iPad

In this Issue

News from the Loan Program

We now have have the Apple iPad in our Loan Program!!

Check out the accessibility evaluation article by Darren Burton of *Accessworld* on page 8.

For further information please contact: jcmorris1@mail.utexas.edu

Assistive Technology Q&A

Q: Is there a Braille embosser that will print graphics?

A: Yes. They're called "tactile graphics" embossers. Some of them cost as much as $10k+. The Tiger embossers are made by ViewPlus Technologies and information is available on their Web site.

- **IVEO** (Speaking Tactile Diagrams)
- **Tiger Cub Braille Embosser**
- **Tiger Cub Jr. Braille Embosser**
- **Tiger Max Braille Embosser**
- **Tiger Pro Braille Embosser**
- **Tiger Pro Ink Attachment** (Ink and Braille)

TTAP Stands Out at Houston Abilities Expo

The Texas Technology Access Program was a feature exhibitor at the Houston Abilities Expo August 27-29. We sponsored and anchored the Assistive Technology Pavilion for the Expo, held at Houston's huge Reliant Center. Thousands of people with disabilities, their families, caregivers, seniors, veterans, and healthcare professionals attended the three-day event.

Expo attendees were able to see and test drive the latest, cutting-edge products and services for people with a wide range of disabilities. The Expo featured manufacturers, non-profits, state and federal agencies offering the latest information, mobility products, medical equipment, home accessories, essential services, low-cost daily living aids, products for people with visual impairments, and much more. Our large exhibit area featured an interactive hands-on demonstration lab showcasing the latest AT products and innovations, all available in our loan program.

We hope you were able to visit us at the Expo. If you missed us or the event, here's good news: TTAP has been invited to exhibit next year!

TTAP provided Information and Demonstrations to over 1500 individuals on Saturday alone!

Back to School Software Resources for Children with ADD

Kidspiration (for grades K–5) and **Inspiration** (for grades 6–12). Mind-mapping software lets visual learners express their ideas for an essay or project in a graphic format and link them together later to create an outline. (both available from **inspiration.com**)

Co:Writer 4000 A boon to struggling writers, Co:Writer reads aloud the words a user has typed. It also helps writers speed up their writing by completing sentences using common phrasing. (**donjohnston.com**)

Dragon Naturally Speaking This voice-recognition software helps students put ideas on paper by typing as they speak. (**nuance.com/naturallyspeaking**)
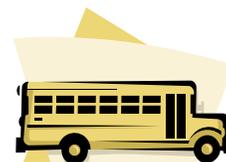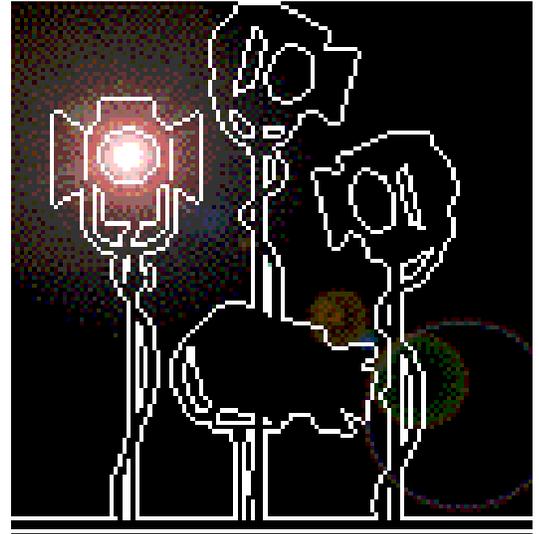
Spotlight on TTAP Demonstration Centers
This quarter the TTAP spotlight shines on:

United Cerebral Palsy of North Texas
(214) 351-2500

Services:

- Adult day care services
- Assistive Technology services
- Children services
- Group Home services
- Class services
- CDS services
- HCS services

United Cerebral Palsy (UCP) is one of the nation's leading organizations serving and advocating for more than 54 million Americans with disabilities. Many UCP consumers are people with disabilities other than cerebral palsy. In north Texas, UCP offers services for individuals, families, and communities such as early childhood development and education, community living assistance and support services (CLASS), home and community support (HCS), consumer direct services (CDS), group homes, adult Impact program, and Removing Limits Through Technology (RLTT), their assistive technology program. UCP of North Texas also provides OT, PT, and speech therapy, along with a vast array of adaptive equipment available through an equipment loan program.

