

The Apple iPad in Government

OGITA Recommended iPad Options & Configurations for Government Agencies



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Background

OGITA, as an organization, has always been involved in working with vendors and new technologies. When Apple announced that the iPad was being developed, several members of OGITA got involved with following the architecture and app developers' interest in supporting new tools. Once the iPad was made available to the public, several members purchased them and started testing their applications, accessories, tools, and mobile reliability.

A project team emerged and started collaborating together to test applications and see how they could work in the government and business world. Hundreds of apps were evaluated; developers were spoken to in order to evaluate the life cycle as well as the future improvements on apps that met the requirements of the team. Many accessories such as cases, keyboards, styluses, chargers, etc., were evaluated to determine the best of the best.

After eight months and many discussions as well as tedious testing, the original apps were selected and added to version 1.0 of this document. As new iOS are released by Apple, OGITA tests the original apps as well as new apps to ensure functionality and best apps are still listed. Apps listed below were agreed on to be the best and thus recommended by OGITA to be used as part of a government mobile tool. But this document is an ever-working document with updates being made as new apps come out or as old apps are phased out for newer Apple operating Systems or hardware, such as the iPad 2, iPad 3, or iOS 5, etc.

The applications listed in this document are not the only apps that would work in a government environment but were the best apps from the hundreds tested by OGITA members as part of the study. The techniques are a starting point and every organization will need to modify the configurations and documents for training based on their individual needs. The multi page reviews of Mobile Data Managers give you the information of over twenty MDM tools to help secure and manager your inventory of mobile devices.

This document contains the results of OGITA GIS for iPad task force. This task force has spent several months testing all the GIS apps from the major vendors that are listed later in this document and their findings are in the final chapter of this document. The GIS apps have and will continue to mature but it will take years for an iPad replacement that equals a laptop or desktop. Until that time you can follow the vendors listed in this section as they continue to work and mature their apps.

With version 5.1 of this document, we assume you are either using an iPad 2 or iPad 3 (the New iPad). Many things will work on an iPad 1 but many will not and to keep this document short and since there are not that many iPad 1's being sold, this document does not distinguish between the 1 and 2 or 3 but assumes you are planning on rolling out an iPad 2 or 3 or even the 4 in the future.

Now with all that discussion Apple is preparing iOS 6 which should be out during the fall of 2012. It brings over 200 updates and improvements. See the section in this document on iOS 6 for more information.

iOS Version 5 and iPad 3 Changes

With the introduction of iOS 5 in the Fall, 2011, and the iPad 3 (or New iPad as Apple calls it) in March, 2012 there are many changes to the hardware and software that Apple pushes out on the top selling pad device.

The iPad 3 is only slightly thicker and most people won't notice the slight change in width. You will notice if you go to use a case that was tight on the iPad 2 as you may not be able to fit the iPad 3 in to the case at all or without so elbow grease. It is only slightly heavier. Battery life is about the same as well has improved but with the HD screen it uses a little more so evens out.

The main noticeable difference is the Retina display. It's the same Retina display that was used on the iPhone 4 but resolution was stepped up to 2048x1536 pixels, that's 264 pixels per square inch. It makes anything look HD and is very easy to read outside, one of the past weaknesses of earlier models. That is higher resolution than most gaming consoles like the PlayStation 3 or Xbox 360.

To make all that video look good and speed up processing, Apple put a quad-core CPU called the A5X. This helps on most applications but some run almost the same speed due to having to process all those extra high resolution pixels.

The rear camera has been upgraded to a 5 megapixel while adding illumination and an IR filter. You can shoot up to 1080 p HD quality. Making videos and pictures taken from the back looking like most cameras on the market. It supports all the normal features you expect now like face recognition, auto focus and white balance with image stabilization.

Siri has been added to the iPad 3 but not as robust as the iPhone 4s. It basically adds dictation and can scribe in multiple languages. Apple releases new voices as updates or patches. More on Siri in the pages that follow.

You can now get a Verizon or AT&T version, both with 4G LTE cellular data connections. Which in theory means you can hit speeds of 73Mbps, though more realistic speeds are in the 10-20Mbps range. Depending on the cellular network installed in your area, the number of users using it, and your proximity to the tower, speeds will vary. You can also now tether or set up your iPad as a wireless hotspot using Verizon. AT&T offers it as an option.

iOS 5.1 is the latest iOS from Apple. iOS 5.0 was introduced in Fall, 2011 but Apple has released iOS 5.1 since then in May, 2012. This latest version of iOS adds over 200 updates from iOS 4. Here are just a few of the main updates.

The Notification Center adds a way for you to add all your various notifications and alerts to a pull down tab from the top of the iPad screen from any application. When you swipe down you can see sections on the weather, latest email, calendar items, etc. You choose what you want displayed in the settings area. Learn how to setup and use this area in the iPad training section of this document.

iMessage gives iPad and iPod owners the capability to send text messages using the Internet as the medium to send to another iPhone, iPad, or iPod. You can send text, photos, or videos. You can share your iMessage account on your iPhone and iPad and see your conversation on both devices.

Newsstand allows you to subscribe to newspapers or magazines and get full issues delivered to your iPad just like you would to your front door step every morning.

Reminders is an app that does exactly as it is named. It is a basic task manager that allows you to not only keep track of a task, time and date due, text about the task, but also you can specify a location and when you get to that location, the reminder will pop to remind you that you had something to do at that location.

Twitter is built into the iOS and thus you can send a Tweet from almost any built in app and lots of Apps purchased from the App store. You will need to set up a Twitter account and enter that into the iPad but after that you can tweet away from inside most apps.

The camera app is more accessible and adds new features such as grid-lines, pinch-to-zoom, single tap focus, and exposure lock. The camera is accessible right from the lock screen so you can get to it fast even when the iPad is off. If you use the Photo Stream option your pictures will go to your iCloud account instantly.

Photos now add tools to allow you to enhance your photos on the fly like crop, rotate, or remove red-eye. You can organize your photos in albums using the photo app. Using iCloud from Apple you can push your photos so that you can access them from other devices.

Safari adds tabbed browsing while moving from site to site with just swipes on the screen. You can add pages to your Safari Reader list and quickly access pages later, even when you don't have access to the Internet. Performance is supposed to be faster while less clutter from menus and such on the screen. If you use iCloud you can sync your favorites and Safari Reader pages on all your devices.

One of the biggest upgrades is no longer do you need a computer to activate a new iPad or get an iOS upgrade. You can even backup your iPad to iCloud so you still have a backup in case you need to restore to another iPad.

In Mail you can now format your email using bold, italic, or underlined fonts. You can indent text, drag names from one address field to the other, or Flag important messages. Searches now can happen inside the body of the email and not just on the name or subject. And if you are one of the two people in the US that does not have an email account, you can get a free email account from iCloud and use it on your iOS devices.

The Calendar now supports a year look so you can see your free dates at a glance. Tap to create a new event and drag to adjust the time and duration. You can view event attachments without leaving the Calendar app. Using iCloud you can share calendars with friends and family.

Multi-tasking gestures add several new four and five finger swipes that when swiped up you reveal the multitasking bar or pinch to return to the Home screen. Or swipe left and right to switch between apps.

Airplay mirroring now supports complete video mirroring from an iPad to an Apple TV device so that anything you have on the iPad can be seen on a projector, HD TV, or whatever you have Apple TV connected to. This makes training and presentations a breeze as well as watching multi media for entertainment.

iOS Version 6 proposed Updates and Enhancements

Apple announce in June that iOS 6 is in beta and plans on a fall, 2012 roll out to devices. It includes over 200 updates and enhancements. Listed here are just a few of those changes that are expected to be in the new version. Rumor has it that Apple has also asked to get iOS 6 FIPS certified:

Safari

- Offline Reading Lists
- Sync Lists with Safari in OS X
- Website Native App Banner Link

Passbook

- Keeps all your ID and loyalty card, tickets, etc in location.
- Location enabled so if you have a card for a gas station or a ticket for a movie and you get to that location, Passbook knows which one you need.

