

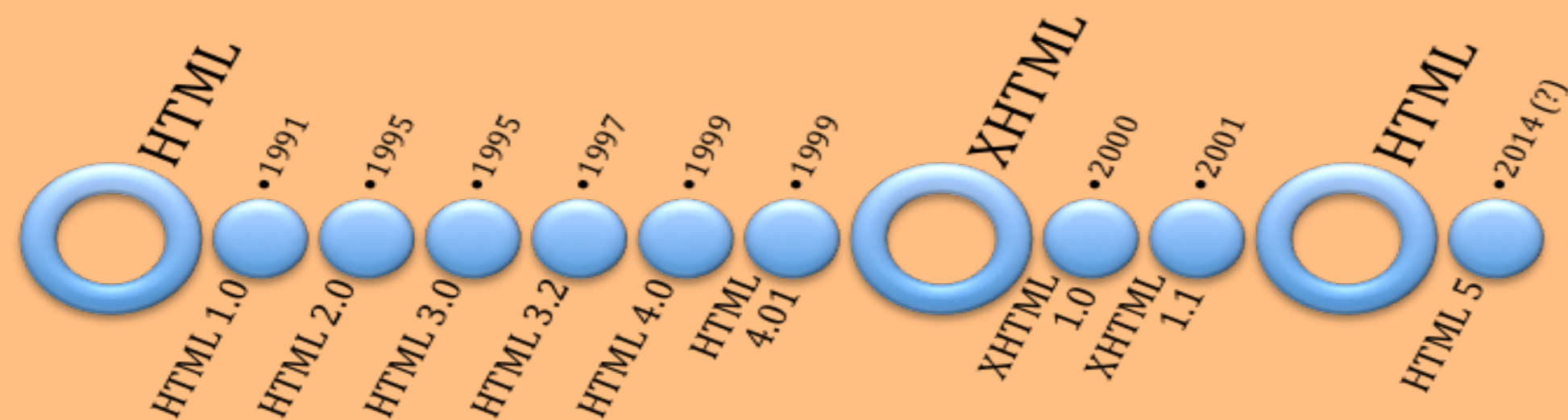
New Web Standards for Multimedia

James Alexander Brown, MSc Information Technology

Supervised by Tom Kelsey & Lisa Dow, School of Computer Science, University of St Andrews

Research questions

1. From a provider perspective, will the introduction of HTML5 be beneficial given that it is likely that storage requirements will increase and much of the coding will have to be done in-house?
2. From a user perspective, will the benefits that HTML5 claims make any real and noticeable difference to users who simply wish to view content and are not concerned about the technology that allows this to happen?
3. What quantitative and qualitative improvements, if any, will the new web standards bring to the usability of multimedia websites and how can such improvements be effectively measured?

