

CSS Slideshow



Brad Barton

Report 11 on the work of Week 13

12/08/09

Project Description:

Today's high speed internet capabilities have enabled web designers to become much more creative in website design. Unfortunately, a lot of these innovative design techniques require large, slow loading file types, often which are not web standards compliant, or easily cross browser compliant. A commonly used design element in today's websites is some sort of photo gallery or photo slideshow. Though it isn't standard, it has become fairly common for these to be designed using flash plug ins. Even with today's high speed connections, flash is often slow to load, and with today's growing mobile device browsers, flash is often not supported. CSS Slideshow will be a possible solution for these exact issues.

CSS and JavaScript are accepted as a standard in web design practice, and are accepted by web browsers and mobile browsers alike (though not all styles/scripts are cross browser compliant). The goal of CSS Slideshow will be to produce a stylish, simple, and innovative alternative photo gallery/photo slideshow solution to flash or other similar techniques.

Application Development:

As a web designer, the need for an eye-catching photo gallery often arises in my work. I typically try to avoid using flash plug ins as design elements in my work, due to the fact that not all users can view flash, and large flash files are slow to load. I have found a few similar products that other people have developed, but most are sloppy looking, highly restricting, and cumbersome to work with. I would like to see a product that is not only functional, but looks great and is easy enough to use that a novice web designer could apply it to their work without much difficulty.

The development of this product will require the use of a web browser (Mozilla Firefox), and website development software (DreamWeaver). The application will be developed using CSS, JavaScript (jQuery), HTML, and if time permits, XML/XML DOM. The final product will be uploaded onto the internet, and open for viewing and download. The end product will be a slideshow application which cycles through a selection of photos on a timer, and also include a navigation system for the images (thumbnails, numbers, buttons, etc.). It will be possible for web designers to customize the number of images used in this slideshow, along with other design aspects such as background color, size, image size, image captions, rotation timing, and if time permits, navigation element rotation. This slideshow will work in Mozilla Firefox, and as time permits, cross browser compliancy with other major browsers will be developed/tested.

Vision and Scope:

The primary objective of this project is to produce a stylish, simple, functional slideshow application that can be used as an alternative to flash and other similar products. The end product will be uploaded to the internet, and made publicly available for download and use as an open source project.

For this project, a main photo slideshow application which uses a timer for image rotation, and a coherent image navigation system are the primary focuses. The capability of navigation system rotation is an “as time permits” priority, and will not be a primary focus of this project. The capability to skip images or return to a previous image is a primary objective of this project, as is the capability to stop and restart the slideshow timer. The development of this project will be focused on functionality and appearance in Mozilla Firefox, though if time permits, cross browser compliancy will be developed. The possibility of using XML/XML DOM to reference the images being used is also considered to be an “as time permits” goal of the project, and will not be a primary focus at this time.

Preliminary Software Requirements Specifications: (revised 11/10/09)

1. Slideshow functions properly in Mozilla Firefox
Evaluation Method: product will be viewed and tested using Mozilla Firefox
Dependency: 2, 3, 4, 5
Priority: High
Requirement revision history: 10/13/09
2. Main slide area is set for rotation using a timer system
Evaluation Method: Viewing the main slide area and watching for slide rotation
Dependency: none
Priority: High
Requirement revision history: 10/13/09
3. Rotation can be stopped and restarted
Evaluation Method: Stop and Start buttons will be added and tested for functionality
Dependency: none
Priority: High
Requirement revision history: 10/13/09
4. Skipping forward to the next image, or back to the previous image is possible
Evaluation Method: Skip and Previous buttons will be added and tested for functionality
Dependency: none
Priority: High
Requirement revision history: 10/13/09
5. A slide navigation system is included, enabling the user to jump to a selected slide on demand.
Evaluation Method: Slide navigation links will be added and tested for functionality
Dependency: none
Priority: High
Requirement revision history: 10/13/09

Design and the Architectural Model: (revised 11/10/09)

CSS Slideshow will have a main image area which rotates by default on a timer system, but users will be able to navigate the images using “next” and previous” buttons as well. The timer will be capable of being stopped and restarted (stopping and restarting the timed image rotation). An image navigation area will also be included, which will enable users to select an image directly. When a user selects an image, the main image will rotate to the selected image, and stop the timer system.

