

BTOTS Web Mobile Hardware Recommendations

Spring 2012

Overview – The following guidelines may help you in the selection of mobile hardware for your staff in the field. A traditional desktop computer will still be most cost effective for data entry only or office staff, but the following mobile solutions provide added flexibility for service providers working out of the office.

Mobile Hardware Categories

- **Laptop** – a traditional laptop meant for full functionality while on the go. For the purpose of this discussion, we will include **ultrabooks** in the laptop hardware category. Ultrabooks are an attempt to provide full performance in a smaller sized and reduced weight laptop.
- **Netbook** – small, lightweight, inexpensive laptop. They use processors that require lower power (and thus have lower performance compared to a laptop). The screen is most often a widescreen format, but has limited vertical resolution, and so requires more scrolling. We don't recommend using a netbook at this time. Consider an ultrabook for those needing more performance or an Apple iPad for those needing greater portability.
- **Tablet** – tablet computers (such as the Apple iPad) are touch-based devices designed for portability. They generally have fewer input capabilities and focus on portability. There are other tablet computers (competitors to the iPad based on the Google Android operating system; e.g., ASUS, Samsung, Motorola, etc.), but we have seen that performance and compatibility has varied widely between brands. MDSC is not equipped to support all the various Android brands and would strongly recommend the iPad for those who wish to use a tablet solution.

Mobile Hardware Considerations

The following list provides some additional considerations you may wish to consider when selecting mobile hardware.

Consideration	Laptop (Windows /Mac)	Apple iPad (tablet)
Keyboard / Mouse / Touch <i>One of the biggest differences between the two devices will be the way you input data into it.</i>	Keyboard and track pad (can use a wireless mouse). This setup is generally more proficient for large amounts of data entry.	<ul style="list-style-type: none"> • On-screen keyboard (on-screen keyboard is generally not as comfortable or as fast as a standard keyboard and mouse) • External Bluetooth keyboard (\$30 - \$100; Some cases have built in keyboards. Smaller keyboards fit the size of the iPad, but can feel cramped.)
Screen Size <i>Size and resolution determine how much data you can view at a time.</i>	Laptop screens are typically 13-15 inches, which makes them quite comfortable to read, and interact with any website. They have enough resolution to easily view web pages.	9.7 inch screen (1024 x 768 and higher resolution). iPads are good for reading and browsing but may require more scrolling than a laptop.

Consideration	Laptop (Windows /Mac)	Apple iPad (tablet)
<p>Digitized Signature Capture <i>The ability for a parent to sign a document with the device (rather than on a paper copy).</i></p>	<ul style="list-style-type: none"> • USB drawing pad & stylus (\$25 - \$60): use of an inexpensive drawing tablet rather than a more expensive signature pad for capturing signatures in BTOTS has been shown to work well. • Touch / stylus screens: some laptops can have a stylus or pen interact with the screen. This feature usually costs at least \$200 more than a standard laptop, but will work well. • Mouse: the mouse could be used to attempt signing, but it will be a frustrating experience for users. 	<p>Users can sign on the iPad directly using their finger or optionally a stylus (\$10 - \$20).</p>
<p>Portability</p>	<p>3-7 lbs. depending on screen size and battery. Likely need to carry a charging cable and other peripherals with a laptop.</p>	<p>1.3 lbs. It is small and will fit in almost any bag. There are many covers available to protect the device while in transit.</p>
<p>Battery Life</p>	<p>Usually 3 hours on a charge (some laptops last longer).</p>	<p>9-10 hours of use on a charge.</p>
<p>Portable Printing <i>Do you need to be able to print forms in the field?</i></p> <p><i>Note: The digital signature feature may overcome the need to print in the field. In addition, we are investigating ways to get the digitized signature forms to the parents in a digital format (e.g., parent portal website, secure email, etc.)</i></p>	<ul style="list-style-type: none"> • Small portable printers are available. Compared to office sized printers, they print slower and often cost more to print per page, but offer the convenience of portability. • If you require portable printing, the laptop option would definitely be the easier option as these portable printers could connect directly to the computer and would work well. 	<p>No good portable solution for iPad printing.</p> <p>See http://support.apple.com/kb/HT4356. There are several apps that cost a nominal fee that will allow the iPad to print to most wireless printers or printers connected to computers on the same network. This solution works well if users simply need to print something while at the office, but won't work for printing in the home.</p>
<p>Maintenance</p>	<ul style="list-style-type: none"> • Laptops are usually a little easier to fix if something goes wrong, and they can usually be upgraded with more RAM (random access memory) or bigger hard drive. Warrantees and protection plans vary greatly. • Your current IT department may be more comfortable and supportive of a laptop over a tablet (IT in general is still trying to determine how to handle tablets in business) 	<ul style="list-style-type: none"> • iPads come with a 1-year limited warranty. AppleCare provides an additional year for \$99 and also covers two accidental damage incidents with \$50 co-pay. • Repairs are done by an authorized Apple dealer. Non-warranty repairs can be quite expensive.

