

# Introduction to Adobe Flash CS3

IST 361 | Web Development

Class 8 – Lecture notes

Anna Arzumtsyan

# What is Flash?

- Adobe's Flash format is among the most widely-used for delivering dynamic, rich-media content via the web.
- Flash is commonly used for delivering interactive, multimedia-based materials through a web browser.
  - Source: <http://www.calstate.edu/accessibility/tutorials/flash.shtml>
- Examples
  - <http://www.albany.edu>
  - <http://www.plantabillion.org/>

# Accessibility

- Adobe's latest developer environment, provides significantly improved support for authoring *accessible* content.
- In particular, Flash CS3 allows developers to assign text equivalents for Flash elements, control the reading order for elements, provides the status of elements to assistive technology devices, enable full keyboard navigation, and provide captions for video materials.
  - Source: <http://www.calstate.edu/accessibility/tutorials/flash.shtml>

- **Good Practice:** when building Flash movies, use the smallest possible file size and web-safe colors to ensure that most people can view the movie regardless of bandwidth, processor speed or monitor resolution.

# Basic items

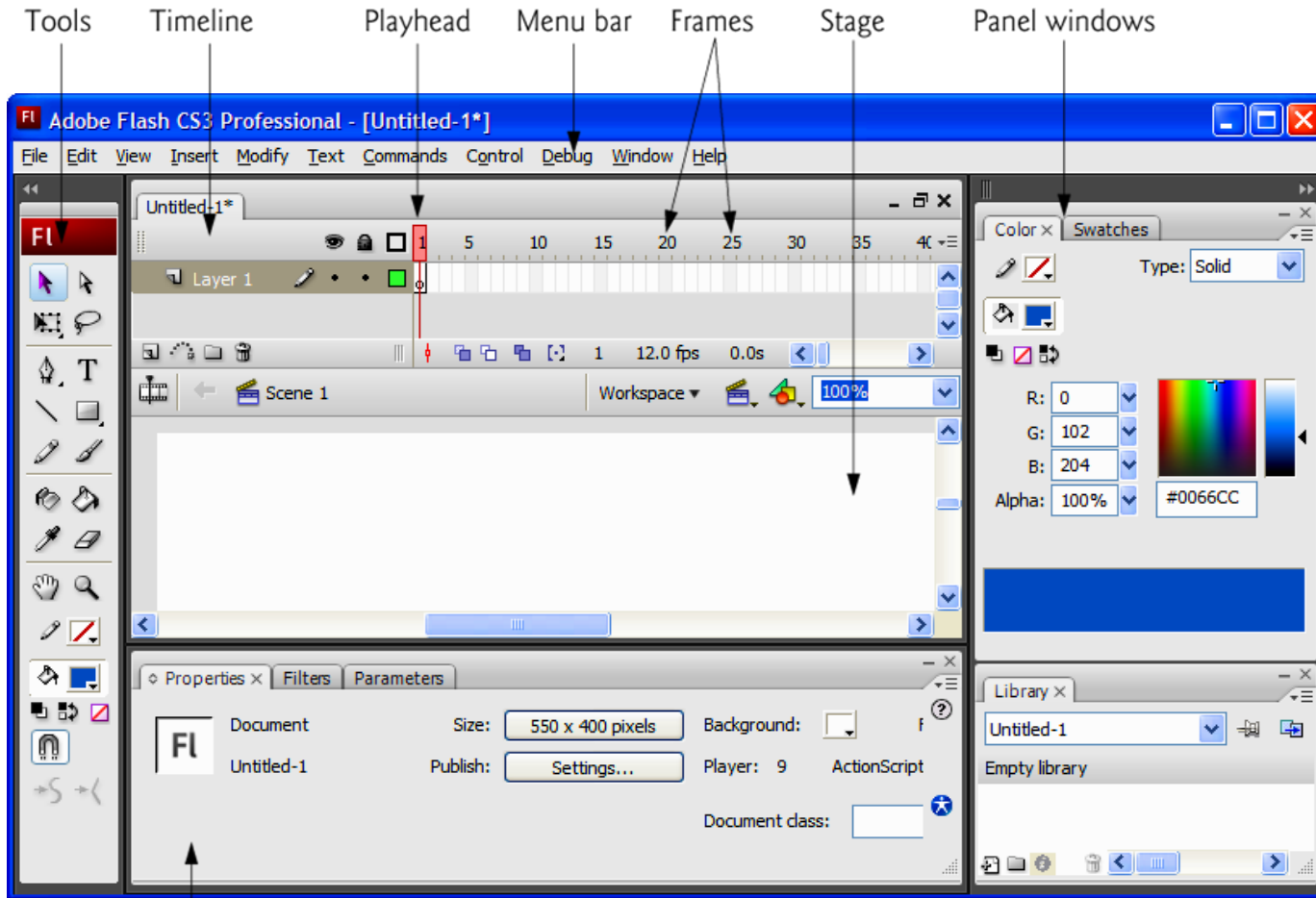
Each Flash document consists of 3 basic items:

