

DON'T FORGET

6

Flash

Based on material from
Digital Media Tools, 3rd edition
published by John Wiley & Sons, 2007
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- Flash was originally a program for creating animation with interactivity, but it has evolved; now it is also a tool for building media-rich Web applications.

Basic Concepts

- Objects are organized in a Flash document, then the result is exported as a Flash movie to be embedded in a Web page or played on a mobile device.

A Flash movie (or SWF) is composed of one or more frames. Movies can also be exported as a sequence of still images or as video.


- Documents can be created from scratch or from a template.

- The timeline shows the sequence of frames over time, from left to right.
- The stage is a window in which individual frames can be created and edited.


- Flash documents are composed of layers, which are displayed in the timeline.

Artwork

- Flash is fundamentally a vector graphics application.



- Draw lines with the pencil, line or pen tools.



Set the colour, weight and style of strokes in the Properties panel; set extra options for the pencil at the bottom of the Tools panel.

- Set the colour of fills and strokes in the Properties panel, Tools panel or Color panel.

- In Flash, Alpha means transparency. Fills and strokes can be semi-transparent.

- Pick up strokes and fills from existing shapes with the eyedropper and transfer them to other objects with the ink bottle or paint bucket, respectively.

- Use the rectangle, oval and polystar tools for drawing geometrical shapes.

- Use the brush tool for more natural looking marks. Brush marks are actually filled shapes, with invisible strokes. Turn on options in the Tools panel for sensitivity to pressure and tilt if you use a graphics tablet and pen.

- In merge drawing mode – the default – shapes and lines are split where they overlap and stroke and fill can be selected separately.

- In object drawing mode, objects don't interact when they overlap and can be selected as a whole. Use the round button near the bottom of the Tools panel to turn object drawing mode on and off.

- Use the black arrow tool to select objects or lines. Use the lasso tool to draw a freehand selection; turn on polygon mode to use the lasso like the line tool.

- Use the free transform tool or the commands on the Modify>Transform command to move, scale, rotate or skew objects.

- Objects can be aligned or uniformly distributed vertically and horizontally using the *Align* panel.

A symbol is an element that can be stored in the library and used repeatedly. You can turn existing artwork into a symbol using **Modify>Convert to Symbol...** or create a new symbol before you have done the drawing.

- To create an instance of a symbol, drag it from the Library panel onto the stage. Editing a symbol alters all the instances of it.

- Instances can be individually transformed or have colour effects applied. Editing an instance does not affect other instances of the same symbol.

- Artwork created in other programs, including Illustrator and Photoshop, can be imported to the stage or the library.

Animation

- For animation, a frame rate of 12 frames per second is usually sufficient to create an illusion of smooth motion. Frame rate can be changed in the Properties panel, but slower rates will generally result in jerky movement.

- Animate one frame at a time by adding keyframes to the timeline and creating their content on the stage.

- Insert>Timeline>Keyframe adds a keyframe whose contents are a copy of the previous frame, which you can then modify.
- Insert>Timeline>Blank Keyframe adds a blank keyframe.

- Turn on onion-skinning to see adjacent frames overlaid on one another.

- Use Control>Play to watch your animation on the stage, or Control>Test Movie [ctl enter/cmd return] to play it in a Flash Player.

- Use File>Import>Import to Stage to import numbered image sequences if you have created the content of your frames in another program. Discontinuity in the numbering of the image files will mean only some are imported.

- Animated GIFs can be imported; each frame will be automatically converted to a keyframe.

- Layered Photoshop or Illustrator files can be imported; selected layers will be converted to keyframes if you choose the correct option in the dialogue.


- Use motion tweening to automatically interpolate the position, size, rotation, brightness, colour and transparency of an instance of a symbol.

- Each instance to be motion tweened must be placed on a separate layer. Successive motion tweens of the same instance may be created on the same layer.

To create a motion tween, drag a symbol to a keyframe at the start of the tween, create another keyframe at the end and move the instance or change its properties. Then select a frame *in between* the start and end and set the Tween pop-up to Motion in the Properties panel.

- Unlike keyframes, tweened frames have no content; they are generated automatically when the movie is played back.

- Use custom easing to vary the rate of change during the tween. Different tweened properties can be eased independently.



Use a motion guide on a guide layer to make an object move along a path that isn't a straight line. Any path may be drawn with the usual tools, or imported from Illustrator.

- To detach a layer from a guide layer, use the **Modify>Timeline>Layer Properties...** command and select the **Normal** radio button under **Type**, instead of **Guided**.


- Select frames and keyframes by clicking on them in the timeline.
- Drag the red bar through the timeline to set a new current frame; this does not automatically select the frame, however.

- Use the commands on the Edit>Timeline sub-menu to cut, copy, paste and delete frames. Using the delete key or Edit>Cut, etc. will delete frames' contents, but not the frames themselves.

- Copy and paste motion tweening and easing curves to make several objects' tweened properties change over time in the same way.

- Use timeline effects to create transitions, such as dissolves. Preview effects in the Flash Player if they do not show up when playing through the timeline.

- Create movie clip symbols and graphic symbols with more than one frame as reusable animations within a movie.



You can set the colour (tint), alpha, size, etc. of instances of animated symbols independently, in the same way as for still graphic symbols.

- Movie clip symbols have their own independent timelines and can be controlled by scripts; instances of movie clip symbols can be added to a single keyframe in the main timeline.

- For animated graphic symbol instances you need to create sufficient frames in the main timeline for the duration of the animation.

- Apply filters to movie clip instances, button instances or text objects to produce graphic effects such as glows and drop shadows. Tween the filter settings using motion tweening, to produce easy motion graphics.

- Use shape tweening to morph one shape into another. Shape tweening cannot be applied to symbols, but otherwise is applied in almost the same way as motion tweening. Test the results – they can be unpredictable.

- Shape tweening is computationally intensive; use it with discretion.

- Use shape hints for more control over morphing.

Sound and Video

- Import sound files in common formats into the Library.

- Create new layers for sounds. Add a sound at a keyframe by selecting it from the Sound pop-up in the Properties panel.

- Event sounds start to play when the keyframe is reached and continue to play until they reach their end. Use them for spot effects.

Stream sounds are synchronized to the movie. Use them for soundtracks. The picture may play jerkily when movies with synchronized sound are played over slow connections. Sound files can be large.

- Use the Sync pop-up to choose between event and stream sounds.

- Flash Video (FLV) files can be exported from popular video editing programs, or created by importing video in some other format into Flash.

- Streamed video uses the Flash Media Server to deliver frames which are played as soon as they arrive on the user's machine.

- Progressively downloaded video is downloaded to the user's machine and starts playing as early in the download as possible.

- Embedded video becomes part of the SWF file; it should only be used for very short clips.

- Use the Video Import Wizard to import video, select streaming, progressive download or embedding, and set parameters for encoding as FLV.

- Flash Video is highly compressed, with consequent loss of picture quality.

End of the “Don’t Forget” key point slides
for Chapter 6, pages 287–355 of
Digital Media Tools, 3rd edition
published by John Wiley & Sons, 2007

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