Mail

- Highlight email from special people you designate
- New refresh for new email
- Open password protected attachments

Photos

- iCloud sharing with friends
- Allows others to comment on your photos

Siri

- Will integrate with more third part providers for information like Movie Times, Restaurant Reviews, reservations, sport scores, game times
- Will be able to launch almost any app installed on iOS device
- Adding integration with in-car control systems
- Works with Twitter and allows Tweeting directly
- Mapping and Navigation control
- Full Siri (not just dictation) on the new iPad

Maps

- Will offer traffic information and real-time accident reporting
- Turn-by-turn navigation and works with Siri.
- Faster generation of Maps

Facebook Integration

- Facebook will become a part of the iOS just like Twitter did in iOS 5.0. Meaning you can post and add to Facebook from almost any app.
- Siri Integration for fast updates
- Facebook Events and other information can sync with iOS calendar.

New Phone App Enhancements

- Add prioritization based on groups of contacts and how they are handled
- A full Do Not Disturb so phone won't light up, vibrate, or ring
- FaceTime now works over cellular connection
- Can answer Facetime on iPad or Mac
- Reminders to call people back or text someone later

iPad Setup

Brand new out of the box iPad must be activated before it can be used. With the introduction of iOS 5 in the Fall, 2011, you may now activate a new iPad using only the Internet, no longer is a computer and iTunes required. Below are two methods to activate an iPad.

Steps to initialize a brand new iPad without iTunes or a computer:

1. This version does not work on an iPad 1.
2. Take the iPad out of the box and remove the charger and the sync/charging cable.
3. Plug in the charging cable to the wall charger and the other end in to the bottom of the iPad. Plug the charger into the wall.
4. You should see an Apple on the iPad screen as the iPad starts up. If not, press the oblong button on the top right of the iPad, opposite end of where the charger is plugged in. You then should see the Apple on the iPad screen as the iPad starts up.
5. Once it is done you will see a screen asking for the language of your choice. English is the default. Select your choice and press the blue arrow in the upper right corner to continue.
6. Choose your Country or Region. United States is the default. Again choose your Country and then press the blue button labeled NEXT in the upper right corner.
7. Now choose whether to Enable or Disable Location Services. Location Services allows Maps and other apps to know where you are and to gather information to be used for apps that give you information based on your location. Most people Enable this and then later decide whether to leave it on or off. After choosing then choose the blue NEXT in the upper right corner.
8. Now you have to choose a wireless network to connect to since you are setting up your iPad without plugging in to a computer or iTunes. Choose your network and if required enter the password. Once it connects, choose the blue NEXT in the upper right corner of the screen.
9. You should now see a screen that says activating iPad. Depending on the speed of your Wi-Fi connection, this could take seconds or minutes. After it activates it will go automatically to the next screen.
10. Now you choose to set up this iPad as a new iPad, restore it from an iCloud backup, or restore from an iTunes backup. Unless you are replacing another iPad you would choose to set up as a new iPad and go to step 11. If you are replacing an iPad and backed your old iPad to iCloud, choose iCloud and go to step 26. If you had your old iPad connected to a computer and backed it up using iTunes, then choose iTunes and go to step 27. Once you make your decision, choose the blue NEXT in the upper right corner.

11. On a new setup, the iPad has to be assigned an Apple ID. This screen allows you to use an existing Apple (iTunes) ID or to create a new one. If you have an Apple ID, then choose “Sign in with an Apple ID”, enter your ID and password. Go on to Step 18.
12. If you need to create an ID, choose “Create a free Apple ID” and it will prompt you for your birthday. This is to determine age appropriate material. Enter your date of birth and then press the blue NEXT icon in the upper right corner.
13. Enter in your First and Last Names and press the blue NEXT in upper right corner.
14. Choose to enter in your current email address or to create a new email address. Most people use an existing email account, as this is where Apple will send you receipts or reset your password with, if you forget it. Choose the blue NEXT.
15. Enter in your email address and press the blue NEXT.
16. In then will ask you to enter a password and verify that password. Password must be at least eight characters, have a number, uppercase letter, and a lowercase letter. After entering password twice, press blue NEXT.
17. Now choose your security questions in case you forget your password. Enter your answer and press blue NEXT.
18. Choose to receive email updates from Apple or not. Your choice. Most turn it off. Then press blue NEXT.
19. Press blue Agree in lower right corner to accept the Terms and Conditions from Apple. Then press Agree again on pop up screen.
20. Apple creates your ID and assigns it to the new iPad. Once done it will continue automatically.
21. Next it asks you to use iCloud or not. iCloud allows you to store items on a server at Apple called iCloud. You can then share your iCloud with your iPhone, another iPad, computers, etc. You can always turn this option on later after you have time to research options and get used to your iPad.
22. Next enter your email password and the iPad will setup your email on the iPad to receive and send emails. Press the blue NEXT.
23. Now choose to use dictation or not. Dictation allows you to tap the microphone on the virtual iPad keyboard and talk instead of typing. You can use this in any application that pops up the keyboard. Make your decision and choose the blue NEXT.
24. Now decide on the send Apple diagnostic and usage information or not? Most people choose not to, but this is your call. Make your choice and press the blue NEXT.

25. Skip to step 28 below.
26. iCloud restoration is done using your iCloud ID and password, which for most people is your iTunes ID and password. You will need to provide that ID and password to login. Then do steps 18, 19, and then choose your backup to restore. After that go on to step 28 to finish your setup.
27. iTunes restoration is done using a computer and iTunes that you had previously used to backup a different iPad with. You will unplug the iPad from the wall charger and plug into your computer. Do steps 18, 19, and then follow the on screen prompts to choose which backup to restore. Once restored, go to step 28 to finish setting up your iPad.
28. Finally decide on to register with Apple or not. Normally this should be yes but if you have a reason not to, now is the time to decide. Choose blue NEXT.
29. You are now ready to use your iPad. Choose Start Using iPad and your iPad icons will appear.

Sometime slight variations of options may appear but overall the setup process is the same as above.

Steps to initialize a brand new iPad using iTunes and a computer:

1. Take the iPad out of the box and remove the charger and the sync/charging cable as well.
2. If you are supported by an IT staff they normally take care of this step for you. But if not, then first make sure you have iTunes installed on your computer that you are going to use to sync the iPad with. If not, you can get iTunes free from Apple at www.apple.com/itunes. Once it installs you will have to create an Apple userid and password. It will also ask you for your credit card information. This is used for future purchases you want to make as well as to verify who you are on your iPad to download even free Apps.
3. Start iTunes. Plug in the Sync cable to the bottom of the iPad into the dock Connector. Plug the other end in to a free USB port on your computer.
4. iTunes will pop up and tell you that you “Welcome to Your New iPad”. It will have a description detailing what will be done: Registering your iPad and Setting up your iTunes Store Account.
5. Click on Continue.
6. If you already have an Apple ID then you will enter it now. If not, choose the option that says “I do not have an Apple ID” and then one will be created on the next screen.
7. The next screen verifies your name, email address, phone number, etc. Fill in and answer all fields and then Continue.
8. Next it will ask you to set up “Free Find My iPad”. It is strongly suggested that you do this. If you choose to it will step you through and give you directions on adding this iPad to be found

using your Apple ID. You can get more information on finding your iPad in the Apps section of this document.

9. Next it will ask you if you want to restore a previous backup or setup as a new iPad. Normally you choose Setup as new unless you are restoring one.
10. The next screen asks you name your iPad. Use whatever name you wish.
11. Next option is to “Automatically sync songs to my iPad”? If you leave this checked, then when you sync your iPad to iTunes, it will copy all your music to your iPad. If you have a huge library of music this could use a lot of space. So if you only want to sync partial then uncheck this box and when you sync you can pick out the music you want to sync.
12. Next option is to “Automatically add photos to my iPad”? Same thing as music above. If you have lots of photos you could use a lot of space. Later you can pick out just the pictures you wish to sync. Normally leave this option unchecked.
13. Next option is to “Automatically sync apps to the iPad”? This should normally be checked. Only if you are syncing multiple iPads and iPhones to this computer would you tell it not to automatically sync so that you could choose.
14. Click on Done. It will sync and backup your iPad for the first time. You are now ready to pick and choose what you would like synced.
15. To choose what to sync you first click on your iPad on the left hand side under the heading of Devices. Once you do you will see the various options on the right hand upper area of the screen. You should go from section to section and pick out items you wish to sync.
16. Once all items are selected on every section, click on the Sync or Apply button in the lower right screen area.
17. The iPad will sync and you can watch progress in the upper middle information box of iTunes.
18. Once it comes back and says “iPad sync is complete. OK to disconnect” you can then make any more changes and resync if you wish.
19. When you are done, never just unplug the iPad. There is an eject button next to the iPad’s name on the left menu under devices. Looks like an arrow point up with a line under it. Click there and let iTunes finalize the iPad and then you can unplug and use the iPad.