1. Timeline – a record of every frame, layer, and scene in your movie. Frames appear in chronological order.
2. Edit bar – displays text and menus for choosing symbols and scenes to work on.
3. Stage – the actual area in which your movie displays.

You can choose to hide the Timeline or Edit Bar, and you can open any combination of other panels and tools that you need to work with your Flash content.

Source: <http://proquest.safaribooksonline.com/9780321502919/ch01?imagepage=1>

# Flash CS3 development environment



Properties Panel/  
Property Inspector

Image source: [http://www.cse.fau.edu/~sam/course/ic\\_html/](http://www.cse.fau.edu/~sam/course/ic_html/)

# Flash CS3 tools bar

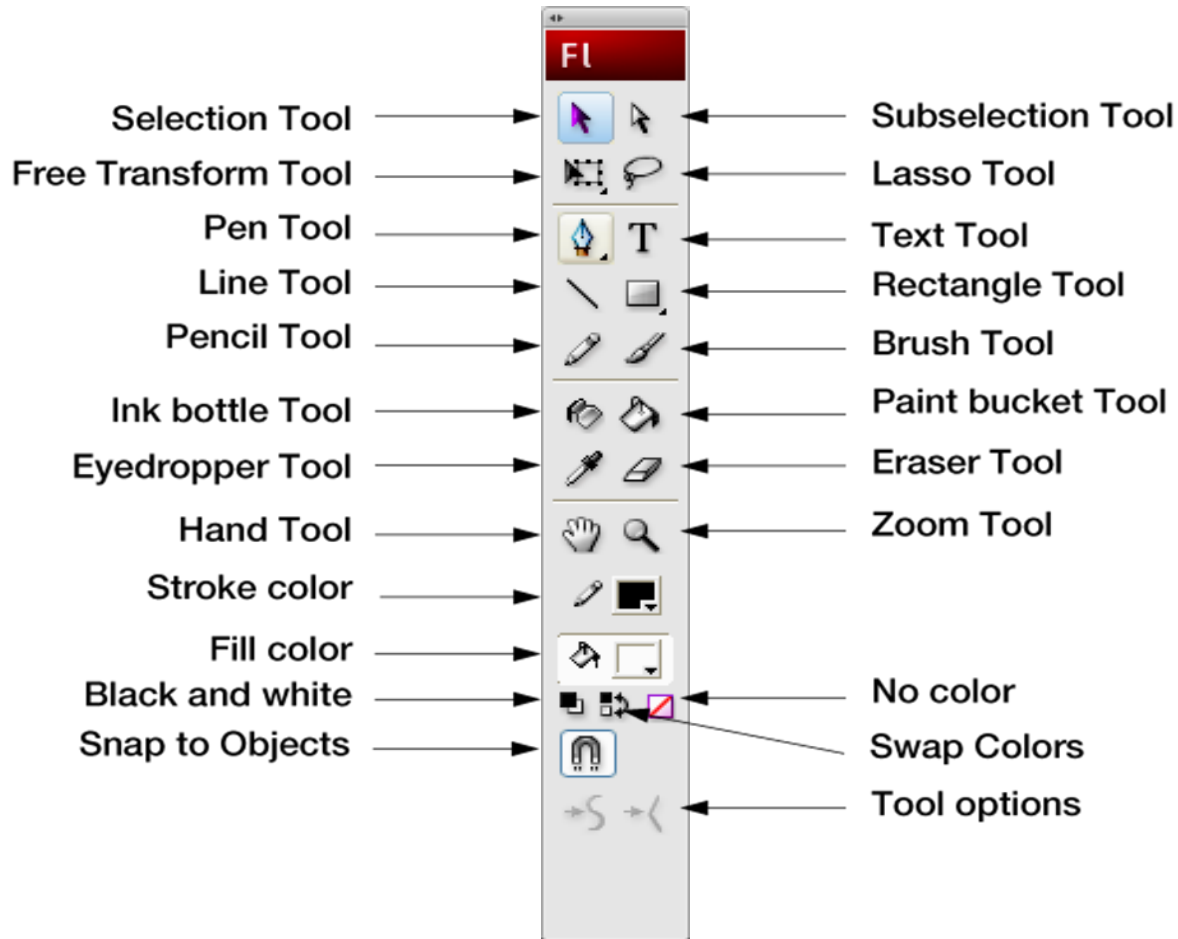
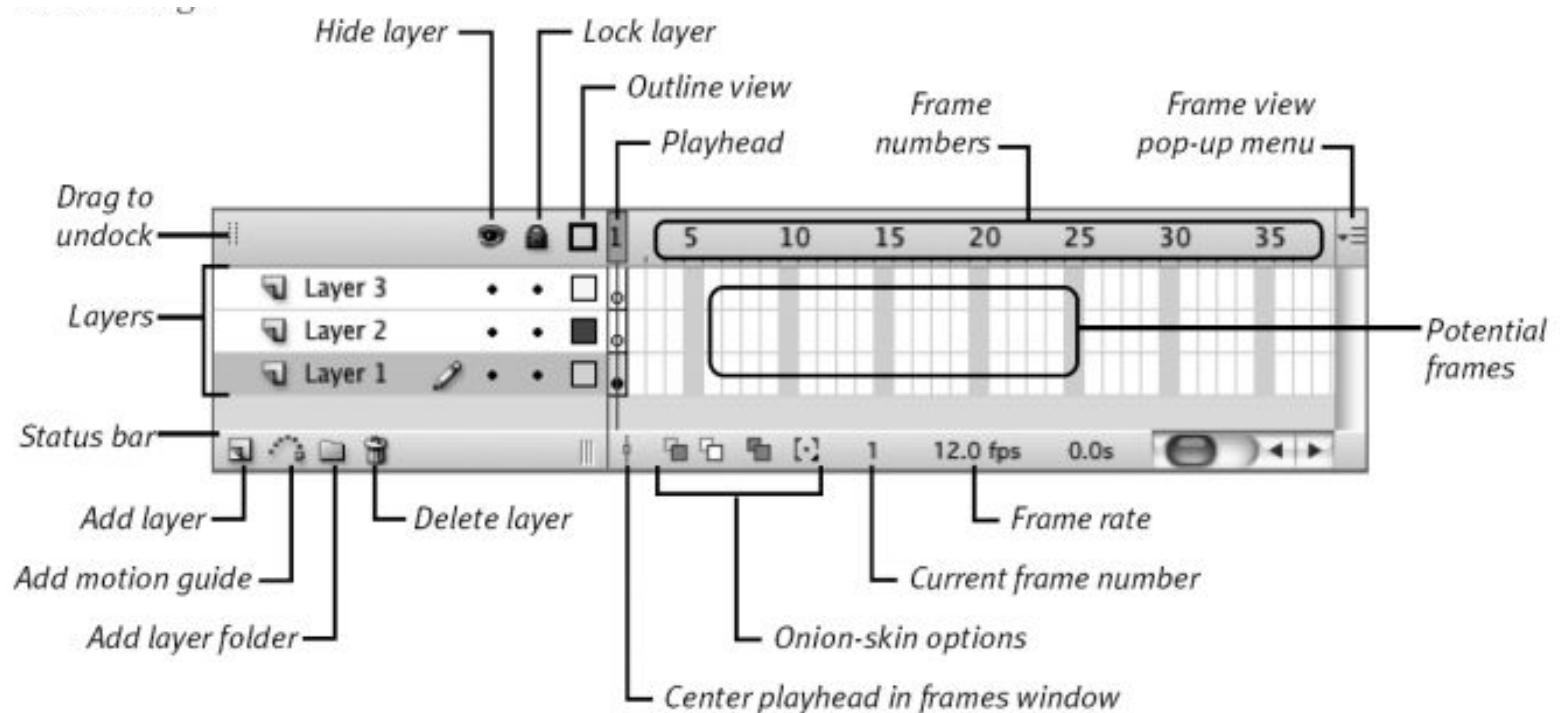


Image source: [http://www.cse.fau.edu/~sam/course/ic\\_html/](http://www.cse.fau.edu/~sam/course/ic_html/)

# Timeline

- The Timeline visually represents every element of the movie, and is the framework for building projects. We will use it extensively for creating animations. The major elements of the Timeline are shown in the image below.



