

## Improving Usability of e-Government for the Elderly

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**Abstract :** Electronic government systems are currently in the same development stage as e-commerce applications were about in the late 1990s. Wide adoption by the majority of population is near, as such services are not only more and more desired by the users, but also strongly advocated and pushed by the state, as a means to increase effectiveness and cut expenses at the same time. Diffusion is however hampered by the low motivation caused by usability issues which will cause more and more frustration as the general population ages. Usability centred design is essential when creating such services. Elderly users, who have statistically the least experience, have the most problems, and therefore reject unusable systems first. The goal of our research was to find a way to map the needs of the elderly and create guidelines for the design of electronic government systems which are usable for the whole population. The first phase of our research, started mid-2009, was centred on the idea to gather information about the needs of the target group, in both Germany and Hungary with over 70 participants. This was done with the help of scenarios, interviews and questionnaires. The supplied data enabled to choose an eGovernment system for tests on the target group. Tests conducted in Germany and Hungary were based on the design and functions of the German electronic ID card, in the native languages. Scenarios mirroring common, every day transactions requiring an identification procedure were used. The obtained results allowed us to develop a generalised solution, the IGUAN guideline. This guideline makes a standardised approach to the usability improvement process possible. It contains the special requirements of elderly users, and a catalogue of criteria, which helps to develop an application in line with the set requirements. The third phase of our research was used a proof of concept for the IGUAN. The guideline was evaluated and tested with an iterative prototyping. The successful completion of this phase indicates that the IGUAN can be used to measurably increase the acceptance of e-government systems by elderly users. We could therefore demonstrate that improvements in the interface make e-government application possible which are perceived useful and easy to use by elderly users. These improvements will measurably increase the user motivation and experience. This can however only be achieved with a structured design process, and requires a framework which takes the requirements of the elderly users into account.

**Keywords :** e-Government, usability, acceptance, guidelines

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