Configuration Methods

There are two configuration methods. One locked down, and one open. There are several variations on these configurations and each agency will have to decide on their own options based on which configuration Upper Management will agree to and support. iOS 5 added a new dimension of how to secure and support iPads by adding new tools vendors could access. Later in this document in the section titled Mobile Device Management Tools twenty tools to help secure and lock down iPads are reviewed.

- Non-Locked or Un-Managed: This technique allows the IT support staff to do the initial setup and application installation. After the installation the iPad is given to an end-user who then is allowed to download and install updates for installed applications, install new applications and modify the iPad's settings as needed. The iPad, by design, can easily be wiped clean, re sync to iTunes, and all applications be reinstalled with no additional purchase. This makes it a very easy device to support for users.

Typically IT support will use a City owned credit card and purchase all the initial applications. The best methods are to use the technique described below in the section named "Gifting" or the "Apple Volume Purchasing" section. It is best to actually use the end-user's iTunes ID to install the applications once iPad is delivered and not a generic City owned iTunes ID. This allows the end-user to get updates for those applications since updates go to the iTunes account that originally downloaded the application. Once the iPad has the initial applications purchased, the end-user will then use their own personal credit card or city issued credit card, depending on how their particular city has planned on future application purchases. It is better to require each end user to utilize their own personal credit card to ensure that municipal funds are not used to purchase anything personal for the iPad in the future. Based on the City's policy and procedures, purchases for City related applications can be reimbursed to the employee or the employee can use their own municipal issued credit card.

- Locked or Managed: This technique allows the IT support staff to do the initial setup and application installations. After the installation, the iPad is locked down by using tools in the Settings application of the iPad, in the Restrictions area of the General tab. Typically, IT support will use a City owned credit card to purchase all the initial applications. The best method is to use the technique described below in the section named "Gifting". Then if an application needs an update, the iPad will be brought back to IT staff, updated and then returned back to the end user. Installation of new applications by the user will not be allowed under the locked or managed configuration. The iPad will have to be brought to the IT staff to purchase and install new applications. Some applications will not function as a normal application if they require access or approval from a locked feature. Keep this in mind of you plan on going with a locked down version. You can also use an MDM as described in the Mobile Device Management section to distribute applications. Twenty of them are reviewed in that section. By using an MDM tool you can distribute only the apps you wish or restrict what the iPad user can download. Apple has expanded the tools that are available in iOS 5 so it is worth your time to upgrade to iOS5 before distributing the iPad. Apple's Volume Purchasing program described on the next page allows you to purchase one or multiple apps and distribute them with out the iPad user having to purchase them.

Purchasing Apps for Others

Apple's Volume Purchase Program (VPP)

Apple has now made volume purchasing and management of apps available for education, government, and business enterprises. This would be a good alternative to “gifting” (as described in the next section) apps to end users. Typically, this service would be of value if an organization intended to purchase apps in quantities of 20 or more but as few as 1 can be bought through VPP.

Information and enrollment for the VPP program is available at <http://www.apple.com/business/vpp/>. You can also get Business 2 Business apps here. Enrollment requires a DUNS number and valid business contact information. NOTE: an ordinary Apple ID is required to begin the enrollment process, but a UNIQUE Apple ID, with a valid e-mail address, must be used ONLY for the VPP. Late in the enrollment process, the user is prompted to create this unique Apple ID.

Once the unique VPP Apple ID is setup, the VPP App Store is located at <http://vpp.itunes.apple.com>. Select to enter the “Business Store”, unless your VPP Apple ID was validated as an educational institution, then use the “Education Store”, which offers discounts on some volume purchases (Apple currently doesn't have any special arrangements in VPP for governmental entities). Browse for Apps, select one, indicate the quantity desired, and then login with the VPP Apple ID to purchase.

Just like using iTunes, the VPP system will prompt for addition security settings and agreements. After a successful purchase, the “Purchase History” screen will display the purchase information and show a status of “processing”. Once the purchase is complete, the status will change to “download”. Click on the “download” link to open a spreadsheet containing the purchased number of app redemption codes and links. This spreadsheet can be accessed repeatedly at this site and will update as codes are activated by end users.

When ready to deploy a code to an iPad, either provide the activation code with instructions for redeeming it through the App Store or provide the link to the activation code. These can be provided to the end user by e-mail or several other methods. Suggested methods are available in the Guide available at <http://www.apple.com/business/vpp/>.

Instructions for using VPP codes to install Apps on an iPad:

1. To install the app, on the iPad start the app “App Store”. Choose the “Featured” icon at the bottom of the App Store.
2. Then scroll down to the bottom of the “Featured” Screen and choose “Redeem”.
3. Enter the code provided. The App Store will prompt the user for an iTunes ID.
4. After successfully entering a Redeem code, the purchased app will be installed on that iPad. (Once the code has been redeemed by an iTunes ID, it is locked to that ID and cannot be reassigned.)
5. Exit App Store to view the installed app icon.

To access the VPP account and verify purchased App code availability/status:

1. Login with the VPP Apple ID at <http://www.apple.com/business/vpp/>.
2. Click to enter the “Business Store”.
3. Click on the hyperlink of your Apple ID on the right hand side. This will take you to your Purchase History view.
4. Click the “download” link beside the desired App to view the remaining number of codes and retrieve them.

It was hoped that this new feature would provide documentation of the Apple ID used to “redeem” a code and to allow code redemption without the App then “belonging” to the end user’s Apple ID. Unfortunately, that doesn’t appear to be the case, yet. We’ll continue to provide feedback to Apple on the VPP program and hope for further development. As such, the VPP option is only somewhat more convenient for the purchasing agent than utilizing the “Gifting” option described below. Utilizing an MDM (see the Mobile Device Management section of this document) along with the VPP to distribute App codes may offer more functionality.

Gifting

Using the Gifting method to purchase applications is an easy way to keep track of purchases for accounting as well as ensuring a Credit Card number is not used on every iPad and possibly left on the iPad when delivered to the end user. To use Gifting the IT Support will log on to their own iTunes account that has a City owned credit card tied to it or an even better technique is to create an iTunes account that is only used by IT to purchase applications for other users and has a City owned credit card tied to it. This account is never used on any actual iPad or iPhone or synced with any device.

To gift an application to someone else, follow these steps:

1. Start iTunes on the IT computer.
2. Choose the iTunes Store option.
3. If you are not logged in using the IT support ID or the ID you wish to use, then click on Sign In that is in the upper right corner of the store and log in.
4. Then in the Search field above that enter the application you wish to gift, for instance let’s use iAnnotate for this demo. You could click on the link that says App Store and just look for the app you need but there are thousands of apps and it is much faster to search for it.
5. You will then see a list of items that have the search word in them. It may list applications, songs, videos, or anything else it finds in the iTunes store. Scroll down until you find the correct one that lists your application and ensure it is for the iPad or the iPad/iPhone. If you see it listed as an iPad version and in a different list as an iPhone version, choose the iPad version, which is better for the iPad.
6. Under the app icon or next to it you will see a button labeled with the price and “Buy App”. Even if it is free, it will say “Buy App”. For our demo using iAnnotate it will say

“\$9.99 Buy App”. Next to that button will be a small button with down arrow (upside triangle). Click on that down arrow and an option list will appear.

