Interactive Picture Tutorial: Flash 8

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Now that you have learned to animate maps and control that animation with buttons, let's add more interactive controls so that users can click on map symbols to see pictures or get more information. This is getting a little more complicated, so follow closely.

The objectives of this tutorial are:
- Learn how to imbed pictures into a "Movie Clip".
- Create map symbols that are actually buttons which open pictures associated with a map location.
- Close pictures and return to the original basemap.

Collecting Base Data:

- First, find a basemap that interests you and has sufficient detail to be used as the main stage for the project. It can be a map that you constructed for a previous assignment, or something found on the Internet. The map image should be high resolution and in the ".jpg", ".tif", or ".bmp" format. Larger is better here; the image can always be resized in Flash using the "⊡ Free Transform" tool. Images less than 600 x 800 pixels will be too small for the basemap.
- Next, find three (or more) images that relate to different locations on the basemap. For these, smaller is better, or the movie will get to large. Have fun with this! This tutorial should open your mind to many possibilities.

Importing into the Flash Library:

- To get started, open Flash, create a new Flash document, and save it as "your_name_interactive.fla".
- Click on "File," then "Import," then "Import to Library…." Navigate to your basemap image and click "Open". Your image will be placed in the "Library" next to a bitmap "🖼" icon. (Note: Flash converts all images into bitmaps.)
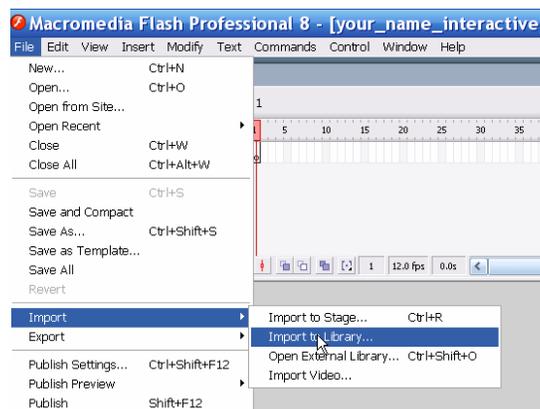
- Import the rest of your images into the "Library" in the same manner.

You are now ready to begin building the interactive map!

Setting Up the Stage:

- Rename "Layer 1" to "basemap" and make sure there is a "Blank Keyframe" on frame #1. (Name all of your layers with something meaningful to help organize the project.)
- Drag your basemap image from the "Library" onto the "Stage'. Is it too large— too small?
- Either resize the image with the "⊡ Free Transform" tool, or resize the "Stage" in the "Properties" panel. It may take a combination of both operations to get it right. Test the movie to see the final basemap size as it will appear to the user.
- This is also a good time to pick the background color for the "Stage". Again, this is accomplished in the "Properties" panel when nothing else is selected besides the "Stage".
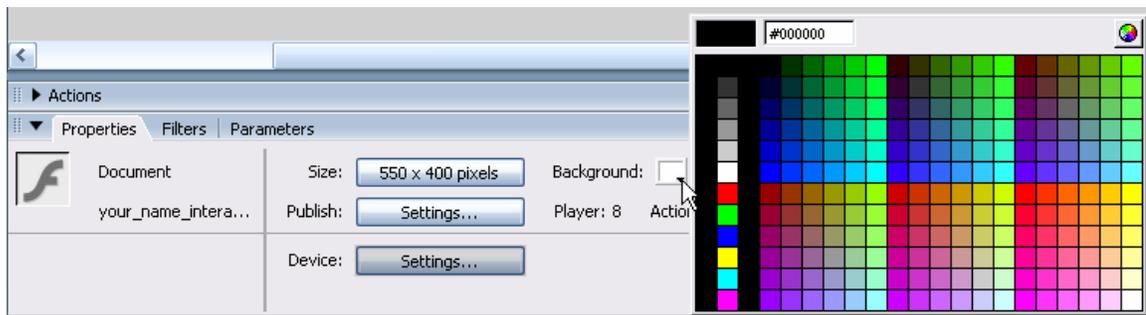

If the base map is too small in the test, and it can't be enlarged with an acceptable resolution, then you may need to find another image. When the basemap is set, it's time to get the pictures in order.

Building the Picture Movie:

