

Overview of Adaptive Computing in the Classroom

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[Objectives]

- Define Adaptive Computing (AC) and associated terminology
- Introduce concepts of Adaptive Computing Assessments (ACA)
- Identify categories of AC with examples of equipment, hardware, and software
- Provide info regarding AC resources

[What is Assistive Technology?]

Assistive Technology Devices

Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized that is used to increase, maintain, or improve the functional capabilities of children with disabilities.

(Section 300.5)

Assistive Technology for Computer Access

Terminology for hardware and software

- Adaptive
- Alternative
- Augmentative
- Ergonomic
- Accessibility
- Therapeutic

Definition

Adaptive Computing

Part A: Using alternative hardware and software to adapt general computers so that they are usable by people with disabilities.

Part B: Using computers as compensatory or therapeutic tools.

[Adaptive Computing Elements]

- Adaptive Input and Adaptive Output
- Ergonomics
- Accessibility Features
- Shortcuts

[MRC Adaptive Computing Lab]

- Established in 2008
- Third Floor MRC
- ATT Excelserator Grant ~\$25,000
- Nielsen Foundation grant ~\$37,500
- Research
- Service

Adaptive Input: Keyboards

- Enhanced Vision
- Alternate Style
- Reduced Size
- Increased Size
- One Handed
- Programmable



[Adaptive Input: Mice]

- Ergonomic
- Trackballs
- Joysticks
- Switched
- Mouth Operated



Adaptive Input: Physical Devices

- Orthotics
- Hand Stick
- Mouth Stick
- Head Stick
- Special



[Adaptive Input: Alternative]

- Voice Recognition
- Head Operated
- Eye Gaze



Adaptive Input: Switches & Mounts

■ Mounting Options

- Table
- Beds
- Wheelchairs



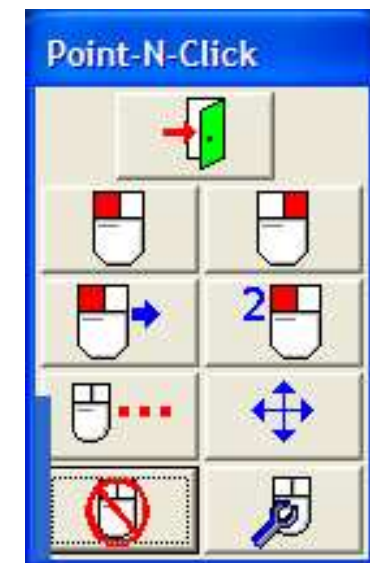
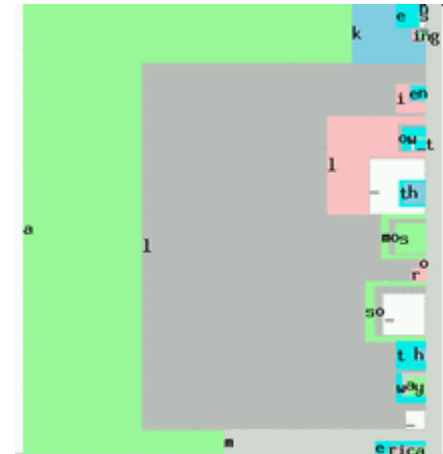
■ Switches

- Size
- Location
- Type



Adaptive Input: Software

- On Screen Keyboards
- Mouse Emulators
- Word Prediction
- Voice Recognition



Adaptive Output: Visual

- Large Monitors
- Magnification



Easy to See

- ZoomText now magnifies from 1x to 36x, 3.5x, 4.75x and 5.5x.
- New xFont technology displays the clear.
- Eight zoom window types allow you to magnify.
- Change screen colors to eliminate glare.
- Enhance the size and color of the mouse easier to find and follow.

Easy to Use

- ZoomText's new Application Settings will change automatically as you switch programs.
- Quickly locate web page links using the Documents using the Desktop Finder.
- Use the new Text Finder to instantly find document windows.
- ZoomText's friendly user interface makes ZoomText features using the mouse or keyboard.

