



Internet Computing

# **Advanced Multimedia Development (AMMD)**



**2004**



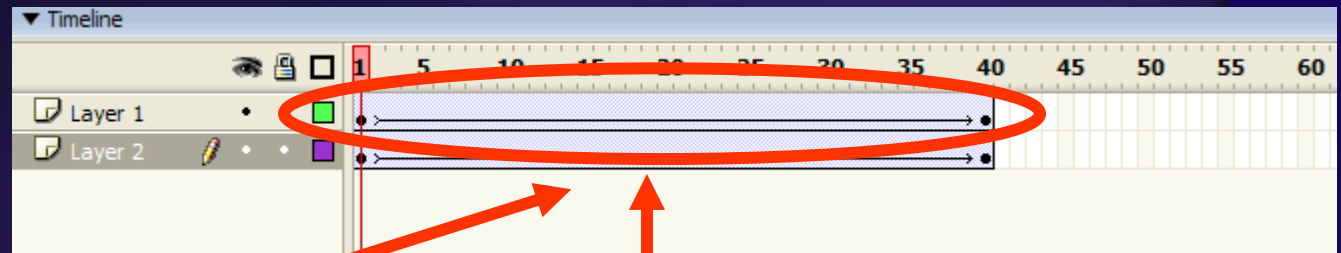
# Flash Structure

Internet Computing

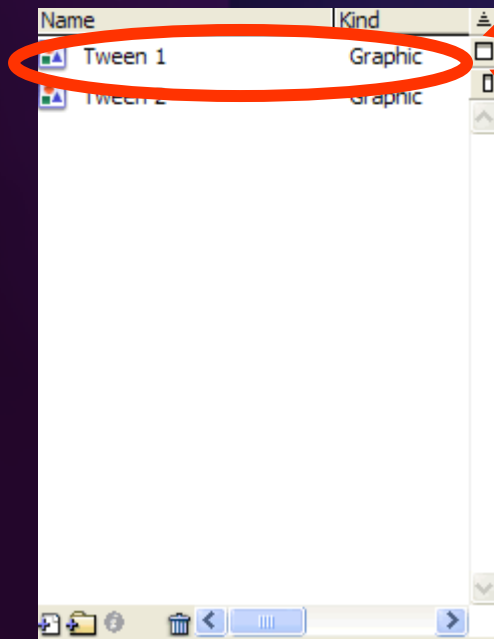
- Flash Intro – Last Week
- Drawing in Macromedia Flash
- Working with Symbols and Interactivity
- Creating Animation
- Creating Special Effects
- Scenes