7. Choose the option “Gift This App”.
8. Next a screen will be displayed with options and who to gift to. This is the place you decide how you want to gift. If you are doing an initial install then choose the “Print gift myself” option. If you are buying an application after the iPad has been delivered to the end user and want to send the gift to the user, choose the “Send gift via email” option.
9. If you choose the “Print gift myself” option you will then have to fill out the Sender’s Name, Recipient’s Name, and Personal Message. If you chose the “send gift via email” you will also have to fill out the recipient’s email address. This is where you can document the gifts and use the printed receipt for your accounting department. Normally the Sender’s Name is the IT person using their credit card. The Recipient is the iPad end user’s name, and in the Personal Message field put in the amount paying for the App.
10. You will then see a screen that says Buy Gift. You can still cancel here but if you click on Buy Gift, it will be purchased.
11. After purchase you will get the option to “Print Now” or to “Gift Again” . Use the “Print Now” option to print a receipt for accounting as well as installation. The receipt will have the “Redeem Code” needed to install on any iPad.
12. After Printing you can “Gift Again” to purchase the same app again and give to another user. Or you can choose “Done” and start all over on the next app.
13. To install the app, look at the printed receipt and it will have a “Redeem Code” on it. Go to the iPad and start the app “App Store”. Choose the “Featured” icon at the bottom of the App Store.
14. Then scroll down to the bottom of the “Featured” Screen and choose “Redeem”.
15. Enter the Redeem Code from the receipt. Once you do the app will be installed on that iPad and the Code will not work on another iPad.
16. If you purchased multiple apps, the iPad will ask you to enter the next code and install another app. Otherwise quit and you are done.

Equipment Configurations

There are several different options available on the size of memory storage and the type of wireless access, as well as a wide range of useful accessories. There are also now three types of iPads: the iPad 1, iPad 2, and the New iPad (or really this is the iPad 3 but Apple refers to it as the New iPad). The main differences between the three is that the iPad 2 and 3 have a front and rear camera, faster processor, full 1080P HD output, thinner, and a flatter back. The iPad 1 is now cheaper if you can find it in a model and size you wish. Most are gone and only occasionally show up on eBay. Many still purchase the iPad 1 to save money as most applications do not require the above new features to work in government. But now the iPad 2 price is \$100 or more cheaper than an iPad 3 and they are hard to find as well. As mentioned earlier, this document assumes you are using an iPad 2 or 3, since iPad 1's are rare to find now unless you already have one.

iPad Wireless Options

The iPad is currently sold in two different wireless configurations, WiFi with cellular or WiFi only with no cellular.

WiFi Only: The WiFi only version requires you to connect to any 802.11(b, g or n) wireless WiFi network in order to send and receive email, browse the Internet, update your calendar, update your Dropbox files, get GIS maps, or other network required types of data exchange. The WiFi network can be one inside a municipal owned building, the user's home, a restaurant, library, or other public hotspot. The WiFi network can also be provided from a cellular hotspot device like a MiFi or cellular smart phone. The MiFi is credit card size device from almost any cellular provider that will connect to a Cellular tower. Once connected to the cellular tower, the MiFi will broadcast a WiFi signal so that the iPad can connect to it and thus on to the Internet for email and other Internet required data. Up to five users can use the MiFi at one time so it becomes not just usable by the iPad but also by an iPhone, laptop, or any other Wi-Fi enabled device, at the same time. Several modern cell phones now come with a hotspot options that allows them to become a mobile WiFi hotspot using the cellular phone network.

The WiFi/4G/LTE version has a cellular wireless card built into them. At this time Verizon and AT&T are the only two cellular providers that have integrated wireless cards built into the iPad. If your iPad has one of these integrated cards, you do not need a WiFi network or MiFi cellular hotspot to access the Internet or exchange data, access email and other applications. Both Verizon and AT&T charge a monthly fee for this connection, which is generally \$30-\$35 per 3 GB of data (plans vary by region and vendor). Verizon does have a government pricing that gives unlimited usage and no data slow down for high usage, generally priced around \$37 a month. This is a good option and as of print time AT&T had not planned on coming out with a competitive pricing unlimited plan for government. Most of these connections are on a month-to-month term with no long-term contract required and are directly payable to AT&T or Verizon. Both providers generally send out warning notices when you get close to exceeding your GB of data usage per month. If you go over your limit, you are generally charged another 3 GB data fee. If you go over that amount, you are charged another 3

GB data fee and so on. Keep in mind that 3GB is a lot of data but each user's data usage should be monitored the first couple of months to determine which data plan is best for that individual user. Both providers have additional higher volume data plans available if the 3GB plan does not provide sufficient data capacity and you did not go with the Verizon Unlimited plan.

Some agencies will use the MiFi card from AT&T or Verizon and others will use AT&T or Verizon built in cellular iPads, both will be used only when a free or corporate WiFi connection is not available. Most WiFi hotspot connections are generally faster than a MiFi or 3G connection on the iPad 1 and 2 but using the iPad 3 on AT&T or Verizon's 4G network is improving in some areas to surpass that 15-25 MB range. The networks theoretically can go to 78 MB but that is yet to be seen out in a city somewhere. Expect this data spectrum to start being used more and more as more iPad 3s are sold. More iPads mean slower speeds as the more users on a network the slower each user goes.

iPad Storage Options

The iPad comes in three different storage amounts 16GB, 32GB, or 64GB. Typically the 16GB should work for most situations. Apple uses a very good compression routine thus most applications don't require much storage space. Most storage space is consumed by documents, emails, GIS data, music, video, etc. Each agency will have to decide on which version best fits their storage requirements. Currently, storage on the iPad cannot be upgraded and additional storage like a SD Cards, USB drives or external hard drives are not supported (except for photos), so the selection of storage should be a serious consideration. You can use a Wireless HardDrive for Video, Music, Photos, and Document storage as described in more details below. You might use 16GB iPad for Council and 32GB for potential GIS users. A Google Earth GIS solution does not require much storage space but other solutions store GIS related files on the iPad and may consume considerable storage. Email generally does not require a lot of storage unless you synchronize email with an exchange type server that allows the retention or a large number of emails or allows the sending of large attachments.



Current Pricing:

1. 16 GB iPad (WiFi only) is \$499.
2. 32 GB iPad (WiFi only) is \$599.
3. 64 GB iPad (WiFi only) is \$699.

If you want to add the AT&T or Verizon 3G built-in wireless option, it will generally cost an additional \$130 plus the monthly data fee. If you order from the Apple website you can get free engraving on the back of the iPad. You can purchase iPads from the Apple corporate stores in Tulsa and Oklahoma City as well as most Best Buys, Radio Shacks, Targets, and Wal-Mart's. Some Verizon and AT&T wireless stores also have iPads available for sale. If you take in your municipal tax exception certificate to Apple, Best Buys and Wal-Mart Stores, you can usually make tax-exempt purchases. Apple stores also provide discounts on accessories to government agencies when you make your purchase from an Apple Business representative at one of the Apple corporate stores. Apple will now give a small discount on purchases. Online sites like CDW-G and PC-Mall now will give discounts for bulk iPad purchases. Not a lot of discount but adds up if you order enough iPads. Call your sales rep from those locations and ask for a quote with a discount.

Wireless External Storage Options:

There are several Wireless Access Points made by manufacturers such as Netgear, Cisco, etc, that now have the capability to plug in USB devices to the Access Point and make it available on the Wireless network. Apps in the Apple App store are available for free from the manufacturers that allow the iPad to access these storage devices and use them for storage of music, videos, photos, and documents. This makes it a very useful tool at home or in the office to have many items accessible wireless and still be secure inside your office or home firewall. Any size USB hard drive can be used.

Seagate also makes a WiFi enabled hard drive named the GoFlex Satellite Mobile Wireless Storage device that does not require the Access Point to let the iPad access it. It allows up to three users at the same time to connect to it and watch videos, look at photos, listen to music, or access documents. You can stream from the device or copy from it to your iPad or iPhone using a free app from Seagate in the App Store. It will also connect to other smart phone or pads using a URL type of connection.

Currently it comes in a 500 GB model. It can hook to your Mac or Windows PC using USB 3.0 or 2.0. It has a rechargeable battery built in and can go for 5 hours at full streaming or 25 hours standby. To conserve battery, turn the device off when not using it. It does come with an AC and a DC charging adapter and can be used while it is charging.

Accessories and Screen Protectors

There are several accessories and other support items available for the iPad.

Screen Protector: One of the more necessary accessories is a screen protector. Some sort of clear, plastic screen protector should be used to help keep the iPad screen from being scratched. There are several brands available but some are not as effective as others. One of the best is the screen made by Zagg. It comes with a lifetime warranty so if your screen protector is ever damaged you can get a free replacement. Zagg screens can be purchased from the Zagg website www.zagg.com, BestBuy and at Zagg kiosk carts in some shopping malls.

