

A Comparison in Web Animations

Project Proposal

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Introduction

Adobe Flash and Shockwave

There are a number of ways to create and display animations on the web, two of the most common are Shockwave and Flash (1).

In order to play animations and videos plug-ins are required, two of the most popular plug-ins for play animations are Flash and Shockwave. Flash is used to in order to create rich animations on the web (1); While Shockwave is used to create more complex animated content (1). Flash and Shockwave also integrate well with the web page and offer high interactivity with the user. One of the main advantages of Flash and Shockwave is that as the files are Vector-based, there is a quick download time.

Flash and Shockwave works by compiling a number of "Frames" together in order to play a movie, these movies can be interactive with the user allowing them to select buttons which usually starts/stop the movie but there are more advanced user interactivity flash movies made. It is even possible to create a flash website using Adobe Flash (2), flash websites have become popular as it is a great way to pull in visitors with websites by offering high interactivity with the user.

In 2011 Adobe laid off 750 staff as part of broader restructuring as Adobe announced that they will be stopping support for Flash on mobiles (3), instead they have decided to focus on HTML5 technologies (3). With Apple computers not introducing flash by default and Windows 8 computers going the same route

Adobe Edge Animate

As previously mentioned, Flash and shockwave is a plug-in and without the plug-in the flash file will not work. Adobes solution to this is Adobe Edge Animate; Adobe Edge Animate is a new Animation software for creating animated, interactive content using HTML, JavaScript and CSS (3). Everything Edge Animate does is created and stored in an external JavaScript and CSS files (3), and because of this is, does not need a plug-in.

A recent review of Adobe Edge Animate (4) (27 Feb 2013), criticized Edge Animate's lack of features, Tom Arah (the writer of the review) criticized its lack of drawing tools, having only three available with the Rectangle tool, Rounded Rectangle tool and Ellipse tool (4). It even lacks the use of a brush or pen tool. He also goes on to criticize the lack of gradient fills, no textures, no procedural effects, brush outlines, graduated transparency or blend modes (4).

One of Tom's most interesting quotes was that

The shift from Flash to HTML has set web design back 15 years (4)

It was clear reading the review that Tom was extremely disappointed with Edge Animate and listed a lot of negatives for Adobe's new software and lacked any real advantages for Edge Animate apart from its progress away from Plug-ins. Tom also criticized that Edge Animate's test movie did not perform well across the different browsers.

Another recent review of Edge Animate (5) (17 January, 2013) was more positive. Michael Burns (the writer of the review) praised Edge Animate by saying

Edge Animates workflow, particularly the Pin and Easing tools, as well as hidden gems like cut and paste functions, makes for effective and free HTML 5 animation creation (5)

He also praised its copy and paste function that allows a quick build-up of animated elements such as a fading slideshow of images and its ability to group a collection of elements together with their animation timeline into a reusable symbol (5). However he did criticize its lack of audio and the need of coding for a sophisticated interactivity (5).

About the Company

Adobe Systems Inc. was founded in 1982 (6) by computer scientists John Warnock and Charles Geschke (7). Before founding Adobe Systems Inc. both men worked at Xerox Palo Alto Research Center in the late 1970's (7), Their aim was to translate digital text and images onscreen accurately onto the printed page. This idea was a big motivation behind the innovation and re-invention of Adobes technology.

When both men founded Adobe, they further explored the possibilities of graphics and print by developing the device-independent page description language called Post Script released on the market in 1984 (7). The language provided an alternative to the restrictions put in place by the print publishing industries.

Other graphic technologies soon followed Post Script, Illustrator, Photoshop and Type Manager all being released by Adobe. All of the software is still used today, with Illustrator and Photoshop responsible for most of the largest logo and graphic designs out there (8).

In 2005, Adobe Systems Inc. made a major acquisition Macromedia, Inc. (8) In order to describe Macromedia Inc. Jonathan Gray must first be discussed. Jonathan Gray launched his own company in order to create software for pen computers (electronic tablets that users could write on with a special pen) in 1993; this company was called FutureWave Software and created SmartSketch immediately after (9). By 1995 developers of FutureWave software realized the potential for using SmartSketch as an animation tool (9) and started to add animation and java features to his software, he then renamed SmartSketch to FutureSplash Animator; this was the very first version of flash. Jonathan decided to partner with a bigger company and spoke to Adobe and Fractal designs; neither was impressed (9). in 1996 the first units of FutureSplash Animator was sold to the public, it was a massive success with Macromedia purchasing the software in the same year (9). Macromedia released eight versions of flash before Adobe returned to acquire Macromedia at the end of 2005 (9).

Aim of the Project

The aim of the project is to compare both of Adobes software, Flash and Edge Animate by designing and developing various animation movies using both software and also creating a website that will be similar but designed on both of the softwares.