Their mission is simple… "Advance the independence, productive, and full citizenship of persons with cerebral palsy and other disabilities."

From the smallest child in need of therapy to a senior living her golden years in a group home, UCP of North Texas is here for people with disabilities. Since 1953, they have provided the best care possible in response to the ever-changing needs of children and adults with cerebral palsy and other disabilities.

UCP of North Texas has grown from a humble beginning serving primarily the community of Dallas, to serve all of North Texas and beyond. Their level of professionalism and attention to individualized care combine to make their roster of services and programs un-matched. Nationwide, more than 65 percent of individuals served by UCP have disabilities other than cerebral palsy, including disabilities such as autism, epilepsy, spina bifida, down syndrome, muscular dystrophy, hearing and speech disorders, and many others.

At UCP, they're proud of their efforts on behalf of people with disabilities and their families. For 57 years, they have improved the lives of thousands of men, women, and children in north Texas.

Removing Limits Through Technology Program

Every day is Independence Day in the Removing Limits Through Technology (RLTT) assistive technology program's lab at United Cerebral Palsy of North Texas. The goal of the program is to assist individuals with all types of disabilities to be able to use technology such as computers, communication devices, low visions aids, and assistive listening devices, in order to be as independent as possible. The lab is a demonstration site for the Texas Technology Access Program at The University of Texas at Austin. As an official demonstration site, any Texan can receive a FREE demonstration of the latest in technology for individuals with all types of disabilities. For an appointment, contact Leah Gardner at (214) 247-4539.

Some examples of types of disabilities RLTT can specifically assist are:

- various mobility impairments
- hearing impairments
- blind or visually impaired
- literacy limitations

Removing Limits Through Technology Program Includes:

- Evaluation of each person for appropriate Assistive Technology equipment/software
- Demonstration of possible devices and assistance in selecting the most appropriate device
- Training for each person for their assistive technology devices
- References for financial assistance or alternative resources for securing a device, if needed
- Demonstrations of Assistive Technology to anyone interested, regardless of a disability or not

UCP United Cerebral Palsy™
of North Texas
Life without limits for people with disabilities
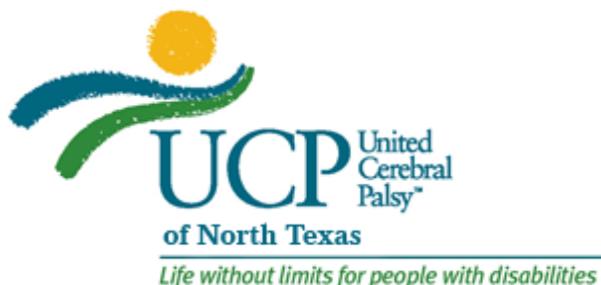
New AT Device in TTAP Device Loan Program

The Apple iPad* is now in our Device Loan Program! The iPad has some universal access features that are worth an evaluation. It comes with universal accessibility features to help people with disabilities experience all it has to offer. Other helpful applications are available at a small charge. Recently, there have been several articles published about how the *iMean* application has been effective in facilitating communication with individuals with autism. The *iMean* application can be downloaded directly to the iPad for $4.99 at **http://itunes.apple.com/us/app/imean/**

Universal Accessibility Features:

- Screen reader
- Support for playback of closed-captioned content
- VoiceOver, a gesture-based screen reader
  - Instead of memorizing keyboard commands or pressing arrow keys, you touch the screen to hear a description of the item under your finger, then double-tap, drag, or flick to control iPad. VoiceOver speaks 21 languages and works with all of the applications built into iPad.
  - Apple also enables software developers to create applications for iPad that work with VoiceOver

- Mono Audio
  - If your hearing is limited in one ear, you can tap a checkbox to route both right and left channel audio into both headphones, so you can hear both channels in either ear.