- Just as you have done in the past, create a new "Movie Clip" by going to "Insert," then "New Symbol…" The "Create New Symbol" box will appear.
- Name it "Pictures," make sure that "Movie Clip" is checked, and press "OK". You are taken to the "Stage" and "Timeline" for the new clip.
- In frame #1 on the "Timeline" there should be a blank "Keyframe". Leave frame #1 blank; we will see why later.
- Insert another blank "Keyframe" into frame #2 by right-clicking on it and selecting "Insert Blank Keyframe".
- Now drag your first picture from the "Library" onto the center of the "Stage". (Preplan the order of the pictures from left to right as they relate to locations on the basemap. This will make identifying them in the "Action Script" easier.)
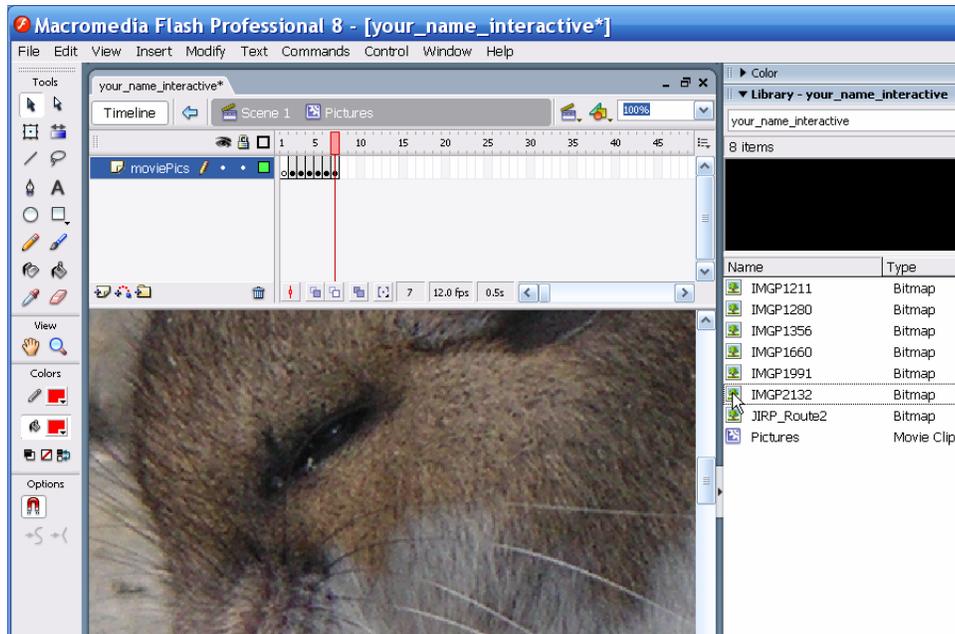
- Drag each of your pictures onto the stage on a separate "Keyframe". Don't worry about the size and position of the pictures at this point. It will be more efficient to manipulate them when you can see your basemap beneath.
- When finished, press the " Scene 1 " icon above the "Timeline" to return to the main "Stage".
- Use the " Insert New Layer" icon to create a new layer in the "Timeline". (Don't forget to name it!)
- With your new layer selected and the others locked, (it's always a good idea to lock layers that are not in use) drag the "Movie Clip" from the "Library" onto the center of the "Stage".
- In the "Properties" panel, you must name the instance of this "Movie Clip" so that it can be identified in the "Action Script". Call it "photo1". (That's a #1)
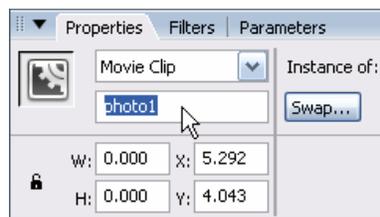
* Did you notice that the "Movie Clip" is not visible on the "Stage"? That is because we left frame #1 blank so that it doesn't cover the basemap. Actually, you can see the small white circle in the middle of the "Stage" which is the place-holder for the clip.

- Double-click on the white place-holder and the "Timeline" for the "photo1" clip will come up.
- Click on frame #2 and you will be able to see where the picture is in relation to the basemap. Resize and place as desired. Repeat for all the pictures and return to the main "Stage".

With that done, it's time to place buttons at select locations related to the pictures.

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Buttons as Map Symbols:

- Choose the buttons that you want to use on your map and import them into the "Library". Buttons that you previously built can be used, or you may wish to construct new ones (see the "Button Tutorial" if you need a refresher). Remember that an image can also be used to construct a button. This means that any map symbol can become a button! An airplane for an airport, a building icon for a church, or a hiker for a trailhead are all buttons waiting to happen. This is the power of interactive mapping! Be creative!!
- Create a "buttons" layer and drag your buttons onto the "Stage," placing them on the basemap at the locations that correspond to the pictures you selected.
- Design and place one extra button that will be used to turn off the pictures and return to the basemap.

Once you have the basemap laid out to your liking, the fun part of tying it all together with "Action Script" begins.

Programming in Action Script:

This is getting more involved, building on what you already know. Don't get overwhelmed, it's well within your capabilities. Just do exactly what is written!

- First we have to tell the "photo1" clip to stop, or it will flash all your pictures up in an endless loop. Create a new layer called "action" and with the blank "Keyframe" selected, get a blinking cursor in the "Actions" panel. Then Type:

