

## Further Flash CS5 Discussion

### Audience and Project Requirements

#### **Identify the purpose, audience, and audience needs for rich media content**

Before you start any rich media project, a little analysis into your client and target audience needs will determine the project's objectives. These objectives are essential for shaping the right design, finding appropriate solutions, and keeping the project on track down the line. Be sure to document your findings and have them accessible to anyone working on the project because sometimes the most obvious and important objectives are most easily overlooked in hustle of the project pipeline. You should discuss the following questions with your client:

- 1. What is the client's purpose of the project?** Evaluate the client's goals for the project to see how rich interactive content can best serve their purposes. Will the content be educational, entertaining or informational? What kinds of media formats do they wish to include? What functionality will be needed to accomplish their desired outcomes? What level of interactivity do they want to offer their users?
- 2. Who is the target audience?** Defining which demographics make up the target audience is important for determining how the rich media content should be communicated. Key demographics often include but are not limited to age group, gender, computer literacy, education, wealth bracket and geographical location. The demographics' relevance will also vary from project to project.
- 3. What are the audience's needs?** Imagine yourself in your audience's shoes: what are their expectations and how can you best deliver that experience to them? Factors such as usability, level of engagement, accessibility, user's time and what technology the audience will be using are all examples of how their needs will have to be addressed to shape the best experience for them.

#### **Identify rich media content that is relevant to the purpose of the media in which it will be used**

Having a clear idea of which platform or the types of devices your content will be delivered across will have a major impact on the design and development phases of the project. You've probably noticed how mobile apps have such specific

functionality, since their screen size is so small they limit their functionality to make it easier to navigate. Based on whether your project is a website, desktop application, mobile/tablet app or kiosk, the content will have to be organized and delivered differently. Examples of the types of considerations you'll encounter are screen resolution, touch screen versus mouse interactivity, Internet bandwidth, Operating System, simple versus complex navigation/functionality, etc.

## **Identify criteria for determining whether content is relevant to the purpose.**

It's tempting when working with rich media content to pull out all the tricks to impress and engage your audience. However engaging your audience is more dependent on not wasting their time or distracting them with too much with superfluous information or bells and whistles. To accomplish this, evaluate all content to make sure it has meaningful value to the target audience and that it is easy for them to understand. Better to keep things simple, short and to the point rather than overwhelm them, possibly confuse them and lose their interest all together.

## **Accessible Rich Media Content**

### **Understand options for producing accessible rich media content**

#### **Accessibility in the target audience**

When creating rich media content it is crucial to consider all types of people who will make up the target audience. Many people with visual, auditory, mobility and other disabilities have difficulties accessing various aspects of content and use assistive technology to aid them in navigating the websites and applications. By making content accessible you are helping your client reach more people and ensures that no member of the target audience has to endure additional frustration or is left out of the experience.

#### **Screen readers and the Accessibility Panel**

Flash Professional has made it easier for you to create accessible rich media content. By using the Accessibility Panel (found under the Window > Other Panels) you can make content readily available for screen readers to interpret for people with visual impairment. Screen reader software such as JAWS, Windows-Eye and Yahoo Asteroid Toolkit read the content on web pages out loud for a vision impaired user and that person can also use keyboard shortcuts and the "tab" key to browse screen information more quickly and selectively.

When interpreting a Flash movie the screen reader will read any text in the SWF and will look for alternative text to read on buttons, images and animations. Every object can be given a Name, a Description and a Tab Index number in the Accessibility Panel, which a screen reader would read off in that assigned order

according to the object's Tab Index. This is useful for all buttons, images and animations that convey important meaning to a user. For objects that wouldn't have relevant meaning to someone using assistive technology, these objects can be hidden from screen readers by unchecking the "Make object accessible" checkbox on the Accessibility Panel.

### **Handling animations and complex rich media**

For animations you should assess the content to determine how they should be presented to screen readers. Animations trick screen readers into interpreting any movement as a new page being displayed so it starts reading the content over again from the top. You can imagine how frustrating this could be for someone trying to use a screen reader, so you should either hide the animation completely or hide just the movement which allows you to still include a text equivalent for the animation by checking the "Make object accessible" checkbox and unchecking "Make child objects accessible". For animations that could add to the experience of someone using a screen reader simply allowing for some control over the playback could allow them to experience the content more interactively. For other objects that have dynamic states such as toggle buttons you should update the screen reader with the updated functionality of the button. As the complexity of the Flash movie increases it becomes harder for people using screen readers to navigate, so a good rule of thumb is to include a brief summary of information that can be accessed on each page and create good descriptions for navigation buttons.

