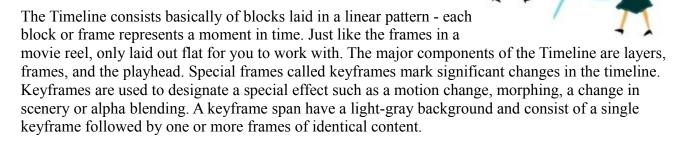**June Kaminski**
BellaOnline's Web Design Editor

Flash 101, Pt. 2 - Understanding Timelines

The output created with Macromedia´s Flash program is called a movie - an animated movie. When learning to make a Flash movie, it helps to view the work areas in terms of movie making. The Timeline is one of the most important areas which can be compared to the editing area of the movie set. Flash uses Timelines to plan and lay out the movie, allowing you to choose where and when a particular object starts, how long it runs, and where and when it ends.

The Timeline consists basically of blocks laid in a linear pattern - each block or frame represents a moment in time. Just like the frames in a movie reel, only laid out flat for you to work with. The major components of the Timeline are layers, frames, and the playhead. Special frames called keyframes mark significant changes in the timeline. Keyframes are used to designate a special effect such as a motion change, morphing, a change in scenery or alpha blending. A keyframe span have a light-gray background and consist of a single keyframe followed by one or more frames of identical content.

Flash 5 offers two different formats of timelines: the original one that users of earlier versions of Flash, especially version 4 are used to. The other version mimics the timelines used in Macromedia Director. Experienced Flash designers often first use storyboards to map out their movies, just as cartoon, commercial or animation designers would do, before actually working with the Flash timelines.

Layers are organized in a column to the left of the Timeline. Frames contained in each layer appear in a row to the right of each layer´s name. The Timeline header indicates the frame number. The playhead points out which is frame is the current one being displayed on the movie´s stage. You can add, delete, and move frames around within the Timeline. You can also add tweening and frame actions, which are signified using keyframes. For instance, if you wanted two objects to move at once, you would need to create two layers with two different timelines. You would then set frames and build tweens for the objects on those lines. Eventually, you end up with a hierarchy of timelines, just as you would have a hierarchy of files or directories in other programs.

Once your objects (text, images, sounds) are prepared, begin to place them into the scene, at particular points in the timeline by assigning each image to its own layer. The timeline controls actions in a linear

way, even though symbols can have their own timelines and act independently of other elements in the scene.

Each black circle on the timeline represents one frame of your animation. The illusion of movement is created by having images in different locations on successive frames. The smoothness of the animation is determined by how similar the images are from frame to frame. Many small changes to the image in each successive frame will make the animation appear smoother than a few large changes. However, the smaller the changes per frame the more frames are required to make the complete animation.

The other important factor is the number of frames that are displayed per second. As the frames per second (fps) increase, more frames can be packed into the same amount of time, and thus smaller changes can be made on each frame making the animation smoother. Flash defaults to 12 fps, which is shown beneath the layer timelines . You can change the fps by double clicking on the indicator. 12 fps is good rate for web-based animation since it minimizes file size yet keeps the animation smooth.

The timeline shows you the key frames in your animation. Most computer animation is created by using key frames. These key frames indicate the final positions or changes to the symbol or graphic. Flash calculates the in-between frames for you to make your animation flow from keyframe to keyframe.

Links

Flash Support Center
http://www.macromedia.com/support/flash/basics/flash_timeline/flash_timeline.html
Controlling Different Timelines
http://www.actionscripts.org/tutorials/beginner/Controlling_Different_TimeLines/index.shtml

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