

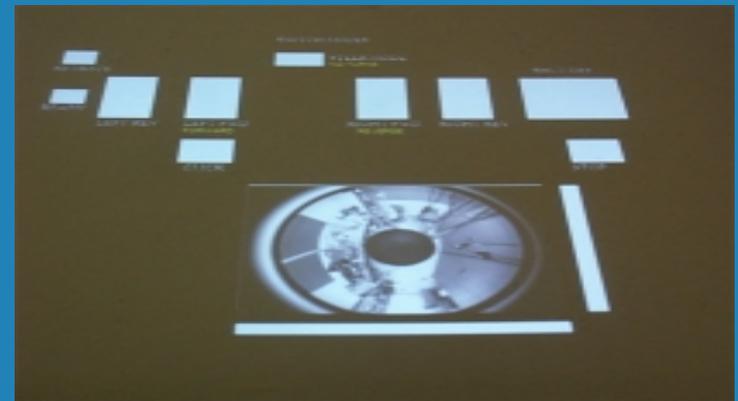
Communication at Your Fingertip



Karla Conn
SUNFEST 2001

"Smart" Wheelchair

- Mobile wheelchair with camera



- Black gloves make virtual mouse click

Let Your Fingers Do the Talking

- Wireless finger mouse
- Communication board
- Text to speech application

Finger Mouse

Advantages

👍 One hand use

👍 Wireless

👍 Compact

Design (comfort fit, microprocessor)



Mouse Transmitter/Receiver

- Unique signal between transmitter and receiver
- Works with communication board



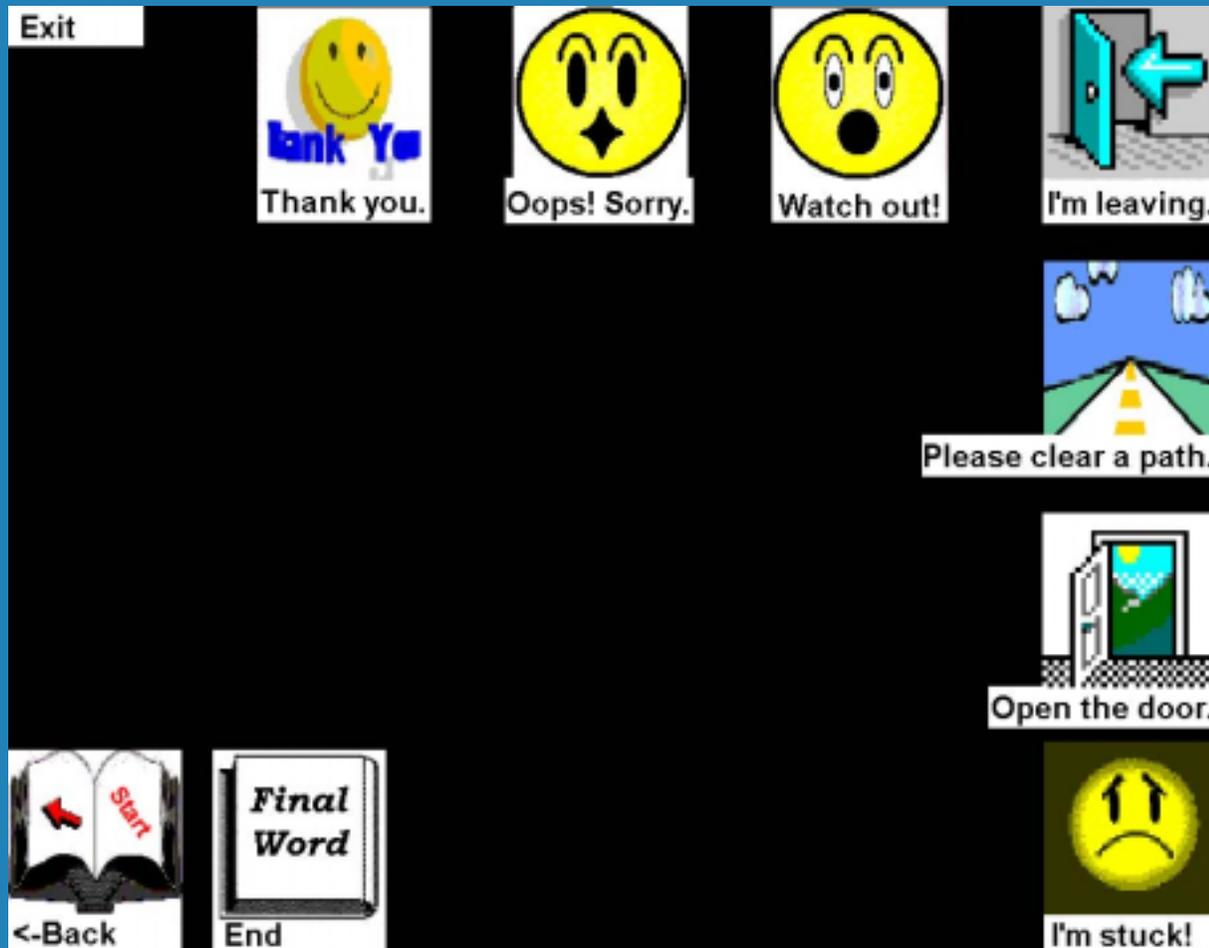
Communication Board

🗨️ Vocabulary of words and pictures

- Graphics - Open GL
- Microsoft Virtual C++
- Extended selection



Navigation Page

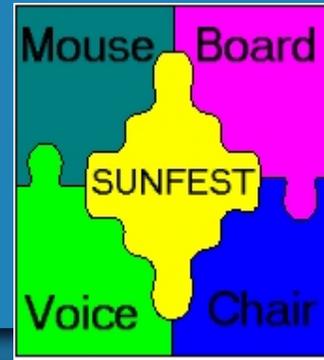




Voice Synthesizer

- Computer “speaks” the phrase selected
 - Microsoft Speech SDK 5.0
 - Text-to-Speech Application
 - Links the icons to the correct phrase

Putting the Pieces Together



Click the mouse

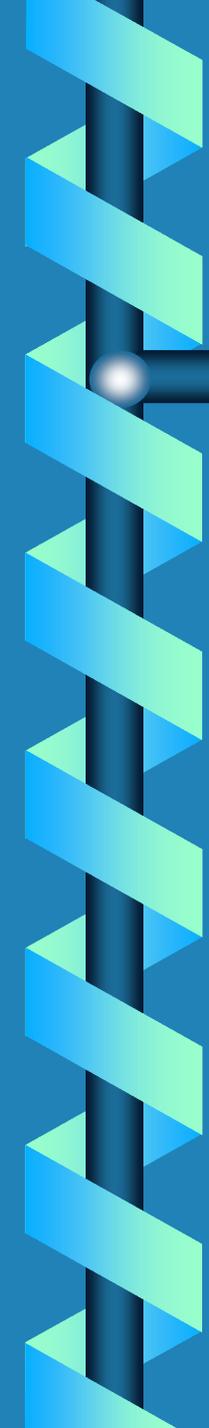


To select the phrase



Hear the phrase spoken





Acknowledgments

- Dr. Jim Ostrowski
- GRASP Group
- World Wide Web