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Building a Prototype Web Application for Serious Film Fans

Study Set – The Communicators

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Introduction

This report looks into how the users, and design for a prototype web application for serious film fans was determined using various methods including; rapid user modelling method, web personas, sketches, storyboards, and the use of heuristics.

It will also reflect on feedback received from fellow peers from the study set, and go through testing procedures to ensure the application works correctly. Finally the site will be evaluated against a list of pre-determined heuristics.

The genre of films selected for this prototype application for the web is war films.

The location of the application on the Intranet is:
http://scm-intranet/users/d4060381/dfu/ica/
Or
http://outranet.scm.tees.ac.uk/users/d4060381/dfu/ica

1 Target Users

1.1 Determining Target Users Groups

To determine the users for the prototype web application, two methods were used, to ensure the correct audience was defined. These methods were rapid user modelling method, followed by web personas, where several fictional scenarios are developed where a user develops a need for a service or product, which in this case would be the prototype application.

During these processes it was not ruled out that more than one age group of user could be the primary user of the web application, but several groups. (Lazar, 2001, pg. 31).

In the appendix, the full rapid user modelling method questionnaire is attached, which allowed the users to be determined in an efficient manner, without the expenditure of too much time, which would cost more money in industry. For example, if the development team were to send questionnaires to potential users to see if it would match their needs, it would cost more money, and time to produce them, and analyse the results. These results would also include people who felt the application had no reference to them.

1.2 Rapid User Modelling Method (RUMM) – The Process

The first stage of the RUMM process was to determine the age group of both, the primary users and secondary users. These age groups had to be determined in conjunction with the genre of films that the application was to be built with. It was determined that the primary users were going to be from the age of 30 upwards, and the secondary users ranging from school leaver's age up to 50. In the case of the primary users the age range is so wide as many of the war films watched and produced are from the period of World War 2, and many of the users of the applications will have parents or grandparents who served in the war, and will be keen to see what they went through. In the case of the secondary users, recent blockbusters at cinemas,

and recent computer games such as the Medal of Honour series, and the Battlefield series, have brought younger generations into the genre, becoming educated about what has happened in wars through the years.

The next stage was to determine the gender of potential users. Due to the nature of war films being very male dominated it was decided that the primary genre was to be male, with male and female being included in the secondary bracket, as recent war films have tried to include love stories as sub plots, such as in Pearl Harbour, in 2001 (Wikipedia, 2006). It was decided as wars that have been covered in film have happened across the world, that culture was not going to be a specific issue in the design of the application.

The next stage was to determine the user's potential computer skills. It was decided that as users will be accessing the application through the Internet in form of a website, then the range of skills will vary greatly from novice up to expert. It was also decided that the employment type that users in was not applicable to the outcome of the design of the application.

The next stage was to determine the reasons a user may be using the application. For this application it was decided that it would be used to gain information about films, users may have watched or want to find out more about, before deciding whether or not to watch them, and also to help them learn about the period of war, that they may be interested in.

The penultimate stage was to determine where a user would use the application. It was determined that a user would more than likely use the application at home, in their free time, or with the growth of public services such as wireless internet hotspots around the country (BBC News, 2006), and in libraries.

The final stage was to determine how the user would use the application. It was determined that, if the application was to be accessed at a users workplace that a broadband connection would be used, and if it at home, either broadband or narrowband connections would be used. However,

broadband is fast becoming the overall primary connection at homes as 64% of all connections in the home in the UK are now broadband (BBC News, 2006).

With the application being used over the Internet, the specification for Windows, Mac, or Linux machines would be varying due to the hundreds of millions of people across the world that could potentially make use of the application. With the application being designed to be accessible as possible, assistive technologies should be able to use it as freely as possible. Due to this and to make the application as accessible as possible no plug-ins such as java applets, or flash movies would be used.

1.3 Memory and Perception

When designing the application, memory is an important factor to make sure there are no difficulties in using it. For example, an issue that could arise is confusion caused by an ambiguous icon that user's may not know how to interpret. A simple example of an icon that could be used, is a house icon used to take the user back to the home page of the application when clicked. If an application's interface is designed simply and effectively it is more likely to be remembered by a user after a few uses, than a cluttered one which will more than likely continue to cause confusion. An example of a confusing interface could be where the buttons, in a navigation bar change upon the entry to a new page, so any sense of location in the application is lost. Therefore a well designed interface should easily be absorbed into short-term memory and long-term memory if a user was to revisit the application at a later time.

