

## MAPS - Memory Aiding Prompting System

An empowering tool and aid to independence for cognitively Disabled adults

**Challenge:** Cognitively disabled individuals are often unable to live on their own because of deficiencies in memory, attention, and executive functionalities. These lacks can create inability to consistently do normal domestic tasks like cooking, taking medications, performing personal hygiene and taking public transportation. Computationally enhanced prompting systems can provide a bridge to independence.

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MAPS is part of the Cognitive Lever Project (http://www.cs.colorado.edu /~l3d/clever), a research project of the Center for LifeLong Learning and Design with support from the Coleman Initiative.



## The CLever/L3d approach to computationally supported prompting:

- Involve all stakeholders the cognitively disabled user, the caretaker, the Assistive Technologist, in design and evaluation as well as users. This approach addresses the high abandonment rate commonly encountered with assistive technology <Inclusion>
- Design a tool that creates solutions equal focus on the prompt user and the script creation tool. <Empowerment>
- Aid community involvement by informed system design repositories of prompting scripts can be shared, extended <Socialization>.
- Implement personalization Use logging to enable adaptive prompting, caretaker feedback, research objectives <Socialization>

The MAPS prompter application uses a PDA platform to display verbal and pictorial prompts in a sequence that comprise a script. The PDA provides backtracking, restarting and 'panic button' functionality. As a script is played a timer logs the events and provides logging information for script refinement and analysis as well as immediate alternate prompts for breakdown situations. Concrete images are gathered using a built in digital camera





A PC based application provides tools for script creation, modification and sharing with other users via a web-based repository of scripts. The web repository has a browser based search, storage, and retrieval engine facilitating sharing and building of a body of successful scripts. Other community building tools will be accessible thru the MAPS portal.



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**CLever** Building Cognitive Levers to help people help themselves An L3D Project funded by the Coleman Initiative

