

**DOING MORE FOR LESS:  
WINDOWS & MAC  
ACCESSIBILITY  
FEATURES**

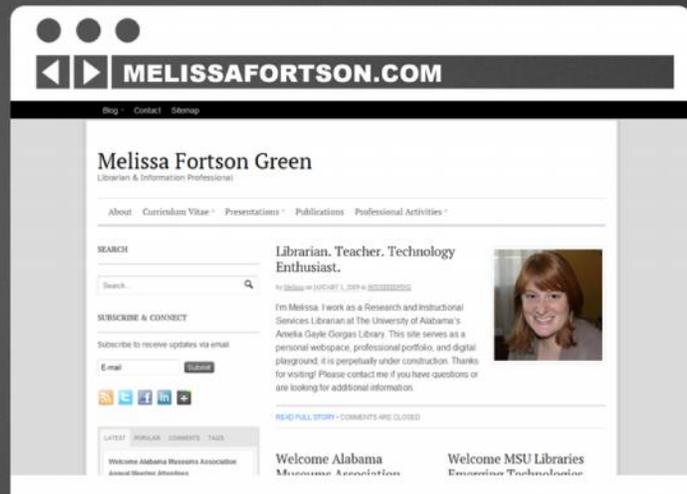
**[BIT.LY/ALLA2012](http://BIT.LY/ALLA2012)**

- We'll talk about accessibility options and programs built into the Windows and Mac operating systems.
- The session is introductory and will aim to provide a broad overview.
- I'll share the primary accessibility features in Windows 7 and OS X Lion (and show a lot of videos!).
- You'll leave the session with resources you can use to learn more about these features and explore additional features (including browser accessibility options).

# MELISSA FORTSON GREEN

RESEARCH &  
INSTRUCTIONAL  
SERVICES  
LIBRARIAN

THE UNIVERSITY  
OF ALABAMA



- Melissa introduces self, talks about background, research interests, etc..

# WHY

- Why learn about this?



- The people we serve.



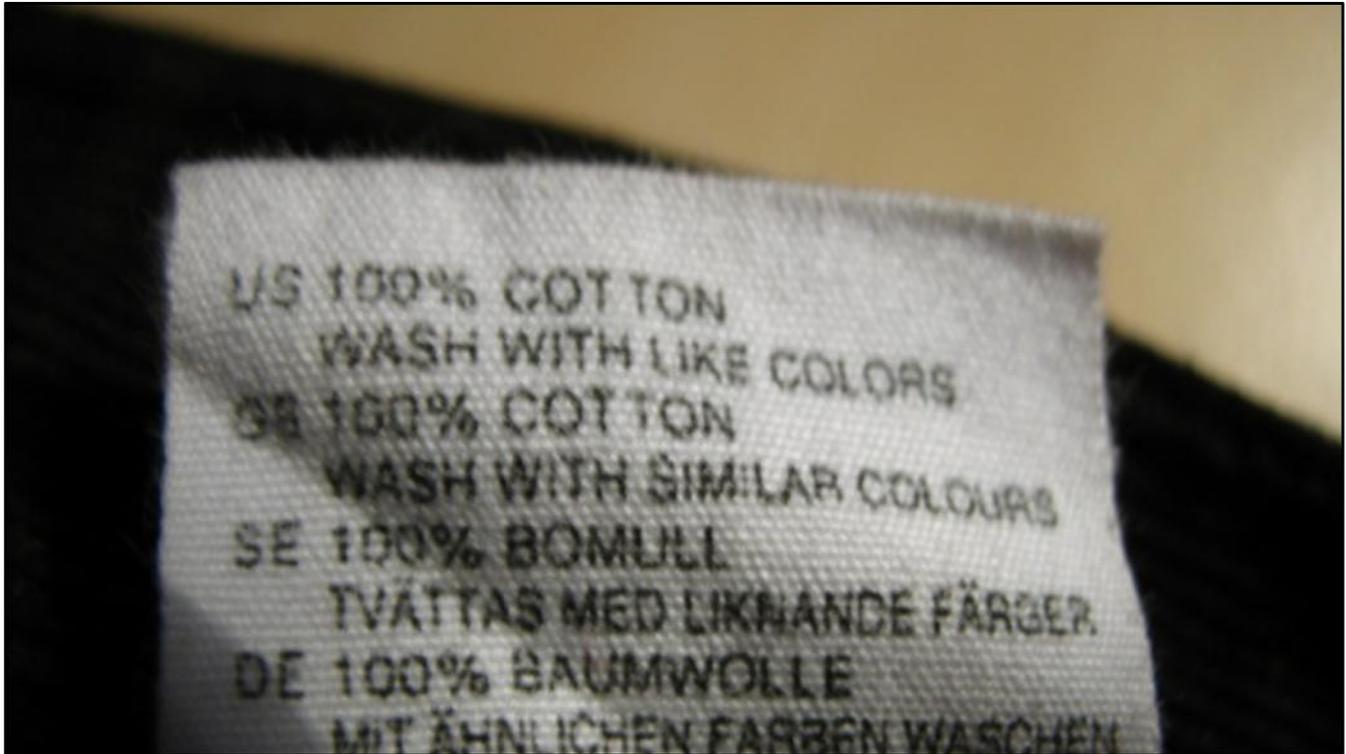
- According to the U.S. Census Bureau, 12% of the United States population report having a disability;

Source: *Disability Characteristics (United States) | 2010 American Community Survey 1-Year Estimates* | American FactFinder,  
<http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>



- in Alabama, the percentage is 16.6%.

Source: *Disability Characteristics (Alabama) | 2010 American Community Survey | American FactFinder*,  
<http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>



- About those labels...
  - survey data are unreliable (what is a disability?)
  - while we may talk about “people with disabilities” or specific disabilities for purposes of this presentation, in general, disability is not something to be singled out
  - the disability experience is the human experience
    - will impact us all at some point
    - choices we make in our design will be of benefit to all users, regardless of ability
      - captions & hairdryer
      - accessible websites & SEO