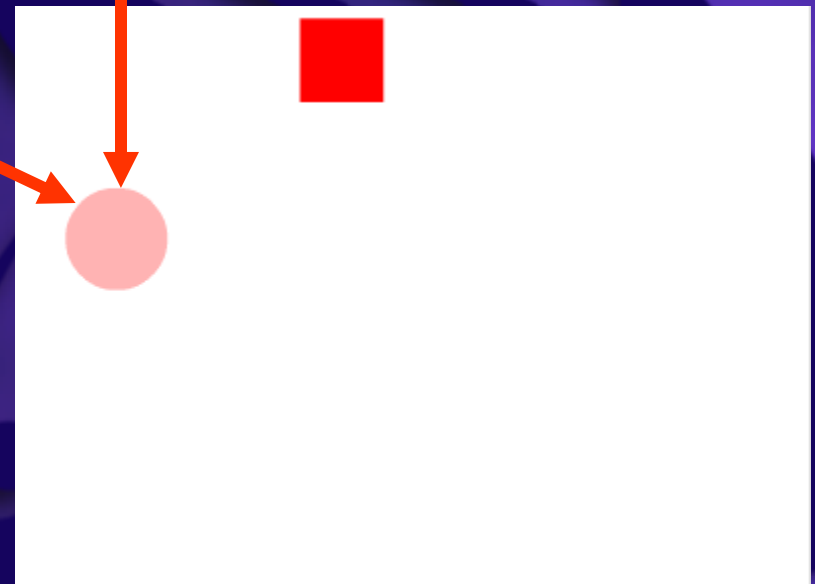
# Intro to Flash MX2004



Timeline



Panels – Library



Stage



# Drawing in Flash

Compelling Feature : Create Vector Graphics

Vector Graphics represent the images using lines and curves

⇒ We can re-size without losing image quality

Vector images are smaller than bitmap images

⇒ Good for web site

Vector images in Flash

⇒ Have a Stroke, a fill or both

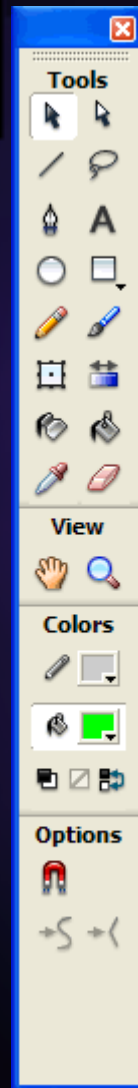


# Drawing in Flash

## Drawing Tools

Tools + View + Colors + Options

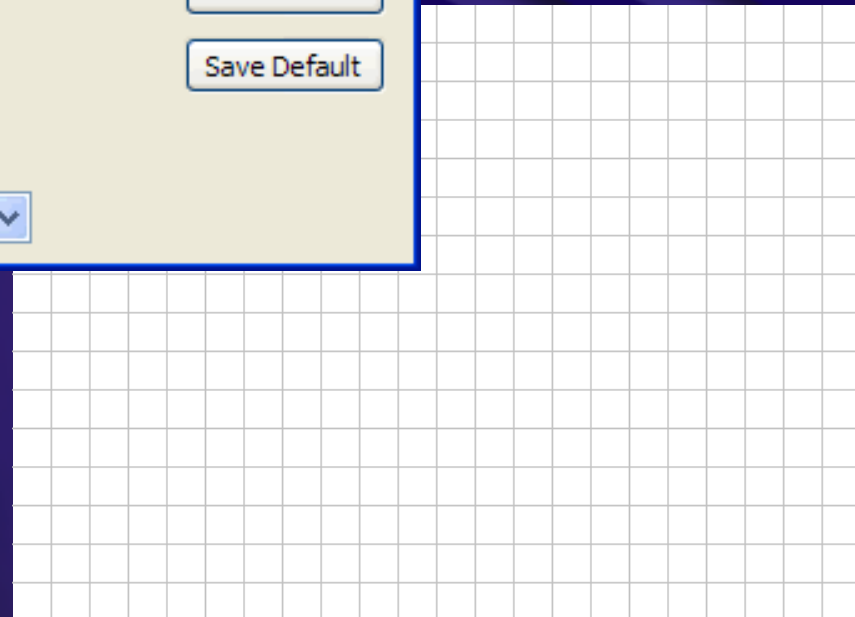
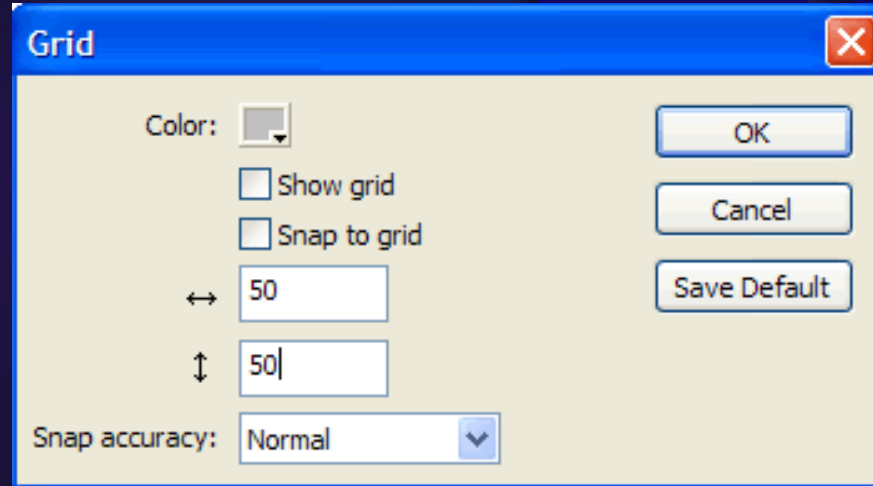
To use Grid to help formatting





# Drawing in Flash

We can use the Grid Panel  
= to help in formatting





# Working with Symbols

For Web Use..

