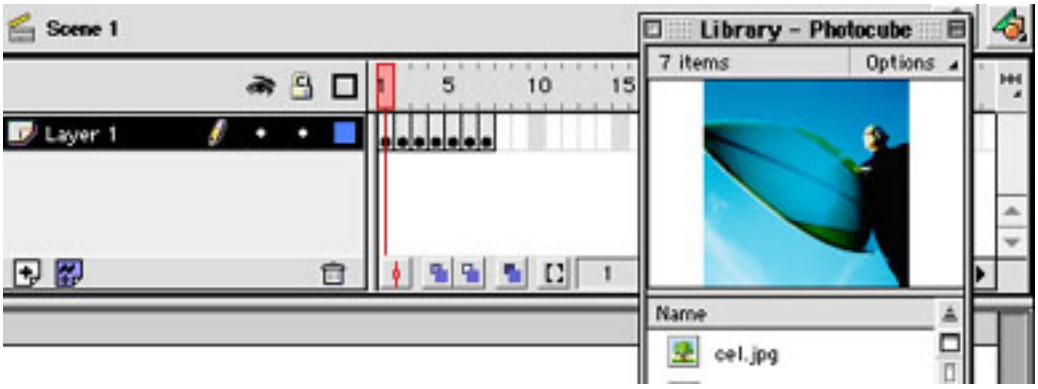
Putting the Images into Frames

Pull down under **Window** to **Library** to show the Library for this project which should show the names of all of the images. Select Frame 1 with the Playhead and **click** in the Layer 1/Frame 1 box. Take one of the images and place it onto the Stage.

Next go to Frame 2 with the Playhead and pull down under **Insert** to **Timeline** then over to **Blank Keyframe**. We want to get rid of the old image from frame 1 and then declare frame 2 a **Keyframe** so that we can put a new image there. A Keyframe tells Flash that there is something new or significant in this frame. Next pull another image from the Library onto the Stage.

Note: If you ever make a mistake and want to get rid of a keyframe, select the keyframe that you want to remove then pull down under **Modify** to **Timeline** then over to **Clear Keyframe**.

Continue on to Frame 3 now and do exactly what was done in frame 2. Do this for Frames 4–7 as well. When you finish, you should have seven images with each image being in its own Keyframe.

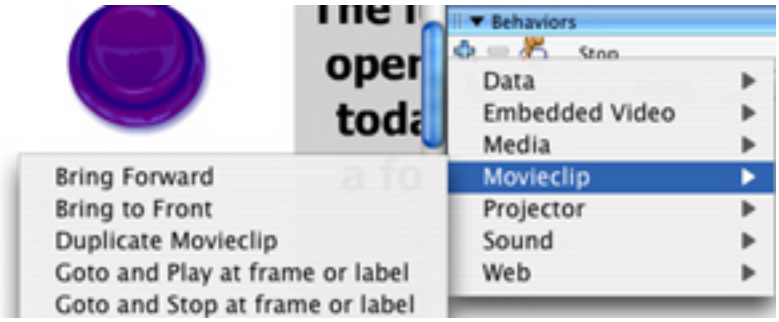


Pull down under **File** to **Save As** and save your Flash file to the desktop. You can try out your movie by scrolling the Timeline along the Playhead *known as scrubbing* or you can also run your movie by pulling down under **Control** to **Test Movie**.

If you test the movie, you'll find out that the images play one right after another rather quickly and then loop back to the front. Maybe we need to slow things down a bit.

Stopping the Action

The Behaviors panel is used to add simple interactive actions to frames, sumbols and other objects within Flash. Create a new layer by going under **Insert** → **Timeline** → **Layer** and click on the layer name and rename the layer to **Actions**. Create a **blank keyframe** in **frame 2** of the Actions layer. Next **select Frame 1** in the Actions Layer and click off the main stage area. Next go to the **Behaviors Panel** and click on the **Plus sign** then drag down to **Movieclip** and over to **Goto and Stop**. Take the default options and click on **OK**.



You should now see that on frame 1 of the Actions layer there is a small *a* on it denoting that it now has a frame action. Go and test your movie again and you will find that it now only shows the first frame. Now we just need to add a few buttons to tell Flash to advance to either the next or previous frame.