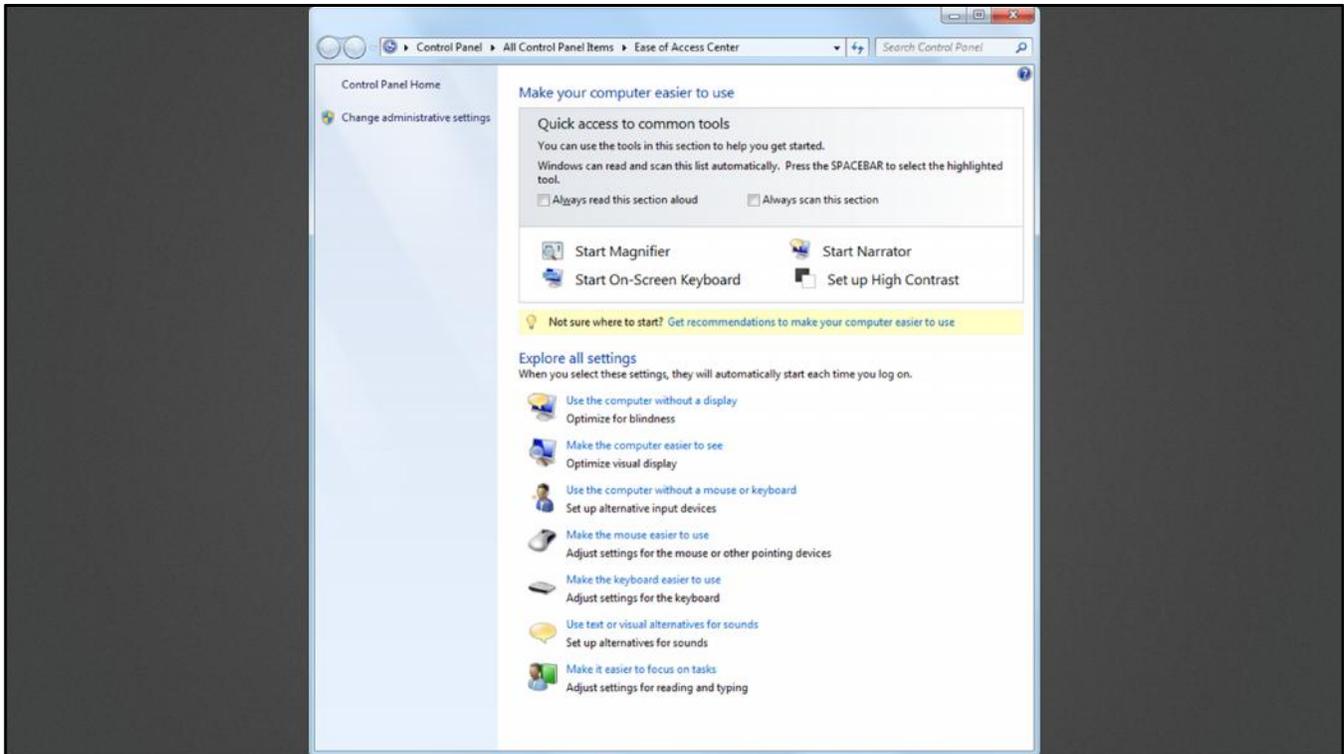
- Continuing to talk about why knowing about these things is a good idea: your money.
- These are tools at hand that do not require expensive software purchases or the addition of dedicated staff.



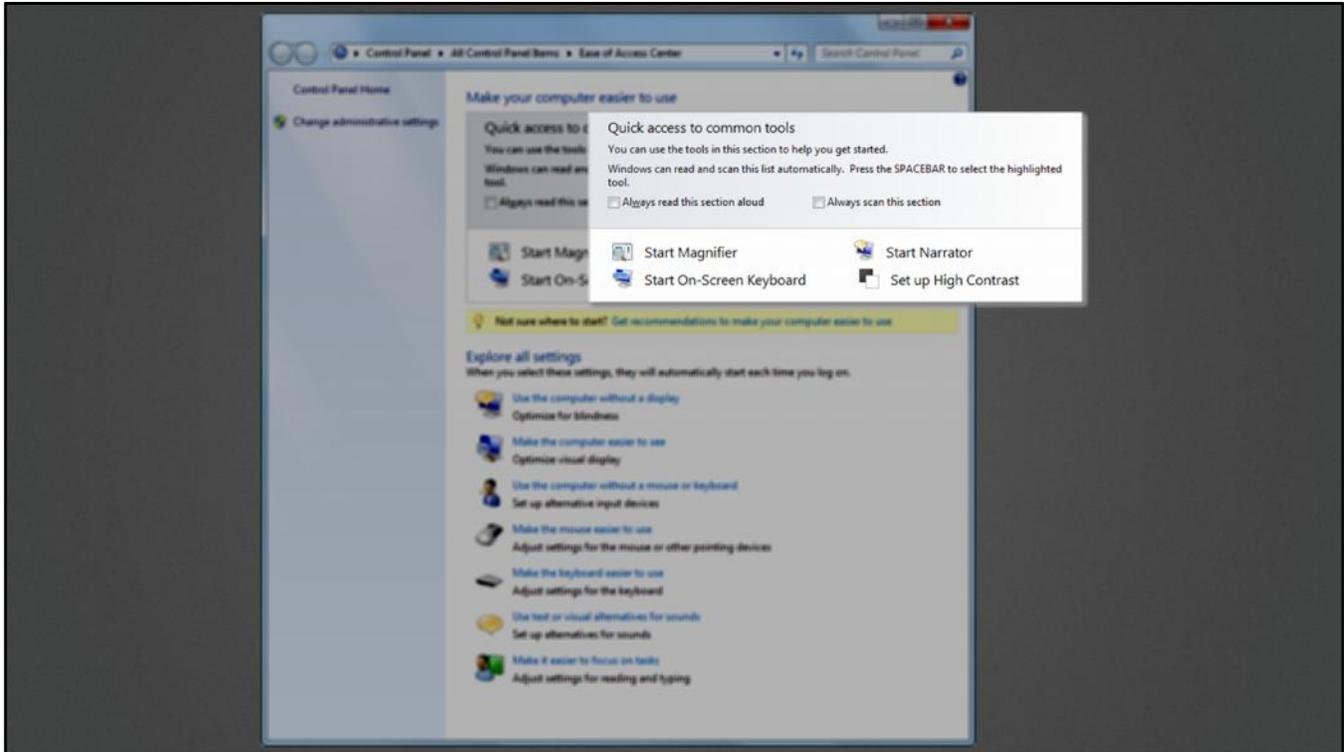
- They also don't require extensive training or expertise, which means you can do more with less time.

# WINDOWS 7

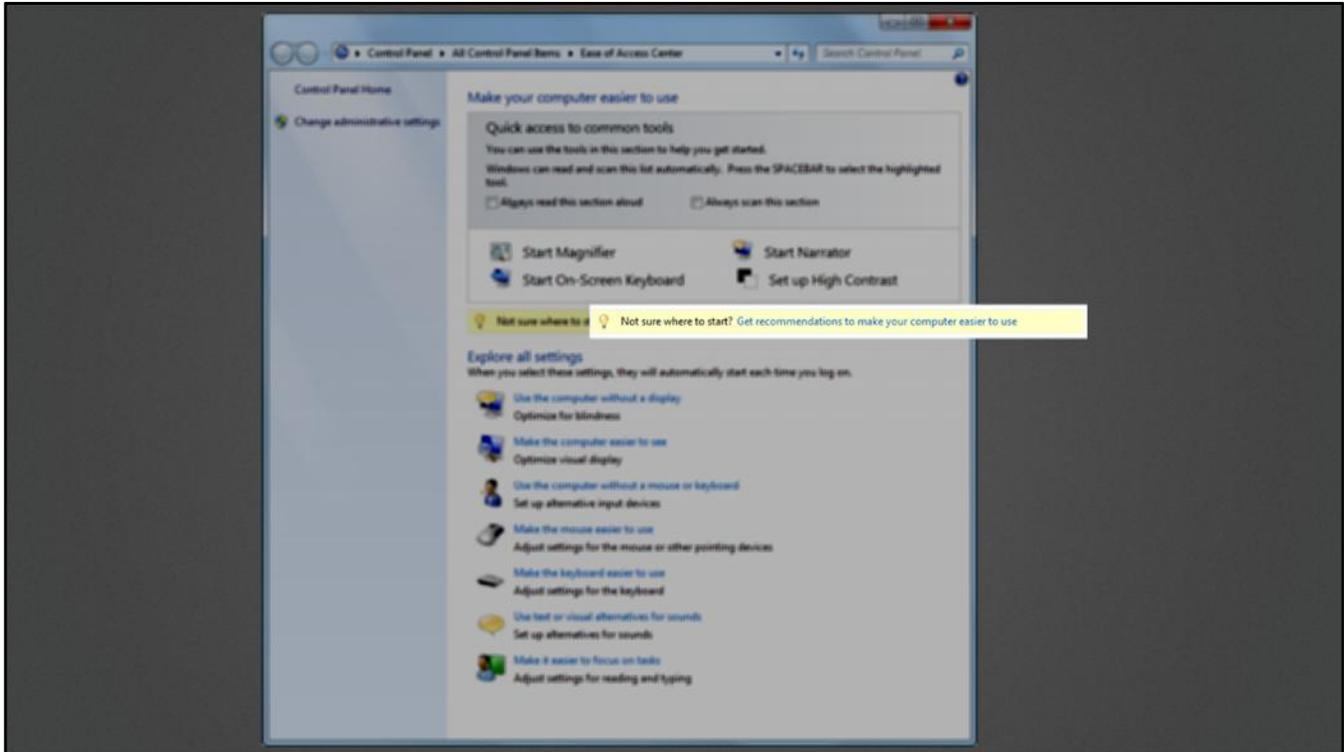
- Source: *Introducing Accessibility in Windows*, <http://windows.microsoft.com/en-US/windows7/introducing-accessibility-in-windows>



