

About MultiMemoHome

MultiMemoHome is an EPSRC funded research project aiming to develop acceptable, accessible, effective and adaptive reminder systems to support independent living at home. We hope that this will help to provide a higher standard of living, reduce stress on carers and family, and allow people to remain in their own homes independently for longer.

In order to reach this goal we are researching how different people live, identifying the things people forget and the methods used to remember things in and around the home. In addition, we are investigating the different modalities that can be used to present reminders in the home.

We are investigating the technology required to deliver reminders to people of various ages, backgrounds and abilities; we hope to develop solutions that are accessible and acceptable to people of all ages, and also to people with visual and/or hearing impairments. Most importantly, we're trying to research technology that is practical, affordable and suitable for use in everyday life.

Stories

We are currently conducting focus groups and interviews with older users and people with sensory impairments. We also believe that anecdotal stories are important to researchers, as they can provide answers to questions we hadn't thought to ask. Here is a selection from the stories submitted to our website. For more, visit '<http://multimemohome.com/share>'.

Today, my father was frantically calling doctors' offices to find out which doctor he had an appointment with tomorrow. Turns out that he had rescheduled the appointment and hadn't changed his calendar.

Submitted: 8th December 09

Recently, my parents came to visit. They live on a ranch in central Montana, and my dad has CPOD, along with some other health issues. They forgot to grab some of his medication and called me last Friday and asked me to mail it to them. I forgot Friday, I forgot on Saturday and due to some other rather pressing issues today, I forgot to grab it this morning to mail as well. Thankfully, said meds were not terribly important-over the counter stuff. With Christmas right around the corner, they told me today to just hold onto it, as they had made it into town to get some more.

Submitted: 8th December 09

One of the most common issues I see with my older family members is remembering to charge their cell phones. Which can be somewhat of a worry to me, because I fear they will get in a bind somewhere, and go to use their dead cell phone to no avail. Recently one of them had a bit of car trouble. It was late and they were in a less travelled area. Luckily a neighbour passed by shortly and they were able to call one of us to assist. I was a bit amused when I asked the last time they charged their phone, and they replied, "Well I haven't used it in a week, so I thought it would still be charged up!"

Submitted: 7th December 09

Supporting Independent Life

In common with other European countries, the UK has an ageing population. The proportion of people aged 65 and over is projected to increase from 16 per cent in 2008 to 23 per cent by 2033. This is an inevitable consequence of the age structure of the population alive today...

Source: statistics.gov.uk

As well as chronic illness, older people are also more likely to have a disability. Nearly half of disabled people are aged 65 or older. The most common problems relate to movement and to vision and hearing. Sensory impairments become increasingly common as people age: around 80% of people over 60 have a visual impairment, 75% of people over 60 have a hearing impairment, and 22% have both a visual and hearing impairment.

Source: Department of Health

With an ageing population throughout Europe, it's apparent that preparations must be made to support a larger aged population. As people age, many will develop health issues that require care, and it is likely that many people will be placed into care homes. Home Care systems can assist people living in their own homes, reducing their dependence on carers; as a result they are able to remain at home for longer, retaining their dignity and independence.

Users of home care technology are more likely to have a sensory impairment such as sight or hearing loss. Multimodal interaction uses one or more of the senses in order to convey information; as such, it is ideal for creating systems accessible to people with sensory impairments.

Multimodal interaction has been explored for jobs with a high mental workload, such as nursing or piloting an airplane. It's also been used in toys like the Nintendo Wii and to add to the functionality of mobile devices such as the iPhone.



From a research point of view, it is often neglected when considering accessibility, and there is little research regarding the possibilities of multimodal interaction in home care settings.

The type of reminder we might want to receive can depend on many factors, from our personal preferences to our capabilities. It may also change depending on where we are, or what we're doing. We believe that a home care system should be flexible enough to allow the users and their carers to configure it to suit them, their current needs, and their lifestyle.



We are investigating the different modalities that can be used to present the reminders and empirically developing and testing sets of usable reminders in each of the modalities (visual, audio, tactile and olfactory). These reminders will be tested both in the lab and in the homes of real users. Throughout our studies we will also explore the issues of intrusiveness, disruptiveness and privacy, exploring the psychological and social impact that a user-configurable home reminder system might have.