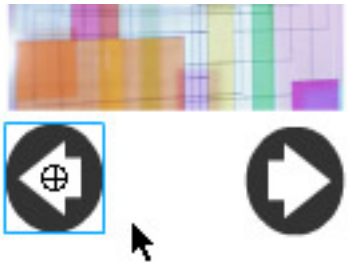
Adding Some Buttons

Create a new layer for your buttons by pulling down under **Insert** to **Timeline** then over to **Layer**. Double-click the layer name and name the layer 'Buttons'. Select Frame 1 in the new Buttons Layer. Pull down under **Window** to **Common Libraries** and over to **Buttons**. Within **Classic Buttons**, double-click the **Circle Buttons** folder and drag one **Circle with Arrow** out onto the stage and place it just below the image that is already there.

You can resize this button by selecting it and then pulling down under **Modify** to **Transform** and then over to **Scale**. This will cause scale handles to appear around the arrow. Simply drag one of the corner handles to scale the arrow then click away from it when finished.

Click the Pointer Tool then select the arrow button. Now we are going to copy the arrow to create a second arrow just like it.

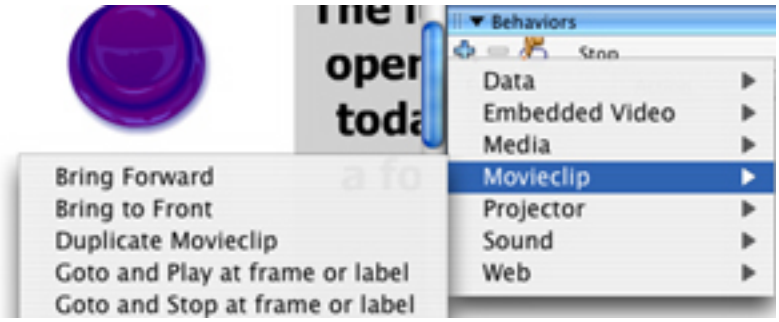
Pull down under **Edit** to **Duplicate**. Select the new Arrow. Now pull down under **Modify** to **Transform** then over to **Flip Horizontal**. Now the new arrow is a Left Arrow and is scaled exactly the same as the Right Arrow. Arrange the Left Arrow properly under the image.



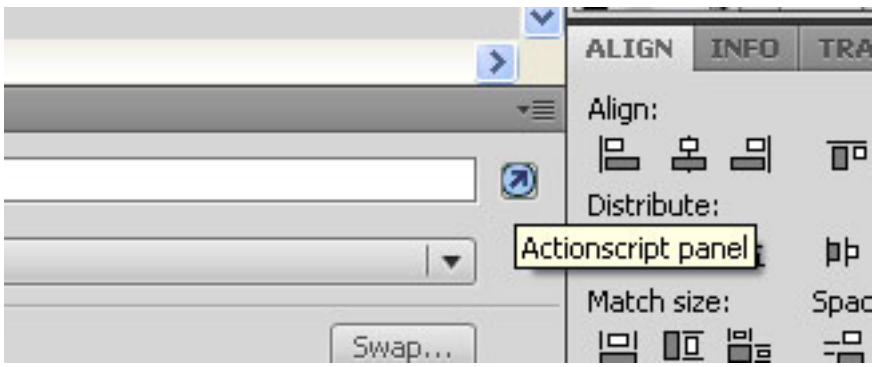
Now we just need to tell the arrows which actions to perform when they are clicked.

Adding Button Actions

Select the Right Arrow and click on the **Plus button** button in the **Behaviors** panel then slide down to **Movieclip** and over to **Goto and Stop**. Take the default options and click on **OK**. This isn't exactly what we want but we will alter it in a minute. Do the same thing for the Left Arrow.