Slideshow (combination of Main image area and Image navigation area) (class)

- Styling/appearance

- GUI/HTML interface

- Main image area

 - Slide (class)

 - Slide rotation (function)

 - Timer (function)

 - Stop/Pause (function/button)

 - Start/Play (function/button)

 - Next (function/button)

 - Previous (function/button)

- Slide navigation area

 - Navigation element (class) (Thumbnail capability optional)

 - Slide selection (Main image area rotates to selection and stops rotation)
(function/buttons)

 - Navigation rotation (if time permits)

 - Next group (function/button)

 - Previous group (function/button)

Implementation (revised 11/17/09)

HTML -- See default.html

CSS -- See slider.css

JAVASCRIPT -- See cssslideshow.js

Brad Barton, Lead Developer

Brad is a senior Computer and Information Sciences major at Berea College, and is also a Senior Web Designer for the Berea College webteam. Originally, his interest in computers was primarily focused on video games and computer programming, but after working for the Berea College webteam, he developed an interest in web design. A recent project of the Berea College webteam was to find and implement a slideshow application onto the college website to be used for photo galleries and similar projects. Originally the team was looking for a non-flash version of such an application, but after researching and attempting to use some JavaScript slideshows it was decided that using the SlideShow Pro Flash application would be easier for the team. Frustrated by the complexity of similar JavaScript applications, Brad decided to take it upon himself to develop a simple, yet powerful JavaScript slideshow application.

Known Bugs and Other Issues (revised 11/17/09)

Cssslideshow using jQuery cycle v0.3

- No notification that slide show has been stopped (pause and play buttons do not change)
- Does not read in slides from external file (XML)
- Thumbnail navigation is forced without extensive editing of the JavaScript

Cssslideshow using jQuery slideshow v0.5

- No pause and play functionality
- Transition between slides when clicking a navigation link is not immediate
- No navigation and/or button styling

Preliminary Test Play and Preliminary Test Cases (revised 11/17/09)

- Test using images as slides
 - Display slide show which only uses images as slides in Firefox and test functionality by using navigation elements.
 - Use various numbers of images multiple images.
- Test using HTML tags as slides
 - Display slide show which only uses HTML as slides in Firefox and test functionality by using navigation elements.
 - Use various numbers of HTML elements as well as embedded elements.
- Test using images and HTML tags as slides
 - Display slide show which uses both images and HTML tags as slides in Firefox and test functionality by using navigation elements.
 - Use various numbers of images and HTML elements as well as embedded HTML elements and embedded images in HTML elements.
- Test pause and resume functionality
 - Test all pause functions for all test cases
 - Test resume play function after testing each pause test case
- Test XML slide importing
 - Create test XML files that satisfy the 3 cases above (images only, HTML only, images and HTML together).
 - Import the XML files and check to see that the navigation works in all cases.

Executive:

To: Jan Pearce, Project Director

Wacky Waving Inflatable Arm Flailing Tube Man



Brad Barton

9/21/09

This week, after much research, I was able to find instructions as to how to install a working version of Leopard OS X onto my machine. Doing so will allow me to begin working with the iPhone Dev environment and begin on the programming of the game. I have also researched Objective C since it is the programming language used to create iPhone / iPod Touch applications. From my research I have gained an understanding of the syntax used in Objective C, and now feel comfortable with the idea of programming in this language. Combined, this research has taken me roughly 6 hours within the last week. As a total, I have spent close to 20 hours on this project to date including the time spent before the semester started. Most of this time has been spent on research and idea development.

Next week I plan to have Leopard OS X installed and running on my machine, as well as the iPhone / iPod Touch Dev environment installed and working. I also plan to begin researching basic graphical and animation programming.

To: Jan Pearce, Project Director

Wacky Waving Inflatable Arm Flailing Tube Man



Brad Barton

9/29/09

Most of my time this week has been spent attempting to get Mac OS X Snow Leopard to work on my machine. Unfortunately, this effort has been to no avail, as I have not been able to get a working version of Leopard onto my machine. I have also spent more time researching how to set up a dual boot system using Windows XP and Mac OS X Snow Leopard as an attempt to find some method in which I could set my system up. Currently, it seems that I may have to abandon this project due to the difficulty I am having on obtaining a Mac OS to work from.

The next few days are going to be spent as a last effort trying to get Mac OS X working on my machine. If I continue to be unsuccessful in doing so, I will be changing my project which I will immediately begin working on.

Project time this week: 9 hours

Trying to install Mac OS X: 6 hours

Researching Mac OS X and Windows XP dual booting: 3 hours

Total project time: 29 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

10/13/09

The last two weeks have been spent rethinking my project, and developing a new project idea as well as researching my new project topic. This is due to the fact that I was unsuccessful in getting Mac OSX to work on my machine, cannot afford to buy a Mac machine, and have no other means of obtaining a Mac machine to use to develop an iPhone application on. I have found a few similar products to CSS Slideshow, and have looked at them as inspiration and guidance for this project, as well as for research on how to develop such a product. I have also spent some time developing an idea base for functionality capabilities of CSS Slideshow and basic design of the application. A break down of my time spent on this project over the last two weeks is below.