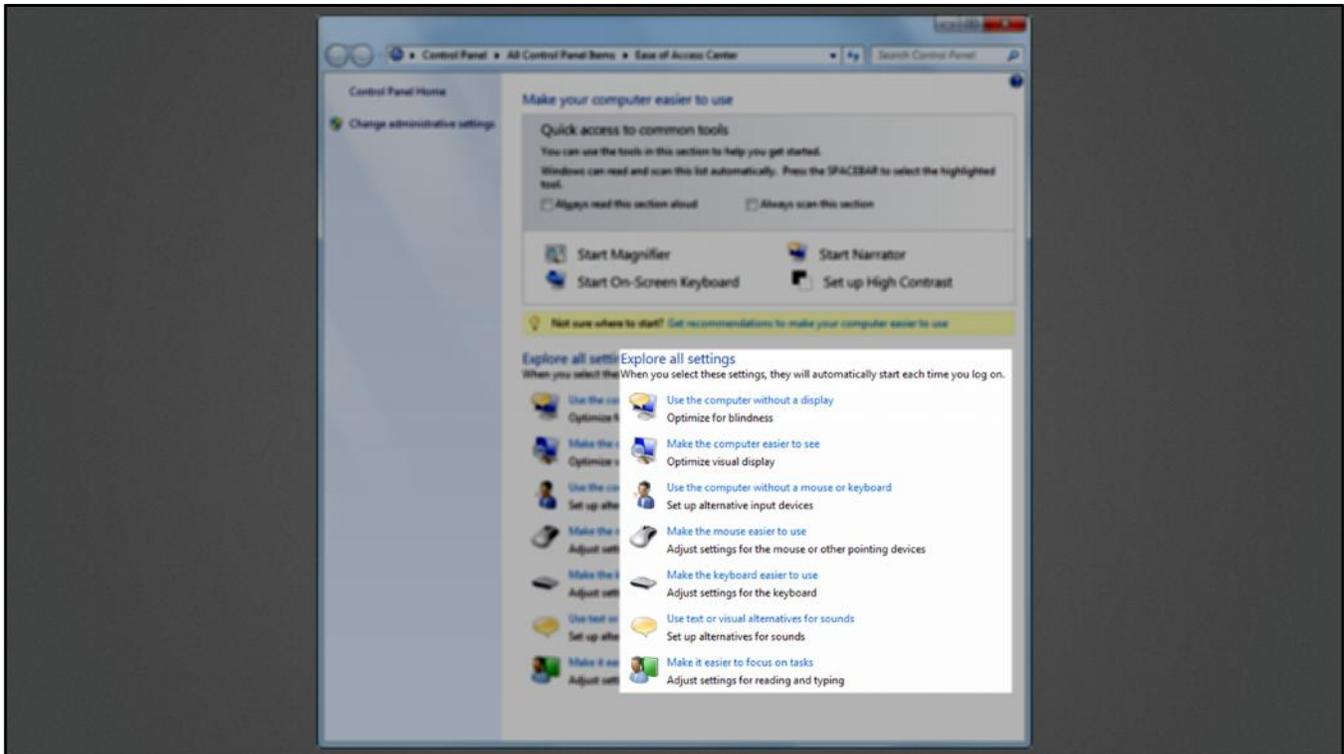
- Ease of Access Center:
  - where to find most of the accessibility settings for Windows
  - open it by going to Start>Control Panel>Ease of Access>Ease of Access Center or press Windows key + U
  - three sections



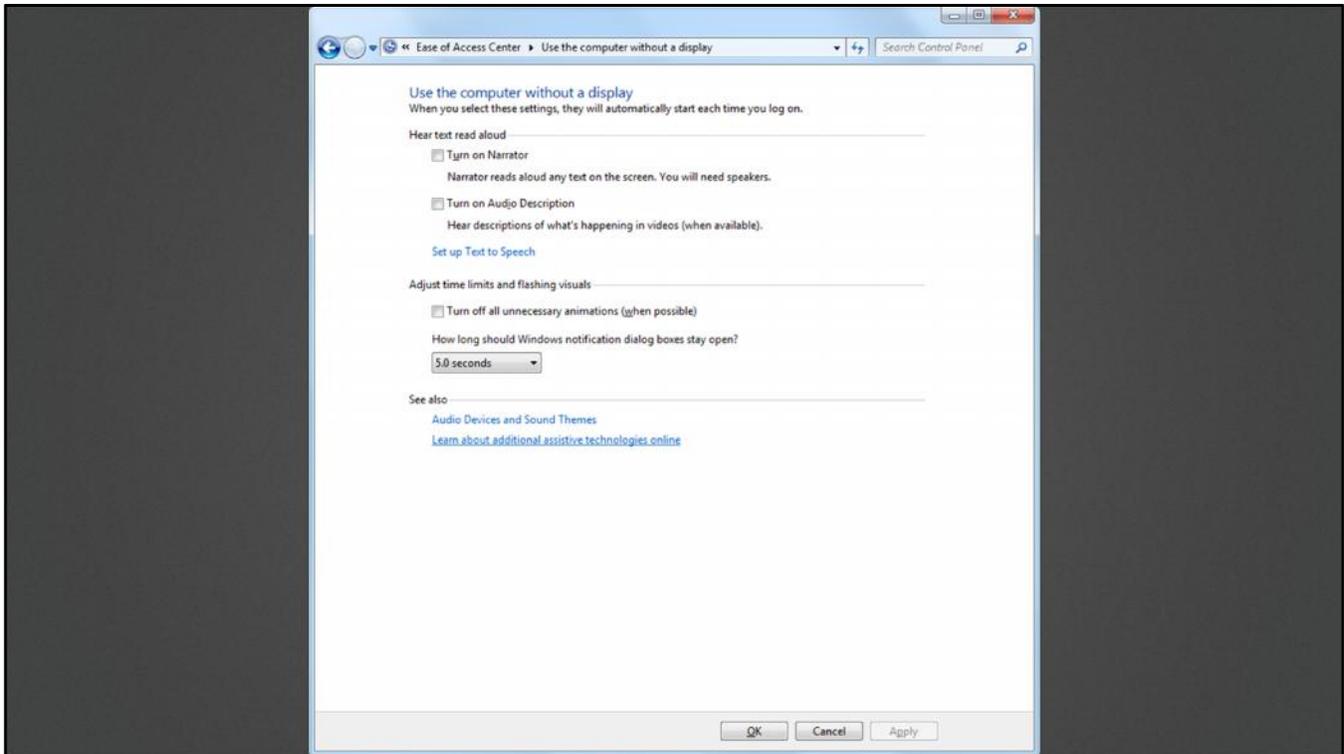
- First section: Quick access to common tools
- Provides fast access to programs that you can turn on right away to make your computer easier to use:
  - Magnifier
  - Narrator
  - On-Screen Keyboard
  - High Contrast
  - we'll come back to these
- After you select the program you want, it will remain on until you log off or turn it off.
- Windows can read/scan automatically.