Perception is also important. If a user saw a bright yellow application, when looking for an application for war films, they are very likely to turn away. This is because a user makes their first impression of an application after just 50 milliseconds (Hodge, 2006). Users will also have a vague idea of what colours they are likely to encounter when visiting a website of a particular genre. Also there will be no mixing of sensory stimuli in the design of the

application. As the application is to be designed for the Internet, it has been decided no sound will be added, as that would significantly increase the download time of the application. This means that the site will solely rely on visual sensory stimuli to draw attention to different areas of information. This could include methods such as highlighting text, using contrasting colours, or simply using different font sizes.

1.4 Age and Gender

As identified in the rapid user modelling method the age of the users will range, if including secondary users also, from 17 years old and upward. With this wide range of ages, the design for the interface will have to cater for the differing views that the different age brackets will inevitably feel comfortable with. For example, text size will be an issue, as younger people will be happy with a smaller text size, where as more people in the 50 plus bracket are more likely to have difficulty reading small print, therefore a mechanism needs to be in place to cater for both.

With males more likely to visit the site, due to the nature of the war film genre, the interface needs to have some masculinity, but not to the extent of making females, feeling unwanted by the application. Therefore as long as the interface closely couples up with the theme of the war films in general, then a gender issue should not arise.

1.5 Use of Colour

This will be tightly coupled with the genre of films, to avoid being biased completely to one gender as mentioned above with the design of the interface. Also where text is involved in the interface it will have a contrasting colour to the background it is positioned on (Lazar, pg.159, 2001).

1.6 Cognitive and Accessibility Implications

This will be regarded with the highest priority when designing and building the prototype web application. To begin to tackle these implications, good quality code will be used, using lists for factual information responsibly, using heading tags (<h1> to <h6>) on each page to give documents a defined structure, and providing alternative text for images on each page, by the means of using the “alt” attribute for images in XHTML (BBC News, 2006). It has been decided that XHTML 1.0 transitional will be used to construct each page of the application, and CSS to define the style and layout of each page. In no ways, at all will tables be used for layout, as this can cause issues for screen readers. Also to ensure that the web application is at least level 1, to the World Wide Web Consortium’s Accessibility guidelines (WCAG), an online tool called Bobby (Watchfire, 2006), will be used to validate each page, and any errors found, corrected. The XHTML and CSS will also be tested by online validator’s found at the World Wide Web Consortium’s website (W3C, 2006). Using valid XHTML is important as it makes it easier for older browsers, such as Netscape to interpret the page, and for newer ones also, and also makes it more accessibles on different platforms, such as PC’s mobile phones, and PDA’s.

The cognitive ability of users will also need to be considered with the design of the interface on the application. Any buttons, icons, or links need to be big enough, and spread apart, to allow people with poor motor control, to click comfortably wherever they wish to. In addition, a simple navigation system is required to ensure users with or without any disabilities can interpret the hierarchy and organisation of information on the application (Nielsen, 2000, pg. 310).

Colours on the site need to be contrasting, and not colours that may merge together for people with disabilities such as colour blindness, or low vision. People with hearing disabilities will encounter no issues with the web application that will be designed, as it is intended no sound will be used due to file size issues.

The amount of information on any one web page will try to be limited to no more than two screen heights, to cater for users who may have cognitive disabilities where they have difficulty taking in large chunks of information at any one time.

1.7. Web Personas

1.7.1. Persona 1

Bill is a 47 year old movie enthusiast who has recently started watching war films, after watching one on television, two weeks ago. He has decided to look on the Internet to see if there are any websites dedicated to war film fans. Bill knows the basics of computers, but is unsure when it comes to complex websites with flash interfaces, and so on. He would also prefer the option of increasing the text size so he does not have to wear his reading glasses at the computer, at his local library.

1.7.2. Persona 2

Alan is a 36 year old who is doing research into films that took place during the Vietnam War, for a presentation he will be doing as part of a course at his local college. He has good vision, so text sizes of websites primarily do not concern him, however, he likes little quirks such as being able to change the theme of the site to suit his needs, rather than a designer’s needs.

2. Designing the Web Application

2.1 Design Heuristics

The design process began with the user profile and film genre in mind, with sketches. These sketches were also done with the aid of a set of guidelines or heuristics to ensure it would be accessible for the Internet and a viable design that could be made with XHTML and CSS.

Below are heuristics that have been adapted from a lecture where in groups we amended heuristic guidelines made by previous year's students (Turnell, 2006). The ones below feature amended guidelines for the web application on war films, based on these group created guidelines mentioned above.