Total project time: 12 hours

Similar project research: 4 hours

Similar project evaluation: 4 hours

Project functionality development: 2 hours

Application conceptual design: 2 hours

Total time including former project: 41 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

10/20/09

This week I have spent my time looking at examples of similar products, and beginning the development process of CSS Slideshow. I decided to start the development process from a design aspect rather than going straight into functionality. I'm choosing this approach mainly so that I have something to use for testing once I do begin working on functionality. A break down of my time for the week is below.

Total project time this week: 7 hours

 Similar project research: 2 hours

 Application design: 5 hours

Total project time: 19 hours

Total time including former project: 48 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

10/27/09

This week, my time has been focused on revising the design of CSS Slideshow, as well as the research and development of psuedocode for some of the JavaScript functions. A break down of this weeks time is listed below.

Total project time this week: 5 hours

 Similar project research: 3 hours

 Application design: 1.5 hours

 Psuedocode development: .5 hours

Total project time: 24 hours

Total time including former project: 53 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

11/3/09

This week I have spent my time learning how the JQuery Cycle Plugin works, and using its capabilities to create the basic functionality of CSS Slideshow. I have also thinned down some of the extra code design code that I originally thought I would need to make CSS Slideshow leaner, and less code intensive. A breakdown of this weeks time is below.

Total project time this week: 7 hours

 JQuery Cycle Plugin research: 4 hours

 JavaScript implementation: 2 hours

 Extra code removal: 1 hour

Total project time: 31 hours

Total time including former project: 60 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

11/10/09

This week I have debugged the thumbnail navigation, as well as added in pause and resume functionalities to the slide show. CSS Slideshow now has a pause button, which pauses the slide rotation, and also pauses whenever a navigation element is clicked/selected. The play button that is now in CSS Slideshow resumes the slide rotation from where ever the slide show is when the play button is clicked. I have also began researching how to use XML as a means to separate the slide data from the HTML code.

Total project time this week: 7 hours

Thumbnail navigation debugging: 3 hours

Pause and Play functionality: 2 hours

XML research: 2 hours

Total project time: 38 hours

Total time including former project: 67 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

11/17/09

This week I spent my time debugging the thumbnail navigation section so that when a thumbnail is selected the slideshow pauses. I thought that I had this function working last week, but after doing some testing, I found that only the first thumbnail was actually pausing the slideshow. I also continued researching XML/XML DOM some more and have begun planning exactly how I want the XML sources to be used/created. I have also separated the JavaScript specific to CSS Slideshow from the HTML file, and linked them together. Finally, I also spent some time testing and developing more extensive test cases.

Total project time this week: 5 hours

Thumbnail navigation debugging: 2 hours

XML research: 1 hour

XML functionality planning: .5 hours

Separation of script and HTML: .5 hours

Testing and testing plan development: 1 hour

Total project time: 43 hours

Total time including former project: 72 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

12/01/09

The last two weeks I spent some time testing various test cases for CSS Slideshow, and have made a few adjustments to the CSS and JavaScript files to accommodate for the text/html cases. This testing and adjusting is not yet complete, but rather is still in the development process. However, much of my project time in the last two weeks has been spent planning, and scripting the demo video, as well as recording it.

Total project time (two weeks): 7 hours

Testing/debugging: 3 hours

Video planning: 1 hour

Video scripting: 1 hour

Video recording/rehearsing: 2 hours

Total project time: 50 hours

Total time including former project: 79 hours

To: Jan Pearce, Project Director

CSS Slideshow



Brad Barton

12/08/09

This last week I have made some extensive developments to this project. I decided to not only improve upon the jQuery cycle plugin, but to also develop my own jQuery slideshow plugin. I have managed to create a working plugin that creates slides using a container's children elements, and cycles through those slides on a timer. This plugin also has the capability to dynamically create navigation links of two types depending on which option is input upon calling the plugin. The two types of navigation elements are numbers (in sequence) and thumbnails of images. This plugin is not complete, but rather it is still in the development process.

Total project time: 30+ hours

Writing slideshow plugin: 25+ hours

Testing/debugging: 3 hours

Video editing: 1 hour

Presentation planning/development: 1 hours

Total project time: 80+ hours

Total time including former project: 109+ hours