

The Portrait System for Care Staff of People with Dementia

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ABSTRACT

Care staff can find it difficult to get to know people with dementia who live in care homes. Care staff have limited time to spend with each person and communication difficulties can make it difficult to learn important social information and preferences. This lack of knowledge about the person with dementia can make social interactions very difficult and can often lead to repetitive interactions. This paper presents a software tool called Portrait that was designed to help care staff quickly get to know a person with dementia as a person. Overall Portrait was very positively received by care staff and families of people with dementia.

Categories and Subject Descriptors

H.5.2 [User Interfaces]: User-centered design, H.5.1 [Multimedia Information Systems], K.4.2 [Social Issues]: Assistive technologies for persons with disabilities

General Terms

Design, Human Factors.

Keywords

Multimedia, Dementia, Usability, Care Aid.

1. INTRODUCTION

Dementia is an umbrella term used to describe intellectual impairments normally in older people produced by brain dysfunctions that are usually progressive and eventually severe. Life history, personality and environment can have a stronger effect on a person with dementia's experience of the disease than the dementia [5]. In the UK alone 700,000 people have some form of dementia with over a third of these people (244,000) living in care homes [4]. Alzheimer's Society (2007) states that 'dementia is the strongest determinant of entry into residential care in over 65's'.

People with late-stage dementia can be very difficult to get to know due to deterioration in their written or verbal communication skills. These communication difficulties can pose a problem when the person with dementia is introduced to a care environment. These individuals with dementia are unknown to care providers and less able to easily communicate who they are and what they need. Extra effort and innovative strategies are

required to encourage communication and social interaction between care staff and people with dementia. As a result, care functions can be limited to only dealing with the clinical care or daily living needs such as eating, bathing, toileting and sleeping [8, 4].

There has been a lot of work that focuses on tools to aid the person with dementia from life story books/memory boxes for reminiscence, to simple pill boxes to 'cognitive prostheses' as well as tools for communication or reminiscence support for the person with dementia (e.g. CIRCA [2] and Multimedia Biographies [6]). These tools, however, are not designed to help care staff learn important personal and social information and preferences about a person with dementia. As a result these tools can provide too much information or are too time consuming for staff to sort through to lean the most salient personal information and preferences.

In this paper we will present a system called Portrait. Portrait was specifically designed to only be used by care staff. The goal for this software is to help care staff get to know a person with dementia as a person given the limited time in their work schedules.

2. SYSTEM DESCRIPTION

The Portrait system consists of a multimedia portrait for individuals with dementia who live in a care environment. It is intended to be used by the care staff in that environment to gain an initial understanding of that person's life prior to entering care and to learn more personal information about their needs and habits. The Portrait system contains important but limited personal and social information about the people with dementia for their care staff to access. The portraits are presented on a combination touch screen/computer system and are designed to be used for about three to five minutes.

The overall design of the Portrait system contains a menu bar that is located in the lower portion of the screen (see Figure 1). The menu bar consists of the six different topics of information: Time Line, Family Tree, Things To Know, Hobbies & Interests, Family Stories and Photo Album. The menu button and the background colour of that topic are the same to help users identify where they are within Portrait (see Figure 1). The system uses text and icons wherever possible to help care staff quickly identify a topic of information (see Figure 1). All text descriptions are limited to a maximum of three sentences to ensure there is not too much detail that staff could not quickly read.

There is a growing body of research on designing interfaces for older people or people with dementia but there is little published on designing for care staff. In designing Portrait, characteristics of the typical care staff were considered. Specifically, care staff have very little if any need to interact with computers in their normal working day. Also, they are a large and varied user group with

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large differences in age, literacy levels, computer experience and time for training. Thus it is important to design the Portrait system's interface to be intuitive, simple and easy to use, and to require little to no training to reduce barriers to use.

As a result of these requirements, the Portrait system has been developed for a touch screen interface as touch screen interaction is one of the simplest and most direct forms of HCI [1]. This combined display and control also remove the need to learn to use other hardware such as a mouse.

Portrait was also designed to maximize information retention. Information retention and engagement have been shown in studies to improve when interactive multimedia is used, particularly in learning environments [7]. Therefore, using a multimedia system such as Portrait could have many benefits over a standard paper equivalent.

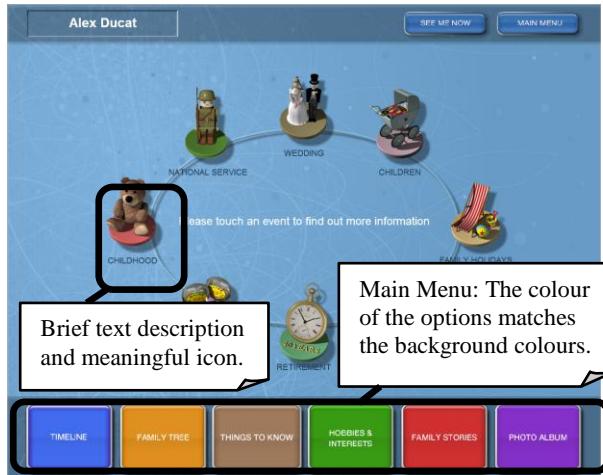


Figure 1 - Time Line topic showing meaningful icons and limited text descriptions that the user can select.

3. STUDIES

Five key studies were conducted during this research. The first study evaluated the usability of the Portrait system. The second and third were conducted with care managers and staff in the care home setting to assess usefulness and usability of the Portrait system and to compare it to current methods used in the care home environment. The fourth study conducted case studies with families of people with dementia to investigate the Portrait creation process and the final study investigated the placement of these Portraits in the care environment.

4. DISCUSSION

The results of this research are promising, with Portrait being very positively received by care managers, care staff and the families of people with dementia. This research highlights the potential benefits of technology in the care environment to assist care staff. A number of key areas for future research have been identified including the possibility of expanding the use of the system and using alternative state of the art devices.

This research directly investigated care staff as a user group and the application of technology within their working environment. It identified key factors of care staff as a user group and implications of conducting research within a care environment. It examined the processes involved in the identification of the content of a

'Portrait' of a person with dementia and investigated the gathering of information by families to create such a portrait. In doing so, Portrait, a software tool was systematically developed and evaluated in care environments by care staff for usability and usefulness of this technology in their working environment. Thus the studies conducted in this research have not only examined and identified care staff as a user group and explored how families would gather information for and create portraits of their relatives, but have also identified approaches to integrating technology into care environments.

This research identified key factors of working with care staff within care environments. The results illustrate care staff's ability to use technology within their work routine and the care environment. Care staff are open and accepting of new technology and its possible benefits to them, the care environments, and importantly the residents themselves.

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