### **Other accessibility considerations**

There are some easy steps you can take to making your content more accessible early on in the design stage. Consider different types of color vision deficiency when selecting your color scheme and never rely on color alone to express information. Also many elderly people have trouble reading small font sizes so keeping the fonts at a more legible size, or having options to make the text appear larger is a good idea. For the visually impaired you should always allow for user control of audio and video, building on this you can increase accessibility by giving keyboard shortcuts to playback controls. For people who are deaf or hard of hearing you can easily add closed captioning at cue points in your Flash Video or provide the text equivalent of audio clips.

Through the development process and certainly before your project launches you should validate for accessibility by navigating the content with different screen readers and by having people with diverse impairments perform usability tests. By taking this measure you ensure that your efforts result in rich media content that is thoroughly accessible.

## **Copyrights**

### **Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material)**

#### **First review the following terms:**

**Intellectual Property** – can be any original work in the form of a design, text, photo, video, sound, logo, name or innovation that is used commercially or as a form of expression.

**Copyrighted** – the copyright law protects the ownership of intellectual property once it has been created in a fixed medium with or without applying for a federal copyright. In order to reuse or reproduce copyrighted property that is not yours written permission must be obtained from the creator or owner. Many cases of obtaining permission will also include paying royalties. Whenever you see “copyright” or the © symbol, author name and/or published date that work falls under copyright protection. It is safe to assume any work you see, hear or read is copyrighted unless it comes with a statement that that you may reproduce it without permission from the author/owner.

**Fair Use Doctrine** – this creates a loophole in the copyright law whereby copyrighted material can be reused in part as long as it falls under the guidelines of “fair use”. These “fair use” guidelines loosely stand to help the flow of information to the public as long as the usage is not at too great of a conflict to the original work. Usually educational purposes fall under “fair use”.

**Derivative Work** - is a new product that includes an aspect of a previously copyrighted work.

**Citing online copyrighted material:**

When reusing a copyrighted work under the Fair Use Doctrine you should always cite the original material. For video, audio, text, images and websites found online you should always cite the creator(s), the title, the creation date, the URL and a brief description may also be necessary.

## **Project Management**

### **Understand project management tasks and responsibilities**

#### **The Project Plan**

The Project Plan provides the framework for creating a strategized process from start to finish. It includes the project scope: which details specifications, internal due dates, milestones for project deliverables that the client would then approve, and final deadlines. Possible deliverables may be sketches, wireframes, mockup designs, interaction/animation storyboards, sitemap structure and prototypes. The Project Plan details resource allocation, which indicates which tasks go to which team members.

Scope creep happens to just about every large-scale project, it is the expanding of work beyond the original Project Plan. The effects of scope creep can have a devastating impact on everyone’s time and the client’s expectations. Therefore the Project Plan should allow for some shifting of internal due dates so that tasks are not held up by other tasks taking too long. It is essential to examine the

project structure and break it down into detailed tasks and evaluate which tasks may encounter complications. As always, timely communication between team members and with the client is a key factor in the project's success.

### **The Phases of the Project Plan are:**

**Analysis and Planning** - is the first step where client goals and target audience considerations are established and initial project planning begins.

**Design** - plans start to take visual shape in the form of style guides, color schemes, wireframes, graphics and design mockups.

**Building/development** - prototypes are built that make up the interactivity and functionality for the rich media content. Graphics are also integrated.

**Testing** - quality assurance testing is performed to uncover any bugs, usability issues or other possible errors and is reported back to the design/development team for revision.

**Implementation/Launch** – the project is in its final stage, having all bugs from testing squashed and with the client's approval to launch it is ready to "go live" and be made available to the public.

