Dynamic Websites
Topic 12:
Evaluating Websites

Scope and Coverage

This topic will cover:

- Evaluation of the dynamic website in terms of:
  - User satisfaction;
  - Suitability of web application;
  - Business benefit of the web site/services;
  - Accessibility support.

Learning Outcomes

By the end of this topic students will be able to:

- Reflect on the use of web tools and techniques that have been used for a specific purpose;
- Reflect on the functionality of the website;
- Reflect on the web service solutions;
- Test for user satisfaction;
- Reflect on the business benefits of the web site/services;
- Understand the issues of accessibility support.

Introduction

- Having spent a number of lectures looking at how you can construct a dynamic website, we are now going to discuss how to evalutate them.
  - Having created a web page, we must be able to say whether or not it is of suitable quality.
- This is the process with several parts.
  - Ensuring technical correctness (Topic 11);
  - Ensuring standard compliance (Topic 11);
  - Ensuring user and business satisfaction.

User Satisfaction

- The third pillar of evaluating a website is to make sure it meets the needs of users.
  - A website may be perfectly technically adequate and do what it is supposed to.
- This in turn is broken into two parts:
  - Ensuring that it does what users needs
  - Ensuring that it is accessible to users.
- Accessing both of these should be an ongoing part of your development.

User Centred Design - 1

- There is a reliability modern design strategy that is called "User Centred Design".
- Consulting users at each major stage of development ensures several things:
  - Users get a chance to reflect on changes and see progress
  - Developers get to evaluate the effectiveness of their applications on a regular basis
  - Changes can be made least costly.

User Centred Design - 2

- Evaluating user satisfaction is usually done according to a set of list criteria.
  - Though you should permit users to wander from these to express their views.
- These criteria focus not just on the aesthetics, but also on the *workflow*.
  - Usually, "how many clicks does it take to get something done"
- The first few minutes of a user's interaction are usually important.

First Few Minutes - 1

- First impressions are important on a website.
  - Users read less than you might expect.
    - Use text that be easily visually scanned.
  - Users often do not scroll down through a long webpage.
- Unless your web application is *bespoke*, you are going to need to design your web page to grab their attention right away.
  - It should have a clean design, with obvious *action points* clearly visible.

First Few Minutes - 2

- Ajax greatly reduces the need for web navigation as such.
  - Much of the navigation can be hidden behind asynchronous server communications.
- Nonetheless, it is important to ensure an easily understood structure of pages, and provide memory aids.
  - Such as breadcrumbs.
- Common elements of web pages should be where people *expect* them to be.

Functionality

- Your web page should be assessed on its functionality in several ways:
  - Robustness of the site;
  - Responsiveness of the site;
  - Clicks on completion;
  - Auto-complete where appropriate;
  - Low cost of mistakes;
  - Confirmation of actions.

User Familiarity

- When a webpage remembers it users, it is more highly valued than one that ignores users between sessions.
  - Be wary of requiring registration though.
- Some users find this behaviour off-putting.
  - Older users in particular will often have privacy concerns about their information being stored
  - Make it opt-in.
  - Make your privacy policy available and *understandable*.

Evaluation - 1

- User testing will help you address of these issues.
  - They will tell you when things are not as they should be.
- This becomes much harder when you do not have specific users that you can recruit.
  - This is usually the case when designing a web page for yourself.
- You do not need expensive equipment or huge numbers of users to do simple testing.

Evaluation - 2

- There is a structured process that can be followed to employ user evaluation of a website.
  - Identify representative users
    - The people you test should reflect the makeup of the intended audience as far as possible.
  - Recruit users from that group.
    - Experts suggest about 2- people to get rigorous numbers.
    - Five users can be adequate for most purposes.
  - Choose where the testing is to be conducted.
  - Conduct the testing.

Evaluation - 3

- User feeling can be assessed using various techniques:
  - Performance measures;
  - Thinking about protocol;
  - Coaching methods;
  - Questionnaires.
- You can also outsource much of the work to accessibility experts who can do more substantial testing on a more rigorous basis.

Interpreting Feedback

- Having gathered user feedback, it is important that you interpret the results correctly.
- Some issues can be fixed right away:
  - Typos
  - Broken links
  - Confusing instructions
- Some will require more substantial restructuring.
  - This will require testing in itself to make sure it fixes the problems and di not introduce any new issues. This is known as **regression testing**.

Business Benefit

- As well as meeting user needs it is essential that the system meets its original purpose.
  - What is the purpose of the website?
  - What are the business needs?
  - How well does the website meet the scenario?
  - How well does the website perform?
  - How well does the website function?
  - Are there other web services that would benefit the website?
  - How is this website going to improve traffic/sales for the business?

Assessibility - 1

- The final topic of this lecture is *accessibility* – the degree to which our web pages can be used by people with physical or mental impairments.
- Many of the people who use computers have difficulties that make the experience more challenging than for others.
  - And everyone may find themselves subject to temporary impairments from time to time that impact on their ability to use computers and web pages.

Accessibility - 2

- Accessibility should be considered as a non-negotiable deliverable of any web application you develop.
  - In many countries, it is actually illegal to deploy websites with poor accessibility.
- A full study of the implications of accessibility is beyond the scope of this module.
  - But we will talk about some of the more obvious problems that are associated with web-based applications.

Visual Impairments - 1

- Those who have significant visual impairment (partially or fully blind) will find visual displays difficult or impossible to interpret.
  - Most often this is compensated for by screen readers or magnifiers.
- The presentation code that we provide should provide the necessary assistance for these users.
  - Mark-up text with the *lang* attribute
  - Provide alternative text for images
  - Descriptive text for links.

Visual Impairments - 2

- To experience a webpage as a blind user does, try the screen reader simulator at:
  - http://webaim.org/simulations/screenreader
- Another significant visual impairment is colour blindness.
  - This is something that should be taken into account when choosing colour schemes.
  - A simulator exists for colour blindness:
    - http://www.vischeck.com/

Mobility Difficulties

- Mobility difficulties are most often compensated for by modified or specialised equipment:
  - Specifically designed keyboards
  - Mouth sticks
- Here, our obligation for support is primarily on simplifying our interfaces to reduce the burden of interaction.
  - Do not require text to be typed if it can be supplied.
  - Group frequently accessed interaction elements together.

Hearing impairments

- As websites become more focused around multimedia, hearing impairments are becoming more of an interaction issue.
  - We can resolve this to a degree through the use of captioning.
- The primary thing we must avoid to create accessible websites is having important information that is encoded only as an audio cue.
  - Warnings or alerts, for example.

Other considerations

- User experience – big screens, tablets, mobile devices
- User journey including customer profiling
- Testing frameworks

Conclusion

- Building a web application is only one step for a complex process.
  - Having built it, we must ensure that it actually works and is effective.
- We assess this on three criterion:
  - Technical correctness
  - Standards compliance
  - User satisfaction
- This is best done on an iterative process.

Terminology

- *User centred design -* A design method whereby the user is consulted at each stage of the development process.
- *Accessible -* The degree to which our web applications can be used by individuals regardless of physical or cognitive impairments
- *Standards compliance -* The degree to which our web application correctly implements fixed standards.

References

- Webaim.org, 2017. [online] Available at: http://webaim.org/simulations/screenreader
- Vischeck.com, 2017. [online] Available at: http://www.vischeck.com/

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Any Questions?