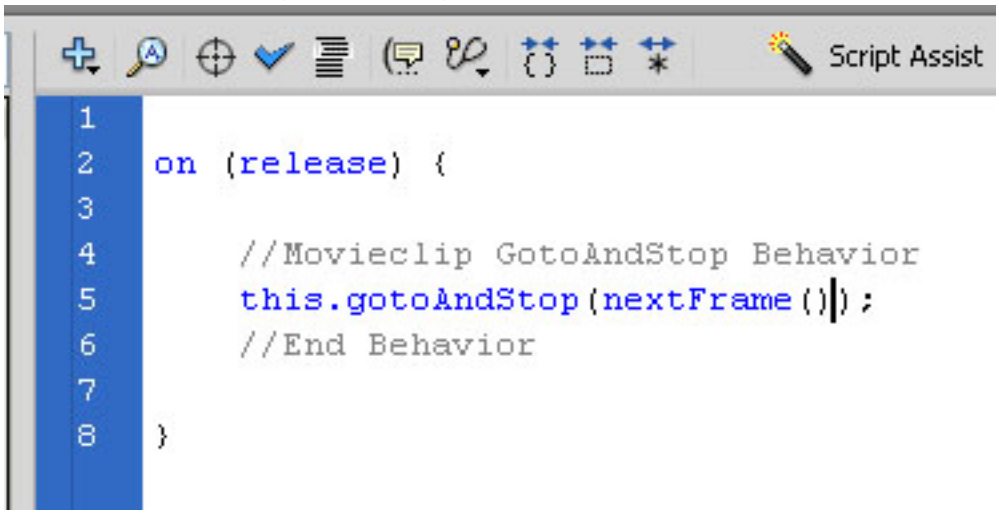


You can alter standard Behavior actionscripts by using the Actionscript Panel button. Select the Right Arrow again then click on the **Actionscript Panel** button in the **Properties Panel**.



Note: Remember this is an action that is being applied to a button. So it should say *Actions - Button* in the upper left of the Action Script. If it doesn't, close the Action Script. Re-select Frame 1 of the Buttons Layer. Click on the Stage away from the button and then click on the Right Arrow button again. A blue rectangle should be in evidence around the button. If necessary, reapply the behavior to this button then click on the Actionscript Panel button again.

Within the Actionscript, change **"1"** in parentheses to **nextFrame()**, remember to get rid of the double quotes, then close the Window.



Do this for the Left Arrow as well but this time change **"1"** to **prevFrame()**. Test your movie and your buttons should move you from frame to frame.

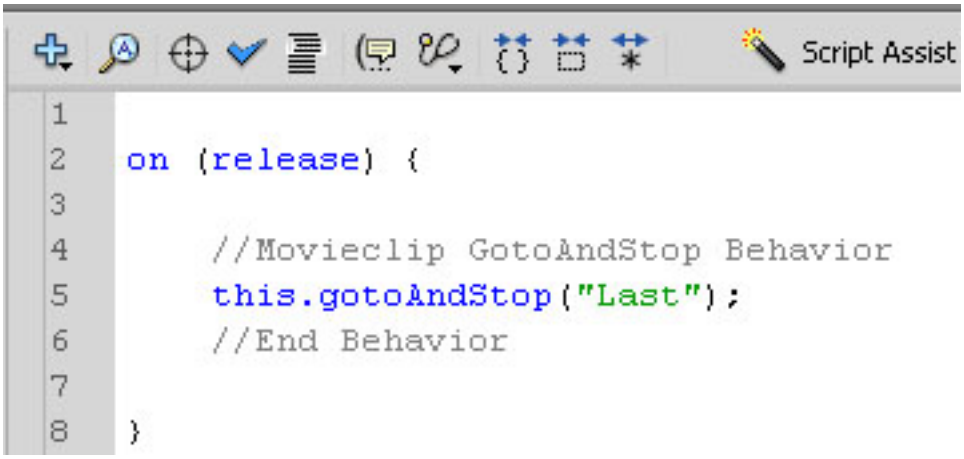
Fixing a Small Problem

You should now be able to use the buttons to browse through your photo gallery. The only problem is that the Right button does nothing in the last frame and the Left button does nothing when the movie is in the first frame.

To fix this make sure you are on the **Buttons** Layer and create Keyframes by pulling down under **Insert** to **Keyframe** while you are in Frame 2 and Frame 7. We've now isolated out frames 1 and 7 as different keyframes that we can alter separately.

Select Frame 1 in the Buttons Layer. Now go to the **Properties Panel** and click in the **Frame Name** box. Next type the word **First** in that box. If you do this properly, a red flag will occur within that frame on the Timeline. Do the same thing in Frame 7 and name it as **Last**. You now know how to create frame names previously called frame labels within Flash. Naming frames allow you to jump to a named framed instead of to a frame number which can help you in Actionscripts.

Now select Frame 1 of the Buttons Layer again and next select the stage then click the left arrow. Press the **Actionscript Panel** button within the **Properties** panel. Within the Action Script, change **prevFrame()** in parentheses to **"Last"**, remember to get add the double quotes this time, then close the Window. Instead of going to the Previous Frame, we want this button to go to the Frame labeled "Last".



