

CGT 353 Lecture 4 Symbols, Instances, and Libraries

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Types and Purpose of Different Symbols

- Symbols are reusable components. They can be created by you or imported into Flash.
 - A Symbol can be reused throughout your movie or imported and used in other movies
 - A copy of a symbol used in the movie is called an **Instance**, which can have its own independent properties (like color, size, function, etc.) different from the original symbol
- Three types: 1) **graphic**, 2) **button**, and 3) **movie clip**
 - **Graphic symbols are reusable static images that are used mainly to create animations.** Any drawn vector/plain text/imported bitmap (photo), or combinations of these, can be converted into a single controllable object: as a graphic symbol. They have only one frame in their timeline
 - **Button symbols are used for timeline navigation** - They add interactivity to the movie and respond to mouse clicks, key press or rollovers/rollout, and other actions. You define the graphics associated with various button states (Up/Over/Down/Hid), and then assign actions to the instance of a button. They have 4 frames in their timeline - one each for the up, over and down states, and one to define the hit area of the button
 - **Movieclip symbols are reusable pieces of flash animation** - consisting of one or more graphic/button symbols - thus they are flash movies within your flash movie. They have their own non-restricted Timeline (any number of layers and frames - just like the main timeline) that plays independent of the main movie's Timeline. The best thing about using movieclips is that you can control them from actionscript - you can change their dimensions, position, color, alpha, and other properties and can even duplicate and delete them
- Each basically differ in their behavior, which can change at any time in the Library...

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Editing Symbols

- Double click a symbol to access its timeline and make changes to it.
- Can also use the symbol dropdown menu.
- Making changes in the symbol timeline will affect all instances



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Registration of Symbols

- The **registration point** of the main movie is the upper-left hand corner.
- You must physically move the content within a symbol to change the registration point, which will affect all instances of the symbol...
- **Note:** The RP is different from the origin of a clip

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Graphic Symbols

- Used primarily for static components....
- Graphic symbol timelines are synced to the main timeline.
- When the main timeline stops, the graphic timeline stops.
- Should not be used for clips that you need to loop.
- **Note:** Graphic symbols should be used sparingly. Movie clips are usually preferable.

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Button Symbols

- A symbol that behaves like a push-button.
- Contains special frame for up, over, down, and hit states.
- **Warning:** Do NOT use dynamic or input text fields in your buttons



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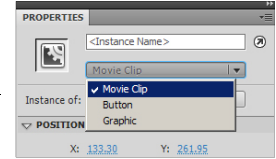
Movie Clip Symbols

- Movie clip timelines keep playing regardless of the main timeline.
- Can include all other times of symbols within them.
- Should use when you want a clip to keep playing.
- Need to either **a) include a stop() action inside it** or **b) directly tell the individual instance to stop via ActionScript**

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Redefining Symbols

- Can change a symbol's behavior in the property panel, effectively changing the type of symbol.
- This will not change the behavior of the symbol in the library, which can be problematic.
- Can also break apart a symbol instance, which will not affect the main library symbol or any other instances.



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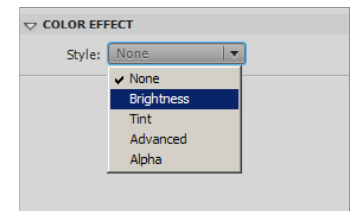
Swapping Symbols

- Can swap different symbols while still retaining the properties of a particular instance

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The Color of Symbols

- Allows you to apply a particular effect to a symbol, including:
 - Brightness
 - Tint
 - Alpha
 - Advanced



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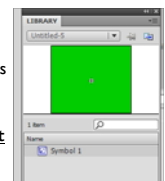
Compound or Nested Symbols: Precedence Rules

- **IMPORTANT: Compound or Nested Symbols: Precedence Rules**
- Can recombine symbols to achieve different functionalities.
- Putting a button into a graphic symbol disables the button.
- Putting a movie clip into a graphic will allow the animation to play, but any buttons or sounds within the movie will be disabled.
- You can put a graphic or movie clip into any of the button states.
- You can put a graphic or button into a movie clip.

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Libraries

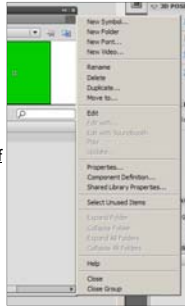
- Libraries store symbols and assign symbols their basic behaviors.
- Every Flash file that has symbols can be a library.
- All you have to do is open a particular fla file as a library, then drag and drop symbols either onto the stage or into the current file's library.
- Remember that a **symbol's registration point is dependant on where you place it on the stage.**
- Also remember that the symbols in the library control the basic parameters of all instances of that symbol.



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The Library Panel

- Use the buttons on the right of the panel to toggle its appearance.
- **File** menu has a number of functions that you can perform.
- Remember that once you have deleted a symbol, there is no way to undo it.
- Deleting a symbol will cause all instances of the symbol to disappear.
- Check the **usage count** before deleting a symbol.
- Can now view **multiple libraries** in a single panel.
- All library items are NOT exported with .swf export.



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Common Libraries

- Useful for creating basic movies....
- Used to have a number of graphics and movie clips in them

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Shared Runtime Libraries

- By setting the **linkage properties** of items in the library, you can share those assets with other swfs
- Can use movie clips, fonts, etc...
- The advantage of doing this is to minimize the amount of file size in "primary" swf's

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Procedure

- Create your fla that will contain the majority of your assets
- Right click each symbol in the library and choose "Linkage"
- For Linkage, select "Import For Runtime Sharing" to link to the asset in the source document.
- Enter an identifier for the symbol, bitmap, or sound that is identical to the identifier used for the symbol in the source document. Do not include spaces.



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Procedures (cont.)

- Enter the URL where the SWF source file containing the shared asset is posted, and click OK.
- In the destination document, do one of the following:
 - Select File > Open.
 - Select File > Import > Open External Library.
 - Select the source document and click Open.
- Drag the shared asset from the source document Library panel into the Library panel or onto the Stage in the destination document.

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Assigning Linkage Identifier to a Library Item

- Select the font item in the Library panel.
- Do one of the following:
 - Select Linkage from the Library Panel menu.
 - Right-click (Windows) or Control-click (Macintosh) the font symbol name in the Library panel, and select Linkage.
- Under Linkage, select Export for Runtime Sharing.
- In the Identifier text field, enter a string to identify the font item.
- In the URL text field, enter the URL of the SWF file that contains the font item

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