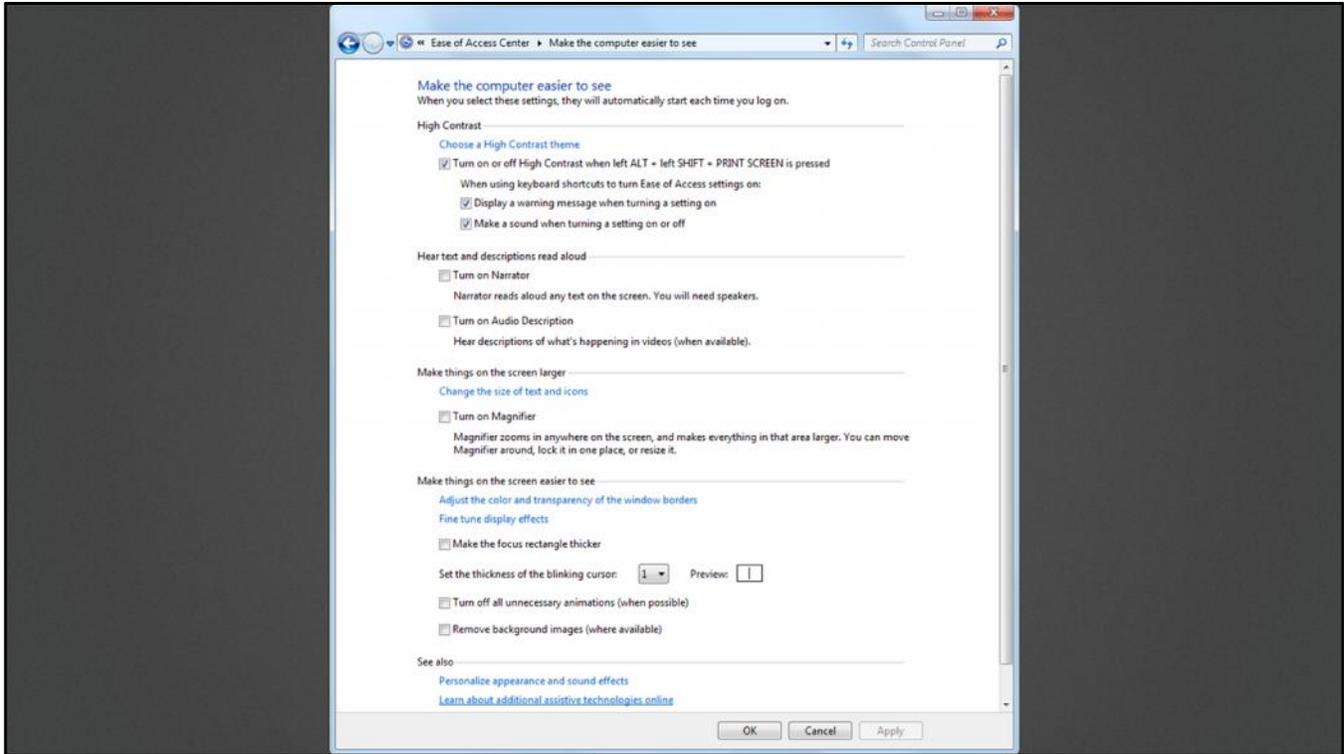
- Next section: Get recommendations.
- The Ease of Access Center contains a questionnaire that can recommend accessibility settings and programs based on user needs.
  - Click Get recommendations to make your computer easier to use.
  - Select statements that apply.
  - Windows provides a list of recommended settings; you choose the settings you want.



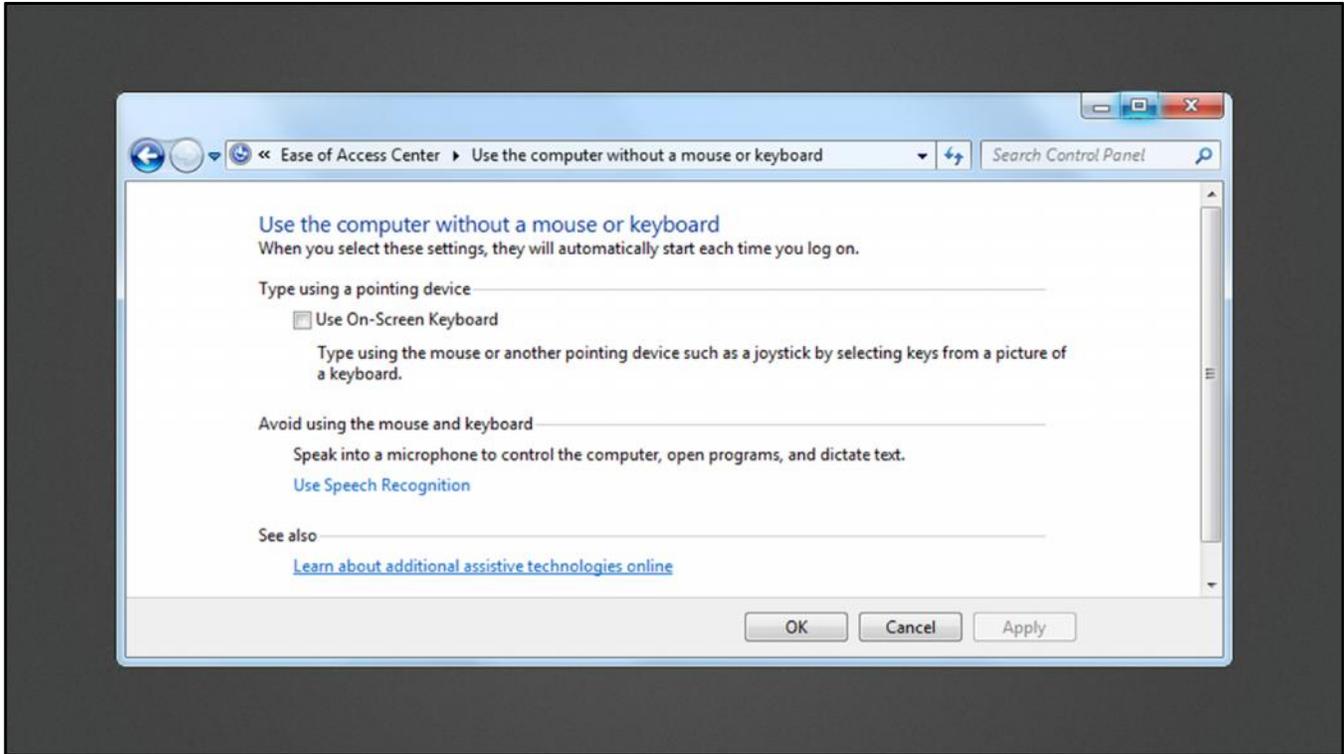
- Third Ease of Access Center section: Explore all settings.
- Seven categories of accessibility tools and options. When you select them, they automatically start when you log on until you tell Windows to do otherwise.
- Let's look at those categories.