Click on Frame 7 of the Buttons Layer, click on the Stage then click the Right arrow. Next do this same alteration for the Right Arrow as you did for the Left Arrow but this time change **nextFrame()** to **"First"**. Save and test your movie. You should now find that both buttons always work properly.

The Photocube— no buttons

One of my favorite tricks, is to use the picture itself as a button. To do this, go to Frame 1 in Layer 1 and select the image there. Pull down under **Modify** to **Convert to Symbol**. Type the name **'pic1'** for the symbol and choose the *Behavior* as a **Button**. The pic1 symbol appears both on the Stage in place of the image file and in your Library.

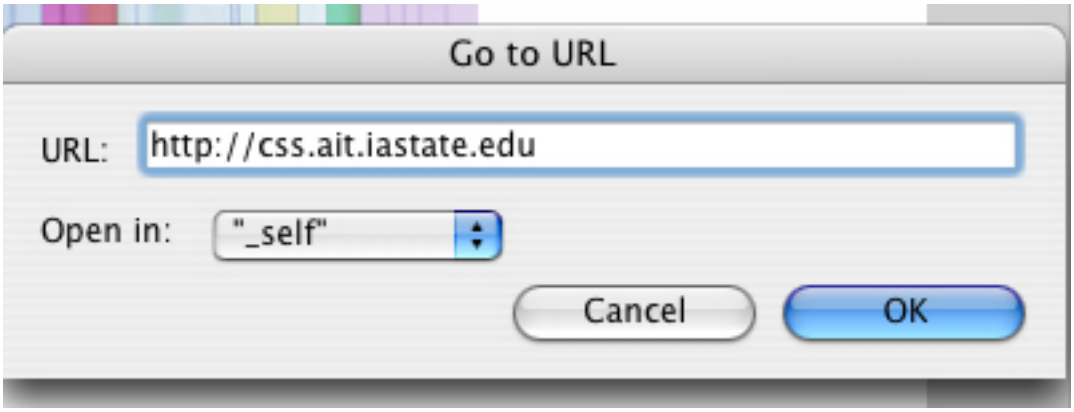
Converting the image to a symbol allows Flash to interact with that image and cuts down on space costs if the symbol is used more than once. You can now select the pic1 symbol and edit its actions just like a button. Go to the **Behaviors** panel and click on the **Plus button** then slide down to **Movieclip** and over to **Goto and Stop**. Choose to stop on frame **2** then click on **OK**.

You could change all the images in this movie to do this (with the last frame button going back to frame 1) and thus get rid of the need for the arrow buttons all together.

Having Buttons Go Anywhere

Insert a new **Layer** and go to frame 1. Open the **Buttons' Common Library**, choose any **classic arcade** button and place it on the Stage. Next to the button, use the **Text Tool** and type on the Stage 'Press this button to continue $->$'.

Select the new button on the stage so that it alone is highlighted in blue. Next go to the **Behaviors Panel** and click on the **Plus sign** then drag down to **Web** and over to **Go to Web Page**. In the *URL:* box that opens up enter **http://css.ait.iastate.edu**. You can change the *Open in:* box so that the new page opens in a new window by selecting **"_blank"**. Click **OK**, save and test your movie.



Optional - Background Sound

Many people like to have a little background audio running while they are showing their pictures and this is fairly easy to add in Flash. Flash can handle most standard audio files and Flash categorizes the use of a sound as either an *event* sound that occurs at a particular frame or as a *streaming* sound which is used throughout a Flash scene.

Pull down under **File** to **Import** and over to **Import to Library** and import the sound **jazzie.mp3** from your desktop. Next create a **new layer named Music** and move the Music Layer to be the **bottom layer** in your stack. Select the first frame in the Music layer and in the Properties panel on the far right choose *Sound, Name:* **jazzie.mp3** and *Sync:* **Event** to occur on that frame. You can also choose to repeat the sound or to just play it once. **Save** your file then **Test** your Movie.

On the Buttons layer to keep the sound from repeating over itself, you will need to do two things. First make frame 3 into a keyframe which isolates off frame 2. Then second, add a "stopAllSounds();" line before the this.goto line in the Actionscript of both the left or previous button in frame 2 and the right or next button in frame 7.