## **Rich Media Design Elements**

### **Benefits of Consistency**

With the wide range of creative freedom Flash extends to designers and developers, it can be tempting to try to impress a client with a unique approach they've never seen before. However the most important aspect of an interface is that it functions well for the target audience. Design conventions are good because they create consistency that users can easily follow based on their past experiences. Links that look like buttons, identical navigation across all pages and icons that clue the user into the content are a few helpful design conventions. Sticking to design conventions and keeping the end user in mind will help you to avoid re-inventing the wheel.

### **Web-Safe Colors**

With the availability of so many different computers and browsers, both old and new, there can be a wide variance of how designs will display on each screen. To tame the effects of this, a number of web-safe colors were adopted and display more consistently regardless of the computer setup. In Flash you have the freedom to pick any color but for important design elements that you want to display reliably you should use web-safe colors.

### **Identify criteria for deciding if content should be implemented by using rich media**

Flash's powerful range of animation and development tools combined with some creative juice can manifest rich media solutions for the obstacles of keeping the target audience's interest engaged. Creating informative animation and transitions can illustrate information, progression and visual hierarchy. Audio and video files can be easily implemented to display with consistent skins and controls across browsers and Operating Systems. Screen real estate can be saved from content overload by organizing navigation into dropdown menus or layering information into one dynamic area of the screen.

### **Benefits of authoring FLV files for Adobe AIR**

Authoring FLV files for Adobe AIR saves you the hassle of having to work with multiple video file formats for various computer platforms.

### **Benefits of including metadata into SWFs**

Adding metadata to SWFs helps search engines target your website pages and can help you track where and how your website/application is used.

### **Principles of Graphic Design**

To help give your designs strong visual appeal and make them more effective in communicating to your audience, there are some basic design guidelines and principles you can follow. A key aspect in effective communication design is information chunking, where you break up your content into more manageable pieces of information and organize them in a way that makes intuitive sense to the viewer.

Spacing these elements in close proximity gives them visual unity, which in turn lets your audience know they are related. Keeping ample space between elements, as well as adding lines between them helps to create a sense of separateness.

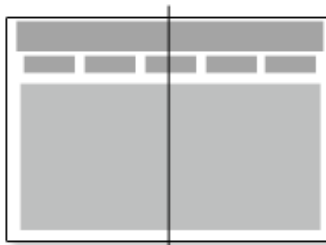
Most people only skim the content on a page until they've found what they're looking for. There are a few ways you can direct your audience's attention and put emphasis on certain elements that you wish for them to see first. Eye tracking studies have shown that people's attention go from big to small, dark to light and saturated to de-saturated colors. Content that moves such as advertising banners draw attention, so use movement wisely in your design.

Site-wide consistency is a proven usability tactic you can see in almost all effective websites. All of the webpages have the header, navigation and other design elements positioned identically throughout the website, while only the page content changes. The one page that can have some variation to this rule is the landing page or the home page, as it is first page your audience will see and can be given a special visual treatment appearance.

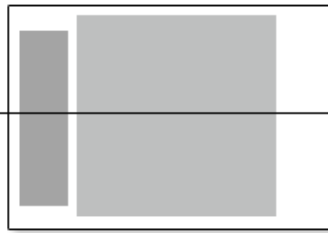
### **Symmetry and balance**

There are various ways you can lay out content to affect the balance on screen. Symmetrical layouts are frequently used in website design, because aligning content symmetrically across a plane will give your design an eye pleasing balance. Horizontal symmetry is the most popular in website design because it is the symmetry we relate to most as we see it in our own bodies, as we are identical on both sides. Vertical symmetry has it's place in website design too where the top of the page is balanced by a mirroring of the bottom. Of course, the mirroring is rarely identical but you can still play with symmetrical effects to create a sense of balance. Some less standard symmetrical layouts you might experiment with is radial symmetry, which mirrors out from the center and diagonal symmetry, which mirrors across a diagonal plane. Asymmetrical layouts can also be used to create an uneven look, which can be interesting to view as well.