- Zoom
  - Zoom lets you magnify the entire screen of any application. Zoom up to five times the normal size and move left, right, up, and down to view any portion of the screen close up. Zoom works everywhere, including the Home, Unlock, and Spotlight screens, and with every application, including those you purchase from the App Store.

- Closed Captioning
  - Every iPad can display subtitles and closed captioning for the deaf and hard of hearing when playing movies and podcasts that support it. Movies and podcasts with closed captioning are available on the iTunes Store and can be downloaded directly to the iPad or synced to iPad using iTunes.

- White on Black (Screen Colors)
  - If you need higher contrast, iPad lets you change the display to white on black. Use this feature in any application, as well as the Home, Unlock, and Spotlight screens, and with Zoom and VoiceOver.

- Triple-Click Home
  - If you only use the VoiceOver, White on Black, or Zoom features occasionally, or just want a fast way to turn them on and off, enable the Triple-click Home feature. Then triple-click the Home Button to turn VoiceOver, Zoom, or White on Black features on or off instantly.

*TTAP is an independent newsletter and has not been authorized, sponsored, or otherwise approved by Apple Inc."

To request a device loan, please visit the TTAP Web site **http://techaccess.edb.utexas.edu** or call (512) 232-0753

Kindle™ DX

The Kindle™ DX is an electronic book reader manufactured by Amazon.com. It can read books, newspapers, magazines, and blogs (unless the book's rights holder made the feature unavailable). Books can be downloaded without a computer. It is a global wireless device.

The text-to-speech feature is called "Read to Me" and it can also read personal documents saved on the Kindle™. There is one drawback in this feature: the navigation menu is not audible making it inaccessible for individuals who are blind. Amazon has announced it is working on an audible menu system and plans a seventh, super-size font. There are currently six font sizes for large print users. The Kindle™ also includes a built-in PDF reader.

The Kindle™ books are available for PC, Mac, iPad, iPhone, and Blackberry devices.

Content Formats Supported: Kindle (AZW), PDF, TXT, Audible (formats 4, Audible Enhanced (AAX)), MP3, unprotected MOBI, PRC natively; HTML, DOC, RTF, JPEG, GIF, PNG, BMP through conversion.

Cost is in the $450 - $500 range. For further information visit Amazon.com.

Kindle™ DX
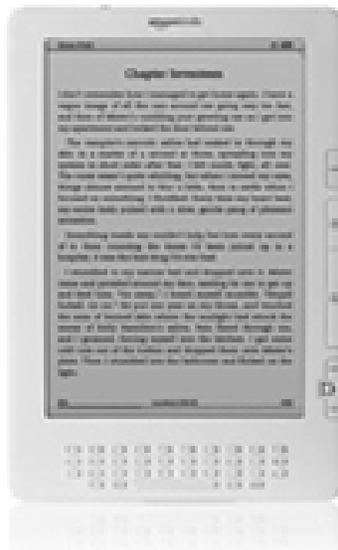
Specifications:

Display	9.7" diagonal E Ink
Size	10.4" x 7.2" x 0.38"
Storage	3,500 books
Books in Under 60 Seconds	✓
3G Wireless	✓
Wireless Coverage	Global
Native PDF Support	✓
Text-to-Speech	✓
Whispersync	✓
Rotating Display	Auto-Rotation

What's on TTAP for Fall

September 15-17   2010 National Employment Conference
                        Marriott Key Bridge
                        Arlington, Virginia
                        http://www.grcrce.org

September 22-25   Envision Conference 2010
                        Westin Riverwalk
                        San Antonio, Texas
                        http://www.envisionconference.org

October 11-14   2010 AgrAbility National Training Workshop
                        Charleston, West Virginia
                        http://workshop.agrability.org/index.html

