CATS: Assisting Older People Obtain Appropriate Technology Support

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Abstract

In this paper, we describe the development of a checklist that is in development that can be used to assist older people determine the efficacy of different types of technology support systems. The importance of this is clear when considered in terms of the rising older population and the speed of technological acceleration making it impossible to keep abreast of latest developments that might be useful to supporting older people at home.

Keywords

Assistive Technology, Older People, Dependability, Design.

1. Introduction

There is a proportionate rise in the number of older people and as a consequence it is clear that new ways of supporting and assisting them are required. With the increase in population of older people, the UK is faced with a challenge of how to cost-effectively ensure that older people's health and social needs are met. Current trends favour technological responses to enable older people to maintain a quality of life, through telecare, EAT (Electronic Assistive Technology) systems as well as other home modifications and adaptations. Within the work under the DIRC (www.dirc.org.uk) Interdisciplinary Research Collaboration in Dependability we have begun to address the true potential for the appropriate use of technology in supporting older people in their own homes [3]. Our extensive fieldwork throughout England and Scotland allowed the voice of older people to be responded to through our adaptation of cultural probes [2]. The cultural probes highlighted the concerns of older people in relation to everyday mundane technology as well as their relationship with supportive technologies such as social care alarms [1]. In this paper we address a possible solution that we have been developing called CATS. The CATS tool has been designed to assist professionals and non-professionals determine whether a potential technology solution is most acceptable and appropriate for a person.

2. Method

Our fieldwork was conducted primarily at three locations, two in the North West of England and one in Central Scotland. Older people were asked to use "cultural probes" to provide us with glimpses into their lives. These probes consisted of Polaroid and disposable cameras, diaries, Dictaphones, photo-albums, postcards, maps of the area, pens and so on. We use them as a way of uncovering information from a group that is difficult to research by other means and as a way of prompting responses to users' emotional, aesthetic, and social values and habits. The data provided by the probes was enhanced by extensive qualitative interviews with the residents and technology tours around each person's home. The research team also complemented this by observation and photography.

3. Technology and Support

It soon became clear to us that older people's relationship to technology was not straight forward [4]. Older people are a heterogeneous group and therefore have a wider range of views and methods of using and accommodating to the technology in their homes. Simple devices such as televisions, for example, were not just providing entertainment but were acting as a 'comforting friend' which was always on in the background. We also found that the dependability of the technology was at times critical to the way that it was used or not used by the older person [5]. For example, cords from care alarms were not used and were tied "out of the way" so that false alerts were minimised. On closer investigation, it became evident that the people who had specified the technology in the first place had not considered the relationship between the technology and the person.

4. The Development of CATS

As a result of our work with older people we have developed and are validating a checklist called "*A Checklist to assist the assessment of the dependability in Assistive Technology Systems* (CATS)". The CATS checklist is

designed to assist in the appropriate choice of assistive technology system to meet the needs of an older person in their home. CATS provides a number of key questions which can be asked about the user's relationship to the overall technology system as well as specific technology related (system derived) questions. The intention and purpose of CATS is to allow users to assess their existing systems and determine appropriate additions (if required), for carers to determine if a person's system is not working well and needing replaced or updated. Finally, and foremost, CATS is designed for social care professionals (Occupational Therapists, Social Workers, Support Workers etc) who would normally be assisting in or having input into specifying or commissioning this form of technology. By using the CATS checklist appropriately, the user should be provided with a set of clear questions that can be used in determining the appropriateness and dependability of any particular AT system they design or are considering using.

CATS contains three main checklists. The first checklist is a "Location Space Form" which allows the different elements of the home and interactions in the home to be plotted. The form is split into four sections (Fitness for Purpose, Trustworthiness, Acceptability, Adaptability) and each section is split into subsections (Transparency, Requirements, Availability and Reliability, Safety, Confidentiality and integrity, Maintainability, Survivability, Usability, Learnability, Cost, Compatibility, Efficiency, Responsiveness, Aesthetics, Configurability, Openness, Visibility, User Repairability) which allows different facets of interaction to be considered [5].

The second checklist entitled "Main Technology Assessment Questions" is designed to probe whether the proposed technology is the correct decision, or whether an alternative method of assisting the person is recommended.

The third checklist entitled "Assessing a System: What to look for and what to avoid" is made up of highly detail questions about the system both in relation to the technology (and its properties and configuration) and the person (their activity patterns, use and understanding of the proposed system). The questions follow the order preset in the first "Location Space Form".

5. CONCLUSION

This paper has briefly outlined the theoretical development of CATS, a tool to assist technology specification. The development and theoretical underpinnings to the tool have been discussed and the tool is currently being evaluated. Although it is still too early to provide definite conclusions, the CATS checklist does appear to be a useful tool that could augment current assessment procedures. There is a possibility that it might need to be re-evaluated and updated to ensure that it is both reliable and valid with future working practices and legislative practices. There is little doubt that a tool of this type is required and could be a means of ensuring people receive technological responses that do actually meet need.

6. REFERENCES

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