We can create Flash movies with small file size

To keep file size small..

Create reusable graphics, buttons and movie clips

Original drawing = symbol

Copied drawings = instances

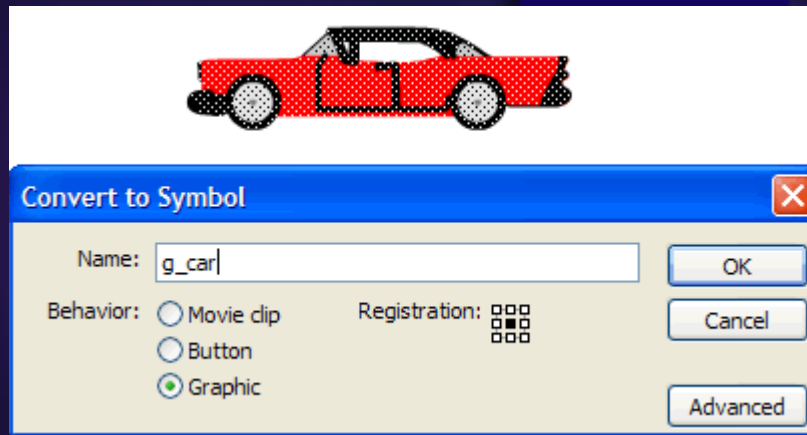
You can change properties (color and shape) for one instance





# Working with Symbols

There are 3 categories of symbols  
⇒ graphics, buttons and movie clips



Graphics = reuse a single image

Buttons = create buttons for interactivity

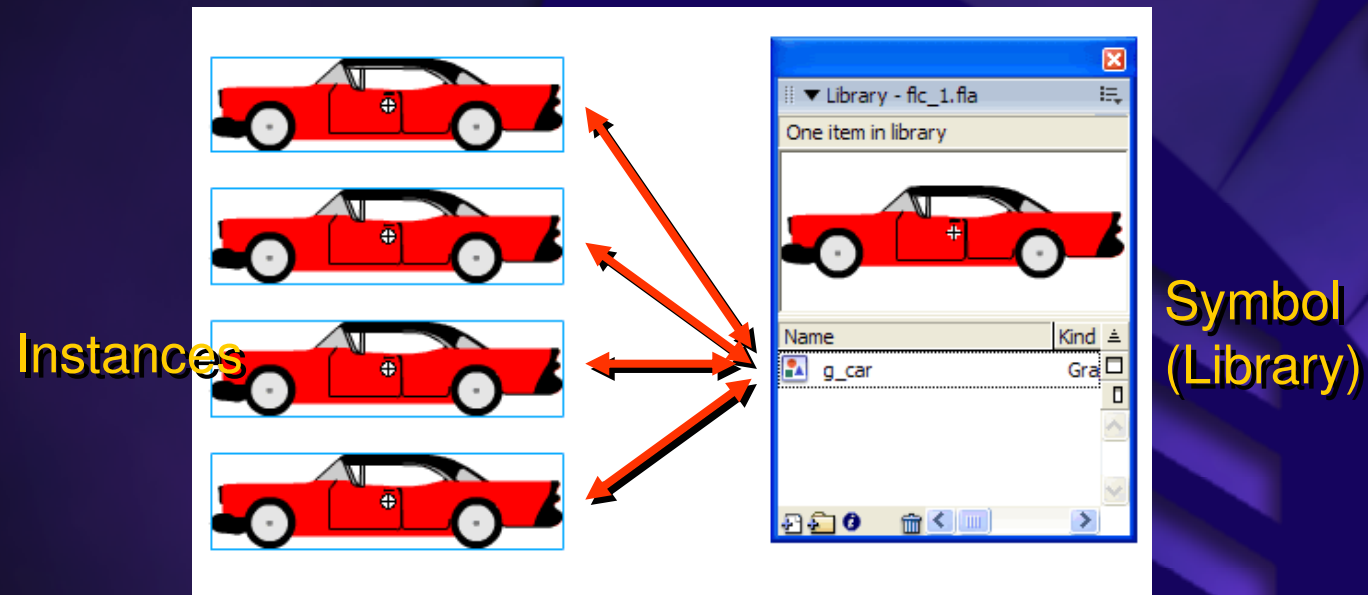
Movie clip symbol = create a movie within a movie





