

Designing Home Care Reminder Systems: Lessons Learned Through Co-Design with Older Users

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Context: Technology for Health and Wellbeing



Reminder Systems



"By the time you're eighty years old
you've learned everything.
You only have to remember it!"



The
MultiMemoHome
Project

How should electronic reminders be delivered?

How can reminder systems be configured by end users?

EPSRC

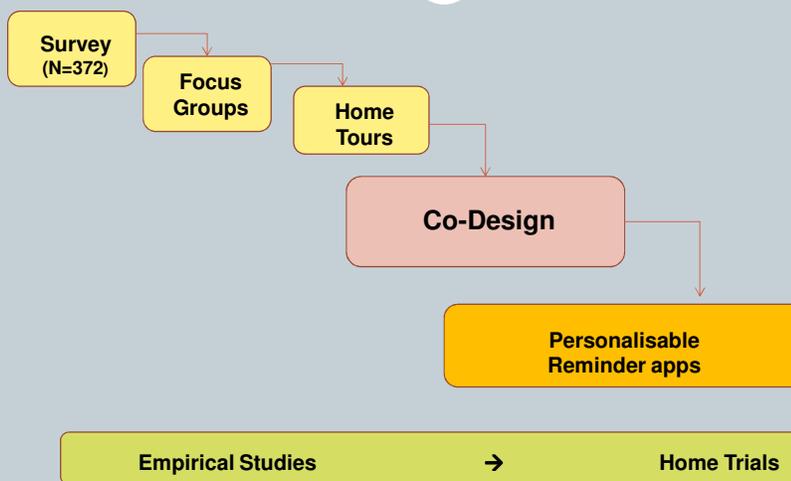
Engineering and Physical Sciences
Research Council

www.multimemohome.com

Understanding the Reminder Design Space

- What do people need reminders for?
- Why do people forget?
- How do people currently remember?
- How would users would like to receive reminders?

Overview of Development



Understanding the Reminder Design Space

- What do people need reminders for?
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- How would users would like to receive reminders?

1. M.R. McGee-Lennon, M. Wolters, S. Brewster, "User Centered Design of Multimodal Reminders for Assistive Living". Proc. ACM CHI 2011: Vancouver, Canada.
2. M.R. McGee-Lennon and M. K. Wolters, "Desinging Reminders for the Home: The Role of Home Tours". In Proc. INCLUDE, 2011, London, UK.
3. M. K. Wolters and M. R. McGee-Lennon, "Designing usable and acceptable reminders for the home", In Proc. AAATE, 2010.

Some Findings

Categorising Reminders People Want

Main Categories	Popular Examples
Environmental controls	Closing windows and doors
Daily chores	Unloading the washing machine
Weekly chores	Putting out the bins
Less frequent events	Appointments
Objects	Keys, Bus passes (where / taking them)
Care regime	Taking Medication

Provide an
appropriate
choice of
modalities



**Understand
physical and
social context**



Personalisation is key

Configuration/Personalisation



How do people want to set reminders?

How do people want to change reminders later as they use the system in practice?