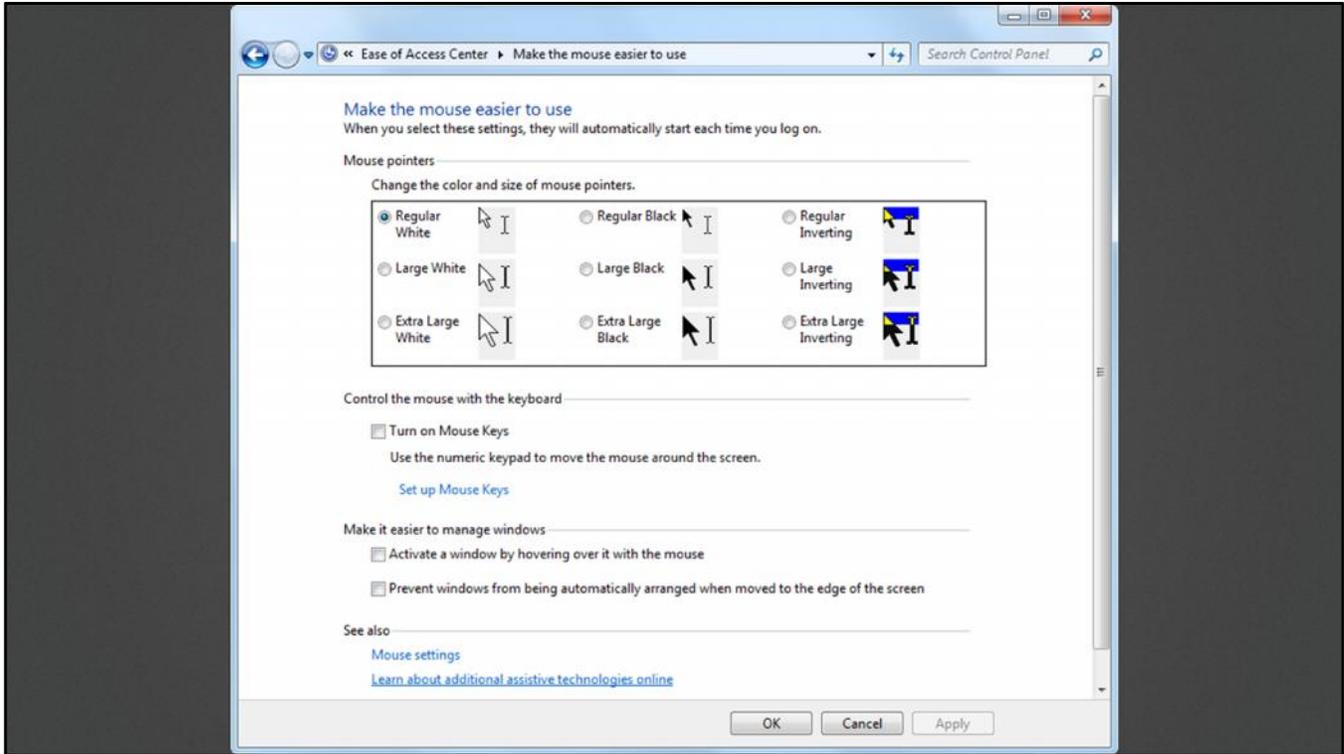
- Use the computer without a display.



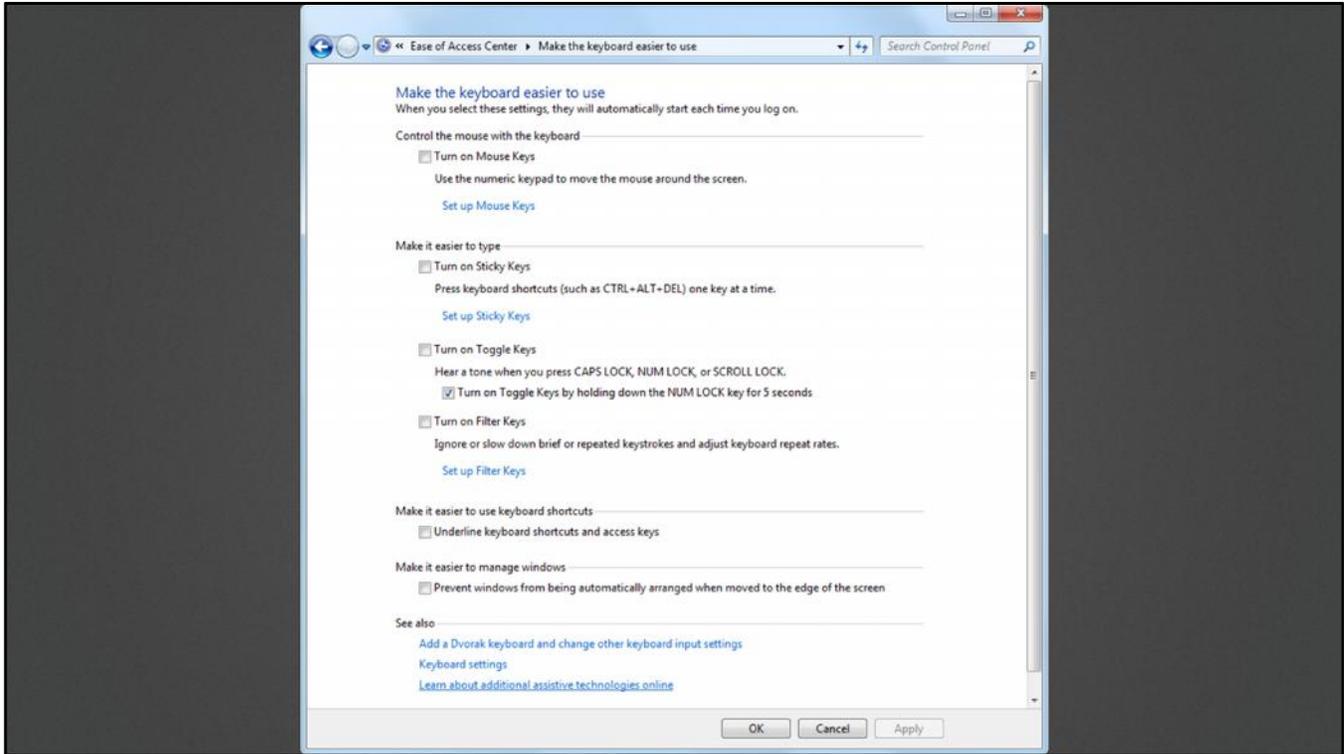
- Make the computer easier to see.



