

**HOME****OPTIMIZING YOUR FLASH FILE SIZE**

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This page will have no tutorials. It is just for informational purposes only. Please have a general knowledge of Flash before reading this. Some parts of it might not make sense if you don't \*smiles\*

**HOW FLASH WORKS -- STREAMING**


Flash uses streaming to transfer data from the server to the users machine. Streaming is exactly this: The common flow of data from a server to the users machine.

When developing a Flash movie you must keep in mind the users at the slowest connection which is typically 28.8 Kbps (or maybe even slower!)

Example: Flash downloads the movie as it goes through it. So, if you are runnin' along fine and then BAM! it hits Frame#50 which has a large animation, the movie will pause download that frame and then keep going. It can make movies jumpy, take a long time to load, and just look really bad overall.

The general in Flash is to keep the file size down as much as possible without taking away from your movie. Look at every frame, not just the overall movie. Take out un-needed symbols and lines. Adjust your sound to be more compressed. Do whatever you can to take a little off here and there. It will make a big difference in the final outcome of the movie.

**GENERAL TIPS TO KEEP THE FILE SIZE DOWN AND FOR A FASTER PLAYBACK RATE**

- **Drawing or Importing art** -- Take out un-needed lines
    - Most of the time when you draw in Flash and connect lines... you'll have little 'stragglings' lines hanging from it. ALWAYS delete these. 1) Because it looks nicer, but 2) because it can help decrease file size.
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- When importing a graphic most of the time it has small 'hidden' lines that you can't really see. Zoom in and view it up close and take out any excess lines.
  - AND, under the 'Modify' > 'Curves' menu it gives you 'Smooth', 'Straighten', & 'Optimize'. Check these out and use them. They will 'compress' your lines.
- **Re-use symbols** as much as possible
 

Every time you create an object -- even a line, it takes up file size. Let's say you have an object that you will using 2-3 times. Make it a graphic!! Then just plopp the symbol into your movie every time you need it. This way you only created the graphic once, otherwise you would of had to create it 2-3 times raising your file size :)
  - **Avoid having too much animation** at one time. This is considered CPU intensive and can take a long time to play for the user. Flash can really bog itself down if you have too much going on at one time. Here are some tips:
    - Avoid using Alpha (transparency) -- If you can get away with it just Tint your object instead.
    - Avoid lots of tweening at one time.
    - Avoid lots of tweening color effects at one time.
    - Avoid scaling objects to a HUGE percent if possible.
    - Don't overuse gradient fills
  - **"Pre-load" images** if you absolutely have to have a large animation all at once
    - You can 'hide' small images before a large animation comes. Just add them on their own layer behind an image, so that when the large animation *does* come they will be ready to go (for lack of better words.. hehe).
    - Or you can just preload your whole movie.
  - **Test your movie** on all different browsers that you can get your hands on. Test it at different speeds also if possible.
  - **Re-use the same font** as much as possible. The more fonts you use the more your file size will increase. It's not a dramatic increase I don't believe.... but if you have 15 fonts compared to 3 then it can definately matter.

## BITMAP IMAGES IN FLASH

Flash is NOT a bitmap program. Bitmaps should only be used for on screen photos and other pictures of that nature. If you can trace a bitmap do it. It will save file size PLUS you'll find that the graphics you trace are a lot easier to work with later, and much cleaner to look at.

- Use bitmaps sparingly
- Try to compress bitmaps if you can. When you import a bitmap (File > Import) it automatically inserts it as a symbol into your library. If you go to the library and select it, and push the small arrow in the right hand corner of the library window then select "Properties". This will give you a dialog box of compression setting for Bitmaps/JPEG's.



average



good

- Avoid animating bitmaps if at all possible

## SOUNDS

**FACT:** Sounds take up file size.

But they are soooo cool :) \* wish I knew more about sound \*

Here's some tips I found out that you can try to keep sound file size down:

- Use the lowest sample rate possible - This will give your poorer quality in your music, BUT if you can work towards that 'happy medium' you will get a smaller file size + some music sounds that you can live with.
- Use shorter sounds and just loop them if you can. So, avoid using long sounds if you can. If you need to I would recommend pre-loading the whole movie.

## FILE SIZE GENERATING REPORT

To generate a file size report just Export your movie as a .swf file and then in the dialog box check

By generating the file size report you can see how many bytes your frames are taking up. It also lists all your symbols, sounds, & fonts and how much bytes they are using. Until now I had never even heard about size reports :)... but I can definately see where they would be useful. Here is an example below:

### Movie Report

<u>Frame #</u>	<u>Frame Bytes</u>	<u>Total Bytes</u>	<u>Page</u>
1	5599	5599	Scene 1

<u>Page</u>	<u>Shape Bytes</u>	<u>Text Bytes</u>
Scene 1	0	0

<u>Symbol</u>	<u>Shape Bytes</u>	<u>Text Bytes</u>
button(1)	86	147
button(2)	0	150
fly-out	31	0
option(1)	0	150
option(2)	0	150
option(3)	83	150
pop-down	131	57

Tweened Shapes: 115 bytes

<u>Font Name</u>	<u>Bytes</u>	<u>Characters</u>
Haettenschweiler Italic	519	-DFLNOPTUWY
Haettenschweiler	997	-DFLMNOPTUWYeinopstu

Arial Bold Italic	787	123Oinopt
Arial Bold	757	123Oinopt

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