October 21-23   Closing the Gap 28th Annual Conference
                        Sheraton Hotel & Hotel Sofitel
                        Bloomington, Minnesota
                        http://www.closingthegap.com/conference/

November 15-19   13th Annual Accessing Higher Ground: Accessible Media Conference
                        University of Colorado at Boulder
                        Boulder, Colorado
                        www.colorado.edu/Atconference

December 8-11   TASH 35th Annual Conference
                        Denver, Colorado
                        http://www.tash.org/2010tash/

Just for Laughs
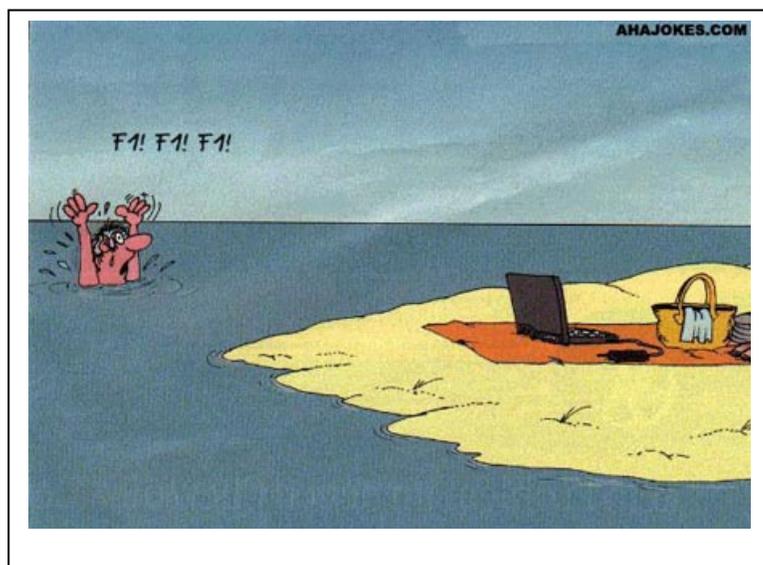
**The University of Texas at Austin
Texas Center for Disability Studies
Commons Learning Center
10100 Burnet Road
Austin, Texas 78758-4445
http://techaccess.edb.utexas.edu**

TTAP values your input. If you have any suggestions, comments or would like to have an article included in the newsletter, please let us know at:

(512) 232-0751/rogerlevy@mail.utexas.edu
(512) 232-0753/jcmorris1@mail.utexas.edu
(512) 232-0750/dwest@mail.utexas.edu

⟵―――――――――――――――――――――――――――――――⟶

<u>Seven Days with the iPad: An Accessibility Evaluation</u>
By Darren Burton

A great deal has been written, blogged, and podcasted regarding Apple's iPad, and Brad Hodges' article "24 hours with the iPad" started our coverage in the May 2010 issue of *AccessWorld*. I will now follow up with my observations after seven days with the iPad. In this article, I'm going to take a look at the iPad from a non-visual perspective and briefly discuss how its VoiceOver screenreader works in general. I will then go into more detail on how VoiceOver works with a select few applications (apps). However, what initially intrigued us AFB TECH lab rats the most about the iPad was its large screen and the potential for accommodating people with low vision. In fact, that was originally going to be the focus of this article, but after a couple days of playing with the iPad, I realized I had enough for a full article from the non-visual perspective. I then decided, along with Lee Huffman, our new *AccessWorld* editor, to take a tag-team approach and write two articles. You can read about Lee's thoughts on the iPad's Zoom and other features that might accommodate a person with low vision in an upcoming issue.

What is an iPad?

You may have heard the iPad described as a very large iPhone or iPod Touch, and that description is somewhat accurate. However, in addition to the size, there are some other significant differences that I hope to illuminate in this article. There are two versions of the iPad: the iPad Wi-Fi and the iPad Wi-Fi + 3G. The iPad Wi-Fi is the original version and it is the one we evaluated for these articles. It accesses the Internet and other data sources wirelessly via a router or a Wi-Fi hotspot you might find at a coffee shop or hotel. The iPad Wi-Fi + 3G version has the additional ability to connect to the Internet anytime you are in range of a cell phone tower. As you have probably heard by now, both versions are powered by a modified version of the iPhone operating system, so they include all the screen-reading, screen magnification, and other accessibility features found in the iPhone and iPod, and those features have even been enhanced a bit. I won't bore you with all the details of how to use these features, but you can check out my original iPhone review to learn more about the basics of using the iPhone.