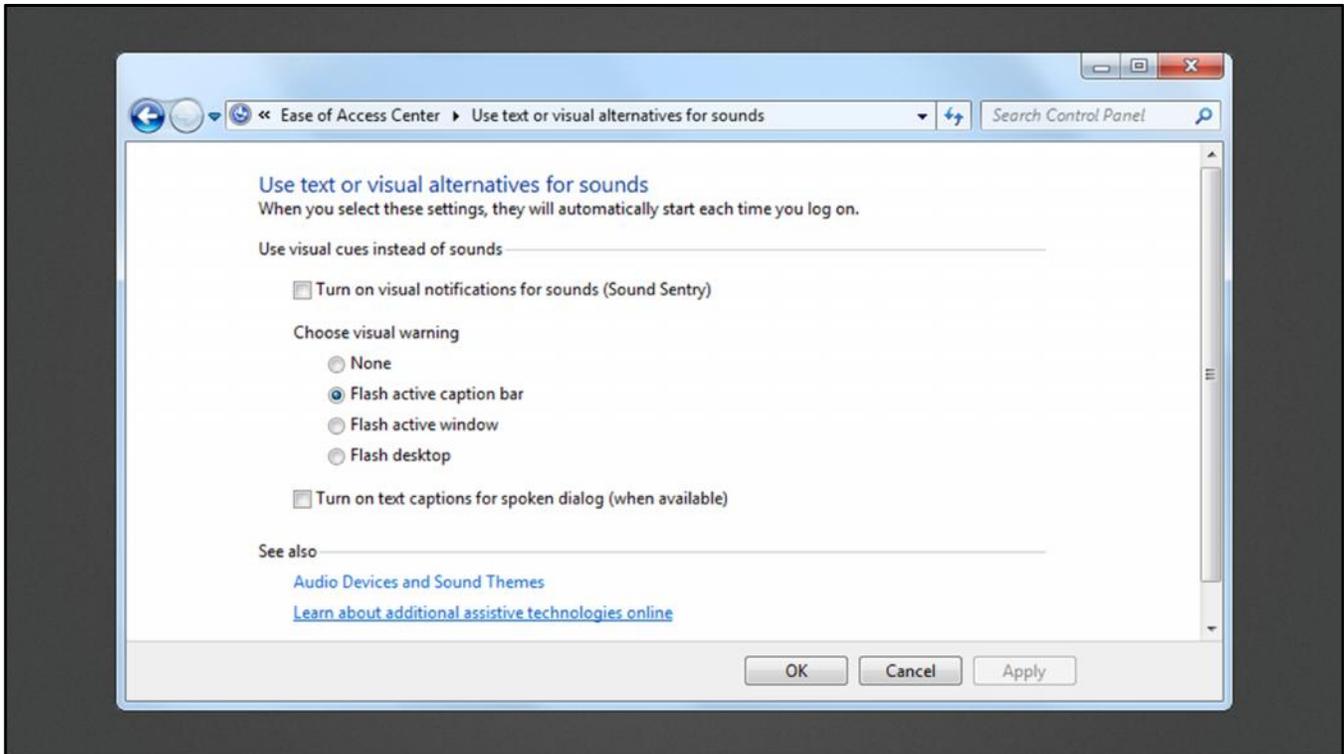
- Use the computer without a mouse or keyboard.



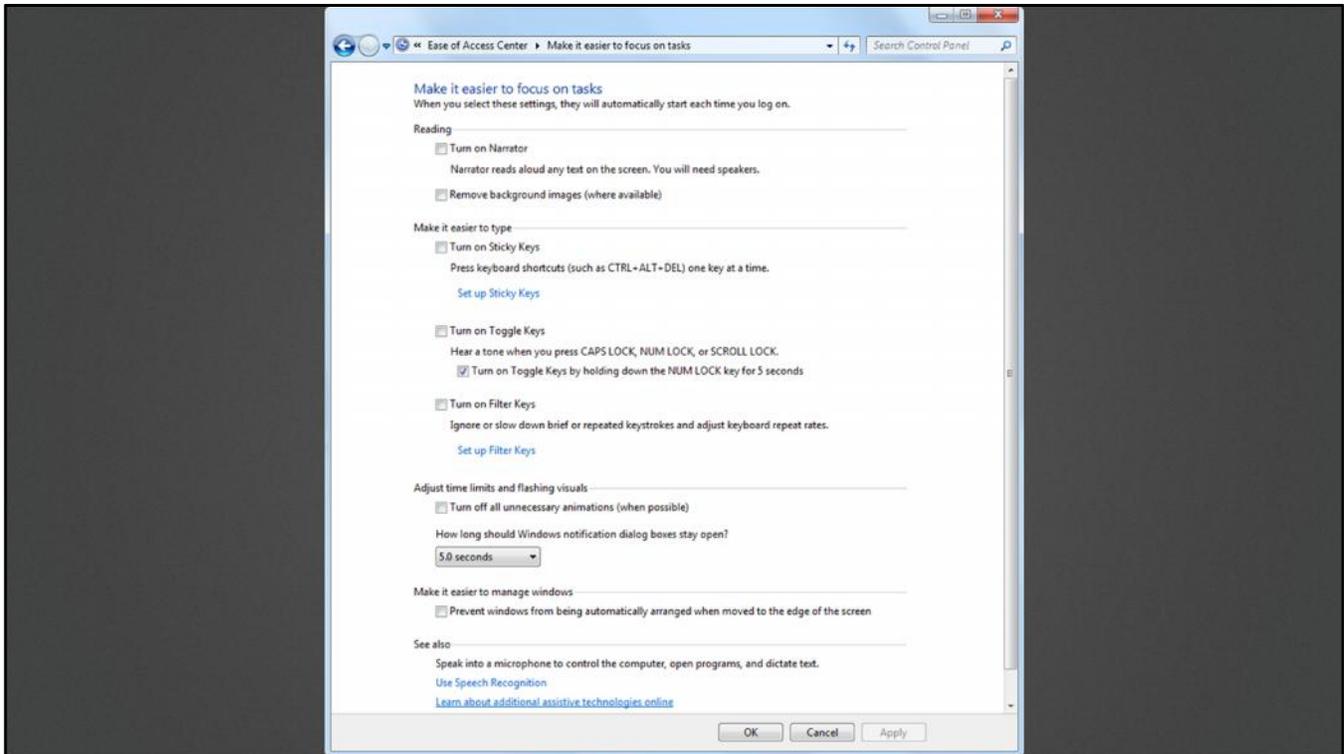
- Make the mouse easier to use.



- Make the keyboard easier to use.



- Use text and visual alternatives for sounds.



