Technology for Inclusion

Rosalee Wolfe

@RosaleeWolfe

Technology for Inclusion: ASL avatars

- A thought experiment
- Challenges of the Deaf community in the U.S.
- The ASL Avatar Project at DePaul University
- Inclusion

A thought experiment

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Stressful, life-critical activities

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Some Challenges of the Deaf community in the U.S.

An invisible, underserved population

- ## Inadequate access to health care

  Kuenburg, A., Fellinger, P. & Fellinger, J. (2016). Health Care Access Among Deaf People, Journal of Deaf Studies and Deaf Education, 1-10.

- ## High school graduates underprepared in math, science and reading

  Nagle, K., Newman, L. A., Shaver, D. M., & Marschark, M. (2016). College and Career Readiness: Course Taking Of Deaf and Hard of Hearing Secondary School Students. American annals of the deaf, 160(5), 467-482.

- ## Underemployment

  Perkins-Dock, R. E., Battle, T. R., Edgerton, J. M., & McNeill, J. N. (2015). A Survey of Barriers to Employment for Individuals Who Are Deaf. Journal of the American Deafness & Rehabilitation Association (JADARA), 49(2).

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It's not simply about sound …

American Sign Language (ASL)

- A natural language in its own right

- Not simply gesture

- Not fingerspelling

- Grammar is radically different from English.

It's not simply about sound …

Deaf community

- Uses ASL as its first language.
- English is a second language.
  — Exclusion: Spoken English
  — Exclusion: *Written* English

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The ASL Avatar Project at DePaul University

asl.cs.depaul.edu

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Goal

- Greater inclusivity via better access to English

Process overview

English
text

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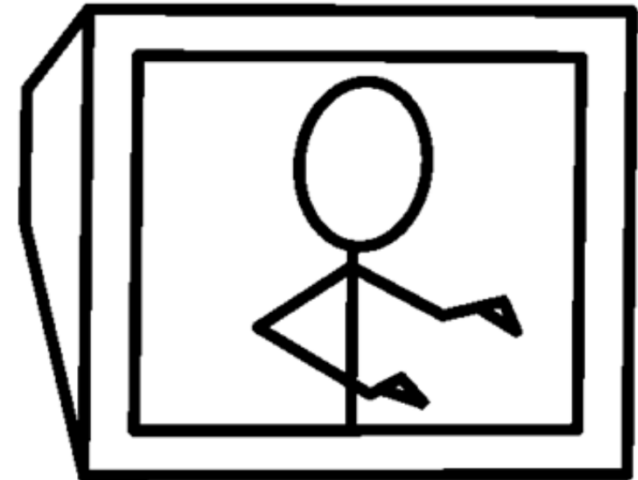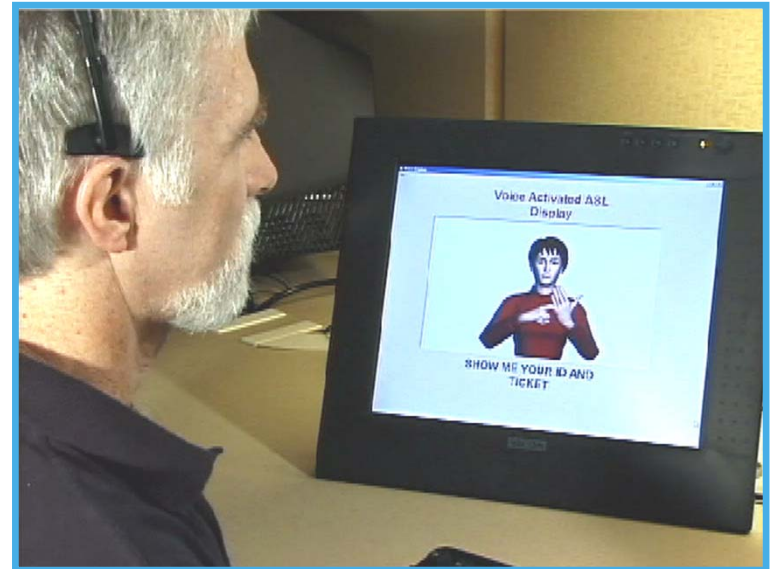
Applications

Used for

- Working with deaf clients
- Interpreter Training
- Deaf education

Achievements and awards

- An airport security prototype presented at a TSA-sponsored conference on disabilities

- *Speech Technology*: Most Innovative Solutions Award
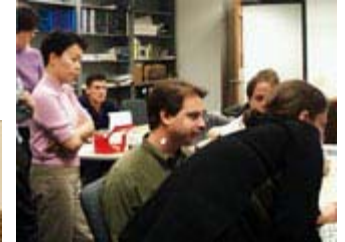
- Illinois Volunteer Service Award

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Inclusion

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How is the ASL Avatar Project inclusive?

- Project goals

- Multiple disciplines

- Environment

- Leadership

Accomplishments

Nora All... Marjana E... Allison Lewis (DePaul, B.S. '12)

Karen A... Dan Ethri... Ryan Leyesa (DePaul, B.S. '02)

Jamita E... John Falla... Jade Mansueto (DePaul, M.S. '05)

Souad B... Bill Gobbe... Tino Perez (DePaul, M.S. '12)

Tahseen... Natalie Gu... Toni Perri... Carolyn Taylor (DePaul M.S. '00)

Larwan... William H... Khairul Ra... Farah Thomas (DePaul B.S. '13)

Melissa... Damien H... Lina Rauc... Julie Torkelson (DePaul M.S. '10)

Stacey E... Amy Hitt (... Peter Sch... Jorge Toro (DePaul Ph.D. '05)

Jeff Cam... Gary Hond... Jerry Sch... Ryan Tsang (DePaul B.S., '05)

Lesley C... Sarah Joh... Lindsay S... Jeff Young (DePaul M.S. '05)

Pattarap... Ashwini K... Brent Shi... Miaoqi Zhu (DePaul PhD '14)

Brock Cu... Robyn Kel... Brent Shiver (DePaul, PhD '13)

Mary Jo... Brian Kirc... Lori Smallwood (DePaul, M.S. '03)

Jason D... Brian Kon... Jessica Stec (DePaul, B.S. '16)

Tim Dev... Bret Kroll... Marie Stumbo (DePaul, B.S. '14)

Cynthia... Ken Kulins... Anna Suh (DePaul, M.S. '05)

Sarah El... Tony Lavo... Irena Svidovsky (DePaul, B.S., '04)

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To see a demo or learn more about the project, visit

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Thank you

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