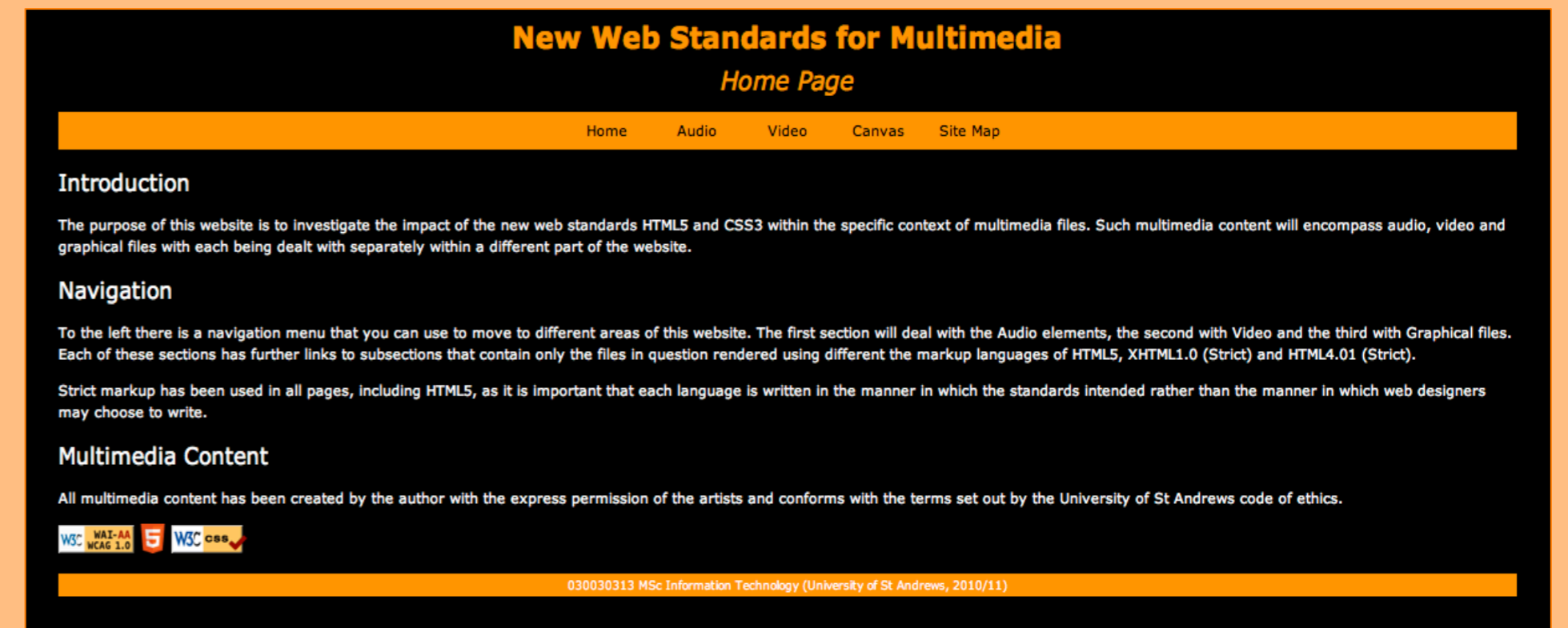


Methodology

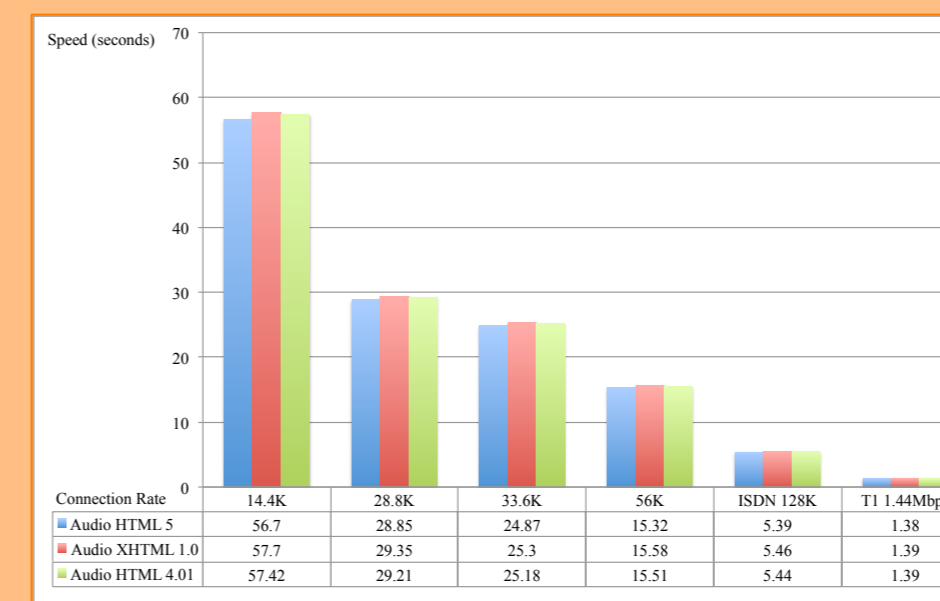
This thesis specifically examined multimedia within new web standards thus, the two principle elements that require investigation were **audio** and **video** files. In order to see how the inclusion of both differed between past, current and future standards a web site was created to incorporate such media content in as simple a format as possible to allow qualitative and quantitative measurement of the following key attributes:

- Analysis of structural code with new standards
- Examination of development times under new standards
- Cross browser and cross appliance accessibility
- Cross browser and cross appliance accessibility user speeds when loading and viewing media specific content
- Scale of adoption of new standards across a range of media and browsers
- Specific requirements of making particular content accessible across different browsers and media

<video>
<audio>
<canvas>



Some results ...



Audio media

Initial speed testing of the audio pages suggests that the new HTML 5 standard may not have any significant impact on download speeds for Web users as differences in download speed are minimal at all connection speeds.

Similar to the audio testing results, HTML5 rendered Web pages faster than both HTML 4.01 and XHTML 1.0. At faster connection rates the differences were small enough to be insignificant to the average Web user. However, at slower connection speeds the difference in download times were appreciably longer when viewing Web pages written in HTML 4.01 and XHTML 1.0 markup syntax.

Video media