Co-Design Sessions

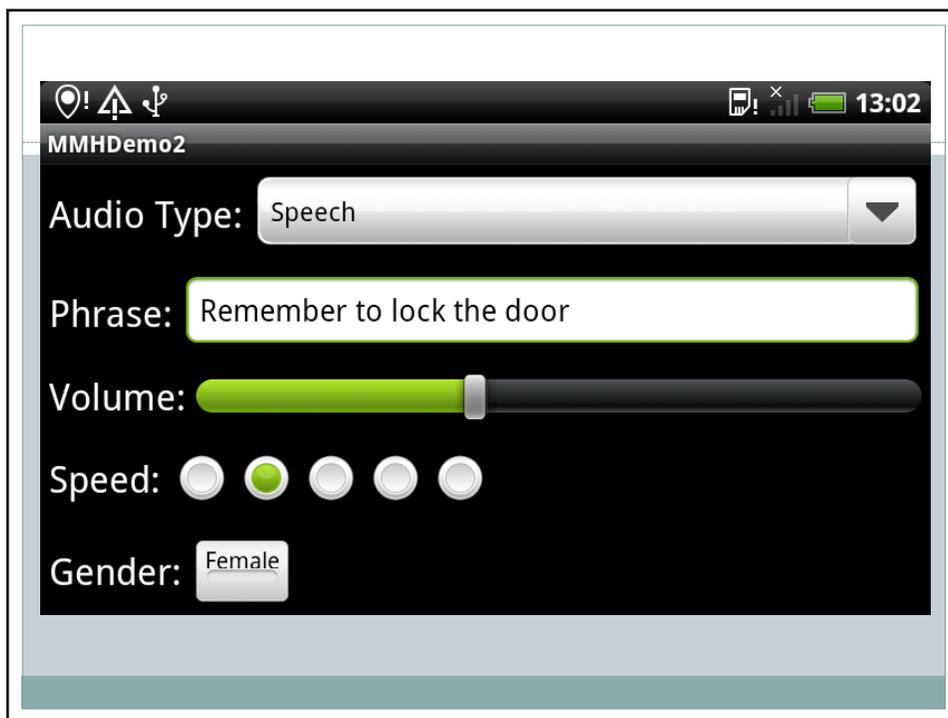
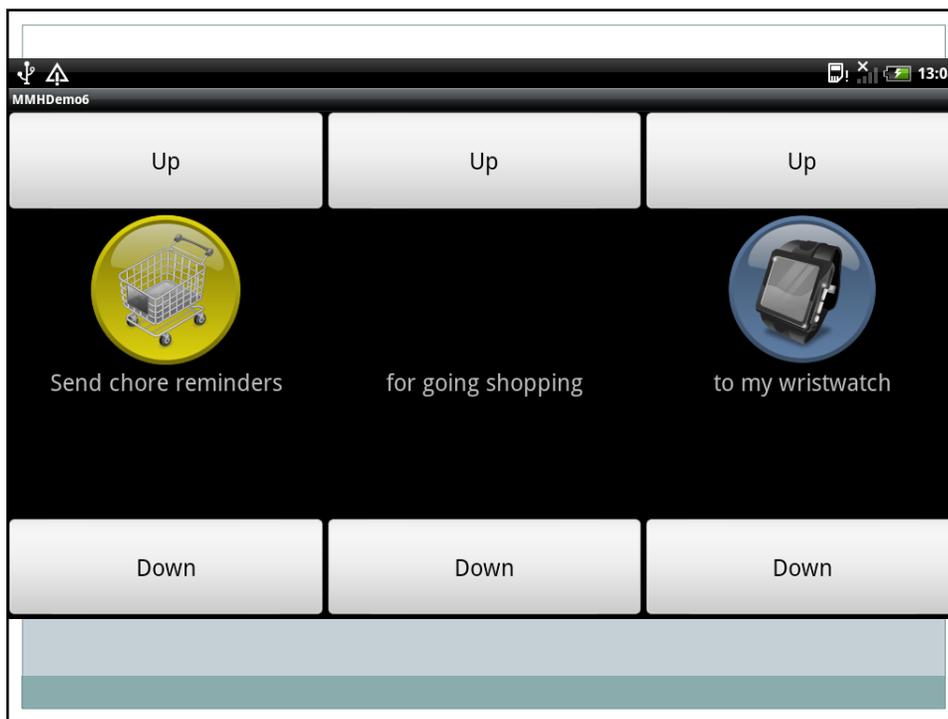