Caption: The iPad

The iPad Wi-Fi weighs 1.5 pounds and measures 9.5 by 7.5 by 0.5 inches. The iPad 3G has the same physical dimensions but is slightly heavier at 1.6 pounds. The screen is 5.75 by 7.75 inches on both models and that is about seven times the area of the iPhone's screen. Like the iPhone, iPads have a round, slightly concave "home" button at the bottom center of the device, just below the display screen. They also have a stereo headphone jack, a screen lock button along the top panel, and a rocker volume control on the top of the right-side panel. It also has a small slider switch just above the volume control used to lock the screen display into a portrait or landscape orientation. The speaker is on the right side of the bottom panel. The 3G version also has a tray beside the headphone jack that accepts a SIM card, which allows you to access data from a cellular network.

Each version of the iPad comes with three different levels of onboard memory from which to choose, and pricing between the two versions varies accordingly. The iPad Wi-Fi costs $499 for the 16GB model, $599 for the 32GB model, and $699 for the 64GB model. The Wi-Fi + 3G version costs $629 for 16GB, $729 for 32GB, and $829 for 64GB. I don't have enough fingers and toes to count that high, but my interns tell me that for each memory level, you will pay $130 more for the 3G version than for the Wi-Fi version. Data plans for the 3G version are available from AT&T, and the price is $15 for 250 MB of data or $30 per month for unlimited data.

Is the iPad a Phone?

No, the iPad is not a phone. Even though the 3G model can access data via a connection to cell towers, it has no phone functionality. However, both versions do work with Skype to make calls over the Internet, but you would need to use a headset with a built-in microphone. Also, Skype only works with a Wi-Fi connection, and it will not work with a 3G connection to the cellular network.

Initial Thoughts

First of all, it is just tremendous to once again see Apple step up to the plate and deliver a product with built-in accessibility, something that far too few manufacturers have even considered doing.   As a user of both the iPhone and iPod Touch, I was able to hit the ground running because all of the VoiceOver gestures used on those devices work the same way with the iPad. The iPad's larger screen provides a lot more room for displaying information and controls, and you can use VoiceOver to learn the visual layout of the screen. You can then use

pointing and other gestures to navigate much more quickly and efficiently than simply flicking around the screen. Many apps, such as the iPod, separate the screen into panes, so you can touch the area of the pane you want and then flick around in that pane. You can also simply slide your finger around the screen, and VoiceOver provides an audio cue to let you know you have passed over the border into another pane. Audio cues also alert you of pop-up panes that appear in certain apps, and VoiceOver also tells you how to dismiss the pop-ups.

Some new gestures available on the iPad also help you to navigate its larger screen. A four-finger swipe left or right moves you from pane to pane, and four-finger swipes up or down move you to the top or bottom of the current pane. Also, a two-finger scrubbing motion will back out of some screens in certain apps. The rotor has also added a line element, allowing you to navigate by line in certain apps.

The iPad's introduction of accessible touch-typing on a flat-panel touch screen is something that I thought would not be possible just a couple years ago. However, Apple has pulled it off by adding a new touch-typing option in addition to the standard typing method available on the iPhone and iPod Touch. It is now possible to hover over the virtual keyboard and type in a manner similar to how you would type on a standard physical keyboard. When you touch a letter, VoiceOver speaks the letter, and when you lift up your finger, it enters the letter. Another helpful VoiceOver enhancement to the keyboard is that it now also speaks a phonetic pronunciation of each letter. For example, if you highlight a letter, it will say "A alpha, B bravo," etc. That is also the case when you navigate a text field letter by letter. The touch-typing feature is certainly something you have to get used to, but it works very well with a little practice. I have only used it for entering text for a few hours, but I am up to about 25 words per minute so far. That compares to my 75 words per minute rate when typing on a standard keyboard. Apple sells a wireless keyboard accessory as well as a docking station with a physical keyboard that would be much more efficient if you wanted to enter a significant amount of text.

