

The Design of Interactive Digital Life Histories of Individuals with Alzheimer's Disease

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DGP Friday Talk

Intervention Methods

- Therapy, support, education, activities
- Few technological interventions
 - Memory Training (Savion Program, 2004)
 - Tele/Video Conferencing support groups (LoPresti et al., 2002, Marziali et al., 2002)
 - Communication Support (Alm et al., 2003)

Alzheimer's Disease

- Degenerative brain disease
- Diminished cognitive abilities
- Questionable causes, cure unknown
- Early, mid, and late stages
- 1/10 over 65 yrs, 1/2 over 85
- Frequency x3 by 2050

Life Histories

- Stimulating reminiscence activity
- Range of benefits
- Marziali et al., 2002
 - Baycrest Centre for Geriatric Care, Toronto CA
 - Study on stimulation and sense of self
 - One participant in prelim study
 - Need more data

AD Symptoms

- Memory loss
- Problems with reasoning and judgement
- Disorientation
- Difficulty learning
- Loss of language skills
- Decline in ability to perform routine tasks

Current Project

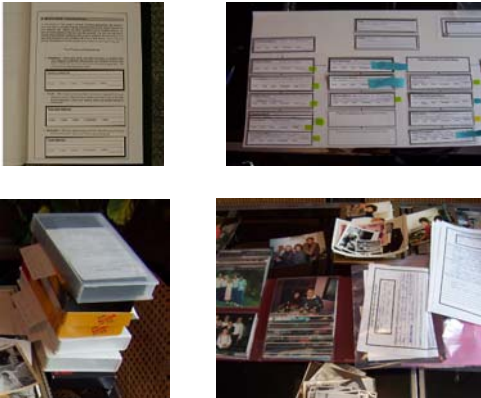
- Extend Marziali to multimedia platform
- Include historic footage, new footage, photographs, music, audio, etc.
- Interactive component
- 2 participating families
- 3 researchers: Social Work, HCI, and an assistant
- 3 month study in the winter

Needs Analysis

- Ethnographic work
 - Bingo, crafts, performances, holiday activities, meals
 - Reminiscing with families and individual
- Extensive Interviews
 - With families, caregivers, social workers, recreational therapists
- Participatory brainstorming activities

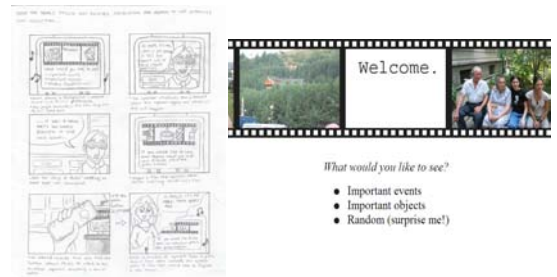
Effective Communication

- Address by name
- Present simple options
- Prefer Yes/No questions (or closed ended questions)
- Common terminology
- Patience and repetition
- Use pictures/Multiple modalities
- Minimize distractions and overstimulation
- Consistency
- Physical interaction



Prototypes:

Storyboard, HTML, and Various DVD authoring applications



Design Goals

- Stimulating
- Pleasant (avoid unpleasant reactions)
- Failure free
- Sustainable over time
- Minimal technical requirements
- Low cost to family
- Effective communication

My Research Questions

- Will the AD participants interact?
 - Will they understand the instructions?
 - Will they learn to respond to the instructions?
 - Will they understand the consequence of the interaction?
- What factors will facilitate/inhibit their interaction?

Discussion Questions

- Possible interaction instructions
 - Direct instruction
 - “Press the button if you would like to see related events.”
 - Yes/No question with instruction
 - “Did you enjoy that? Press the button if you did.”
 - “Would you like to hear more about [this]? Press...”
- Possible input methods
 - Remote control
 - Touch sensitive books
 - Fidgets

