Accessibility Issues in E-Government

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Abstract. Government services are almost always monopoly services, and as a result, it is important to maximize inclusion. However, substantial numbers of people are unable or unwilling to use internet services. Usability and accessibility issues are a major deterrent to internet use and are important in users' perceptions of websites. These are particularly important for older people, many of whom have reduced visual acuity, loss of fine motor control and other disabilities that make it more difficult to deal with poorly designed websites. We undertook two sets of experiments, the first involving an assessment of the accessibility and standards compliance of local and national e-government sites in the UK. The second focuses on sites in several other European countries. Results show significant differences between different levels of government and between standards compliance and accessibility.

Keywords: e-government, accessibility, standards, exclusion.

1 Introduction

As we conduct more of our daily activities online, e-government becomes more essential to citizens and to businesses. Governments are sole providers of many services, for example, registering a birth, booking a driving test or paying taxes. Making these services available online gives most people quicker and more convenient access, as well as creating substantial savings [20]. However, the presence of groups of people who are unable or unwilling to use online services makes the change more problematic, the 'actively disengaged' and the 'willing but unable'; the main characteristics of e-government non-users are related to age, education and income [28] [1].

Since many public services are natural monopolies usability and accessibility issues have a disenfranchising effect which is likely to exclude the groups of citizens who are least well equipped to participate in a digital society. Web accessibility guidelines are well developed, but many organisations do not implement them and previous studies have shown a widespread lack of compliance with accessibility guidelines on e-government websites. A related issue is the extent to which e-government sites are using standards-compliant HTML. Standards-compliant HTML is less likely to have accessibility and usability problems and can be rendered appropriately on a wider range of devices, including adaptive technologies and mobile platforms.

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We describe two sets of experiments, using a set of common e-government tasks in a range of European countries, to test the accessibility of a sample of national and local e-government websites using the WCAG guidelines [29] and to test their compliance with HTML standards.

The structure of this paper is as follows. Section 2 discusses e-government usability issues and some results of previous work in this area. Section 3 describes the methodology used to measure e-government accessibility and section 4 presents the results of the experiments.

2 Service Usability

For e-government services to be successful, they must be usable and easily accessible to consumers. Government sites, in common with the rest of the Web have become more usable over time [21], with the better use of features by designers, better user understanding of conventions and changes in technology. This trend is being helped by the move to standards-based websites, since the standards incorporate many features that aid usability. However, most government (and other) web pages are not compliant with the standards they claim to be written to [14].

Usability measures used for e-government service evaluations may not measure the features normally associated with usability; for example [28], whose usability component comprises a score for help facilities and for user feedback or comment mechanisms. Work on Jordanian government sites [4] included a set of questions about user customisation of the sites, some of which (e.g. font size) are clear usability and accessibility issues, but others do not seem appropriate for e-government sites (e.g. changing the colour scheme).

The satisfaction ratings for e-government services are generally lower than for commercial services (e.g. internet banking); the satisfaction rating was highest for 'declaring income tax' and lowest were for 'becoming unemployed' and other services which might result in a claim for benefits [28]. Of the EU services users, only 47% had their information or transactional needs met in full. Work on US federal e-government shows similar trends; there is low satisfaction (66%) with e-government services compared with commercial services in all sectors surveyed – only ISPs scored lower [2]. There is considerable variation in satisfaction between services, ranging from 75% to 58%; transactional services generally have lower scores than informational services. However, even for poorly-rated services, the satisfaction with the online service is considerably greater than for the paper-based service.

A widely recognised issue in e-government is the difficulty that many users have in finding information (e.g. [9]), which is organised by department, rather than by function. The restructuring of the e-government landscape to facilitate users' tasks is a significant motivation in the UK for both central and local government adoption of cloud-based services.

Extensive research has been carried out on older peoples' use of the internet. It is apparent that the digital divide is a problem for the level of e-government