

Deconstructing bonsai2.swf

The Flash movie is at this URL:

<http://www.macloo.com/syllabi/advancedonline/assignments/bonsai/slideshow.htm>

The movie has 818 frames.

The SWF is 615 KB.

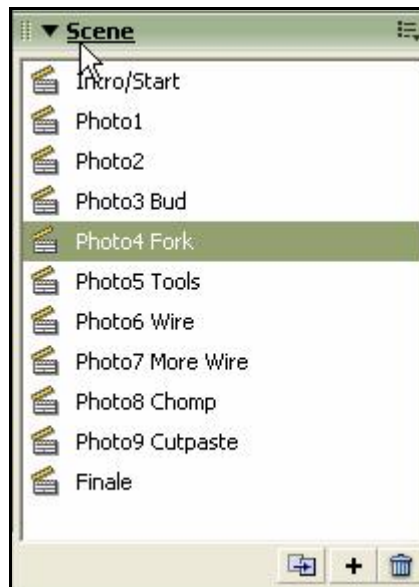
The FLA is 15 MB (15,000 KB). The FLA is not available for download.

All the images are BMP format. (That's why the FLA file is so large.)

All the images are compressed *in Flash* to 40 percent.

This document discusses two things about the structure of this movie:

- Use of Scenes in Flash
- Use of the bandwidth profiler



At far left is the Library for this movie. There are many things in it, so I made folders to organize them for my convenience.

At near left is the Scenes panel. You can open this from the Window menu in Flash. This movie has 11 Scenes. A typical Flash movie has one Scene.

Use of Scenes in Flash

A typical short Flash movie has exactly one Scene. You don't have to know anything at all about Scenes to make a simple movie.

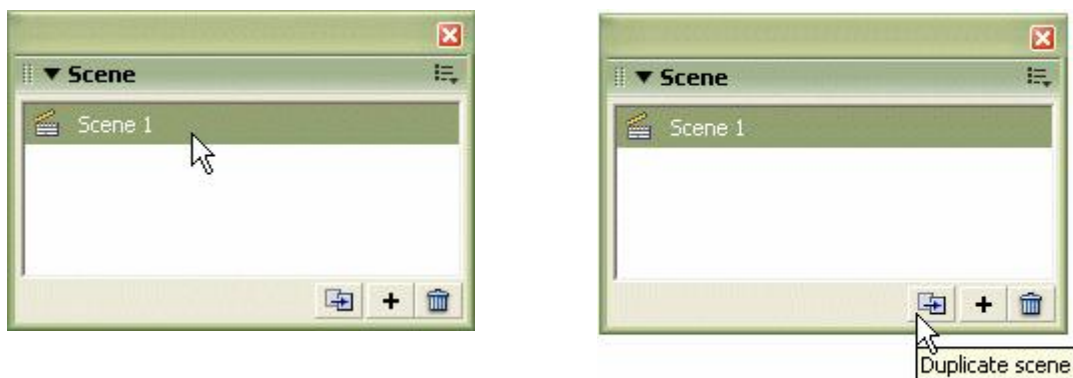
For complex movies, however, you have *three techniques* at your disposal:

- Movie clip symbols
- Externally loaded SWFs and other files
- Use of Scenes

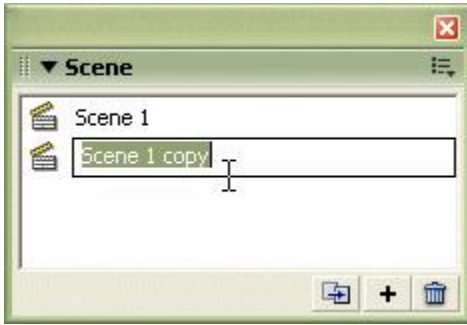
The first two will not be discussed in this document. They are absolutely great, but for different purposes.

The third technique can be really confusing for beginners who are not yet used to the Timeline in Flash. However, Scenes are very, very useful if you need to build a movie with more than 100 frames on the main Timeline.