Optional - Random Starting Picture

This one is a fun effect. If you want, you can have Flash jump to a random starting picture by adding a preloader to your Flash file. A preloader tells the viewer that the file is loading but here it is being used to give the randomizer the ability to jump to a random frame.

Create two new **blank Keyframes in frame one and two** for all your layers and **make a new top Layer named Navigation**. Create a **keyframe in frame 2 and 3** of the Navigation layer and **Name frame 1 load and frame 2 Ready**.

Create a two frame movie symbol with the word **Loading** in two different colors in frame one and frame two and place that movie in **frame 1 of the Navigation Layer**. This lets people know that the images are loading and gives the randomizer time to work.

Open the file preloader.txt with your favorite local text editor. Create a **frame action** in frame 1 of the Navigation Layer and cut and paste the text from the preloader file to be the frame action in frame 1. You can ctrl-click inside of an Actionscript to paste in script infomation. All this preloader does is wait until all the frames have loaded and then moves to the frame named "Ready".

Preloader script:

```
stop();
_root.onEnterFrame = function()
{
if (_root._framesloaded == _root._totalframes){
if (_root._totalframes > 0) {
delete _root.onEnterFrame;
_root.gotoAndStop("first")
}
}
}
```

In the **second frame of the Navigation Layer** add this frame action:

```
start = Number(Number(int(Math.random()*8))+3);
gotoAndStop(start);
```

8 should be the number of pictures that you have. The script picks a number from 0–7 adds 3 then jumps to that frame number. Remove the original actionscript from Layer 1 Frame 3. **Save** and **Test** your movie.

To fix the sound, have the sound start on Frame 2 and then remove the stopAllSounds(); actionscript lines from the button Actionscripts which we added earlier.

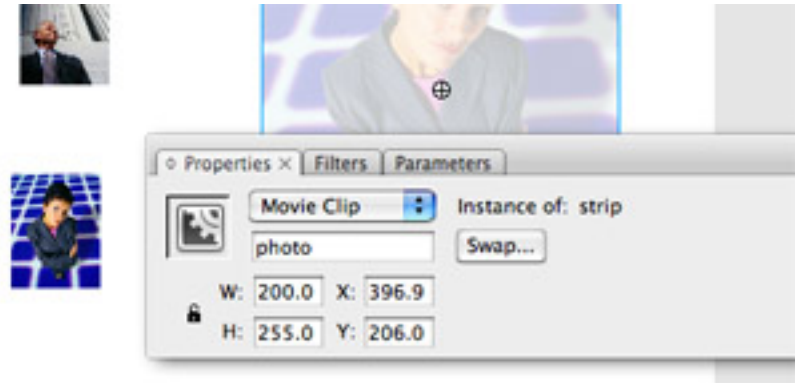
Advanced Optional - A Preview Gallery

Another type of Photo Gallery you can produce with Flash is one where you see miniature versions of a picture and click them to see the large version of a picture. This is an interesting type of item to produce with Flash as it shows how Flash can use one object to control another object within a Flash document.

Create a new Flash Actionscript 2.0 project. Import any four of our images into the Library of the new project. Put the four objects onto the stage and miniaturize them by selecting them, then pulling down under **Modify** to **Transform** then over to **Scale and Rotate**. Scale them down to around 25%.

Next pull down under **Insert** to **New Symbol** and create a new symbol named **strip** which is a *Movie clip*. Add four additional blank keyframes to strip. In frames 2, 3, 4 and 5 of strip, put in the full size version of the pictures. In frame 1, put in a frame *stop( );* then add a copy of the image in frame 2 but convert the image into a graphic object with **Modify** $\rightarrow$ **Covert to Symbol**. Then set the **Alpha** level on this new object to around 25% then return to the Main Timeline. This shaded object will show the viewer that a full-sized gallery is on the stage for viewing.

Take an instance of strip and place it onto your main timeline. **Here's the tricky part. . .** Once you place the instance of this object on the timeline, you need to name the instance in the properties panel— name the instance of this movie clip **photo**. Naming an instance of an object, allows you to easily refer to it in another object's actionscript.



After that it is pretty easy, just click on each on of the miniature images, convert each to a button symbol, then pull down under the **blue plus sign** in the *Behaviors panel* to **Goto and Stop at Frame or Label**, choose the **photo** object and tell it which frame to go to within the photo object. Do that for each of the miniature photos. This type of photo gallery is very popular on the internet and is not too hard to setup in Flash.