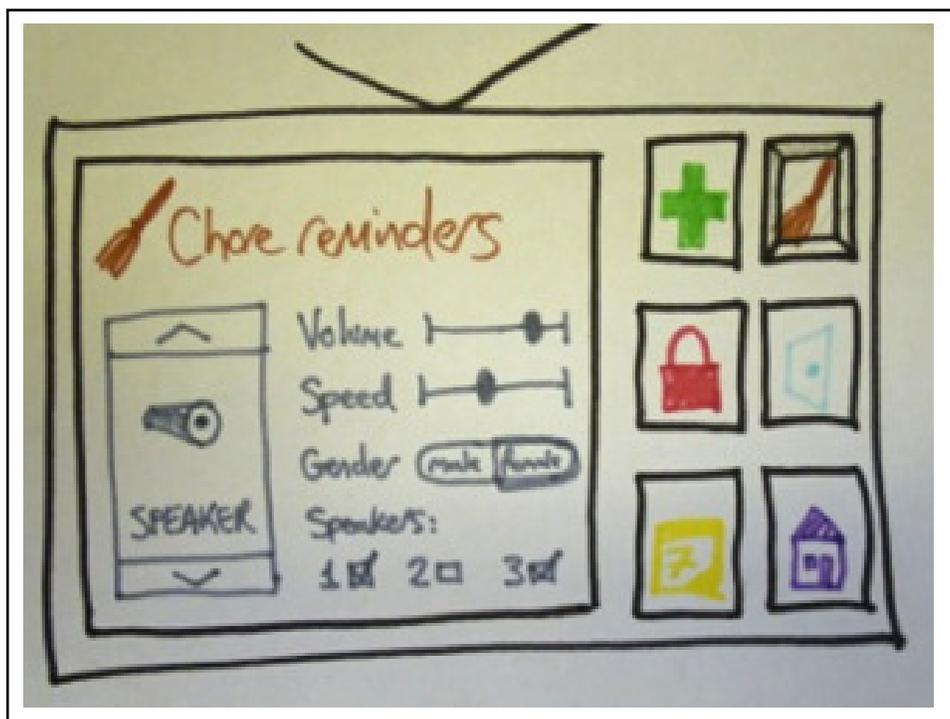
Design Sessions

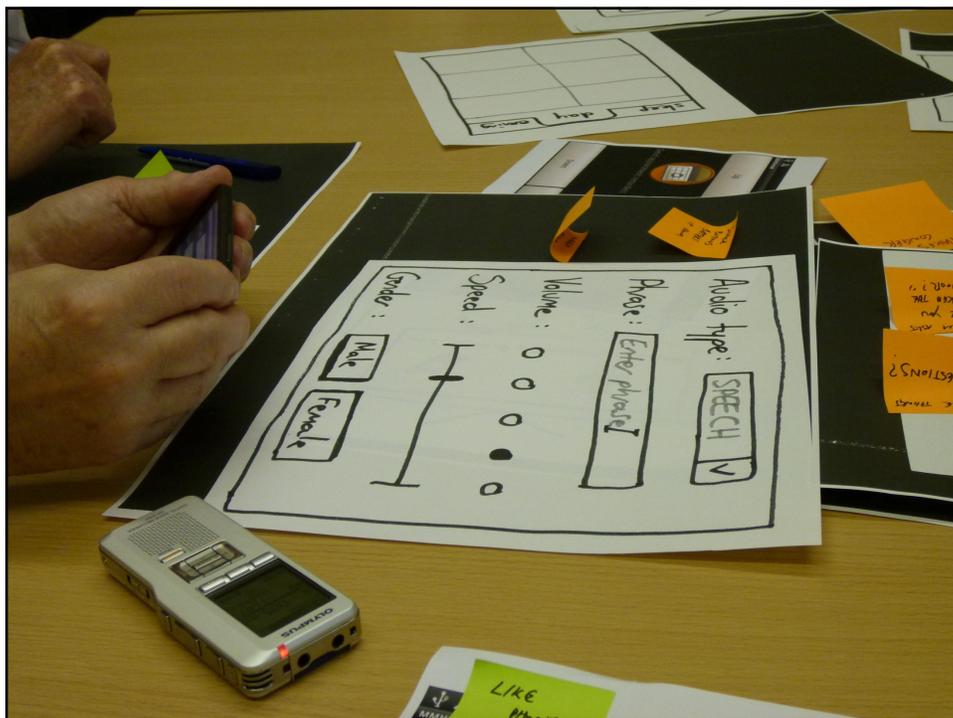
- 4 x 90 min sessions with **older users**
 - (N=3, N=2, N=6, N=4)
 - 2 x 90 min sessions with users with **sensory impairments**
 - N=7 (Hearing Impaired), N=3 (Visually Impaired)
- Evaluation of existing prototypes
- Co-design and re-design