To begin, find the **Scene** panel and open it. It's on the Window menu, hiding on a submenu under "Other Panels."

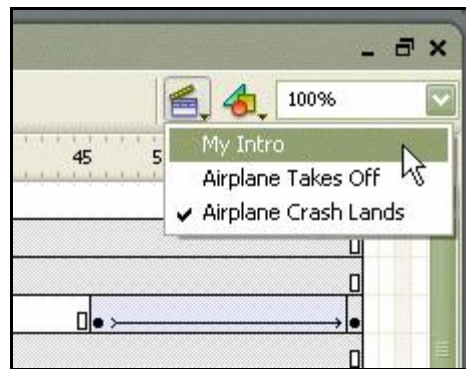
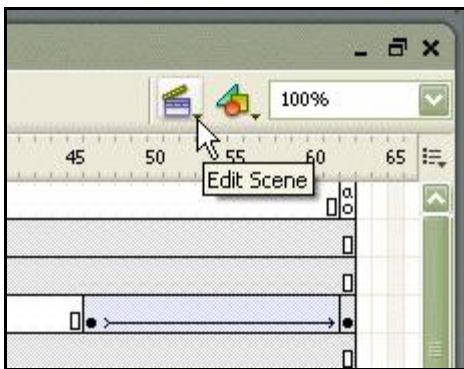


The first useful thing to know: When you *duplicate* a Scene (above right), you make an identical copy of the whole thing. It is still in the same movie, but now it is a separate piece. If you edit one Scene, the other is not affected (unless, of course, you change symbols; your symbols *are* consistent through the whole movie).



You can *rename* any Scene (above left). The name can be anything.

You can *drag* the Scenes into a *different order* at any time (above right). The movie will play in the order listed in the Scenes panel.



The only ways to get into a Scene to edit it (and to see its Timeline) are by using the **Scene** panel or by opening the drop-down menu in the Timeline (above left and right; seen in Flash 8/Windows).

So, Scenes are not hard once you get the hang of creating and using them. But **one last question** should be nagging at you now: If the first frame in every Scene is “frame 1” (and it is), then how can you allow the user to move from Scene to Scene in a nonlinear fashion?

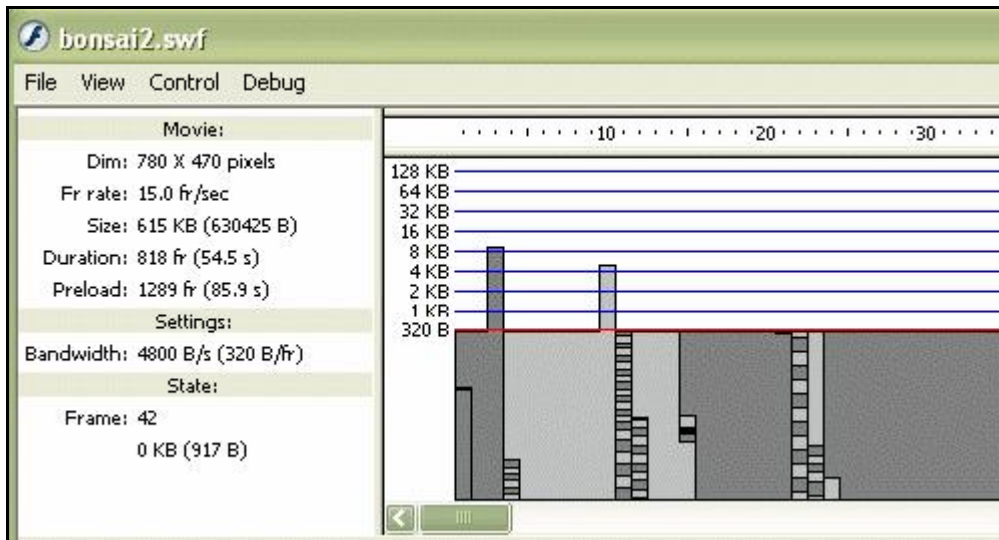
The answer: Use frame labels. These are explained in Lesson 5 in the book (*Flash Journalism: How to Create Multimedia News Packages*; Focal Press, 2005).