Additional things you might try: 1.) See if you can add a transition between your slides in either type of photo gallery; 2.) Try to add a background image that slides behind your photo gallery; 3.) Integrate the photo gallery into a web page design so that appears to be just part of the page; or 4.) Create a gallery that moves from slide to slide on its own— **Hint:** consider doing this with a very low frame rate.

Project- A Quick Button Menu

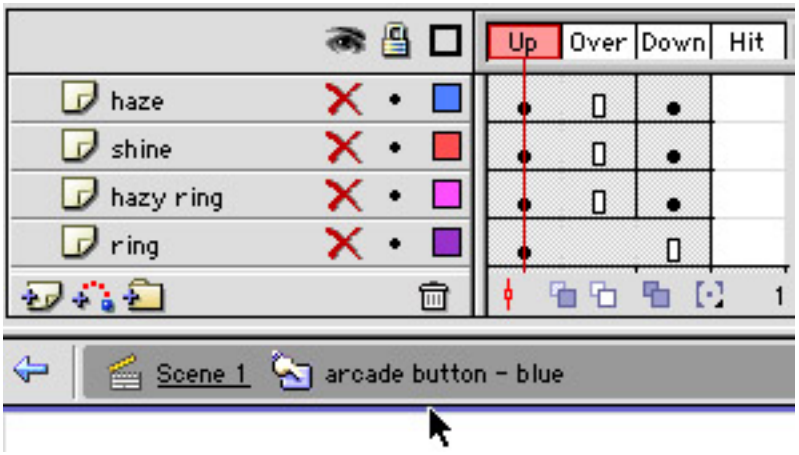
This project creates a quick button menu that can be added to almost any Web page.

Adding Some Buttons

Start a new project by pulling down under **File** to **New** and choose an Actionscript 2.0 Flash File. Then open the **Classic Buttons** in the Common Library and under **Arcade Buttons**, select three different colored Arcade Buttons and drag them onto the stage. Place the buttons so they are about equally spaced out along the top of the stage.

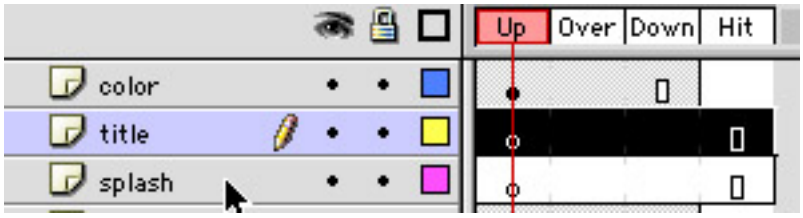
Altering a Button

Double click on one of the buttons on the stage and you will be placed into the internal design of that button.



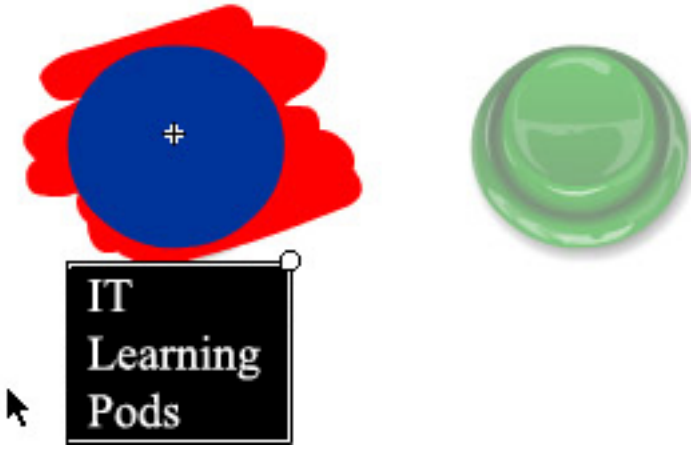
We want to alter the standard button and personalize it a little bit. Notice that the button has four states: *Up, Over, Down and Hit*. The *Up* state is the starting state. While the *Over* state is when the mouse is rolled-over the button. The *Down* state is used when the button is clicked and the *Hit* state shows the "hit area" of the button which is usually a little larger than the button itself.

Add two new Layers to the button and name the Layers **Title** and **Splash**. Do this by pulling down under **Insert** to **Layer** and then double-clicking the standard label name to change it. Make sure the **Title** layer is above the **Splash** layer.