Documentation, Battery Life, and Speaker

The iPad user guide is loaded onto the iPad as a bookmark in the Safari Web browsing app. It is also available in an accessible PDF format on Apple's support site. I have found the battery to last the advertised 10 hours, with a little less life between charges if watching movies. However, unlike the iPhone or iPod Touch, you cannot charge the iPad by connecting it to your computer. Instead, you have to charge it with its AC adaptor plugged into an electrical outlet. The iPad's built-in speaker is significantly louder than the iPhone's, but you will want to use a headset or external speaker if you want to listen to music in stereo.

How Does VoiceOver Work with the Apps?

Just like the iPhone and iPod Touch, VoiceOver supports all of the native apps that come loaded on the iPad. It will also work with many of the thousands of apps available from Apple's App Store. All of the iPhone apps will work on the iPad, but many of them will still be scaled to the size of the iPhone screen, so they will only take up a small portion of the iPad screen. For those of you interested in using VoiceOver and the iPad's Zoom feature at the same time, that is still not possible. However, you can set it so that if you press the home button three times, it will toggle between VoiceOver and Zoom.

I will now discuss in more detail how VoiceOver works with three built-in apps--iPod, Safari, and Mail--and three apps from the App Store: iBook, iWork Pages, and MLB At Bat.

iPod

Because the iPod is one of my favorite apps on the iPhone, I immediately opened it up to see how it works on the iPad. Although the iPod app is fully accessible with VoiceOver, its interface is not like it is on the iPhone. It is actually more similar to the way iTunes is laid out on a computer. You have a sources list on the left side where you can choose among your library categories, such as music, videos, podcasts, and your various playlists. When you choose one of the categories on the left, the right side of the screen displays the list of specific items within that category. There are also accessible controls along the top and bottom of the screen. Although it is possible to flick among all of the items on the screen, it is much more efficient to use a pointing method to move quickly between the four major areas of the iPod screen, and you can then flick or slide your finger to move within each area. That is true of many apps on the iPad's large screen.

Safari

The Safari Web browser is another app that comes loaded on the iPad. Just as with the iPhone and iPod, it is fully accessible with VoiceOver. However, the iPad displays the full page just like a computer would. This allows you to touch various parts of the screen and learn exactly how the page is laid out visually. You can then go directly to a part of the screen and interact with it just as a sighted person would.

If you are comfortable with a flicking method to move element by element through a webpage, you can still do that, but the iPad's large screen makes it more efficient to point to specific elements and interact more efficiently. The rotor is another way to move very quickly among categories of elements, such as headers, links, and form controls. The rotor now also has the line element, allowing you to move by line in webpages. Navigating tables in Safari is also accessible. It takes a bit of getting used to, but you can directly touch the various cells of a table to hear their contents.

Mail

The iPad's Mail app is fully accessible and easy to set up to use with your existing e-mail account. In-box items are displayed in a pop-up list along the left side of the screen, and the body of messages you select appears on the right side. Like the other apps, you can choose to use pointing, flicking, or sliding techniques, or a combination of all three.