2.1.1 Navigation

- Menus should be in one consistent position throughout the application and should not move from one location to another.
- All menus should either be placed on the left of each page, and/or at the head of each page, beneath the logo.
- Use valid XHTML and CSS to create the navigation, but do not use tables to position them, and use rollover (a:hover) to give the user feedback about interaction on the menu. Best method of rollover would be to use a contrasting colour, or a different shade of the base colour.
- Do not use images on menu, so to reduce the download time of the web application. Most rollovers can be achieved solely with CSS.
- Ensure all links on navigation are meaningful, for example, giving a short title of the page they direct a user to.
- Keep menu simple, and do not link to every page all in one menu, use a structured hierarchical menu.

2.1.2 Content

- Ensure that information in web application is current, and accurate, by updating at regular intervals. Also allow user feedback to alert you to any inaccuracies.
- Break up large blocks of text, and use paragraphs responsibly. Make good use of white space, and do not break text up too much by using too many images.
- Use a font that is easy to read on screen from the sans-serif family, for example, Arial, and Verdana.
- Use relative addressing for any internal hyperlinks, and check external hyperlinks regularly to ensure they still work.
- Allow users the ability to change the font size for specific areas on the site using buttons or icons. Users should not have to use browsers in built menus to find a way to increase font size. Therefore use pixels for font size in the body, and then scale the rest using percentages in an external CSS file.
- In the XHTML code, ensure there are no style elements, and place them inside a CSS file. The XHTML should be used for structuring information only, whereas the CSS is used to present it.
- Avoid flash movies, as not all users will have the flash plug-in, and also because screen readers will be unable to read or interpret them in the way that they were intended.
- Place alternative text for each image, which is descriptive, and also provide transcripts for any videos that may be on the web application.

2.1.3. Visual

- Produce a fluid design that can expand, and contract with the window size of a browser accordingly to allow for the widest ranges of resolutions possible.
- If a fixed width is used, then use a maximum of 760 pixels, as the 800x600 is still commonly used throughout the world (TheCounter.com, 2006).

- Make sensible use of white space to separate blocks of text and graphics.
- Try to use no more than three to five base colours for the application, using any other colours to simply highlight areas of importance if needed.
- Test to ensure that the visual design you have works on a various number of platforms, for example, Windows, Linux, a different number of browsers, for example Internet Explorer, Mozilla Firefox, and a number of platforms, for example, computers, mobile phones, and PDA's. This is due to way colours are displayed by certain monitors, software, and how different browsers interpret XHTML and CSS.
- Ensure layout doesn't change width from page to page.
- Use contrasting colours for foregrounds to backgrounds; this also applies to placing text on backgrounds. Grey text (#CCC) on a white background for example, would be hard to read.

Using these adapted heuristics, it is now possible to use them for the design and sketches of the web application for war film fans.

2.2 Use of Icons

It has been decided that on this application icons will be rarely used, as it is possible that people from other cultures and regions of the world may have another interpretation for them (Nielsen, 2000, pg. 330).

Icons will be used however, for the control of text size. Several designs were considered, which are pictured below.

It was decided that the first set were slightly ambiguous as to what the T would mean, and would only become clear if a user tried to click on it. F was also considered, but rejected for the same reasons. The second set which show L, M, and S at varying sizes were more clear as to what clicking on

them might produce. However, a graphical accompaniment to the icons is produced in the final storyboards, to help the user with the interface.

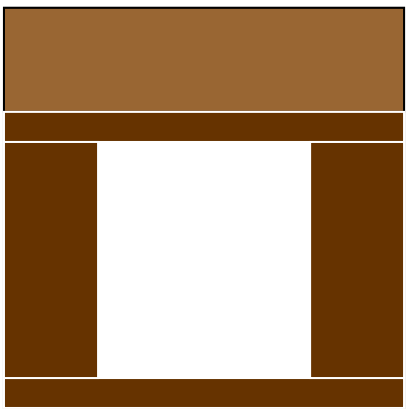
Another icon used is in the menu system, using the '>' angled bracket. The menu at the home page will display one of these, but as a user explores the application deeper, another angled bracket will appear to show the user is at a different level in the hierarchy of the website. They will also see the original menu so they are able to backtrack through the site if required. This system with good titles on each page eliminates the need for a breadcrumb trail.

2.3 Visual Design

The initial design of the application which can be seen from the sketches in the Appendix, show that it was intended to have 3 columns, and a header and a footer. The right hand column was intended to be used for key information on war films, but was later removed, and merged into the central content column, as it may confuse users as to why textual information is positioned in what they may perceive to be a navigation area, or an advertisement area.

The fixed height idea from sketch 5 were also removed, to allow for more flexibility, but the fixed width of 760 pixels remained to make the application and its interface design solid and consistent throughout. The first sketch was rejected also due to its complexity, as it was predominantly intended to be a Photoshop built interface which would be sliced and layout in HTML tables, which are inaccessible for layout purposes.