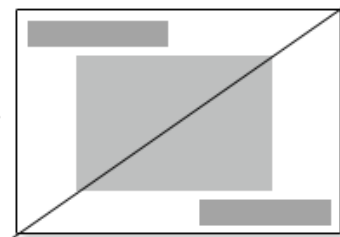
**See examples of the types of symmetry below:**



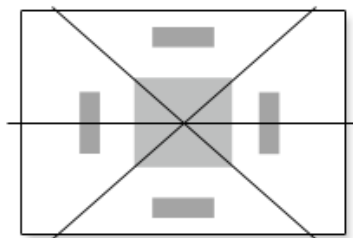
Horizontal Symmetry



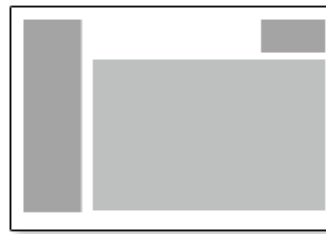
Vertical Symmetry



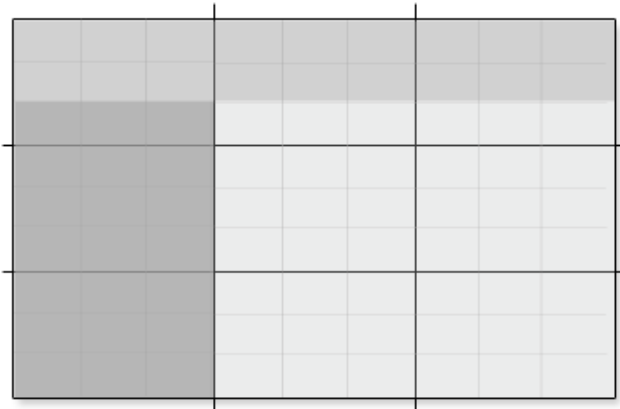
Diagonal Symmetry



Radial Symmetry



Asymmetry



The Rule of Thirds

The Rule of Thirds is a simplification of the Golden Ratio or Divine Proportion used by artists of the Renaissance. With the rule of thirds you can achieve a visually appealing balance that mimics the organic nature of the Golden Ratio by dividing your layout into three equal parts. This “dividing by three” process can be repeated until you have a grid to work with and then you can place your content to fill the squares of the grid.

### **Common design mistakes**

Probably one of the most common design mistakes is trying to do too much, resulting in overdoing the design. When making design decisions it is best to remember that less is more and to keep it simple. A good rule to keep in mind is “Perfection is achieved not when there is nothing more to add, but rather when there is nothing more to take away.” – Antoine de Saint-Exupery. Having too much textual content crammed into one page, is like alerting your reader “this is probably going to be boring.” It won’t hurt to break up the content and add relevant images to give more substance to the content. On the other hand also think about whether the graphics are truly needed, you don’t want a picture’s purpose to be just a space filler. The same can be said for using too many colors, especially too many vibrant colors which all call for attention at once. Rich media content can easily become overwhelming, which is why completely blank areas on your page also known as White Space help to create a less overwhelming page. (Although White Space doesn’t have to be white.) Websites that don’t have site-wide consistency don’t look cohesive across all pages and can become confusing for your audience.

### **Text formatting guidelines**

Finding the right font to use with your design can be quite a process so a little background knowledge about text formatting can help you narrow down your search. The best fonts to use in rich media content are Screen Fonts, which are fonts specifically designed to display well on computer screens. Since computer screens have less resolution than printers it is better to go with a simpler font that is easier for the screen to display, especially for the smaller text that makes up the body of your content. Serif fonts like *Times New Roman* are commonly

used for print and are more decorative than sans-serif fonts like *Arial* or *Verdana*, which are better Screen Fonts. (Sans means "without" in French.) It is important to use appropriate font sizes for readability, which should be determined by the target audience, different monitor displays, legibility of the font and other restrictions of the project. Based on the average factors a safe minimal font size that is legible is 12pt. It is also imperative to go with font colors that contrast well against the background color but do not clash against it. Beware of bad font color decisions like bright blue text on a black background (which contrasts so much it appears to move when you read it) or orange text on a yellow background (which probably won't be enough contrast on most monitors.)

Aside from bolding, italicizing or underlining text there are other formatting options to improve the reading experience and make text more flexible within its allotted space. Adjusting the space between characters is called kerning and line spacing can also be adjusted to give more or less room between lines of text. Margins and indenting can be used to move text in from a graphic or in from the alignment of other paragraphs of text. All of these options can improve the organization of the content and improve the reading experience.