Zagg screens can be installed by IT staff or by attendants at Zagg kiosk carts. OGITA members have reported that in the Zagg kiosk carts in some malls, attendants will install the screen protectors on an iPad for around \$11. Zagg kiosk cart locations can be found at www.zaggcart.com/OK. This site also provides online shopping for screen protectors and back protectors. Special order back protectors are also available from Zagg and most Zagg resellers.

Occasionally discount coupon websites such as www.retailmenot.com will have 50% off coupons on Zagg purchases, so be sure and check these sites before going shopping. OGITA has an email address and phone number for the Zagg cart in Tulsa's Woodland Hills Mall. If you have a several iPads or other devices that need Zagg screen installations, your agency may be able to make arrangements with the operator of the cart kiosks to come and pick up the devices up at your agency. OGITA has sponsored monthly meetings where the cart operator has come and installed Zagg screens during the meeting and conference. Watch the OGITA website for these future dates.

External video connections. There are several options that allow viewing of the iPad on a larger screen. With the iPad 1 offering 720P HD and the iPad 2/3 offering full 1080P HD output, you can get the highest quality video and presentations on your HDMI TV or projector. You do need the HD to iPad cable from Apple. By using the Apple "iPad to VGA" connector you can display your iPad on a larger traditional computer monitor. You can use this adaptor to send out presentations to a projector as well. This uses standard VGA resolution. By using the keyboard mentioned below along with the VGA adaptor and external monitor, you can make the iPad a possible desktop replacement for users who:

1. Mainly email
2. Have limited Word and Excel use
3. Browse the Internet Browsing
4. Use a few smaller applications.
5. Want to connect to a VMware/Citrix Virtual Desktop

Using this configuration, the user can take their entire office desktop with them everywhere they go. On the iPad 1 only presentations and movies can be sent out to an external monitor.

But on an iPad 2 and iPad 3 you can send all video out so it is almost a full laptop equivalent. It supports video out using Airplay (an Apple wireless video protocol) or screen mirroring where all screens of the iPad go out to a remote viewer or presenter. The iPad 3 is much easier to read in sunlight than the previous two models.

Bluetooth Keyboards: Zagg makes several case for all three iPads. One of the cases is the Folio case. It sells for \$99.99 It is a full case that you slide the iPad into and has one of Zagg's newer keyboards that closely resemble and feel like a traditional desktop keyboard. You can also get this keyboard with out the folio case if you wish to mount the iPad in a vehicle or have it somewhere where the Folio case is not needed. Zagg calls this keyboard the Zaggkeys Flex. It sells for \$79.99.

All Zag keyboards are rechargeable from a USB port on your computer or by plugging it in to an AC USB adapter such as an iPhone and iPad charger. It adds several extra keys like Home, Search, and others as well as arrow keys. The external video adapter is still accessible when using the Zagg keyboard. Zagg now has Logitech making and selling the metal keyboard for iPad 1 and 2.

Logitech now makes their own metal thin case with newer style keyboard for the iPad 3. It is much thinner than most other keyboards mentioned above. It has keys that feel like a good laptop so you feel like you are using real keys on the keyboard. It has a built in stand that supports Landscape or Portrait. It has a magnetic hinge on one side to lock on to the iPad just like Apple's leather protective screens. This makes it easy to remove the keyboard from the iPad when the keyboard is not needed. It sells for \$99.99 at BestBuy and other electronic stores.

Apple makes a conventional Bluetooth keyboard that will connect to the iPad. It is useful when you want to have a larger, full size keyboard. When using the iPad with an external monitor or when typing for extended periods, it is more comfortable on the hands to use this larger keyboard. The iPads' virtual keyboard is not displayed when the external keyboard is used. This keyboard costs about \$59. Overall the Zagg keyboard is a better option if you want portability and the standalone Zagg keyboard is a better option if you are going to use the keyboard at a desk, or using the iPad as a desktop replacement. For portability and good battery use the Logitech metal keyboard and case for the iPad 3 is the better option.

Cases: There are many cases out there. This will be an individual choice you will have to make. Some just have a rubberized back and do nothing to protect the screen. Others fold close and protect the screen while transporting the iPad. Some cases also fold to allow them to be used as a stand for viewing or typing. Some as the Folio keyboard case mentioned above serves as a case and keyboard.

There are cases from Otterbox, Kensington, Griffin, DN Distribution, and others that are shock proof, waterproof and some even made to military grade specs. These kind of cases start around \$89 and work their way up to \$500. There is a case that also has storage for paper and pencils, business cards, and has a zipper enclosure to protect from dust and water while transporting. You can find this on the web by searching for "rooCase Executive Folio case". It is about \$35. You can buy some cases at Wal-Mart, Radio Shack, Best Buy, Staples, Apple stores etc. Griffin makes a military grade case for under \$100 and Otterbox makes one that will protect from most dust and fingerprints for about the same price.

Staples carries a couple small multi pocket cases so that you can pack the iPad as well as many accessories including the Bluetooth keyboard, chargers, screen cleaners, and other supplies. www.boxwave.com carries many cases you can look at online. The Zagg keyboard/case mentioned above is one such multi case.

Styluses: There are many styluses available as well. Our tests have shown the silicone rubber tipped styluses to be superior to all others. You can see some of these styluses at www.Boxwave.com. And you can buy these rubber tipped styluses at Best Buy, Office Depot and Staples and are sold under the Targus label instead of the Boxwave label. Boxwave and Targus sell a stylus with a ballpoint pen on one end and a silicone rubber tip on the other end. This stylus is useful to carry inside the zippered “rooCase” mentioned above. There are models that have lasers built in as well to use during presentations. Best Buy has these as well. Look around as styluses now offer ink pens and laser pointers built into them and come in full size ink pen equivalent so you don’t get hand cramps when using for an extended time.

Chargers: Chargers are important. You may want to purchase an optional car charger. Conventional iPhone car charges do not work with iPads because the iPad requires a 10 Amp charger. Zagg and Mophie both make one that costs \$99 but is rechargeable and can recharge an iPad twice or an iPhone 4 times before having to plug back in again. Very useful when traveling or during power outages. The Mophie one is thinner and about the size of an iPhone so easy to pack. iPad car chargers can be purchased at many different stores. Just make sure that the charger says that it is compatible with the iPad. If the manufacturer’s instructions do not list the iPad as a compatible device, the charger will most likely not work on an iPad or charge the iPad very slowly. You may also want another home charger to carry with you as a backup. This ensures that you will always have a charger available when at that special meeting you suddenly realize you are running out of battery. Skorsche makes one that will charge your iPhone and iPad at the same time so you only need one A/C outlet and small enough to pack easily in a suitcase or briefcase to use in an airport.

Screen Cleaners: A screen cleaner is a necessary accessory. Since the iPad screen is touched regularly by fingers it will get body oils on it. Several good moist cleaners are out there. Just look for the ones that say iPad/iPhone compatible so that the iPad screen is not damaged by the solution. Monster makes a multi use cleaner that is small and flat and easy to carry. Don’t use pure alcohol based cleaners. The iPad screen is not glass but rather many tiny holes and you do not want to clog or ruin them. If you use a Zagg or other screen protector than they make chemicals for those screens as well.

Application Configurations

There are currently four recommended configurations: Council/Mayor, Department Heads, IT Staff/Support, and department end-users.

MobileMe Configuration / Find My iPad

It is highly suggested that you use MobileMe to setup a Find My iPad account or use one of the MDM tools described later to track location of iPads. When you first setup a new iPad it will ask you if you wish to set up a MobileMe account but keep in mind that Apple is shutting down MobileMe and parts of it will die a slow death so have another option available like MDM or Apple’s iCloud if you need to track them. You can do the MobileMe setup during initial setup or do it later, but either way it is needed to be able to locate the iPad if it is stolen or lost. During the setup of MobileMe it will ask you for an account to use. You can use the user’s iTunes

account or you can use a shared IT resource account. It is not used for purchasing or anything else except enabling MobileMe to find the iPad. If you create a shared IT resource ID, it can be used on all organizational iPads and that one account can know where any iPad is in case the location needs to be found. By using the Find My iPad option, you can go the website www.me.com and type in the same iTunes account and password and a map will come up and display where the iPad currently is. This is useful if you lose the iPad or have it stolen. It then allows you to send a message to the iPad screen so you can ask the person who has it now to call you or meet you. It has a feature where you can lock the iPad and as a last resort you can issue a remote wipe and it will erase the iPad. If you have an iPhone you can do the same and use the same ID for both the iPhone and iPad. There is also an app called FindMyiPhone that you can install on the iPhone or iPad and use to locate an iPad just like using the www.me.com website. Most of the MobileMe options are built in to many of the MDM tools. This is why Apple is phasing MobileMe out.