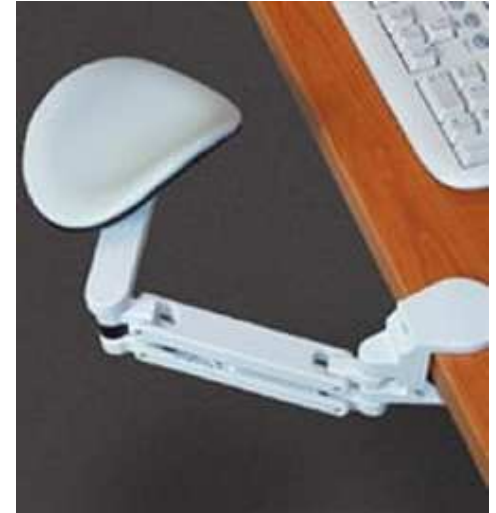
Easy to See

- ZoomText now magnifies from 1.5x, 1.75x and 2.0x.
- New xFont technology displays the clear.
- Eight zoom window types magnified.
- Change screen colors to eliminate glare.
- Enhance the size and color of the mouse easier to find and follow.



[Ergonomics]

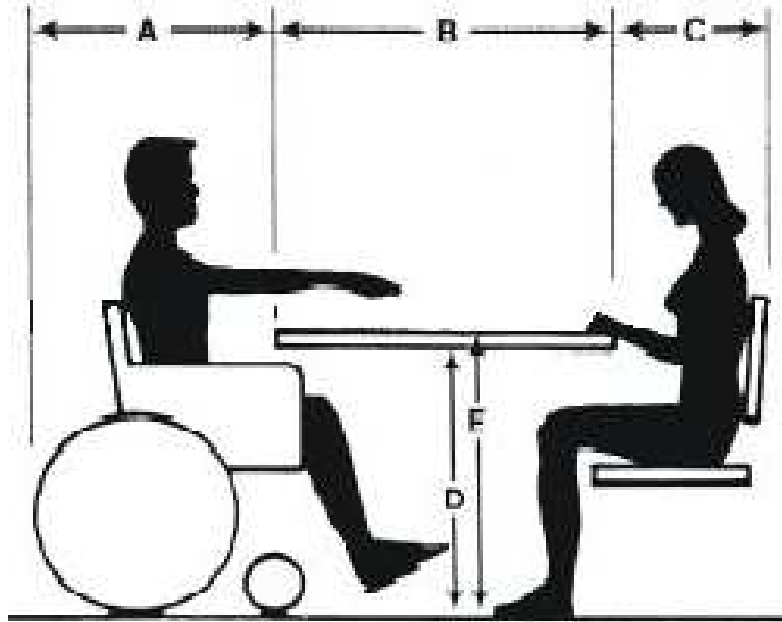
- Mice
- Keyboards
- Display Height
- Workstation
- Wrist Support



[Positioning ~ Support]