### **Some Flash specific settings that are important for the legibility of your text are the anti-alias options:**

**Anti-alias for readability** - is best for making small static text legible because it renders the fonts smoother.

**Anti-alias for animation** - will create a smoother animation because it ignores kerning and spacing formatting.

**Custom Anti-alias** - let's you modify the font's thickness and sharpness.

**Bitmap text - no Anti-alias** - will create a smaller SWF file by not applying any smoothing to the font's outline.

**Use device fonts** - will create a smaller SWF file by using the fonts that are available on the end user's computer. Your font selections will be very limited by this option.

You will also want to select the option in the Properties window for a text box to be static, dynamic, or input text. The static option is for text which will not change throughout the course of the movie. Dynamic text is used for a text box that can change through code/user interaction. Input text allows for the user to type into the text field which is useful in forms.

### **Creating Patterns from Symbols**

You can achieve some pretty nifty effects with the Spray Brush Tool and the Art Deco Tool. With both tools you can set a symbol to be the repeating element; the Spray Brush Tool will repeat the symbol in a random effect whereas the Art Deco Tool will allow you to create more symmetrical patterns. With the Art Deco

Tool if you choose the Symmetry Brush as the Drawing Effect (in the Properties Window) Flash will create the corresponding symmetry across a line or point based on where you brush in instances of the symbol. With Grid Fill as the Drawing Effect you can set up a symbol to be tiled across the Stage.

### **Using storyboards to produce rich media elements**

Storyboards are useful for drafting a plan for your Flash animations and even for planning how a complex interaction will work. Just like the storyboards used for animated shows and movies you create a sequence of drawings of the key moments and each drawing has text below describing what's happening. Important things to include in a rich media storyboard are any times human interactions take place, any changes in button states, transitions, movements, sounds, where links go and the layout of the elements. Storyboards are a helpful tool because they make you visualize, think through and plan out the details so problems can be worked out earlier in the process when it's easy to make changes. They also help to explain the animation or interaction to other team members, making it easier to collaborate on a project.

## **Understanding the Adobe Flash CS5 Interface**

### **The Property Inspector Window**

Much of the control you have over your objects on the Stage are editable with the Property Inspector Window (under Window > Properties). It contains all the text-formatting options, tween properties, filters options and adding sounds to a frame. It also gives you control over editing a shape's stroke, fill and symbol properties such as positioning, size and alpha.

### **The Timeline Window**

The Timeline Window gives you control over your layers, tweens and timing. The black dots under the eyeball icon allow you to turn a layer invisible. The black dots under the lock icon let you lock a layer so its contents can no longer be editable on the Stage. Clicking the frames under the black frame icon allow you see just the outline of that layer's objects on the Stage in a single color that matches that layer's frame color. All of the numbers along the top of the timeline represent the frames' numbers. The Playhead (the red rectangle with the red line beneath it) can be dragged along the timeline to preview tweens or just to see what's on a frame. You can control Playback in the timeline from the Control drop down menu or you can also press the Enter or the Return key to start your animation playing. The icons along the bottom below the frames are your onion skinning tools, they allow you to see an animation's progress by having a ghosted preview of each previous frame you've included in the onion skinning. The previews can also be Onion Skin Outlines, which will just show the object's outlines, which can make it easier to see all of them at once.

## **Flash Rulers, Guides and Snapping**

Setting up guides and rulers are useful for making sure elements in your design align properly. Rulers along the top and left side of the Stage can be made visible/invisible by going to View > Rulers. To change the Rulers to Pixels, Inches or Centimeters you'll need to go to Modify > Documents and change the Ruler Settings. To create guides you must have the rulers turned on and you can either drag out a horizontal guide out from the top ruler or vertical guides can be dragged out from the left ruler. You can lock the guides into place, so you don't accidentally misplace them.

Guides are especially useful when you turn on snapping options (under View > Snapping). Guide properties can be changed under View > Guides > Edit Guides. There you can change their line color to not blend in with the colors in your design and you can also adjust the distance of how far away an object can be for snapping to occur.