Below is a diagram of the design which was used for the first prototype at the time of the study set feedback.



It was intended to look like a white sheet of paper inside of the centre of the interface where the content would be shown. The menu would be placed in the left hand column, with the

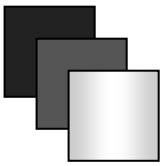
additional information about films, actors, and so on, in the right hand column. The central column would be a fixed height, so the whole interface would fit comfortably within a 800x600 resolution. If any content went through the dimensions of the div area in the HTML then the CSS would place scrollbars inside the content area, which would maintain the static height of the design. A fluid height alternative was also tabled, and became the final design of the site, minus the right hand column. The storyboards (Appendix) clearly show the final layout of the web application.

2.3.1 Colours

From the creation of the mood board prior to the sketches and storyboards it was clear that there were three predominant colour categories, which are also shown in the colour palette (Appendix). These were blues, from naval war films, green earthy colours, from jungle and rural warfare, and metallic colours, which are particularly seen in World War 2 films.

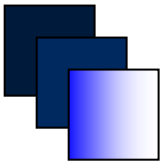
From this, it was decided that three style sheets needed to be produced to allow the user to choose which colour scheme they wanted to view the web application in.

2.3.2 Metallic Theme



The colours to the left are the main colours used in the metallic themed interface. The background colour of the entire web page behind the web application is an extremely dark grey (#222222), the top navigation and footer use a dark shade of grey (#555555), and the left hand navigation uses an imaged background which is a gradient from grey to white. The text colour for the main content is black on a plain white background. The text on the left menu is white on a dark grey background.

2.3.3. Naval Theme



The colours to the left are the main colours used in the naval themed interface. The background colour of the entire web page behind the web application is an extremely dark shade of blue (#001A3C), the top navigation and footer use a dark shade of blue (#002960), and the left hand navigation uses an imaged background which is a gradient from blue to white, which is intended to give an impression of waves in the sea, and to separate with different contrasts the header of the page, from the footer. The text colour for the main content is black on a plain white background. The text on the left menu is white on a dark blue background.

2.3.4. Jungle Theme

The colours to the left are the main colours used in the jungle themed interface. The background colour of the entire web page behind the web application is an extremely dark shade of brown (#461C00), the top navigation and footer use a dark shade of brown (#3C2B20), and the left hand navigation uses a lighter brown to separate the head of the page from the footer. The green pictured (#708542) is used as the rollover for the menu. The text colour for the main content is black on a plain white background. The text on the left menu is white on a dark brown background.

2.4 Interactions Used

The interface throughout the whole web application has been designed to be as interactive as possible. On each page, there will be graphics, designed to be used as buttons that use a simple on click command that increases the text size or decreases according to the user's preference. This helps to deal with the issue of any user's that may have poor vision that may not be able to focus on the text in the content area. It also gives the option to decrease to a smaller size if younger users would so prefer to do so.

Another interaction as mentioned in the previous section is that style sheets can be changed and stored to a user's preference. If they wish to view the site in a grey metallic theme, they can, and also if they wish to view the site in a blue naval theme they can. The JavaScript behind the switching of the style sheets is from A List Apart, and is used to demonstrate the feature in the application of how it was intended to work (A List Apart, 2006).

The menu also comes with its own CSS interaction. When the user hovers the mouse over a menu item, its background colour changes to signify that an interaction is possible to the user.

According to Lazar, 2001, pg.104, "it is important for a web site to be able to respond to users actions". If there was no feedback it would take user's far longer to learn how to use an interface, and the chances of them deciding to stop using it increase significantly.

2.5 Creative Influences

Throughout the design of the application, particularly seen in sketch 1 (Appendix), examples of items from war films were incorporated to the design. To be able to effectively create an application for a certain genre, you need to do research into it, or already have a passion for it. Building an application for a film genre without researching what colours are commonly used by gathering images for mood boards, then sketching ideas down, will more than likely produce a result which users would not expect and would likely not use it to gather information as they would be worried about the validity of any content found on the application.

The final design for the implementation that has been created has come from a thorough design process, and research process which has resulted in mood boards, colour palettes, and font boards, of which can all be found in the appendix attached to this report.

2.6 How the Final Design Meets Requirement of the User

The final design of the web application has been carefully designed to meet the requirement of the user as defined in section 1. The menu has been designed so it visually stands out from the background it is placed on, and each menu item, will have some “white space” surrounding it, to give some separation to each, to stop them merging into one. This also helps users with poor motor control who may have struggled if the menu items were placed together with no padding between them.