One accessibility barrier we did discover with Mail occurs when you want to open up a document that is attached to a message. You can simply double-tap the attachment and it will open up in a window that allows you to read it. However, the problem occurs when you try to close the window with the document; this can be very difficult, even for a sighted person. You have to double-tap the document and then very quickly double-tap a "done" button near the top left corner of the iPad. However, that button does not speak, and you have only a second or so to tap it before the window goes away. A better way to view attachments would be to use the iWork Pages word processor app that I will discuss below. If you have Pages installed, you can double-tap and hold the attachment and then double-tap the icon that says "Open in Pages."

iBooks

The iBooks app is free, available from the App Store, and is probably the one iPad app that has received the most interest from our community. It has deservedly received a great deal of praise for its accessibility, but there are still some bugs that need to be worked out. However, before I mention the problems we discovered, I should say that this app knocks the Kindle and

the Sony Reader devices out of the ring as far as accessibility and usability. Unlike those mainly inaccessible products, nearly all of the buttons and controls in iBooks are accessible using VoiceOver. Also, for those of you with low vision, you can easily increase the font size of books to as large as 24 point. Accessing your library of books, learning how to use the app, and reading with the app are all straightforward. The iBookstore is also fully accessible, and there you can find over 100,000 books, including a large selection of free books provided by Project Gutenberg. The Apple support pages report that iBooks are in the ePub digital file type, and in addition to books from the iBookstore, you can sync freely available ePub files to the iPad using iTunes on your computer. You can also download free software to convert existing files to ePub format on your computer. iBooks does not support any other file types at this time. A promising bit of good news about iBooks is that it will also be available on the iPhone and iPod Touch later this summer.

With iBooks, you can navigate books by page or by chapter, or you can read the books continuously with a two-finger downward swipe and pages will turn automatically. You can also skim through a page by simply dragging your finger down the left-hand side of the iPad and listen to each line of text as you touch it. However, you will want to make sure to keep your finger on the left side of the iPad because some lines, such as those at the end of a paragraph, do not extend all the way across the page. The search tool is also accessible. You can type in a word or phrase and a list of all the "hits" of your search term will appear; you can then double-tap an item on the list to move directly to that page. VoiceOver will then start reading at the beginning of the page in which your search term appears.

As far as the problems we discovered when using VoiceOver with the iBook app, the biggest one is the inability to navigate a book by word or character. The rotor control does have choices to navigate by word or character, but it doesn't work with this initial release of the product. That is a fairly important shortcoming because it is often necessary to read by character to find out the proper spelling or pronunciation of a person's name, and it is also very important when reading a technical book or a cook book.

Another bug we discovered occurs when reading a book continuously. Sometimes, but by no means all the time, the last line of a page is skipped by VoiceOver, or the first line is read twice. This does not occur when you read one page at a time. Also, when reading continuously, sometimes two words will be pronounced as if they are connected, without a space in between them. However, this does not occur when reading a page at a time or when skimming line by line.

We purchased some copyrighted books from the iBook Store, and we discovered some strange behavior when reading the beginning of chapters. The first word of each chapter features a drop cap, which displays the first letter of the first word in a very large font, and VoiceOver reads that letter as if it was separate from the rest of the word. The first several words of a chapter are then displayed in all caps, and VoiceOver reads the last capitalized word as if it were connected to the next word. VoiceOver also skips the second line of a chapter when reading continuously or by page.

Another feature of iBooks that is not accessible with VoiceOver is what I will call the dictionary/bookmark/search tool. Without VoiceOver, a sighted person can double-tap any word in a book and it is highlighted, and three buttons pop up above the word, one each for dictionary, bookmark, and search. Tapping the dictionary button opens a pop-up pane with the word's pronunciation and definition. The bookmark button highlights the word in yellow and adds a bookmark in the book's table of contents. The search button brings up a list of all the occurrences of that word in the book. However, because we cannot navigate to specific words with VoiceOver, we cannot use these tools. That being said, the dictionary is the only one of

these tools that we cannot access at all. This specific search tool does not work, but as I wrote earlier, the regular search tool, where you type in a search term, does work fine. Plus, there is a work-around allowing you to bookmark a page. You can briefly turn VoiceOver off by pressing home three times quickly, and then double-tap anywhere on the screen where the text of the book appears. Then, if you then tap just above where you double-tapped, the page will be bookmarked. You can then go to the bookmarks in the table of contents to go quickly to that page at a later time.

iWork Pages

iWork is a suite of three productivity apps that allow you to use the iPad for tasks that would normally be done on a computer in a work setting. Pages is the name of the word processor app, Numbers is the spread sheet app, and Keynote is the presentation tool used for creating and showing slide shows. Each app is available for $9.95 from the App Store. For this article, we had time to investigate only the Pages app, and we tested it to see how practical and accessible it is to use VoiceOver for word processing on the iPad.