This will allow me to evaluate, compare and analyse both the softwares features and give me a better understanding on what the advantages and disadvantages are of using Edge Animation over Flash. I have composed a table of tests and the reasons why they are appropriate below

Tests	Why Appropriate
Speed it took me to create the movies and website on both softwares	To test the fluidity of the features and software
The lack or abundance of features compared to the other software	Which has the most features
Comparison of the features on both the softwares	Which has the most useful features
The performance of the softwares (freezing, response times, etc.)	Which of the two softwares perform better
Browser Independency; how each of the websites created performed in different browsers	Which of the two softwares support the most major browsers
Complexity of the software	Which of the softwares are capable of creating complex movies/websites
Potential for both the softwares in the future of web development	Which of the software will be used the most in the future
Publishing; comparisons in the size of the file when publishing and the length of time to publish	Which of the two softwares are more size efficient, the length of publish times between the two
Price of both softwares	Which of the two software is more expensive
Formatting	Which of the two software has better formatting for texts, colours, special effects, etc.
Image Support	Which of the two softwares can support the most image types? Can both the softwares run Scalable Vector Graphics (SVG)
Learnability; How useful the help is, how easy software is to learn, etc	Which of the two software is the easiest to learn
Updates; which software is receiving the most and largest updates	Which of the two softwares are being updated the most, which one is receiving less or no updates.

Using these questions and comparing them to data I will be able to solve the question, which will be the future Industry standard? (If any), Flash or Edge Animate?

Expected Outcomes

Tests	Expected Outcome
Speed it took me to create the movies and website on both softwares	Due to the review I read from Michael Burns, I expect Edge Animate to be able to create movies/websites quicker due to new features such as the pin and easing tool
The lack or abundance of features/tools compared to the other software	Due to the review I read from Tom Arah, I expect Adobe Flash to have a large amount more than Edge Animate.
Comparison of the features on both the softwares	I expect Adobe Flash to slightly outweigh Edge Animate on the usefulness of the tools because of the comparison of both Tom Arah, and Michael Burns review
The performance of the softwares (freezing, response times, etc.)	I except Adobe Flash to perform better as Edge Animate is a much newer software and may have less polish than Adobe Flash
Browser Independency; how each of the websites created performed in different browsers	Due to the review from Tom Arah, I expect Flash to perform better across a multitude of browsers
Complexity of the software	I have read no reviews about the complexity of the software but I feel that Edge Animate may be easier to use as it is the more modern software
Potential for both the softwares in the future of web development	I believe Edge Animate has the greatest potential and Flash is slowly losing potential as more and more websites use HTML5
Publishing; comparisons in the size of the file when publishing and the length of time to publish	As Edge Animate uses multiple files such as JavaScript, CSS, html, instead of just a flash file, I expect Flash to have the better sized file and publish time
Price of both softwares	Currently (April 2013) Edge Animate is free but will require a purchase in the future, currently Edge Animate is the software with better value.
Formatting	Due to the review by Tom Arah, I expect the formatting of Flash to be better as it allows more gradients, special effects, etc.
Image Support	In the review by Tom Arah, Edge Animate does not currently support Scalable Vector Graphs and a few other image types. Because of this, I believe that Adobe Flash has the better image support
Learnability; How useful the help is, how easy software is to learn, etc.	I have read no reviews concerning the learnability but I would assume that Edge Animate has the better help due to it being more modern.
Updates; which software is receiving the most and largest updates	Due to reports of Adobe stopping support for Adobe Flash, I expect Adobe Edge Animate will receive the most and largest updates

Research & Development Methods

Philosophy

Within my project I will be taking a positivist approach as I will be gathering data derived from my experiences with both the software, I will be measuring things such as response times, functionalities, tools, etc. I will then compile that data so that I can then compare both the softwares data. This means I will be taking a deductive approach in order to hypothesise if software is faster, more usable, has more features than the other piece of software.

Strategy

My research strategy will contain a mix of both experimental and document analysis. I will be performing a formal experiment on both of the softwares in order to hypothesise if Edge Animate performs at least as well as the Flash. The other research strategy (document analysis) will involve collecting information to determine how regular Adobe is updating their software; this will be done by looking at update information on the company's website. Another analysis I will be performing is searching for reviews detailing the updates in order to determine how useful the update was and also how much the update added to the existing software.

I will also be using a cross-sectional approach using an online questionnaire on popular forums concerning both the softwares; the questionnaire will contain questions derived from the tests in the Aim of the project section of this document, This will be done as to assess what professional developers think of the new software (Edge Animate) compared to the old one (Flash). I will also be using secondary data that people have published; this will be in the form of reviews. I will be reading the reviews in order to assess Adobes new updates for the software and to have an idea of what to expect once I start using the software.

For the questionnaire it's important to use a forum that isn't biased in any way, for example the participants on the Edge Animate forums may be biased towards Edge Animate, likewise for Flash.

Because of this I should find a forum that discusses both the software, this way the results of the questionnaire will be diverse instead of focusing on one group that has only used one of the software.