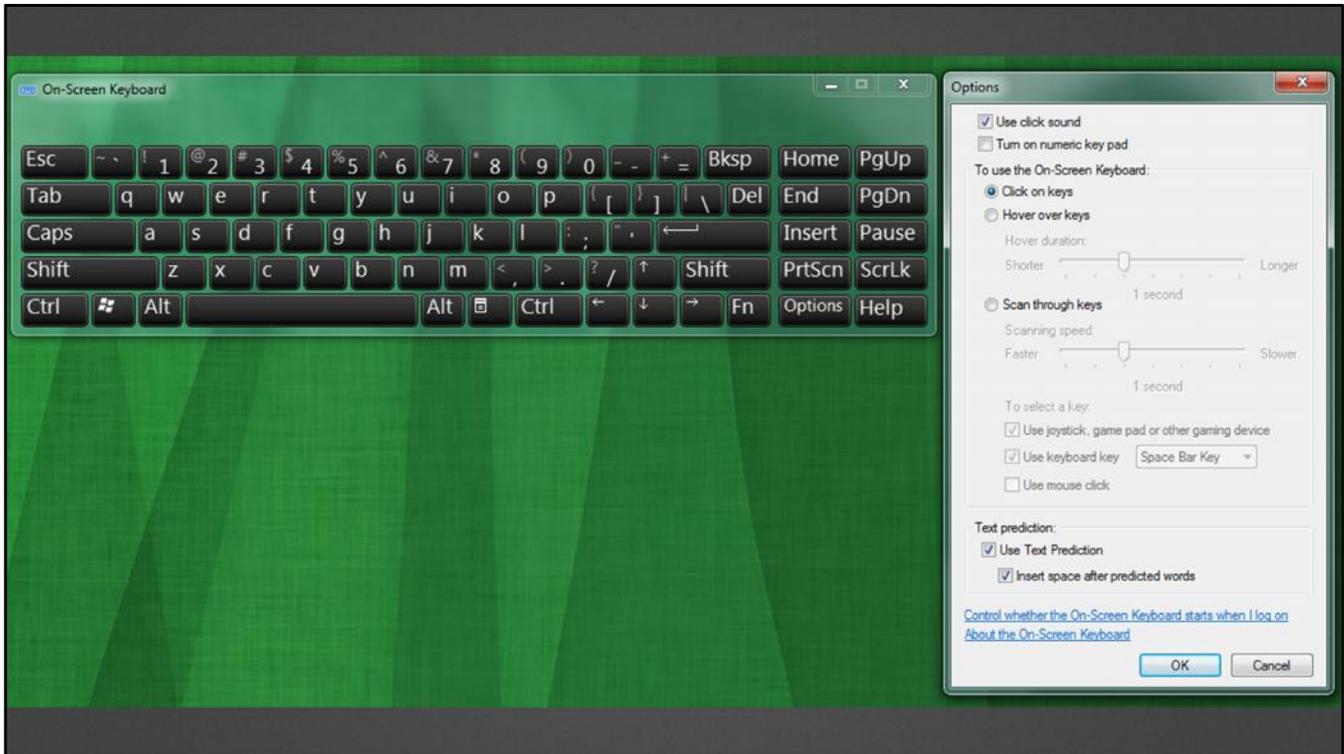
- Make it easier to focus on tasks.

## Windows 7 Magnifier Demonstration



<http://youtu.be/br-eGHp45cQ>

- That's what's available through the Ease of Access Center. Let's highlight some specific tools, starting with Magnifier.
- Magnifier makes it easier to read the screen by allowing you to focus on a specific area
  - open it by going to Start>All Programs>Accessories>Ease of Access>Magnifier or search for Magnifier
  - move the pointer to the part of the screen that you want to magnify
  - use + and – to adjust zoom level
  - several modes you can choose from (select Views)



- Another useful tool is the On-Screen Keyboard, which allows you to use a mouse or pointing device to click the keyboard keys on your screen
  - open it by going to Start>All Programs>Accessories>Ease of Access>On-Screen Keyboard or search for On-Screen Keyboard
  - can enter text by clicking on keys, hovering over them, or scanning through them (change this by selecting Options)

## Using Narrator



<http://youtu.be/0mACOm0SuhE>

- I've mentioned the Narrator tool several times. Let's take a look.
- Narrator is a basic screen reader you can use to read the screen aloud. It also describes some events that happen while using the computer, like when an error message appears.
  - open it by going to Start>All Programs>Accessories>Ease of Access>Narrator or search for Narrator
  - use keyboard shortcuts to tell the program what you'd like to read
- Screen readers can be difficult to use and work best when the user is able to receive training and adjust settings to best meet their own needs. Assistive technology centers can provide additional support.

# Windows 7 Speech Recognition



<http://youtu.be/N3VZnyKViC4>

- Final feature: Speech Recognition.
- Users can control the computer without a mouse and keyboard: open and close programs, dictate an email messages, etc..
  - open it by going to Start>Control Panel>Ease of Access>Speech Recognition or search for Speech Recognition
  - setup wizard walks users through setting up a microphone, using a speech training tutorial to help learn the commands, and develop a voice profile to recognize your voice and spoken commands.

## Microsoft Top 7 Accessibility Tips



<http://youtu.be/sfz9tP2fYNc>

- You've seen me and some users talk about their favorite accessibility features in Windows 7. Let's hear from a Microsoft accessibility specialist as he shares his favorite tips.

# MAC OS X

- Lion. YMMV with Snow Leopard, upcoming Mountain Lion, etc.

# Introduction to Universal Access in Mac OS X



<http://etc.usf.edu/techease/4all/getting-started/universal-access/>

- In Windows 7, we used the Ease of Access Center to access important accessibility features and options. With Mac OS X, we'll use Universal Access.

Vision

## VoiceOver

To make it easier for the blind and those with low-vision to use a computer, Apple has built a solution into every Mac. Called VoiceOver, it's reliable, simple to learn, and enjoyable to use.

[In Depth](#)   [Device Support](#)   [Application Support](#)   [Downloads](#)

### VoiceOver in Depth

**VoiceOver in OS X**  
OS X includes VoiceOver 3. A thoroughly updated release of Apple's screen-access technology, VoiceOver 3 includes groundbreaking new features such as gesture support, braille display mirroring, web spots, and spoken hints. It also offers frequently requested features including autospeaking web pages, "read all," web page summary, web table support, user-created labels, customizable verbosity, and more.  
[Go to the Getting Started Guide >](#)



- We saw how to access accessibility features via Universal Access. Let's take a closer look at some features designed to assist users with specific types of disabilities.
- VoiceOver is the built-in screen reader.

## Screen Magnification

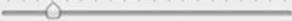
Zoom is a built-in, full-screen magnifier that can magnify the items on the screen up to 40 times. You can activate it using keyboard commands, a button on the screen, a trackpad gesture, or the scroll ball (or wheel) on a mouse. Thanks to the powerful Quartz rendering engine in OS X, text, graphics, and even motion video can be magnified without affecting system performance.

There are three options for how the screen image moves as you type or move the mouse cursor. It can move continuously as you move the cursor; it can move only when the cursor reaches the edge of the screen; or it can move so that the cursor remains in the middle of the screen — great for those with a narrow field of vision. It's also possible to set a minimum and maximum magnification value for instant zooming to a particular magnification and to prevent the magnification from going too high or low, leaving the system unreadable.

Set range for rapid zooming in and out:

Maximum Zoom:  12

Magnification (x): 2 4 6 8 10 12 14 16 18 20

Minimum Zoom: 

Keyboard shortcuts can be used any time zoom is on.  
To zoom past the maximum or minimum setting, hold down  $\text{Command} + \text{Option} + \text{Left Arrow}$  or  $\text{Command} + \text{Option} + \text{Right Arrow}$ .

