

Project D - Evaluation of Archie interface

D.1 Background

Developments in several areas mean that the time is right to re-evaluate the principles and technologies behind the interface used for Archie. These developments include:

- an increased focus on web accessibility
- an expanding user base with expectations shaped by exposure to other web applications (“But it’s much easier on Facebook, Gmail and eBay”)
- the emergence and maturation of relevant technologies.

D.1.1 Accessibility

“Web accessibility means that people with disabilities can use the Web. More specifically, Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging.”¹

The original plans for Archie included programming an interface that combined usability with accessibility. However, the over-riding need to deliver a working system in a timely fashion within the resources available meant that we focused on developing a rich interface with high levels of interactivity and responsiveness, but without consistent attention to accessibility.

As a consequence, Archie does not live up to many basic accessibility guideline requirements, and although some of the problems can be identified easily, an accurate and complete overview of the resources needed to reach compliance requires a more thorough analysis (beginning with the resources to do such an analysis).

D.1.2 Usability

“Usability is a term used to denote the ease with which people can employ a particular tool or other human-made object in order to achieve a particular goal. [...] In human-computer interaction and computer science, usability usually refers to the elegance and clarity with which the interaction with a computer program or a web site is designed.”²

Although Archie is web-based, it was originally designed to mimic a desktop application in many ways. For example, it relies heavily on the use of context menus (i.e. those accessed with a right-click). But since Archie’s launch, the use of dynamic interfaces for websites has increased tremendously (as part of the ‘Web 2.0’ phenomenon), and most of these websites have interfaces that are very different from Archie.

Usability testing could explore the extent to which Archie’s interface paradigms meet user expectations and thereby allows intuitive use.

D.1.3 Technology advances

Archie can be characterized as a Rich Internet Application (RIA). Many new technologies have been developed to enhance RIA development specifically. A few of the examples are AJAX, Adobe AIR, Microsoft Silverlight, and JavaFX.

We also need to keep emerging platform trends under review. For many years, the target audience of Archie has been entity staff, and it has been safe to assume that most users were accessing Archie from an office PC with a reasonable display size. Now that the user base is expanding to include authors, editors and maybe even peer referees (who could, for example, be responding to a workflow task), the types of systems they may be working from is broadening. This does not mean that there is a pressing need to develop ‘Archie for iPhone’, or other mobile clients

¹ <http://www.w3.org/WAI/intro/accessibility.php>

² <http://en.wikipedia.org/wiki/Usability>

right now. But the point where the Collaboration can gain overall efficiency by providing its systems on a wider variety of platforms may not be too far off.

In combination, an evaluation of the appropriateness of Archie's interface technology should look at how it compares to the available alternatives in terms of developer resource requirements and broad platform support.

D.2 Proposal and discussion

To maintain resource efficiency, an evaluation should be performed so it produces results that can be turned into realistic recommendations. Considerable time can be saved by at the outset establishing the general priorities of the Collaboration within the area. The evaluation should therefore begin with a limited consultation with the CCSG and/or its relevant advisory groups.

The evaluation would then consist of at least three 'branches', with resources allocated based on the established priorities:

- Usability testing and analysis
- Accessibility compliance analysis
- Identification and evaluation of current RIA interface technologies.

D.3 Summary of recommendations

1. Determine Collaboration priorities
2. Analyse how well the current interface meets the requirements associated with these priorities
3. Develop a proposal for addressing identified shortcomings

D.4 Resource implications

Until the priority mapping has been done, we are unable to fully predict the resources requirements. However, it is likely that there would be a minimum of 4 FTE weeks for a developer and 4 FTE weeks for a Communication and Support Officer. We also propose that at least 2 weeks be set aside for work to be done by people outside of the IMS core team, for example by the Cochrane Web team. The Steering Group and various Advisory groups would also need to devote some time to defining the Collaboration's priorities and usability testing will be required by volunteers.

D.5 Impact statement

Evaluating the current interface for Archie against best practice in usability, accessibility and appropriateness of technology will enable the Collaboration to make informed choices when prioritising future development.