Use of the bandwidth profiler

After you have pressed Ctrl-Enter (or Mac/Cmd-Return) to test your movie, you have the option to view the bandwidth profiler. Find it on the View menu:



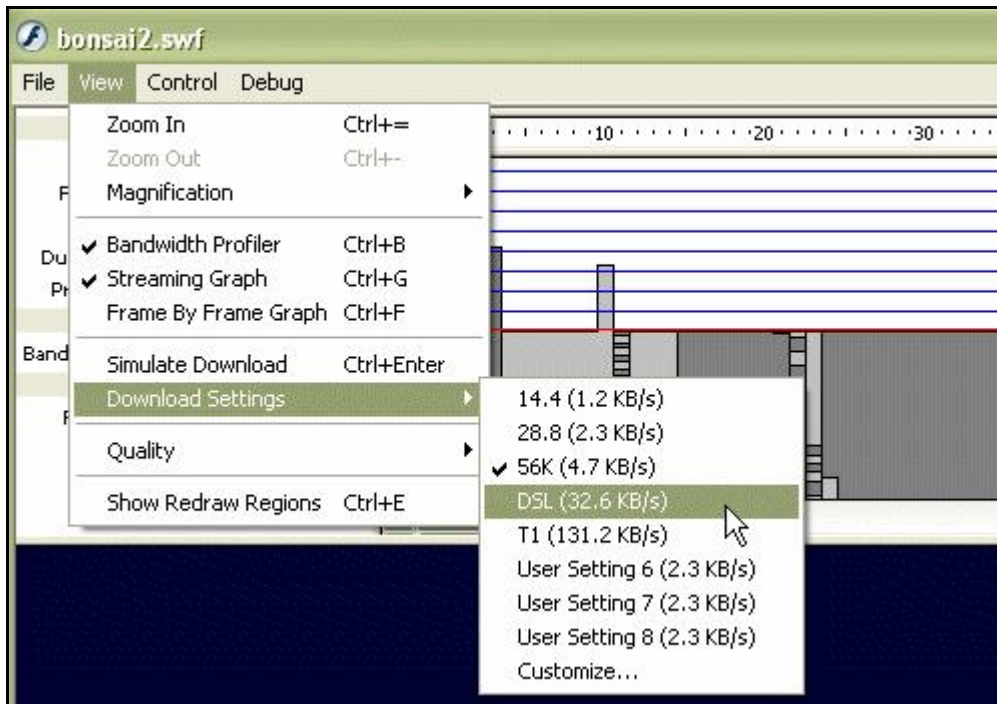
You'll see something like this:



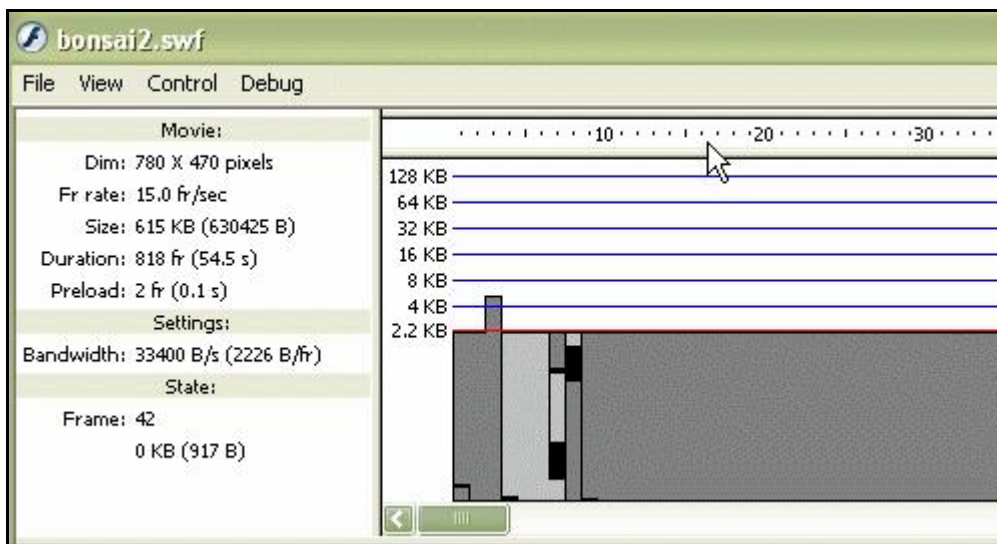
What you're looking at, in this case, is a graph of the download for this SWF, the one that's open now (*bonsai2.swf*). The **red line** is what the connection speed can handle. The parts sticking up *above* the red line will likely make the movie pause or “choke.”