# Working with Symbols

You can have as many instances as needed



- You can edit each one instance.
- Limitations = Cannot select a part of an instance
- Break Apart (to edit a part)  
= Break link between instance and symbol



# Working with Interactivity

Button symbols are used to provide interactivity

When you click a button

⇒ An action occurs

Starting an animation

Jumping to another frame on timeline

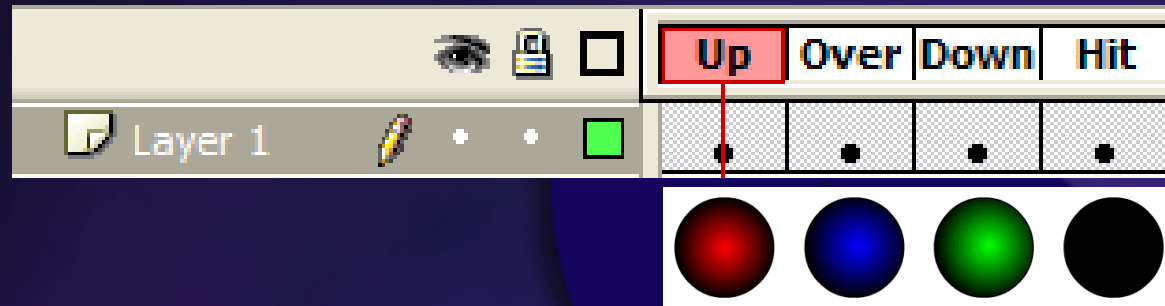
Any object can be made into buttons

Buttons Have four states

⇒ Up, Over, Down and Hit



# Working with Interactivity



Up – Mouse pointer is not over the button

Over – Mouse pointer is over the button

Down – How button appears after users click on it

Hit – Define area of the screen that will respond to the click



# Working with Interactivity

## Basic Action

Allow user to start, stop movie or go to a frame

When user clicks on button = Action Occurs  
(ActionScript)

Basic ActionScript = An event

```
On (release) {gotoAndPlay (10);}
```

Easy way to use ActionScript = Actions Panel



# Creating Animation

Animation can be an important part of your website

Animation is an illusion  
It is made up of a series of still images

Our eyes capture and hold an image for 0.1 second before processing another image

Persistence of vision  
= We perceive a series of rapidly displayed still images as a single, moving image





# Creating Animation

Frame rate 10 to 12 (fps)  
= smooth computer-based animation  
Flash uses a default frame rate of 12 fps

Lower frame rate = jerky image  
Higher frame rate = blurred image

We want to create animations that

- Move
- Rotate
- Change size, shape, color
- Have special effects (zooming, fading)

Frame-by-Frame & Tweened Animation



# Frame-by-Frame Animation

## Frame-by-Frame Animation

It is created by specifying the object that is to appear in each frame.