Pages is a fairly robust word processor, especially for a portable device. Among other things, it allows you to align text as you like, underline, bold, or italicize text, and cut, copy, and paste text.

Reading, creating, editing, importing, and exporting documents are all accessible with VoiceOver. However, just as with the iBooks app, the problem is that you cannot select text in Pages using VoiceOver. Because of that, even though the buttons such as those for making text bold or centered are accessible, you cannot choose the text that you want bolded or centered. We tried this again using the wireless keyboard and it worked much better. Many of the commands used with VoiceOver on a Mac also work on the iPad using the wireless keyboard or the docking station keyboard, and many of the text-selection commands also work. There also are extra navigation options when using the keyboard, such as reading a word, character, line, or paragraph.

Even though I have pointed out some weaknesses with iWork Pages, it still can be a useful tool. I recently attended a meeting to see how it might replace my traditional notetaker, and it did work relatively well. I had the meeting agenda in one file and my meeting notes in another. Although using the touch-typing method on the iPad was not quite as fast as I needed it to be, using the wireless keyboard was plenty fast. The experience was not quite as smooth as using my traditional notetaker, but it was certainly close.

MLB.com At Bat 2010

If you are a baseball fan, then MLB.com At Bat 2010 is an app you will definitely be interested in. It is fully accessible, and for $14.99, you can listen to the audio broadcasts of every game in the season, including playoffs. You can choose to listen to either the home or away team's broadcast, so you can always catch your favorite radio announcers as they provide play-by-play reports.

In addition to listening to the games, you can also use MLB.com At Bat to catch scores and highlights of all the games, and you can even get situational updates for ongoing games, such as two outs and two on with a 3-2 count in the bottom of the fifth. You can also add video of all games for an additional cost if you would like to watch games on the iPad's large screen with your sighted friends.

The Bottom Line

Even though I have pointed out some access barriers that still need to be overcome, the overwhelming majority of features and functions on the iPad are accessible. I have to applaud Apple for once again producing a tremendous mainstream device with accessibility built-in, and at no extra cost. The rest of the world's electronics manufacturing companies are going to have to follow Apple's lead, because the lame old excuses of "undue burden" and "not readily achievable" can now be thrown out the window.

If you were to ask me if you should go out and buy an iPad, I couldn't really make that decision for you because there is no cookie-cutter access solution for everyone. At 1.5 pounds, it is a good pound or so lighter than today's netbooks, but a netbook will do different things than an iPad. The iPad can be a mobile productivity tool, but probably not as productive as your computer or your notetaker. However, there are so many cool things to do with the iPad that many of you may want to consider one. Of course it is much larger than an iPhone or iPod, so those devices may be a better choice for those of you for whom portability is a major concern. It may be a real bonanza for those of you with low vision, so I urge you to read Lee Huffman's article in an upcoming issue for his perspective.

I certainly enjoyed using the iPad. However, there are definitely some trade-offs when comparing it to an iPhone. For example, the large size allows me to somewhat more efficiently investigate a webpage, but the size also makes it much less portable. Also, you can quickly point to and interact with a lot more info on the iPad's large screen, but I like the fact that I don't have to move my hand around nearly as much on my iPhone. The iPad is also very cool to share with friends, and some of my elderly neighbors were simply amazed by the iPad. One neighbor exclaimed, "I can't believe that I can just touch this thing to watch a movie or listen to Frank Sinatra!" It took me more than an hour to pry it out of his hands and get back to work.

For those of you who decide to invest in an iPad, I have one bit of advice for you. It can be very slippery, so you should invest in one of the many skins that are available on the Internet for the iPad. During testing, our iPad slipped off my lap and bent the end of the adaptor as well as the connector port.