But *at what download rate?* That is a very important question!

So we'll open the View menu again and check that (Download Settings).



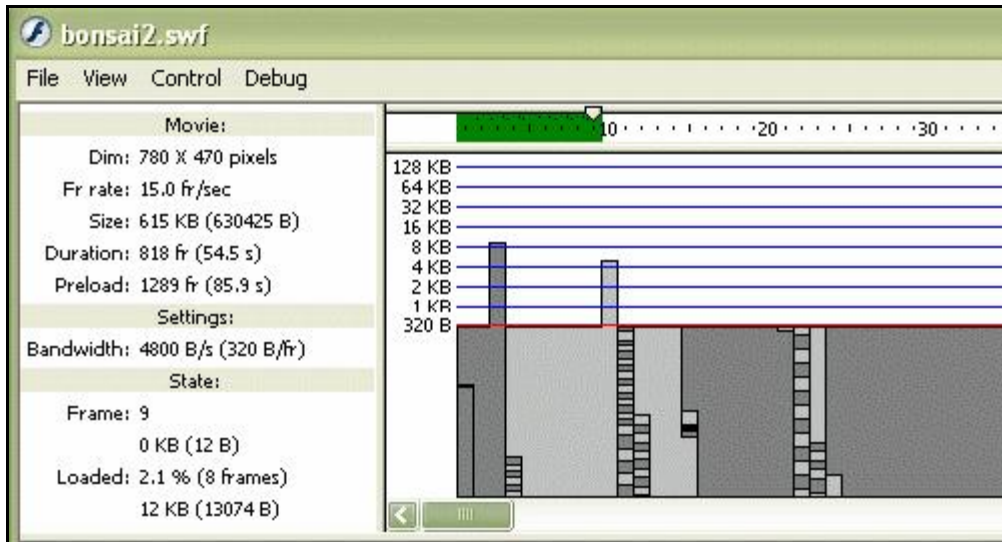
The check mark tells us we're looking at a graph for 56 Kbps, or dial-up speed. Let's *change it* to DSL (32.6 Kbps) and see whether it makes a difference.



Yes, it makes a *huge* difference. Just compare the numbers:

	Red Line	"Choke Points"	Fully Loaded at Frame
56 Kbps	320 bytes	2	683
32.6 Kbps	2.2.KB	1	283

One thing we learn from this effort is that *this movie* does not need a preloader for users with a DSL connection or better. It's not going to choke. Flash can manage the download. If you expect a lot of dial-up users, however, then you had better add a preloader.



Notice the **green bar** above. You'll see this if you select "Simulate Download" from the View menu. You can see exactly how slowly (or quickly) your movie will download under the selected download settings.

A more subtle thing indicated by the bandwidth profiler concerns the way this movie was constructed. This is a **very simple movie** in that it includes **very few movie clips**. All the photo and text effects are on the main Timeline—*not* hidden down inside a movie clip, and *not* in separate externally loaded SWFs or other files. If you "front load" a lot of sound, movie clips, etc., you'll see a lot of "weight" in the early frames of your file—and that means your users will be waiting ... waiting ... waiting.

The simple, unsophisticated construction of this movie enables Flash to manage the streaming download effectively.