Useful when we want to change individual parts of an image

Keyframes are critical

= Keyframes signify a change in object



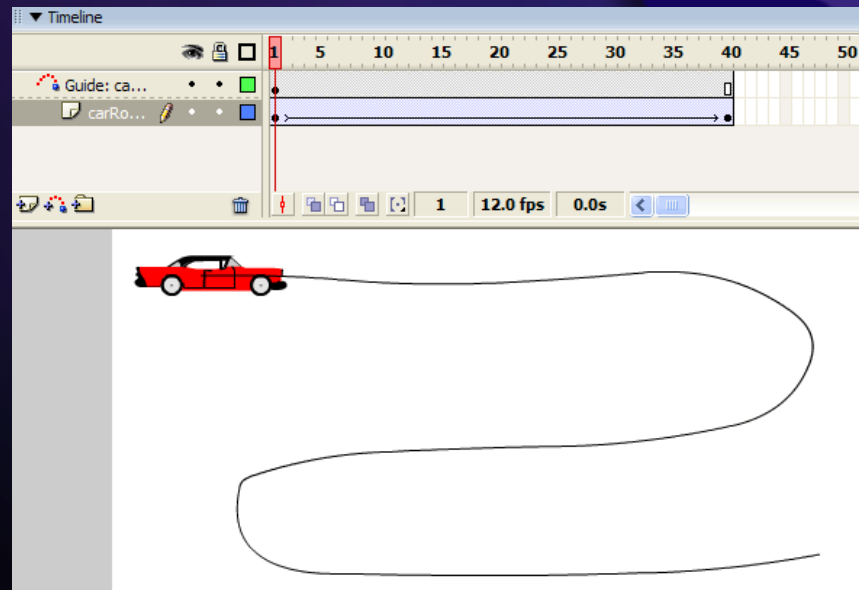


# Tweened Animation

## Tweened Animation

= Create start and end frames, Flash can fill in the in-between frames (tweening).

We can even create a path to guide the object.  
(Motion Guide)





# Creating Special Effects

One type of special effect is “morph”  
= Making one shape appear to change to another shape over time.



We can use shape hints to improve effect



# Add Sound

Sounds are often the only effect way to convey an idea, elicit an emotion...

- Import a sound file (library)
- Create a new layer
- Select frame, drag sound symbol to stage

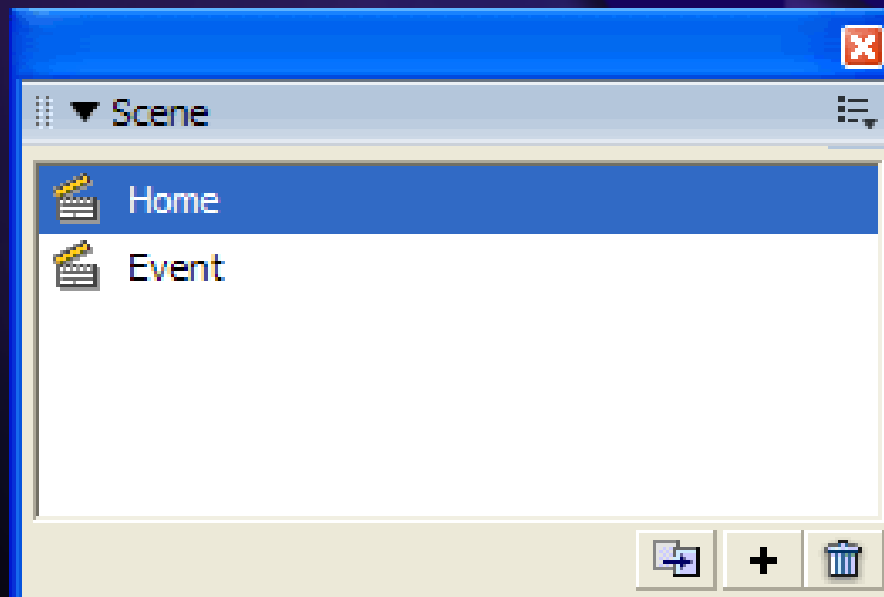




# Add Scenes

Movies can be complex and large (long).

One way to organize the movie = Scenes  
Scenes have their own timeline and can be linked to other scenes





# Conclusion

We covered the basic Flash structure