Council/Mayor Configuration

PDF Editor/Reader

1. iAnnotate for viewing and markup of PDFs including agendas, minutes, and other documented items that are shared with Council members. iAnnotate is the leader and is chosen by most of our municipalities. It currently costs \$9.99 fromPDFpen the iTunes store. It allows you to use a stylus and write on the PDF document like you would on notepaper. It allows highlighting using a highlighter. You can choose different colors for the pen and the highlighter. You can underline, highlighter, insert drawings, bookmarks, stamps, and also use the keyboard to type in notes on the PDF. It can also utilize bookmarks created by automated agenda software. It allows folders on the iPad to be created by subject or by a date. It currently can connect to a remote server (See server setup section) and sync the agendas or PDFs to the iPad but iAnnotate is phasing that server out. iAnnotate can also get PDFs using Dropbox or from email as some cities are doing. Both options work well and you can see their setups later in this document.
2. PDF Expert is a lot like iAnnotate but has a couple differences. It does not have a remote server to connect to but still uses email or Dropbox to share PDFs. It's notes and additions are stored in standard PDF format with the PDF so they can be read by and standard PDF reader on an iPad or desktop. The main difference is the ability to fill in forms and collect signatures. PDF forms made on a desktop can be used so many in the field processing and data collecting can be easily collected. It allows two signatures as well so employees or citizens can sign the document before sending back to master system. Cost is \$9.99 and they do have an Enterprise version which mainly adds the capability to buy multiple copies at once instead of having to buy one at a time.
3. PDFpen is another option. It does everything the above two do plus it adds the capability to actually edit the PDF document itself, not just add or mark up the PDF. If you use the Mac version as well you can share files using iCloud on the fly. The MAC version also gives you capabilities to make PDFs from other documents as well as create a form fillable document that the iPad version can use in the field to fill in the form. Cost is higher at \$14.99.

A Note Taker. There are many note taking apps. The three that performed the best and offered many features as well as easy to use are the following:

1. Penultimate for taking notes with a stylus like on normal paper, drawing, and other free form diagrams. It can email notes in JPG format so you have a copy at your desk or can send to someone else. Penultimate costs \$.99. It allows different color pens and line sizes. Penultimate also uses wrist protection, which allows your wrist to rest on the iPad and not interfere with note taking. Without this feature it makes note taking rather hard, as your wrist will leave little marks on your screen and virtual paper. Penultimate is the easiest to use and most users can pick it up quickly. You can purchase different kinds of backgrounds or paper types from inside the app itself.
2. NoteTaker HD does most of what Penultimate does but adds more features like the option to write your notes at a box on the bottom of the iPad screen and then it will insert them above on the page where they go. This allows you to write a little larger with the stylus. It also allows easy insertion of pictures and other PDFs. It does take longer to learn and to use as there are more options than the basic Penultimate does. Cost is \$4.99.
3. PaperDesk which does most of what the previous two do but has two other features, it can take audio recordings that are synced with what you type, and it has a presenter mode for presentations. The audio recordings will sync with iTunes to your desktop and you can listen to the recordings on your desktop. The presenter mode allows you to use the iPad screen as a drawing board and send the output to the external port to a projector. Good for collaboration efforts or ad hoc presentations. There is LT free version and a \$3.99 version which allows you to have more than 3 pages per notebook.
4. Evernote which allows note taking but adds capability to sync across different platforms. It allows text, photo, and audio notes. Its cost is free unless you want to add premium syncing to larger PDF, Word, Excel, PPT, and other major documents. It then is a monthly charge starting at \$4.99. It also allows group collaboration if set up to allow sharing.

DropBox: DropBox is a cloud based file synchronization and storage program that allows the user to sync files and folders on the iPad with multiple platforms or users. Currently each user gets 2GB of storage for free with additional storage available for purchase. Most users do not need more than the 2GB. Currently each user has their own DropBox account and can store all their files in it. Their iPad, iPhone, Blackberry, Laptop, etc can access the files and they are all kept in sync so multiple versions of the same file are prevented.

Using the “Public Share” option, users can share folders with other users if they desire or can access shared folders from other users that have assigned them public share rights. No more using FTP to transfer or having to email a large file, just share the DropBox folder or file. DropBox is working on having a corporate version which will allow an IT staff member to setup rights and accounts much like you can on local servers now. It will cost and require more intervention from IT staff to maintain and control rights. Currently DropBox accounts are supported in many iPad applications for storage and the sharing of documents such as Word

files, Excel Files, PowerPoint files, PDFs, photos, and even short videos. It is easy to use and set up. A small program runs in the background of your Windows or Macintosh computer to keep the files synced with your local computers and the iPad. Like all public Cloud storage it is not recommended to store highly secret documents. You can also encrypt documents before putting them out there as some locations have to increase the security.

- Google Earth: Google Earth on the iPad allows the user to see the same aerial views from Google Earth that you can view on a desktop computer. It is useful to look at neighborhoods and other areas when construction or projects require aerial viewing. It also allows for use of map layers so that it can be a small, easy to use GIS system for much of the data that you may have in your current GIS system and do not want to pay for an expensive GIS app that tends to run slower and is harder for the end-user to use. There will be GIS apps for the Department end-users, who require it, but most others do not require that type of system and Google Earth fits that need perfectly. There is no cost for Google Earth it is free.

To get your own data layers to display on Google maps you use maps.google.com and import KMZ or KML files to a www.maps.google.com free account. Then on the iPad you access the Google Maps account and all of the imported layers are there available for use. Using Google Earth in this fashion responds faster and is much easier to use than most of the true GIS apps that cost more. The advantage is that once set up, you can also allow all users, not just ones with iPads, to access these data layers on a standard desktop computer or conventional laptop by going to maps.google.com. When you upload and create these data layers on Google Earth, you are given the option to make the layers public or hidden.

We suggest that you use the hidden option and then only the people given the account password can view the data layers. One disadvantage to using Google Earth to show KMZ files is there is a limit to how much data you can upload. The limit is several thousand points but there is a limit.

- Google Translate: Google Translate will translate words and phrases between more than 50 languages. You can speak your word or phrases and then hear the translations. You can also type in words and phrases and it will then translate and let you see the words and speak them if desired. You can also have someone else speak in to it and translate back to your language desired. You can store phrases that you use often as well. This app is useful if you travel or have other countries visit your organization.

- The Weather Channel: This app is very useful for watching the current weather as well as projecting future trends. It also shows actual weather radar displays as well as videos of the current weather events being shown on The Weather Channel. It also tracks severe weather events. You can use your current location or put in multiple locations. It is free.

- Weather Radio: This app will send you critical voice and text alerts on life threatening weather events or alerts based on the level of warnings you wish. Compare to a standard weather alert radio that monitors local on air warnings. The cost is \$9.99.

- MyCongress: Allows the iPad user to pick out Congress members and monitor their activity, recent news, YouTube videos they put out, their Twitter Feeds, their websites, Contact

information, and the Open Congress website, which displays a large amount of information about voting and current projects. It is free.