**Snap to Guide** - will line up the object you have moved on the Stage with the guides you have set up.

**Snap to Grid** - will line up the object you have moved with the Grid if you have it visible.

**Snap to Pixels** - will line up the object you have moved to precise pixels.

**Snap to Objects** - will line up the edges of the object you have moved to the edges of other objects on the Stage.

**Snap Align** - will line up an object at a preset distance from other objects on the Stage.

## **Creating and editing Motion Paths**

After creating a tween you can edit the Motion Path on the stage by dragging the tweened MovieClip's position or by clicking on the MovieClip with the Subselection tool and dragging the Bezier control points to reshape the Motion Path itself.

## **Adding Video to Your Movie**

The most recommended ways to deploy video in your Flash movie is through progressive download or streaming. Streaming is best for when lots of viewers will be watching the videos at the same time it allows viewers to watch the video as it is still in the progress of downloading. These videos will have to be stored on a streaming service such as Flash Media Server. For progressive download, the movie gets linked to externally and then downloads on to the user's computer, gets cached and played. The other method is the Embed FLV in SWF and Play in Timeline Option in the Import Video Wizard. This option is not recommended unless your video is very small and short (under one minute) and

does not contain any audio because the video and audio can easily become desynchronized.

### **XFL and XMP File Types**

With Flash CS5 comes XFL, the new FLA file format which is a zipped folder of XML based files which can be unzipped and expose all the information for your movie. This information can be edited, allowing you to make faster updates and make global changes to your movie.

XMP (Extensible Metadata Platform) allows you to add extended metadata to your FLA files and subsequent publishes. You can edit the metadata information like, document title, author, keywords and description by going to File > File Info.

### **Best Practices for Minimizing File Size**

Creating the smallest possible movie file size is important for delivering content quickly over the Internet. Here are some tips for keeping your file sizes small: Use Flash's drawing API to create the graphics, you'll be surprised by how graphics that were created in Photoshop or Illustrator can be recreated by using Flash's graphic tools and a little out of the box creative thinking. Create symbols out of your objects and reuse them. Don't overcomplicate shape tweens. Save images out for the web prior to importing them into Flash. Break apart graphics in Flash and link externally to images and videos.

## **Building Rich Media Elements by Using Flash CS5**

### **Which tools can you use to for selection?**



Selection, Subselection, Lasso, Free Transform

### **Which tools can you use to modify shapes?**



Selection, Eraser, Pen, Paint Bucket, Free Transform

### **What are some ways you can modifying graphics?**

**Break Apart** - Select the graphic and go to Modify > Break Apart. Breaking apart Flash graphics or a bitmap image divides the colors of the graphic into sections and is useful for when you would like to edit those color blocks. You can modify a broken apart graphic by using the magic wand tool (under the Lasso Tool) to select certain areas, use the Eyedropper Tool and Fill Tool to add new colors.

**Trace Bitmap** – Select the graphic and go to Modify > Bitmap > Trace Bitmap. Tracing your bitmap can drastically reduce the size of your Flash movie because it conjoins the pixels into like-colored vector segments. You can adjust options in the Trace Bitmap window such as the Color Threshold which determines how closely Flash will try to match the colors. (The smaller the number the closer the match.) Decreasing the number of the Minimum area will also create a closer match because it will also stay truer to the original pixel sizes. You can also change the Corner threshold and curve depending on how tight you would like your corners and curves to be.

**Swap Bitmap** – Modify > Bitmap Swap Bitmap allows you to switch a graphic on the Stage with another graphic from the library.

### **Text Layout Framework (TLF)**

By selecting the TLF text option in your Properties window, you'll have superior control over your text content. For starters TLF encompasses over 30 script written languages with support for vertical text and right to left text. It has additional character controls such as kerning, leading, highlight color, digit case, digit width, ligatures, underline superscript and subscript to name a few. It also includes more paragraph options including the very useful multi-column text flow and text flow across linked containers. Other new paragraph styling options include margins, last line justification, indents, paragraph spacing, support for tabs, hypertext and baseline shift. There's also embedded font support and anti-aliasing for CFF fonts and the ability to style text from an external XML file.

### **Inverse Kinematics using the Bone Tool**

A cool feature that came out with Flash CS4 is inverse kinematics, which creates bending effects by calculating how pieces of the whole would move if in the physical world. This is useful for character animation and mimicking organic movements like arms and legs bending, or making a ribbon appear to blow in the wind.