<p align="center">photo1.gotoAndStop("1");</p>

This tells the clip to stop on the blank frame "1".
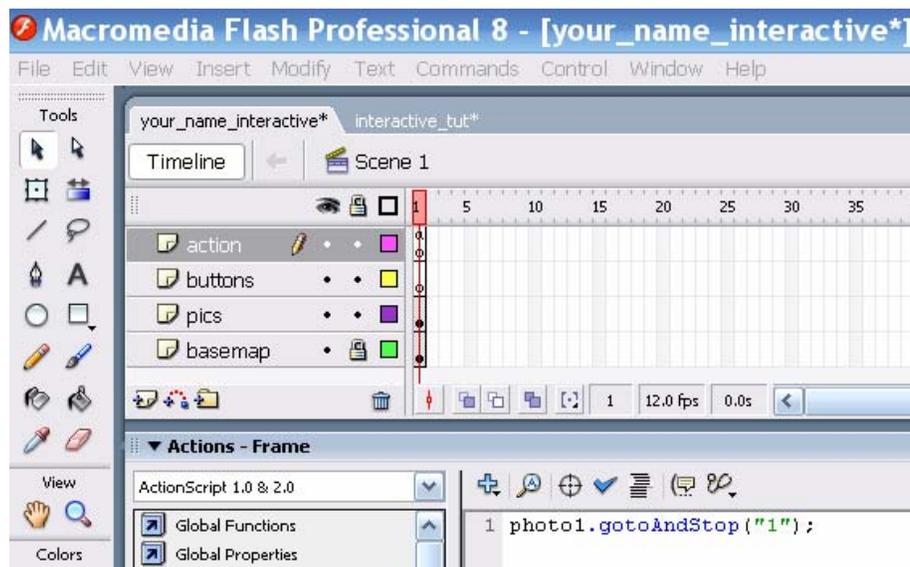
- Next, unlock and select the "buttons" layer. With the " ▶ Selection Tool," click the button instance on the "Stage" that is related to the picture in frame #2 of the "photo1" clip.

  -When the button is selected it should have this outline:
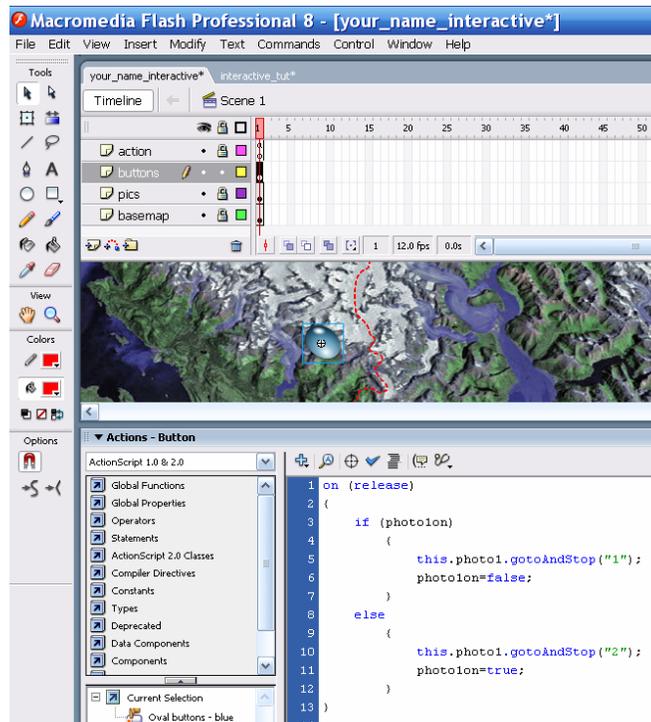
  Get a blinking cursor in the "Actions" panel and type:

```
on (release)
{
    if (photo1on)
        {
            this.photo1.gotoAndStop("1");
            photo1on=false;
        }
    else
        {
            this.photo1.gotoAndStop("2");
            photo1on=true;
        }
}
```

  The "if" part of this statement keeps the user from turning on more than one photo at a time by checking to see if "this" clip is already "on". If the clip is off, the "else" statement tells the clip to "gotoAndStop" on frame #2.

- Repeat this process for all of the button symbols, only changing the frame number in the "else" statement to match the appropriate picture in the "Timeline".

- Finally, select the button that you placed on the "Stage" for the purpose of turning off the opened pictures. With a blinking cursor in the "Actions" panel, type:

```
on (release)
{
    if (photo1on)
        {
            this.photo1.gotoAndStop("1");
            photo1on=false;
        }
    else
        {
            this.photo1.gotoAndStop("0");
            photo1on=true;
        }
}
```

This script checks for open pictures, and then returns the scene to the neutral "0" position with the "Movie Clip" stopped on the blank frame #1.

Tip: The Action Script here does not need to be so complicated, but understanding if – else statements will be very important if you continue with Flash. To make it easier, place this code on the buttons and just change the frame number to match the pictures. (The "off" button would be frame #1, right):

```
on (release)
    {
        photo1.gotoAndStop("2");
    }
```

That's it!! Test your movie! (Tip: You should have been testing all along to find problems early.)

Add the cartographic elements you feel are necessary to make the interactive map a complete product. Start brainstorming on how you could combine all of your new Flash skills to build a powerfully dynamic map. You will be doing just that very soon!

Summary: In this Tutorial you Learned to:

- Import images into the "Library".
- Imbed pictures into a "Movie Clip".
- Create map symbols that are actually buttons.
- Apply "Action Script" to buttons for opening pictures.
- Close pictures and return to the original basemap.

Enjoy the Power of Interactive Mapping!