The option of being able to change the size of the text at the click of a mouse button has been designed with the wide range of age groups that may use the application in mind. Older users who may have poorer vision can increase text size, where the younger users, can leave the text as is, or reduce it if they so wish. Having these options saves the user trying to find a text size control inside the browser options, and also saves all users having to cope with only one fixed text size which cannot be changed.

Also a late addition to the interface in the films pages, was the introduction of a spoilers section, which by default is hidden, so users do not discover the plots of films, but have the option to reveal it by clicking on the accompanying hyperlink if they so choose to. This is done using CSS and style classes, and an on click command similar to that of the text size, where the property of the class is altered to visible.

Alt text is placed on all images, to give a textual representation of the image if the application was used through a screen reader, or even if the user had images turned off in their browser options due to their internet connection speed, for example.

The alternate style sheets would not work if JavaScript was not enabled, however crucially this would not affect the display of the site, as the default metallic theme would still be shown.

All images have been reduced to fit in with the interface dimensions but to also keep download times down. Excluding interface images and the logo, no page contains more than 3 images at any one time, for the very same reason.

The titles put on each menu item are purposely descriptive to the page they direct the user to, and also if the pages are at a different level of the hierarchy the menu expands, with a different colour and smaller text to represent this change. Also no page is more than 3 clicks away from the home page. This has removed the need for any breadcrumb trails on the site, as it would lack any real meaning or value due to the shallow depth of the web application.

3. Design Documentation

3.1. Initial Ideas

These are attached in the appendix. They consist of five different sketches showing different ways of laying out the interface for the web application.

The first sketch is an ambitious idea, which consists of many images of weapons from war, including shotgun shells for the navigation system, a box of ammunition at the bottom right, a grenade to the left, and a helmet, at the top right. This design was designed for a 1024x768 resolution, as most monitors now use this resolution (TheCounter.com, 2006).

The second sketch is a popular standard design seen throughout the Internet, using a logo at the head of the page, with the navigation down the left. The width is designed for an 800x600 resolution.

The third sketch adds to the previous sketch by adding a top navigation bar, below the logo.

The fourth sketch is the closest initial idea to the final implementation adding a footer to the design, where controls to adjust text size are placed. These were moved to the top navigation bar in the final design on storyboards to make them far more accessible and easier to find for the user. The right hand navigation panel pictured was also removed from the final design.

The final sketch is a near mirror image of the fourth; with the exception it uses a fixed height of 550 pixels to fit the whole application on one screen at all times. This idea was rejected due to browsers' compatibility with the overflow method on div tags.

3.2. Storyboards

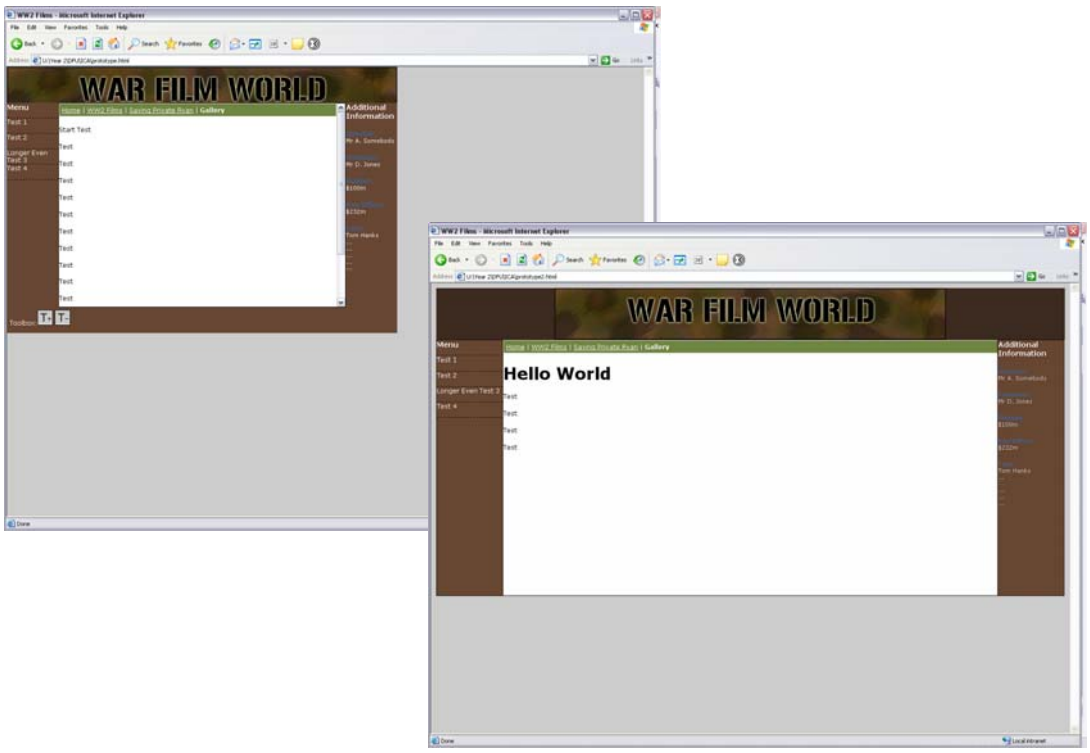
These are attached in the appendix, and show the design changes required for each different style of page. One oversight at this stage was the expansion of the menus on the actors, directors, members, and films pages.