# How does Flash work?

- **Frames** are the “lifeblood” of your animation, and the frame rate is the “heart” that keeps that blood flowing at a certain speed (Ulrich 2007).
- Flash’s default setting is 12 frames per second (fps) – a reasonable setting for animations viewed over the Web. By comparison, the standard frame rate for film movies is double that speed (Ulrich 2007).
- Timeline panel – can contain any number of layers and frames. For most computer-displayed animations, especially those playing from a website, 8 frames per second (fps) to 12 fps (the default) is sufficient.
- A **keyframe** is a frame in which you define a change to an object’s properties for an animation or include ActionScript code to control some aspect of your document.
- You can also arrange keyframes in the Timeline to edit the sequence of events in an animation. Flash can automatically fill in the frames between keyframes in order to produce fluid animations.

(Source: <http://www.ils.unc.edu/~lstacey/inls696/notes.php>)

# How does Flash work?

- When you create and save Adobe Flash CS3 Professional documents within the Flash authoring environment, the documents are in **FLA** file format.
- To display a document in Adobe® Flash® Player, you must publish or export the document as a **SWF** file."
- To include animation in the web page, insert SWF file as an object
  - Show in Dreamweaver insert object
  - Insert button
  - Slideshow example ([album.htm](#))

# Action Script

- ActionScript – scripting language for Flash platform.
  - Initially designed for controlling simple 2D vector animations.
  - Later versions added functionality allowing for the creation of Web-based games and streaming media (such as video and audio).
- **Error Prevention Tip:** ActionScript is case sensitive. Be aware of the case when entering arguments or variable names.

# Common *ActionScript* functions 1

Function	Description
gotoAndPlay	Jump to a frame or scene in another part of the movie and start playing the movie.
gotoAndStop	Jump to a frame or scene in another part of the movie and stop the movie.
Play	Start playing a movie from the beginning, or from wherever it has been stopped.
stop	Stop a movie.
SoundMixer.stopAll	Stop the sound track without affecting the movie.
navigateToUrl	Load a URL into a new or existing browser window.
fscommand	Insert JavaScript or other scripting languages into a Flash movie.

Image source: [http://www.cse.fau.edu/~sam/course/ic\\_html/](http://www.cse.fau.edu/~sam/course/ic_html/)







# Common *ActionScript* functions 2

Function	Description
Loader class	Load a SWF or JPEG file into the Flash Player from the current movie. Can also load another SWF into a particular movie.
framesLoaded	Check whether certain frames have been loaded.
addEventListener	Assign functions to a movie clip based on specific events. The events include load, unload, enterFrame, mouseUp, mouseDown, mouseMove, keyUp, keyDown and data.
If	Set up condition statements that run only when the condition is true.
while/do while	Run a collection of statements while a condition statement is true.
trace	Display programming notes or variable values while testing a movie.
Math.random	Returns a random number less than or equal to 0 and less than 1.

Image source: [http://www.cse.fau.edu/~sam/course/ic\\_html/](http://www.cse.fau.edu/~sam/course/ic_html/)

# Publishing Flash files

- **Good Practice:** It is not necessary to transfer the .fla version of your Flash movie to a web server unless you want other users to be able to download the editable version of the movie.

JavaScript file for browser and Flash detection (.js)	→	 AC_RunActiveContent.js	9 KB	JScript Script File
		 Cash_reg-public_d-296.wav	66 KB	Wave Sound
Windows Executable (.exe)	→	 CeoAssistant.exe	2,420 KB	Application
Flash (.fla)	→	 CeoAssistant.fla	128 KB	Flash Document
HTML document to view movie in browser	→	 CeoAssistant.html	3 KB	HTML Document
Flash Player Movie (.swf)	→	 CeoAssistant.swf	30 KB	Flash Movie

- Example - (view source, show .swf object)