- Mike Allen's Playbook: Another resource for what is going on in Washington and around the world in Politics. Information is updated daily by multiple feeds and Mike Allen. It is free.
- The Hill HD. The Hill is yet one more resource of political information and news. Broken out more by various means it does contain information not yet seen in the other two. It is free.
- RtCongress. This is an app that displays more live items about Congress. Such as updates live from the floor, Whip notices, voting, hearings, documents, etc. It is free.
- Pcalc Lite. The iPad does not come with a calculator. Pcalc Lite is a free calculator that offers a little more than just a plain calculator but is easy to use. It is free.
- USA Today. A source of information from around the world. It contains most of the main news items from the printed version of USA today. It is free.
- American City and County analyses and explains issues facing cities, counties, and states. It collects the latest government trends, policy alternatives, best practices, case studies, and a broad scope local and state government news. It is free.
- ABC News. Gives live updated information on news around the USA and the World. It also allows viewing of the various ABC news shows. It is free.
- CBS News. Gives live updated information on news around the USA and the World. It also allows viewing of the various CBS news shows. It is free. It is a little slower to respond than the ABC application.
- Fwix. Fwix was a local news reporter. **UPDATE**: FWIX is no longer available and not being updated. So if you have it, you can remove it.
- iBooks. Allows access to thousands of free books as well as other books for purchase. Much like the kindle application but from Apple. It is free.
- Wikipanion. Wikipanion is an application that gives access to all the various information the website Wikipedia. It serves as a collection point for large amounts of data about almost anything. It is free.
- Dictionary. Exactly as the name says, it is an electronic dictionary. It is free.
- Dragon Dictation. This allows you to dictate to the iPad in a spoken voice to create a text based written version of what you said. Then it can email that text to someone, it can be copied and texted, it can be sent to Facebook or to a twitter page. It is free.
- White and Yellow Pages. Allows an iPad user access to the White and Yellow pages with search capability and phone number reversal.

Task manager. There are hundreds and too many to evaluate all of them. In reading reviews, looking at options, Apple staff recommendations, the following appear to be the top of the heap and in testing all four appear usable:

1. Apple Reminders: In iOS 5 Apple added Reminders. It allows basic information that works like a task but is not a full blown task manager. It does work for most people, is free, and comes already installed as part of iOS 5. We recommend you look it over before putting out money to purchase one below. It works for about seventy-five percent of the people.
2. 2Do: Tasks Done in Style. \$9.99. The most user friendly and eye appealing task manager and loaded with features. Will sync with Toodledo (web based free task manager and a better choice to sync with) or with a desktop using its free task syncing procedure that runs on the desktop but requires a WiFi network same subnet connection. Tons of options as well as voice recording. Easy to use and looks like an iPad app should. It can sync with Outlook using another vendor's free app that run on the local computer. It is named Chromatic Dragon Sync. This can also be used with Toodledo below to sync as well with Outlook.
3. Toodledo – To Do List. \$2.99. This is Toodledo's own app that interfaces in to their web based task manager. Toodledo is a web based task/note manager that is free with limited options. Then they offer upgrades at \$14.95 and \$24.95 a year expanded features. The free one works for most people. They have a list of supported options on their web site at www.toodledo.com. The screen is not very fancy but it does do tasks lists. 2Do above has more options.
4. TaskTask HD (Exchange Tasks). \$4.99. This so far is the only one to interface in to Exchange to use its task list. Very basic on look and feel. Does not support all Exchange options but some. Will sync remotely if you have Exchange Web Services on Microsoft Exchange 2007 server or if you have DAV access enabled on a Microsoft Exchange 2003 server.

With iOS 5, Reminders sync now with Exchange and this option is free. So unless you need a more robust task manager, Reminders and Exchange work together for free.

Printing. iOS 5 has great improved printing capabilities and most new printers now support Apple's AirPrint option. It works with any printer it can find on the same wireless network you are connected to and using Bonjour. You will be amazed at how many new printers do this automatically. Another application, PrintCentral Pro, allows printing from the iPad to any wireless printer on the same subnet as you are. It also allows remote printing using a Google email account and a small monitoring app on the computer with the printer connected or access to a network printer. It costs \$9.99 and is well worth it if you need remote printing. It allows printing of web pages, email photos, documents, and other items. So test built in iPad printing and see if meets your needs. If not PrintCentral Pro will meet your needs.

Bat Reminder. This tool will display how much time is left to do certain iPad functions based on the amount of battery charge you have left. It will display items about Cellular Internet, WiFi Internet, Audio, or Video lengths. The cost is free.

Built In Apps. There are several built in apps that come on every iPad that cannot be deleted. These include:

1. Maps (allows viewing of standard street maps).
2. Safari (Internet web page viewer)
3. Calendar (multiple calendars can be accessed)
4. Reminders (as mentioned earlier it may do what you need)
5. Mail (multiple emails can be accessed)
6. Music (In older versions of iOS this was named iPod. Playing of music, podcasts, audio books, etc)
7. Settings (You can lock some of these down)
8. Photos (collection of photos synced, sent by email, etc)
9. Contacts (can sync with Exchange or other remote LDAP contact lists)
10. Videos (no videos come preloaded)
11. YouTube (a link to the YouTube website)
12. App Store (where you go to purchase more apps or you can use iTunes on your desktop computer)
13. iTunes (used to purchase music, audio books, and podcasts)
14. Apple Store (purchase Apple accessories online)
15. Notes (this is a keyboard driven note taker. No stylus free form handwriting allowed).
16. Photo Booth (Allows you to take pictures of your self and save them to your iPad for use in email or websites).
17. FaceTime (Can talk and see another iPad 2/3 or iPhone 4 user who has FaceTime turned on. Much like Skype that is described in a future section).
18. Game Center (This is not a business app but Apple has not given you permission to remove it. So it will be on there. Allows access to share scores online).
19. Newstand (this app gives you access to lots of newspapers and magazines that you can subscribe to. There is a cost with each of them)
20. Twitter (Apple has added built in support for Twitter in iOS 5).

Department Heads/Directors Configuration

The Department Head/Director configuration includes all the items mentioned in the Council Configuration section plus:

- Office Programs. To qualify the Suite must not only read but also edit Word, Excel, and PowerPoint.
 1. QuickOffice. It costs \$19.99. It graphically looks the best and allows decent basic editing of PowerPoint. The Word and Excel editor does most of the normal Basic commands and will work for most on go editing of Word, Excel and PowerPoint. This app is slowly taking the lead and new functionality is being added in each upgrade. The company that created QuickOffice has created other applications for the iPhone as well as for the desktop that edit Office products so they should be around to support and improve as time goes on. You really can't go wrong with QuickOffice or DocsToGo, except that QuickOffice works better with DropBox. In 2012 QuickOffice was purchased by Google so watch online to see what Google adds to this app.
 2. DocsToGo – Premium Office Suite. It costs \$16.99. There is also a DocsToGo Standard for \$9.99, which does not allow use of Cloud storage, like Dropbox, or the editing of PowerPoint documents. The premium version allows the editing of PowerPoint documents, but is not as good of an editor as the interface in QuickOffice, so we recommend that if you have to do a lot of PowerPoint editing you should purchase QuickOffice. Apple Keynote is a good PowerPoint editing program but does not support DropBox. The premium version of DocsToGo can access DropBox, email, or other locations to read, edit, and share Word and Excel documents. The standard version only allows the reading of PowerPoint documents. If you did buy the standard version of DocsToGo, you can do an in app upgrade purchase to the premium addition for \$7.99 with will allow you to get cloud support and PowerPoint editing.
 3. Apple Office-like Applications. Apple does make some very good Office products named "Keynote", "Numbers", and "Pages". They sell for \$9.99 each. But currently they do not utilize third party cloud storage like Dropbox which easily transfer documents back to a desktop system. If Apple adds Dropbox support these apps will become very useful but will cost a little more. Currently Apple uses their own iCloud storage option which is not fully used by other applications thus making you use two different storage options if you go with this app.
- Motion X GPS Drive is a possible driving directions mapping program. This application is much like a TomTom or Garmin GPS unit but it allows users to get directions before travelling. It can also be used in the car and give spoken voice turn by turn directions. It costs \$2.99 initially and \$20 a year after that.
- TomTom application is exactly as it sounds. It currently is a one-time purchase of \$39, no yearly fee. Does everything like Motion X but a little cleaner. Just costs more upfront. But we believe that TomTom is the much better application for the dollar. Uses the same maps that the TomTom dedicated GPS device uses. It also allows you to search using Google or Facebook to find your destination.

QR Code Reader. There are many QR Code readers out there so you may find one you like better but a good one is named Best Barcode Reader. Yes it reads QR Codes. QR codes are becoming more and more used. They are an enhanced version of a barcode but allows much more data to be included. Many business cards now have a QR code on them that has all the information on it and saves the user time by allowing it to be scanned in and added to contacts, hit a website, text a message, or call a phone number. They are also useful to place on inventory as all the information about the computer, printer, or other device can be encoded in the QR code and easily read with out having to carry an inventory program to look up information. Cost of Best Barcode Reader is free. There is also QR Code generators for the iPad and most cost from \$2.99 to \$5.99.

Remote access software: There are several out there that work great.