It's also important to remain unbiased in the questionnaire itself, for example if I were to ask the question "Why is Edge Animate better than Flash?" it would be a biased question and may indirectly affect the users opinion, a better question would be "Which do you prefer, Flash or Edge Animate? Please specify why" would be unbiased as it is not proposing that one of the software is better than the other.

In order to check the validity of the participant, it is important to assess how much experience he has had with both the software, for example a question I could ask is "How many times do you use X software a month?" using this question for both of the softwares I can discern if the user has ample experience in both of the software which will allow me to separate experienced professionals from newer users. It is still important to collect data from newer users however as questions such as "how difficult is it too learn X software" in order to address the tests in the Aim of the Project section.

Risks & Limitations

With software continually being updated, the project runs the risk of being out-dated shortly after completion. In order to solve this issue I will not only be paying attention to the newest updates but paying attentions to upcoming features that will or may be inserted into the software. This will involve speculation from reviewers and possibly participant for the questionnaire. It will also include promises that are/could be made from Adobe, using this confirmed/speculated data I can speculate how the software will progress in the future.

A limitation of the project is that Edge Animate is much newer than Flash and might not have the same amount of polish and features as its counterpart. This might make reviewing Edge Animates Software to Flashes unfair; in order to counteract this I will be assessing both of the softwares potential in the future and comparing updates of the two software. For example as Edge Animate is the newer software it may be receiving much more updates than Flash, this means that it could quickly catch up to Flash in a number of months. It might also indicate if Adobe is going to abandon Flashes updates altogether which might drastically change the direction of the web development industry.

Data Evaluation

In order to evaluate my data I will be comparing the results of the questionnaire and the results of my own experiences to the tests in the Aim of the Project section. Comparing this data will allow me to solve the question proposed in the Aim of the Project section, which will be the Industry standard of the future? (If any), Flash or Edge Animate?

Resource & Planning

Resources Required

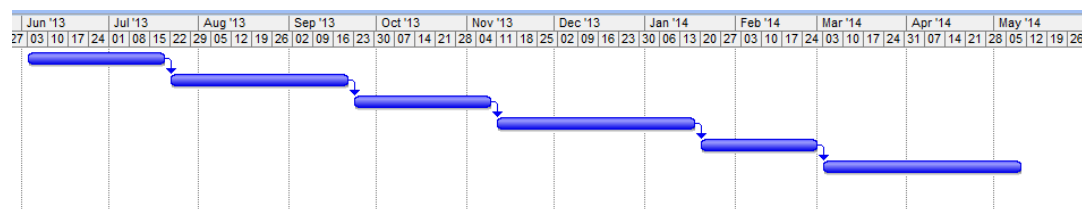
I require both Adobe Flash and Adobe Edge Animate in order to compare both of the softwares. The cost of Adobe Flash CS6 can be from £300 - £400 or around £17 per month, older software prices will be cheaper and may vary. Edge Animate is currently free software but it is expected to cost around £300 or £10 a month but will likely increase in price if Adobe releases different versions with more features like they do with their other products (Photoshop, Dreamweaver, Illustrator, Flash, etc.)

Programming Languages that will be used are ActionScript which is required for flash, JavaScript used for both website functions and Edge Animate coding. CSS and HTML5 will likely be used for the websites design.

Gantt Chart

In order to correctly assess what and when things should be completed, I have created a rough guideline using a Gantt Chart in Microsoft Project.

		Task Name	Duration	Start	Finish	Predec
1		Preliminary Research	35 days	Mon 03/06/13	Fri 19/07/13	
2		Software Familiarisation	45 days	Mon 22/07/13	Fri 20/09/13	1
3		Design Application	35 days	Mon 23/09/13	Fri 08/11/13	2
4		Develop Application	50 days	Mon 11/11/13	Fri 17/01/14	3
5		Compile Data	30 days	Mon 20/01/14	Fri 28/02/14	4
6		Compare Data	50 days	Mon 03/03/14	Fri 09/05/14	5



The Preliminary Research will consist of designing questions for the questionnaire, searching and reading reviews concerning both of the softwares newest features and updates, viewing recent update history and finding appropriate documents that offer help in familiarising myself in the software.

The Software Familiarisation will consist of following tutorial documents gathered from the research in order to familiarise myself with the software, in this time I will get to know both of the softwares features and how to create web applications. In this time I will also be taking early notes on software performance, support for newer developers, etc.

I will then begin to design the application itself, in this time I will decide what the web applications and the website will contain, look like and perform.

Next I will develop the web applications, using both the experience gained from the software familiarisation and the pre-set design of the application to create the web applications. I will also note any problems or benefits with the softwares to be used later.

I will then compile the data. This will consist of using the questionnaire created in the Preliminary research on a forum in order to gather the thoughts of experienced professionals. I will also be compiling my own thoughts of the softwares, researching new reviews of the software and compiling data on the updates since the preliminary research.

Finally I will compare the data to the tests created in Aim of the project section; this will be done by using my own experiences, results of the questionnaire, reviews of the softwares and comparing update history.

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