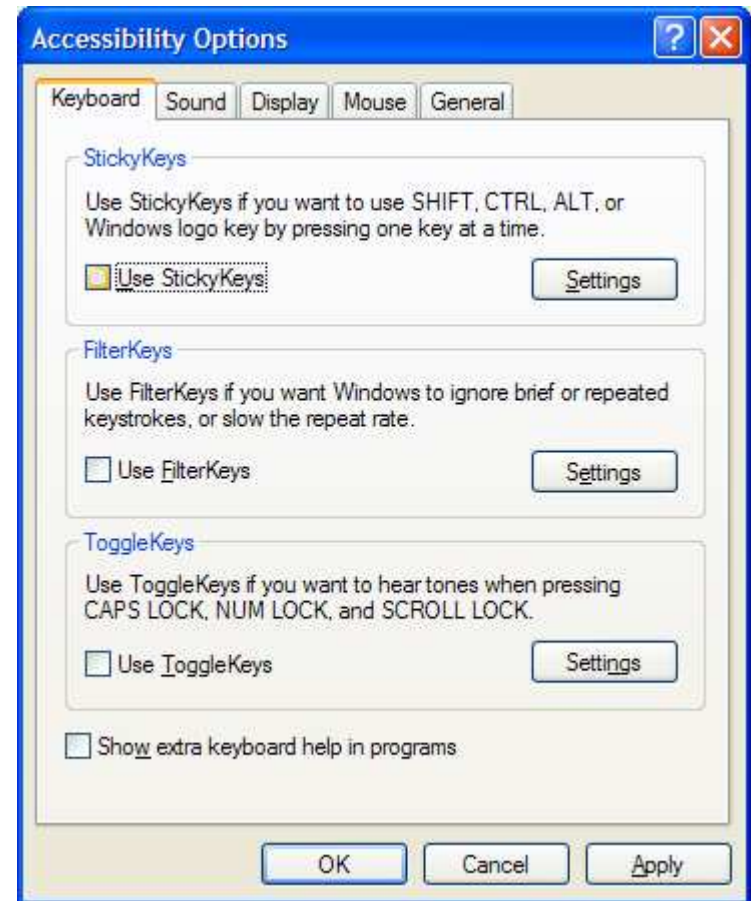
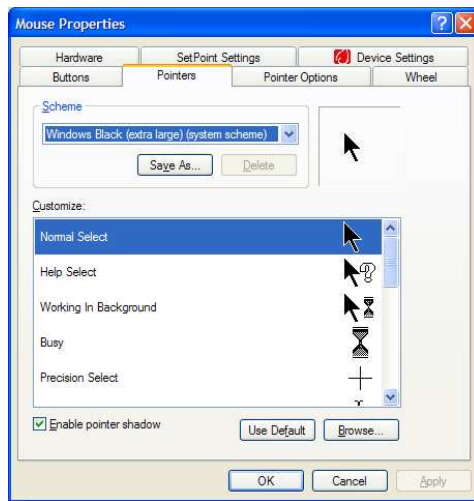


Seating ~ Workstation Interface



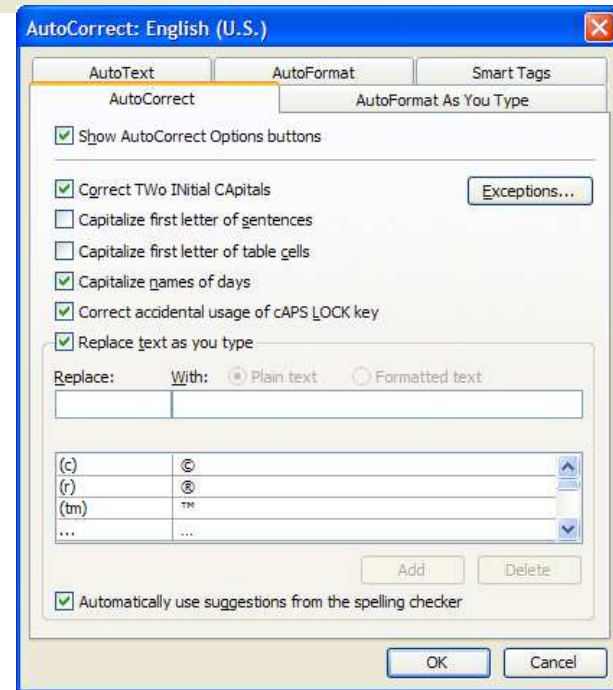
Accessibility Features

- Sticky Keys
- SnapTo
- High Contrast
- Enlarged Cursors



Shortcuts

- Keyboard Shortcuts
- Programmable Keys
- Abbreviation Expansions



[Adaptive Computing: Resources]

- InfoGrip infogrip.com
- Abledata abledata.com
- EnableMart enablemart.com
- T. K. Martin Center tkmartin.msstate.edu
- AssistTech assisttech.info

The Future of Adaptive Computing

- Universal Design
- Moore's Law
- Convergent Technologies
- Emerging Technologies
- Integrated Controls
- NeuroProsthetics