Consideration	Laptop (Windows /Mac)	Apple iPad (tablet)
<p>Software</p>	<p>Laptops can handle additional software that you may need to use.</p>	<ul style="list-style-type: none"> • The web browser is responsive and supports the BTOTS system well. • If you want additional functionality for the iPad, you must purchase apps created for iOS via Apple iTunes online store.
<p>Security <i>The system is web-based and thus the database is not stored locally when using a laptop or iPad. Care must still be taken to use secure passwords and protect your equipment.</i></p>	<ul style="list-style-type: none"> • Username and passwords should be required on all laptops. • Antivirus and antimalware software should be installed and updated regularly. 	<p>We recommend turning on the passcode for the iPad, which would slow someone down from accessing content on the iPad (e.g., email, notes, etc.).</p> <p>The iPad features a built in locator and remote memory wipe feature should it be lost.</p>
<p>Cost</p>	<p>Approx. \$400-\$1,000 for entry level laptops. We recommend 4 GB of RAM and core i5, i7 or equivalent processor. Also 200GB is usually adequate for a hard drive and most come with more than that.</p>	<p>Starting at \$399 iPad 2 (Wi-Fi), \$499 iPad 3 (Wi-Fi), \$629 iPad 3 (4G).</p> <p>The 16 GB models are sufficient for BTOTS usage. Wi-Fi requires a connection to a wireless router for Internet (much like you would use in an office or at home). 4G uses cell phone data access for Internet connection.</p> <p><i>Note: The iPad 3 is actually branded as the “new iPad” but we are using 3 to denote the difference from the iPad 2.</i></p>

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<p>Internet Connection <i>Data needs for browsing the Internet will typically be less than 1 GB of bandwidth. More Internet bandwidth is generally only needed for downloading movies and photos.</i></p>	<p>Laptops will require additional hardware to connect while on the road. The two options are hotspots and USB Modems.</p> <ul style="list-style-type: none"> Hotspots are similar to a cell phone; they need to be charged separately. Up to five devices can be connected to one hotspot, just like you would connect to wireless router in the office. Some smart phones can act as a hotspot for an additional fee on top of normal cell phone service costs. USB modems look like a USB thumb drive. They run off the power of your computer and provide connection to the Internet for one computer. These generally require a 2-year contract of \$50 per month for 5GB data. The device (both hotspots and USB modems) generally cost around \$50 with the contract, and \$300 if purchased without a contract. Some companies have “pay per month” (i.e., no contract) access that may be cheaper. 	<ul style="list-style-type: none"> Non-contract (pre-paid) and contract data plans are available on the 4G models with Verizon or AT&T \$15-\$30 a month cost depending on data requirements, 1-3GB download a month A Wi-Fi only iPad would require a hotspot similar to laptops for on the road Internet access or access to Wi-Fi in parent’s homes.
<p>General Recommendations</p>	<p>Users with moderate to heavy data entry responsibilities. Users that need the ability to run Windows applications unavailable on the iPad.</p>	<p>Users with light to moderate data entry responsibilities. May be a productivity boost for employees that do short data entry bursts (e.g., view/enter small amounts of information in the child’s home) as there is less setup, startup, and shutdown time involved (iPad is instant on and quick to stow away).</p>