3.3. Mock-ups

Below are screenshots taken of the two mock-ups that were used to demonstrate what ideas were available at the time of the study set feedback.

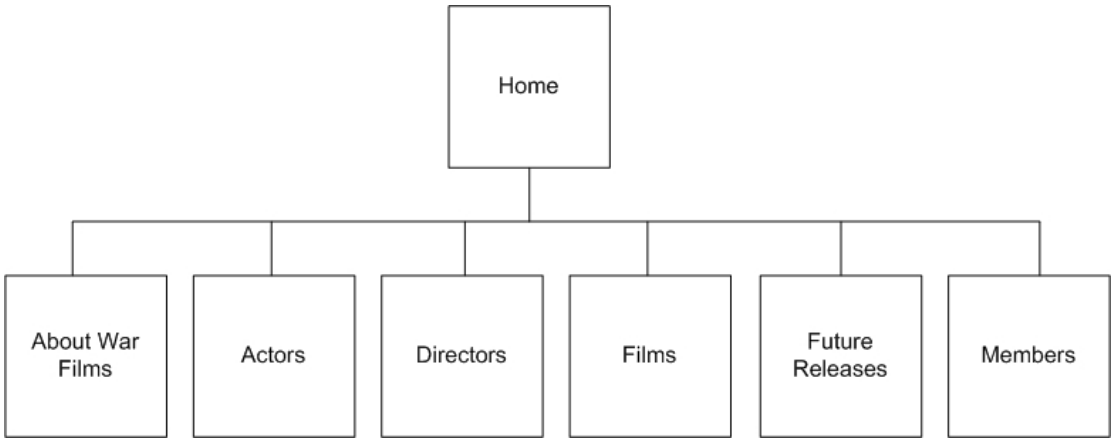
The left hand design is the fixed width, and height design, showing the menu on the left, and information panel on the right. The control panel with text controls in the footer can also be seen.

The right hand design is the fluid design which would allow for the window to collapse to a minimum of 300 pixels in width before text in the white content area became distorted. The footer was excluded from this mock-up due to difficulties encountered before the feedback relating to the CSS.



