Digital Libraries on Handhelds for Autistic Children

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ABSTRACT
Autism is a wide spectrum developmental disorder. Its prevalence has increased enormously. Each autistic child has different needs and requires individual therapy. Information technology can help these children and their families by augmenting therapy and providing communication tools. We are developing a digital library that provides such a communication tool on a Pocket PC. The tool will be integrated into the therapy sessions and the children will be able use it daily. Additionally, all the interactions with the tool are logged, allowing the therapist a detailed view of the effects of therapy on the children’s communication.

Categories and Subject Descriptors
H.5.2 [Information Interfaces and Presentations]: User Interfaces – graphical user interfaces (GUI), prototyping, screen design, user-centered design.

General Terms
Design, Human Factors

Keywords
Interface Design, Handheld, Autism, Communication, Children.

1. INTRODUCTION
Autism has increased in the U.S. at a staggering rate and it is now the third most prevalent mental disorder in the country. It is characterized by developmental disabilities, extreme withdrawal, lack of social behavior, severe language and attention deficits, and repetitive behaviors. Because of its wide spectrum, therapists need to interact with each child on an individual basis. As a result, the waiting period for those needing therapy can be years.

Information technology can efficiently augment therapy and provide better communication tools to autistic children. For example, children respond well to videotaped examples of social interactions, which reinforce treatment, and the results are sustained [2]. We are developing a digital library that contains an image-based communication system and a usage data repository.

2. A DIGITAL LIBRARY FOR AUTISM
Autistic children often use pictures, such as the Picture Exchange Communication System (PECS), to communicate. For example, children respond well to videotaped examples of social interactions, which reinforce treatment, and the results are sustained [2]. We are developing a digital library that contains an image-based communication system and a usage data repository.

The digital library will be tested in different phases. Currently, we are evaluating how best to communicate different types of messages to non-autistic people using only images.

3. REFERENCES