Prototypes

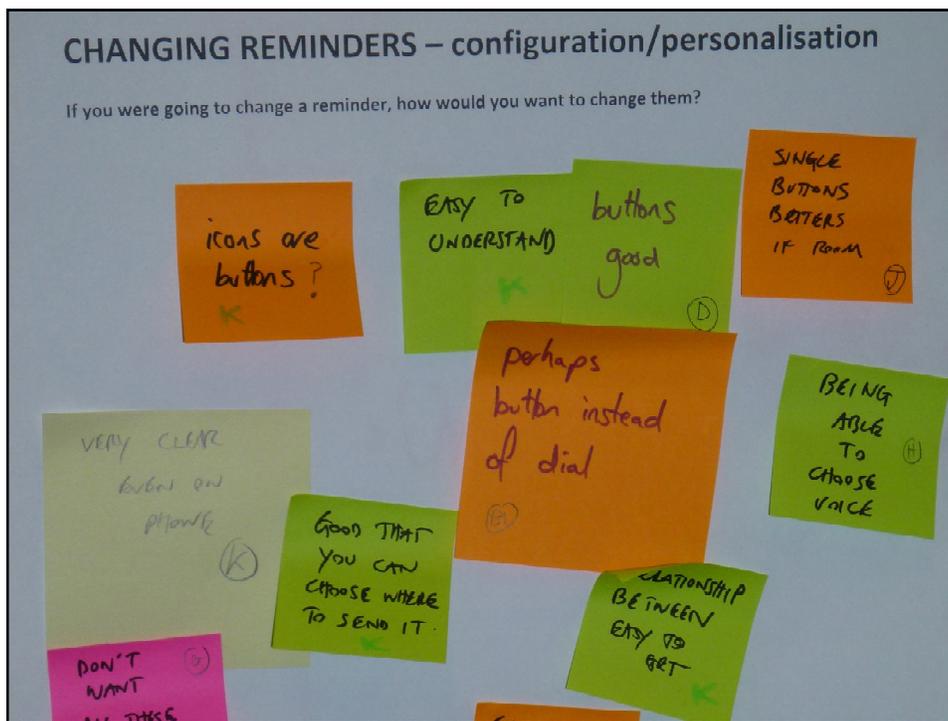












Analysis

6 Q. But, if the Court is -- what is the danger today for
7 these children that are not at thirteen, fourteen, fifteen,
8 sixteen and seventeen years of age? what is the danger today
9 for these children?
10 A. The danger that I can see and that I have seen that
11 they'll continue to grow up in an environment where it will be
12 accepted that there will be young girls having sex with older
13 men, sometimes much older men. And it will be accepted that
14 the boys are to grow up in that belief that they will one day
15 be adult men having sex with young children.
16 Q. So on the supposition by the Department that in the
17 future this may happen, these other four hundred children
18 should not be with their families?
19 A. Yes, ma'am.
20 MS. HENNING
21 witness.

own home
when you mean the girl's own home, you'd say. There is a lot of people around for
house. (She's having someone in that to what get tonight) get me? or some kind of
there's some background stuff that I'm not really on that side. Sometimes I will be
getting here. It was important to be out doing something other than watching the
suburb. (I was a lot of) sometimes I can't find any girl apart to say that it's been good
to move out of mum and dad as it's not really to rely on them as they won't last long
my own decision. It's good they will figure when I need them
when I was at home, I was happy to see them go and see
to go.

Thematic analysis of:

- Observation Notes
- Transcripts
- Photos
- Original Coding



How Should Reminders Be Delivered?

It Depends.....

- personal preference
- impairments and abilities
- available devices
- importance of reminder
- social context

➤ Provide Choice

How Should Reminders Be Configured?

It Depends.....

- Technical ability
 - System decisions
 - User decisions
 - Behaviours and choices over time
 - Recommendations
- Provide personalisation options

Co-design as a Process

- Easier to recruit users
- Easier to engage users
- Live Coding is useful
- Prototypes provide focus and freedom
- Allows evaluation and design
- Can increase ownership and buy in



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For more info mail
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<http://MultiMemoHome.com>