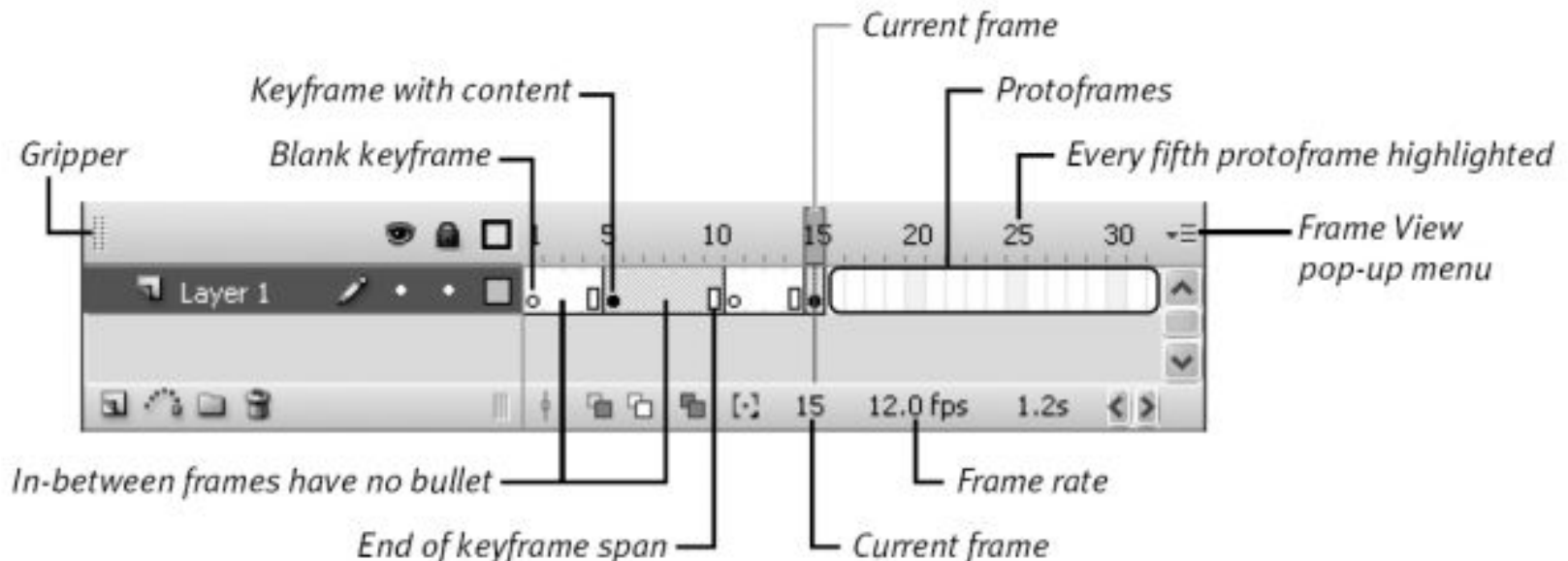
Image source: [http://www.cse.fau.edu/~sam/course/ic\\_html/](http://www.cse.fau.edu/~sam/course/ic_html/)

# Flash Animation Techniques

- Frame-by-frame
- Shape tweening
- Motion tweening
- Masking

# Frame-by-frame Animation

- Frame-by-frame - traditional animation used before the days of computers
  - The camera captures motion by snapping a picture every so often
  - Motion is achieved by showing drawings of elements at various stages of movements
  - Walt Disney animators (1930s – 1960s) had to create hundreds of images to achieve every movement of each character
- In Flash you can make frame-by-frame animations by placing different content in different frames. The frames that hold new content are called **keyframes** (Ulrich 2007).



# Flash Animation Techniques

- **Exercise 1 – shape tweens**
  - Creating animation using *shape tweens* ~ 30 minutes
  - Copy “Flash” folder from the X: drive to your IST 361 folder on your S: drive
  - Open “**shape-tweens.pdf**” file in **Ex-1** folder, and follow the instructions
- **Good Practice:** save each project with a meaningful name in its own folder. Creating a new folder for each movie helps keep projects organized.
  - *Backup your files!!*

# Flash Animation Techniques

- **Exercise 2 – motion tweens**
- Creating animation using *motion tweens* ~ 30 minutes
- Open “**motion-tweens.pdf**” file in **Ex-2** folder, and follow the instructions

# Flash Animation Techniques

- **Exercise 3 - masking**
- Creating and animating masks to add unique effects to a logo
- Open “**masking.pdf**” file in **Ex-3** folder, and follow the instructions

# Exercise 4

- Create an XHTML page in **ist361** folder, name it **flash1.html**
- Include all 3 Flash elements created in ex.1, 2, 3 on this page
- Arrange them in the order, or by visual appeal
- Link it to Assignments page in your Portfolio
  
- Please, do Not e-mail me this link. I have your portfolio page links and will check your progress.

# Reference:

Ulrich, Katherine. *Adobe Flash CS3 professional for Windows and Macintosh* Berkeley, Calif. 2007.

E-book, available through <http://library.albany.edu/>

- **Team 3** – meet me after class, you are presenting next week.
- Questions/Problems – see me during office hours.