To start you want to apply a bone chain to a symbol, a series of symbols, line, shape or brush stroke. You do this by click and dragging a few bones across the areas of the element you want to manipulate; this will create an armature layer in your timeline. You can then create a tween by creating a keyframe and then repositioning the links of the bones. You can add easing effects to your tweens and adjust how much spring there is in the movement. By decreasing the Strength of the spring you make it more bendable, and by decreasing the Dampening of the spring it will spring for a longer duration.

### **ActionScript Coding Basics**

**Some basic concepts in Object Oriented Programming:**

**Variable** – variables are where values are stored. In ActionScript 3.0 you must declare your variable to announce what kind of value it will store based on whether it is going to hold a number, string, Boolean, etc.

**Function** - Flash has built-in functions and there are also the functions you create yourself. Functions are blocks of code that accomplish a purpose and can be called multiple times from any other code in the document.

**Class** – Classes are the templates that define attributes, properties of objects and actions of methods.

**Object** – An object is an instance created from a Class, it is where you will run methods and send and receive data.

**Method** – Methods are functions that have been defined by a Class and give action to an Object.

**Property** – Properties are used all throughout Flash. In MovieClips they are the x,y coordinates, width, height and alpha. You can manipulate the properties of all sorts of things such as tweens, videos and sounds and you can create your own property definitions in Classes.

The simplest of ActionScript functions are stop(), gotoAndPlay() and gotoAndStop(). With these you direct the playback within the timeline. If you have an animation that you don't want to loop you insert the stop() code into the actions window on the last frame of the animation, which causes the playhead to stay paused on that frame. For gotoAndPlay() you can direct the playhead to jump to another scene and/or frame and it will continue playing whereas gotoAndStop() would go to the other frame and pause there. Other useful actions Flash has built in are navigateToURL() and SoundMixer.stopAll(). navigateToURL() is used to link to the URL specified in the URLRequest object. The SoundMixer class contains properties and methods to control sounds in your movie, one useful method is the stopAll() method which can be used to pause all sounds which are currently playing. All of Flash's built-in functions help you utilize the rich media tools available in Flash and handle events like responding to mouse clicks or starting an action after a sound clip finishes playing.

## **Evaluating Rich Media Elements by Using Flash CS5**

### **Spell Check Your Document**

Select Text > Check Spelling to start spell checking your document. You can edit Flash's Check Spelling options by clicking Text > Spelling Setup. There you can choose from a myriad of options to check certain types of text throughout the document such as ActionScript strings, symbol names, current scene only. You can also select which dictionary language is used and you can add your own words to your personal dictionary. There are also plenty of options to customize how Check Spelling works, like ignoring internet/file addresses, ignore first letter capped words and finding duplicate words.

## **Check your Flash document against your Storyboard**

When the pieces of your animation or interaction start to come together you should test them against your Storyboard. Have your storyboard handy either on screen or printed out. Run your Flash document either in the timeline or you can do Control > Test Movie, follow along with your storyboard to make sure all the events are running as planned, you can use the Enter or Return button to pause the movie if you need more time to follow along or double check.

## **Usability Testing**

**You will need:** a few test subjects that are representative of your target audience, a computer to test on and a plan.

Usability testing does not have to be an expensive or time consuming, but it should definitely be done so you can ensure your project will accomplish its purpose, which could be anything but confusing, irritating and losing your audience.

For your final usability tests it would be nice if you could test out all the possible situations your audience may encounter, but this may be improbable with typical time and budget restraints. So instead try to cover a variety of tasks that would allow a user to navigate your content in different ways. It would be helpful if the tasks chosen are based on past usability information gathered throughout the lifecycle of the project, although a lot of the time the usability test is an afterthought and this is not possible. Sometimes coming up with a scenario is a better way to explain a task to a test subject because you give them more background information and a more personal purpose to the task.

Conduct the usability test in private with the test subject in a distraction free environment. Try to get your test subject to "think out loud" what they are trying to do as they accomplish each task. This is important for gathering information about their thought process and may be helpful in coming up with better solutions. Avoid asking leading questions that would give away the answer.

Observe which tasks work and which ones fail completely or cause the user trouble. Take notes of where they go amiss or get stuck, also record subject's comments and be attentive to cues that they are frustrated, such as their facial expressions. Coming up with a good post-usability test interview, which will also help in determining if the project's design and functionality worked.