Show preview rectangle when zoomed out

Smooth images (Press  $\text{Command} + \text{Option} + \text{S}$  to turn smoothing on or off)

Zoom follows the keyboard focus

When zoomed in, the screen image moves:

Continuously with pointer

Only when the pointer reaches an edge

So the pointer is at or near the center of the image

Use scroll wheel with modifier keys to zoom 

Done

- Zoom is the built-in screen magnifier.

### **Slow Keys**

Slow Keys changes the sensitivity of the keyboard to filter out unintended multiple keystrokes. It adds a delay between when a key is pressed and when it is entered, so you have more time to press it and more time to remove your finger to avoid mistakes. The delay is adjustable, and you can choose to have a sound play to let you know when a key is entered.

### **Sticky Keys**

Using Sticky Keys, you can enter key combinations (called chords) — such as Command-Q (for Quit) and Command-Control-Option-8 (to reverse the display to white on black) — by pressing them in sequence instead of simultaneously.

When Sticky Keys is active, OS X visually displays each modifier key in the sequence in the upper-right corner of the screen, accompanied by a sound effect, so you can verify the sequence and correct it (if needed) before it's entered. When you press the last key in the sequence, OS X plays a sound, enters the keys as a chord, and removes the visual representation from the screen.

Use Sticky Keys in combination with the Keyboard Viewer to create an onscreen keyboard that you can type on using a mouse, trackball, or other similar input device.

- As we saw with Windows, there are also settings that allow for more ease of use by those who may have physical or motor disabilities that make it difficult for them to use a keyboard.
- Slow Keys and Sticky Keys are two options.

### Onscreen Keyboard

If you find it easier to use a pointing device than a keyboard, you can use the Keyboard Viewer to enter text. You'll find this onscreen keyboard in the Language & Text pane of System Preferences.

The Keyboard Viewer floats above other applications (so you can't misplace it) and can be resized to fit your screen. Though you "type" with a mouse or other pointing device, it otherwise works just like a physical keyboard. When you use it in conjunction with [Sticky Keys](#), you can enter multikey keyboard shortcuts, such as Control-Option-Command-8, by pressing the keys in sequence.



### Speech Recognition

Speakable Items, built into OS X and located in the Speech pane of System Preferences, lets you control the computer using your voice instead of the keyboard. And you don't have to train your Mac to use it. You can use Speakable Items to navigate menus and enter keyboard shortcuts; speak checkbox names, radio button names, list items, and button names; and open, close, control, and switch among applications.

If you want to perform speech dictation on your Mac, you can use an application from MacSpeech called [Dictate](#) (sold separately).

[Hearing](#)

[Literacy and Learning](#)

- The on-screen keyboard is another.
- OS X also offers a speech recognition function.

### Simple Finder

Using Parental Controls in System Preferences, the Mac can be configured to provide a greatly simplified experience that may be more appropriate for users with cognitive and learning disabilities. Called Simple Finder, it changes the way the Mac works to make it easier to control and use. For example, the Dock contains only three folders: one for applications, one for your documents, and one for items you want to share. You can limit the list of applications that a user can open to those you choose. Simple Finder users only need to click an item, not double-click, to open it. Files, folders, and applications are all displayed in a single window with icons neatly arranged so there's never any confusion or clutter. You can even set weekday, weekend, and "work time" limits for using the computer to assist those who aren't able to manage their own schedules. Using Parental Controls with different user accounts, you can provide the Simple Finder experience to those who need it, and still provide access to the full capabilities of the Mac to others using the same computer.



- There are dozens of others, especially when you keep in mind Apple's focus on "universal access." Features that may be of use to people with access needs may not be marketed as such and can be found outside the "Universal Access" area.
- An example: Simple Finder.

**“Everything I can't do in the real world I  
can do with my Mac”**

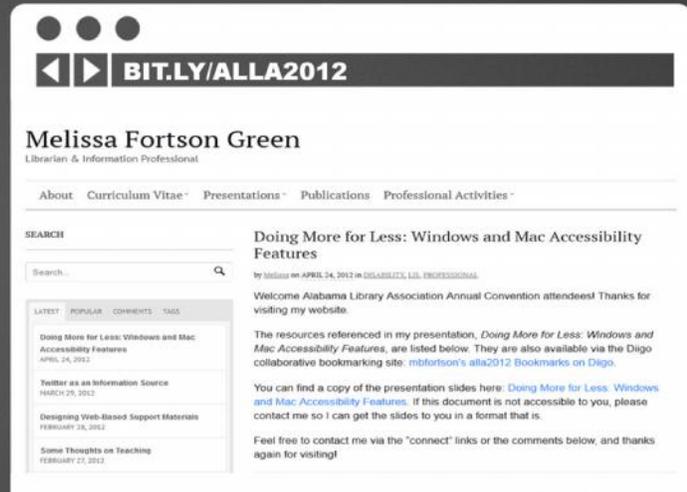
**“Everything I can't do  
in the real world  
I can do with my Mac”**

<http://youtu.be/capg1FmXYUI>

- Finally, here's a Mac user explaining how he uses the technology.



- We've just barely scratched the surface. There are many additional Windows and Mac OS features that may be of use to patrons with access needs.
- Another tool we all have that offers built-in accessibility options is the browser.
- I've included some resources about browser accessibility features and lots more information about Windows 7 and Mac OS X on the web page I mentioned at the beginning of the session.

**BIT.LY/ALLA2012**

The screenshot shows a Bitly profile page for Melissa Fortson Green. At the top, there are three black circles and a navigation bar with left and right arrows and the text "BIT.LY/ALLA2012". Below this is the name "Melissa Fortson Green" and her title "Librarian & Information Professional". A horizontal menu contains links for "About", "Curriculum Vitae", "Presentations", "Publications", and "Professional Activities". A search bar is located on the left side. The main content area features a post titled "Doing More for Less: Windows and Mac Accessibility Features" dated April 24, 2012. The post includes a welcome message to the Alabama Library Association Annual Convention attendees, a list of resources referenced in the presentation, and contact information. A sidebar on the left lists other recent posts: "Twitter as an Information Source" (March 29, 2012), "Designing Web-Based Support Materials" (February 28, 2012), and "Some Thoughts on Teaching" (February 27, 2012).

- That page is [bit.ly/alla2012](http://bit.ly/alla2012).

**THANK  
YOU**

# IMAGES

4: <http://office.microsoft.com/en-us/images/MP900430804>

5: <http://office.microsoft.com/en-us/images/MC900189571>

6: <http://office.microsoft.com/en-us/images/MC900189579>

7: <http://www.flickr.com/photos/acb/135873327/>

8: <http://office.microsoft.com/en-us/images/MP900148985>

9: <http://office.microsoft.com/en-us/images/MP900430829>

29: <http://www.apple.com/accessibility/voiceover/>

30: <http://www.apple.com/accessibility/macosx/vision.html>

31, 32: <http://www.apple.com/accessibility/macosx/physical.html>

33: <http://www.apple.com/accessibility/macosx/literacylearning.html>

35: <http://paulirish.com/2010/high-res-browser-icons/>