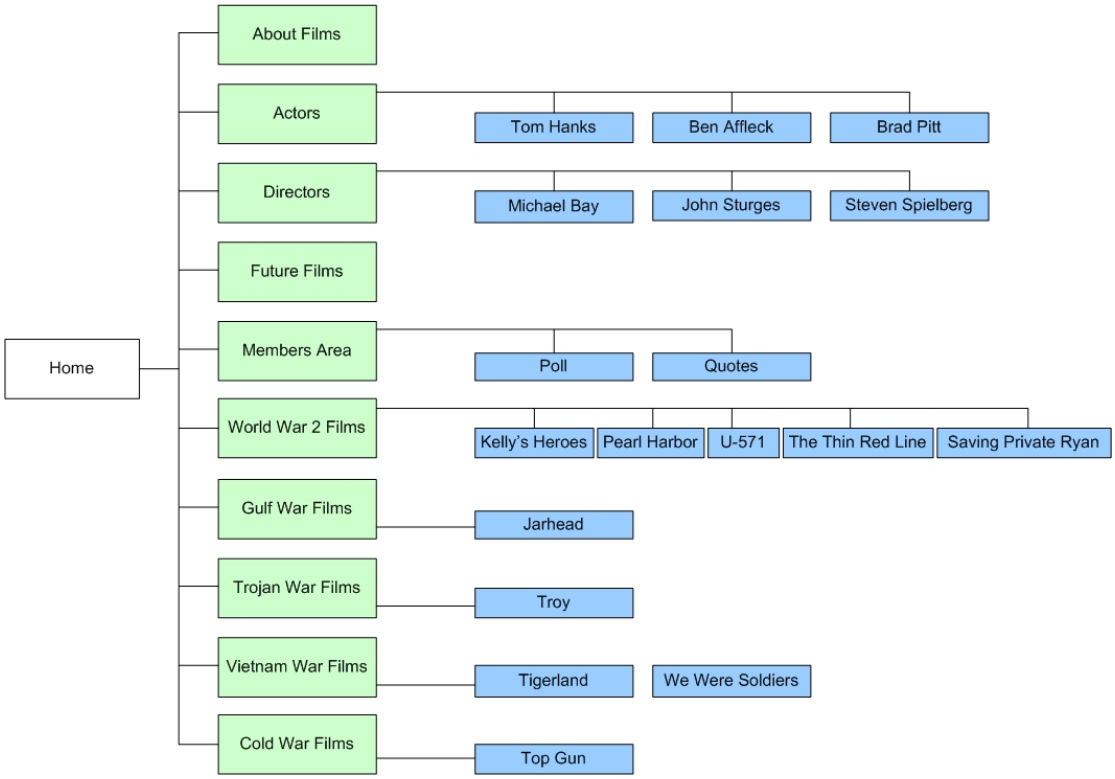
3.4. Content Model

Below is a diagram of the content model of the web application of how information on the application is organised.



3.5. Navigation Chart

Below is the navigation chart of the web application, showing every page in the application. White signifies the very top level; green signifies the first level, and blue, the lowest level. All pages on the site can be accessed within three clicks from the homepage.



4. Reflection on Study Set Feedback

The study set feedback took place on 24th February 2006. Documents that were made available to the group members during the presentation of the application were the sketches, mood board, rapid user modelling method, and a web mission statement.

One member, Chris Waugh, was not present at the feedback session to give feedback on the web application produced.

The reflection on feedback received document is attached in the appendix.

5. Site Implementation

To allow the application to be fully working, example information was added to each page. This is for purely demonstrative purposes showing how the interface works with varying amount of text and graphics. All information on the site comes from two sites, Wikipedia and IMDB, and each page is referenced in a special reference list in the appendix. All content from these sites is also referenced in HTML comments on each page.

To get the minimum height of the application working in all browsers a CSS hack was required for Internet Explorer, as “min-height” alone does not work. A hack was found, and applied to the CSS files, and the reference appropriately commented. This hack was from a site called Dust in Diaz, 2006.

The style sheet switcher code which is in the file ‘styleswitcher.js’ is from A List A Part, 2006. This is also referenced in the additional reference list in the appendix. Again it is for demonstrative purposes to show what the intent of the interface for different styles was.

The poll in the members sections is created from a tutorial on Ron’s Guide, 2006, website. The poll again is demonstrative to show what the application would have looked like and is also referenced in the additional reference list in the appendix.

6. Testing Plan

It was decided that the test would be continuously tested after each page was created to pick up any errors which could cause problems, hours of work down the line which would cost a lot of work to be lost to be fixed, and then rebuilt.

Two tests have been devised to test the quality of the website. The first test plan is to test the final functionality of the application testing all interactions and hyperlinks work as planned, and make a note of any that do not, and correct them.

The second test makes sure the application uses valid XHTML 1.0, valid CSS, and a minimum of level 1 accessibility.

6.1 Alpha Testing

Action	Page	Work As Expected? (Yes/No)	Amendments/ Issues	Retest Working (Yes/No)
Increase text size from interface.	All	Yes		
Decrease text size from interface	All	Yes		
Does login form redirect to correct page?	Members.html	Yes		
Does form validation work?	Members.html	No	Forgot to add form validation to register form. Login validation is present.	Yes
Does poll work?	Poll.php	No	Forgot to run pollsetup.php file, and set directory permissions to CHMOD 777.	Yes
Do mouse hovers work on menu?	All themes	Yes		

Do style sheets switch?	All	Partial	Internet Explorer has issue where part of background remains until another page is loaded with full theme.	
Do external hyperlinks work?	All	Yes		
Do internal hyperlinks work?	All	No	Incorrect level on relative addressing. Corrected.	Yes
Do site style graphics have yellow text when selected?	All themes	Yes		
Are alt tags present on all images?	All	Yes		
Do all spoilers reveal on click?	Selected film pages	Yes	If page is taller than screen height, then click returns to top of page.	
Does logo return to home page on click?	All	Yes		

6.2 Quality Testing

6.2.1. Valid CSS 2.1?

- 'Wfdefault.css' - 1 error on .releasedate. Corrected. **Valid CSS.**
- 'Wfjungle.css' – **Valid CSS.**
- 'Wfnaval.css' – **Valid CSS.**

6.2.2. Valid XHTML 1.0?

Pages with Errors

- Aboutfilms.html – '<ul>' tag wrapped in paragraph tag. Corrected. Now **valid**.
- Ww2films.html – 3 errors, all relating to HTML character entities. Corrected. Now **valid.**
- Johnsturges.html – extra character entity. Corrected. Now **valid.**
- Stevenspielberg.html – extra character entity. Corrected. Now **valid.**
- Savingprivateryan.html – extra character entity. Corrected. Now **valid.**
- Thethinredline.html – extra character entity. Corrected. Now **valid.**

All other pages passed validation first time, and are all valid XHTML 1.0 transitional.