Select the **Over** state of the **Splash** Layer and make a **Keyframe** by pulling down under **Insert** → **Timeline** → **Keyframe**. Select the **Paintbrush** and a splashy color like red then splash paint all over the button making sure to go outside the button itself.

Select the **Over** state of the **Title** Layer and make a **Keyframe**. Then select the **Text Tool** switch the color to Black and write the following below the button 'IT Learning Pods'.



Optional: If you would like to add sounds to your buttons, import **banjo2.aif** or **lock.aif** from the class web site. Create a **new layer in the button named Sounds** and move it to be the bottom layer. **Make a keyframe in the Down state** of the Sounds layer and add banjo2.aif or lock.aif as an **Event sound** in that keyframe.

Repeat the Process

We've now personalized the button. Go back to the main scene by clicking on the **Scene 1** icon and save your project by pulling down under **File** to **Save As**.

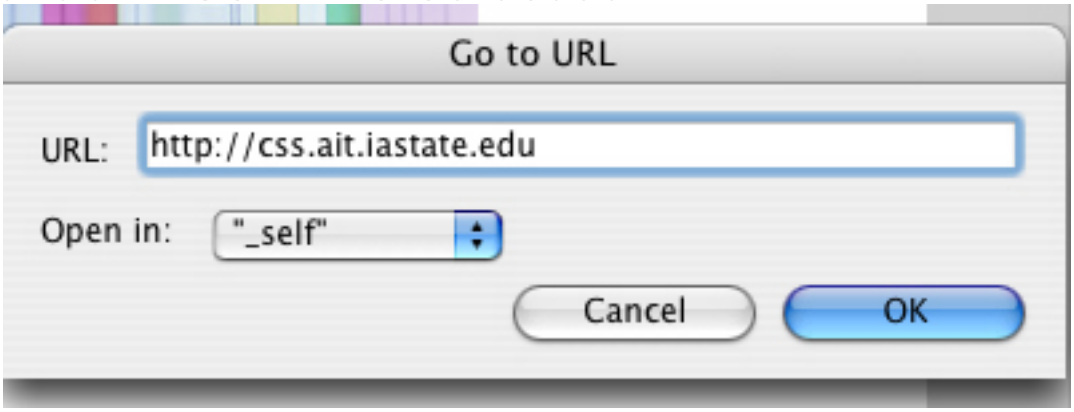
Repeat this process with the other two buttons but give them the titles: **IT Services** and **Ebay**. Under **Modify** → **Document** you might want to change the height of your movie so that the buttons and rollover text just fit into the Flash document.

Save your movie again and then test it by pulling down under **Control** to **Test Movie**. As you glide over each of the buttons, the text message and the splash area should show up. Now let's make the buttons do something.

Adding an Action to each Button

Make sure you are in Scene 1 then using the **Arrow Tool**, select the first button again. Next go to the **Behaviors Panel** and click on the **Plus sign** then drag down to **Web** and over to **Go to Web Page**.

In the *URL:* box that opens up enter the IT Learning Pods URL of **http://css.it.iastate.edu/** and change the selector in the *Open in:* box so that **"_self"** is selected.



Click **OK** then save and test your Movie. The first button should now take you to the IT Learning Pods site if your browser is currently active.

Now go back and **add Web Page actions** to the other two buttons sending them to `http://www.it.iastate.edu` and `http://www.ebay.com` respectively.

You can then **Publish** the movie and use that as a menu on your Web page.

References

Flash CS4 Professional for Windows and Macintosh: Visual Quickstart Guide by Katherine Ulrich; Peachpit Press. Inexpensive quick start guide.

Flash CS4: The Missing Manual by Chris Grover; Pogue Press. Great series and this one seems to have everything in it.

How to Cheat in Flash CS4: The art of design and animation in Adobe Flash CS4 by Chris Georgenes; Focal Press. Interesting Flash book with a unique approach.

ActionScript 3.0 Game Programming University by Gary Rosenzweig; Que. Great book for creating Flash games if you already have a programming background.

Adobe Flash Resource Center:
Click under the **Help button** and then pull down to **Flash**. The Flash CS4 Resources in the upper right especially *Using Flash* are a good place to start.

My own Flash Series Examples and Projects:
`http://css.ait.iastate.edu/Flash/`