Something old, something new: Designing for the Aging Population
Krista Coleman
Shelly Heller
Laura Leventhal
Agenda

First 15 minutes: Overview

• Next 30 minutes: Hands on activities – “What does aging do to the user?” – what defines an aging population. What does it mean to be “Elderly”?

• Last 15 minutes: What are the guidelines and legal issues related to providing computing for the elderly

Second Hour

• First 30 minutes: What do we already know about design and usability that addresses the needs of the aging population.

• Next 30 minutes: Hands on activity: Designing for the elderly

• First 30 minutes: Tools and devices for design and reuse

Last 30 minutes: Hands on activity: Was that usable and useful?
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What does it mean to be “Elderly”?

Krista Coleman, Enhanced Mobility Technologies
Classification of Aging

“Elderly” = > 65 years
“Young Old” = 65 – 74 years
“Middle aged Old” = 70 – 80 years
“Aged” = > 75 years
“Chronically Old” = > 70 years
“Oldest Old” = 80 years and more
Everyone has Ability (Capacity to Sense)

Ability varies between individuals
Ability varies within individuals
Compensation for changes in one ability
Ability changes over time

Most persons have enough abilities in reserve to adapt to changes and environmental restrictions

Interaction between systems
Classification of Abilities

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What are the legal and guideline issues related to providing computing for the elderly?

Laura Leventhal, BGSU
Topic Summary

• A number of statutes and guidelines relate to universal access for the elderly. In this section we discuss a sample of these.

• Note. None of the instructors are lawyers so we are not experts here! No legal advice will be offered!
Specific Laws and Guidelines Discussed

- US Communications Act of 1934
- The Americans with Disabilities Act
- World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI™) and Web Content Accessibility Guidelines (WCAG) 1.0
- Section 508 of the Workforce Investment Act of 1998
- eEurope
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What do we already know about design and usability that addresses the needs of the aging population

Shelly Heller, GWU
Dynamic diversity - Crossroads of advancing technology and advancing age

• gerontechnology - new interdisciplinary field of scientific research in which technology is directed towards the aspirations and opportunities for the elderly persons.

• designed flexibility
Usability Testing - Some studies

• Effects of Age and Training on World Wide Web Navigation Strategies -
  – Older users differed significantly from younger they searched less efficiently
  – they had the most problems with tasks that required 3 or more moves
  – they had more difficulty recalling previous moves and the location of previously viewed information.
Some more studies

- Usability and Accessibility of Aging/Health-Related Web Sites -
  - Compared usability (BOBBY and LIFT) sites maintained for elderly by different organizations.
  - US government sites best at less than 50%

- Designing a Touch Screen Kiosk for Older Adults
  - User centered design
Summary and Conclusions of the Tutorial

• What have we learned?
  – Aging is a process of dynamic diversity
  – Designing for the aging population requires designing for changing user characteristics
  – Flexibility is the key

• What BIG questions remain for you?