6.2.3. Accessibility Level

All files were uploaded to personal web space to be tested for accessibility then removed. All files were tested using the online validator, Bobby (Watchfire, 2004). All files must pass a minimum of level one on the automatic errors.

Page	Auto Level	Amendments To Improve Level
Home	3	Onclick should be used with onkeypress for level 2. Corrected. 2 errors from level 3. Removed white spaces between images, and added language of html. All corrected.
About Films	3	
Actors	3	
Directors	3	
Cold War Films	3	
First Gulf War Films	3	
Trojan War Films	3	
Vietnam War Films	3	
World War 2 Films	3	
Future Releases	3	
Members	3	Error at level 2. Added references on form labels. Added onkeypress event handlers to form buttons. All corrected.
Top Gun	3	1 error at level 2. Added onkeypress event handler to spoiler hyperlink. Corrected.
Jarhead	3	
Troy	3	
Tigerland	3	
We Were Soldiers	3	

Kelly’s Heroes	3	
Pearl Harbour	3	
Saving Private Ryan	3	
The Thin Red Line	3	
U-571	3	
Michael Bay	3	
Steven Spielberg	3	
John Sturges	3	
Ben Affleck	3	
Tom Hanks	3	
Brad Pitt	3	
Poll	3	
Quote	2	Added label for to remove error at level 2
Quote Thank You	3	
Logged In	2	Tried to remove white space between links but unsuccessful.

7. Evaluating the Prototype Web Application

7.1. Developing Heuristics for Evaluation

To be able to evaluate an application such as this thoroughly, a set of guidelines needs to be outlined so the content of evaluation is known beforehand, and so every area that is thought of, can be covered.

- Does the site look visually appealing in its current state, after accessibility adjustments, or could it be improved?
- What additions could be made to the application or interface to improve the experience of the user?
- Are there any features on the application that should be removed?
- Was the testing stage thorough enough?
- If the application was started from scratch, would the approach to its design and build be different?

7.2 Evaluation

As the final prototype application stands, the visual design holds up, and still continues to match the genre of war films very closely. The horizontal pipes which were added to give separation between the icons in the top navigation bar, to achieve level three accessibility could have been replaced by simple image adjustments by adding a white border to the right hand side of each style sheet name, and font size icon, with the exception of the last of each. In addition, the navigation could have been improved with images, using the same font as the logo, but with the overriding concern of download size, this option would not be the best alternative.

One addition that could be made to the application is the addition of a fourth style sheet that would remove all images, and provide a text only version of the site, if the user chose to want that. Another alternative addition to the style sheets would be a high contrast theme, where the content would have a

black background, with large white text, to aid users with poorer vision. Also the forms in the member's area could also use highlights, for when a field is selected, however this is currently only available in Mozilla Firefox.

As the current application stands there seems to be no weak feature that derives from the quality of the overall product, therefore at this stage nothing would need to be necessarily removed.

If the testing stage was to be redone, with more time available, user testing, for the primary users could take place, to see how they interact with the application and its interface. As it stands it is impossible to tell how all users might interpret and try to use different interactions on the current interface. Also any queries or problems they have could be used to improve the design for a more finalised version of the application.

If the whole application was started from scratch, it would be possible to rework the XHTML, from 1.0 Transitional, to 1.1 Strict, the latest and most compliant version of XHTML, so far. However, this is will soon be replaced by version two, which is still in a working draft by the World Wide Web Consortium (W3C, 2006). However, this would mean some of the CSS would need re-working as version 1.1 interprets certain style properties differently. The overall design may also change from a fixed width to a liquid design to cater for even more resolutions and platforms such as PDA's. Also the letter of each access key would be added to the alt text of all links.

The software used to develop the application was Dreamweaver, and helped to save time with its template system, therefore if the application was re-built, Dreamweaver would once again be used.

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Appendix

- Mission Statement for War Films Web Application
- Rapid User Modelling Method
- Mood Board
- Colour Palette
- Font Board
- Initial Sketches #1 - #5
- Reflection on Feedback Received
- Peer Evaluation Feedback Forms – Marie Brudenell, Steven O’Neill, Tom Stacey.
- Storyboards screens 1 – 9.
- Resources Reference List.