1. LogMeIn - for \$29.99.
2. Itap RDP - for \$11.99.
3. Mocha VNC for \$5.99.
4. Iteleport VNC for \$19.99.
5. GoToMyPC for \$29.99.
6. Citrix Receiver is free but you must have a Citrix Gateway to your network or VDI solution.
7. VMware View is free but requires you to have VmWare View on your network.

All of these remote access programs work great but you should decide on this based on how your network is set up. Some do screen refreshes a little faster as well. All require some sort of port openings or server software to work except LogMeIn. It creates an account on the LogMeIn website and an application is installed on each machine you want remote access to. You can then access these machines from an iPad, iPhone, or any other remote computer that has access to an internet browser. LogMeIn does not need a port opened in your firewall because the remote connection is made from an inside request. VmWare View is a VPN client that is getting more and more attention as well as Citrix Receiver for access to your Virtual Desktop Infrastructure (VDI) from VMware or Citrix.

Texting/Messaging

1. TextPlus. Allows the iPad to have text capabilities just like a cellular phone does. It uses the Internet as its carrier so you must be connected to the Internet to send or receive text messages. The application supplies a “pop up” notification notice just like a cell phone does when you receive a text. One nice thing is that you can have group texts where multiple people can send and receive text messages in to a group so group discussions using text messaging can be accomplished. You can get an external phone number to allow non textPlus users to text you and you text them back. Cost is free but to remove ads cost \$2.99 for Silver.
2. Textfree. Textfree comes in an iPad version and an iPhone version. This app is basically the same as TextPlus above but added a couple items to make it stand out. The iPad

version is higher res and a little more graphical than TextPlus. Can get a standard phone number and if people call it, Textfree sends you a text so you can call them. In future will add the calling that the iPhone version has. The iPhone version, which will run on the iPad, adds capability to get a phone number and allow you to use an iPad, iPhone, or iPod as IP based phone. You purchase minutes from the vendor. Textfree is free with Ads or an in App upgrade for no Ads is \$5.99 a year. Textfree for iPhone is free and offers the same \$5.99 in App upgrade to remove Ads. It also sells 100 minutes of voice calls for \$1.99, 250 minutes for \$4.99, 500 minutes for \$9.99, and 1000 minutes for \$18.99.

3. HeyTell is an app that allows you to send voice messages back and forth to other HeyTell users. Much like texting but no typing. Very useful and safe when using handsfree devices and driving if you use the handsfree activator. The receive must also have HeyTell on their iPhone, iPad, or other supported device. Cost is free but has many in app purchases such as group broadcast, voice changer, Ringtones etc.



Teleconferencing/ Video Broadcasting Applications

1. Skype. The same video conferencing software that has been on the desktop for years. Useful on an iPad to get an AdHoc conference going to discuss troubleshooting strategy or get support. You can do group conferencing if the conference is started from a PC or Mac. The iPad can join it, just not start it. You can get a real phone number and people can call you from a regular phone or you can call real phones. With the iPad 2/3 you can add video. You can connect iPads, iPhones, Desktops, laptops, other smart phones, etc. Cost for the app is free. Some additional services cost. www.skype.com for more information.
2. Ustream. This is an app that uses your iPad as a portable camera and allows you to broadcast your camera and microphone as a broadcast that remote users of Ustream can watch and listen. This allows you to go live and become a live broadcaster of meetings, training seminars, or any other important meetings that remote users need to see and hear. The audience can chat with you and also do polls. You can also access other Ustream feeds from the hundreds of feeds that come up when the app is started. Ustream is free.
3. FUZE Meeting. This application is a lot like Skype. But is the next step towards full mobile teleconferencing. You can show documents, desktop screens, etc. You can join using an iPad, iPhone, smart phone, or any web connected computer. For free you can have a one to one audio conference. For \$9.99 a day you can have up to 15 attendees, still audio only. For \$29 a month you can have up to 25 attendees, only audio still. For \$49 a month you can have 45 attendees, still only audio. But for \$69 a month you can have up to 100 attendees and now you can have video to see the first 10 attendees. The other 90 are audio only. On the monthly plans they are a one-time purchase and do not auto renew. So you can have a one-time meeting and not worry about reoccurring costs. www.fuzemeeting.com for more information.
4. WebEx. This application is a lot like FUZE Meeting with some minor changes and cost differences. WebEx is owned by Cisco. It does basically the same but allows 25 attendees for \$49 a month and once again it does not auto renew so you can use it as an impromptu meeting organizer. www.webex.com for more information.

5. FreeConferenceCall.com is a website used to sign up for a free phone number that you can use for conference calling from any phone. You are limited to 96 callers at a time, the caller pays the long distance charge if there is one, you keep the same phone number every time, and the best part is.....it is free. OGITA and several municipal organizations use it all the time and it works great. More information at www.freeconferencecall.com.

Miscellaneous Apps. The following apps are apps that may be used by Department Heads, other personnel, and maybe even a commissioner or Mayor.

1. Slideshow Remote allows you to control your PowerPoint presentations on your Windows PC remotely. It also can show you your notes, or browse slides. Cost is \$4.99.
2. FH Inspector allows data collection and updating of your FireHouse software on your network. It requires the server based FireHouse software. The app is free for users of FireHouse.
3. Fire Chief delivers the latest Fire Department news, trends, and ideas on management solutions and leadership training. This app is free.
4. Live Cams Pro allows viewing of any IP based camera on the Internet or your network. It also has links to many public and private cameras so use carefully. It is free but has in App purchases to unlock more features.
5. Pocket CPR is an iPhone app that looks good still on the iPad and gives CPR instructions and refreshes memory for people who already know CPR. It does give the new 2010 guidelines and new methods. Some of the uniqueness of it is that it uses the accelerometer hardware to give real-time coaching and feedback to the user. It measures the actual rate and depth of your compressions and lets you know to push faster or slower. Cost is free but offers some additional in App purchases.
6. Facebook/Twitter apps. Both Facebook and Twitter have apps in the App Store. Apple added native Twitter support in to iOS 5. And there are hundreds of apps made by other vendors for both. With any third party app you must give certain rights to it so it can access and update your information. Some do this even when you are not running the app so choose wisely. There are several iPad apps for Facebook including Friendly and Facely but they are not free and are not as responsive as just using the iPad Facebook ap. For Twitter there are too many to list. A nice one used by many is HootSuite. It does your Twitter as well as will do Facebook News feeds. It is Free.
7. YouTown is an app that brings information on Organization (City, County, or State) to your citizens. You go to www.youtown.com and sign up for a free account so you can input your information. Then citizens using the YouTown app can get updated information on local news, maps, events, services, etc.
8. Citizen Reporting. Many website developers are adding apps for mobile devices to allow more input from citizens or their own employees in the field. These apps allow collection of an event, or something that needs reported such as a pothole or out of service streetlight. These apps not allow the user to send their information but it also will use the GPS and get the exact coordinates of where the report is from. The user can also take pictures and include with the report. Most are free as they provide the link from the citizen to the using organization. Two if these are:
 - CityReporter 311
 - Citizen Request Tracker

9. Radio Traffic Scanners are used to monitor the various radio traffic from Police, Fire, Emergency Management, Departmental etc. Much of the radio traffic is listed as a town, county, department or some other detailed label. But you can also set up your own traffic to be accessible by your people only and then use the iPad and iPhone as an easy radio extension when your real radio is not available. This allows you then to monitor traffic even when out of town or out of state to stay in touch with your various departments. Most of them have the full list of frequencies they already have on their web site. Some of the leaders are:

- Emergency Radio is free but \$1.99 to remove ads.
- Pocket Tunes Police/Emergency Scanner is \$1.99. Has recording feature.
- Scanner Radio – iPad Edition is \$.99.
- 5-0 Radio HD is free but for \$1.99 then add an additional 33,000 listings but many are normal radio stations and not two-way radio traffic.



GIS Software. If you also desire to have a more robust multi-layer GIS application than Google Earth, several OGITA member cities are working on solutions and an OGITA “GIS Task Force” was charged with coming up with “iPad GIS recommendations”. The task force’s final findings are below as it was determined that GIS developers are continuing to increase their apps and this area will continue to grow and mature within the next couple years. Check with your GIS provider as your iPad will need to interface with your data. If you do not have a GIS system and wish more information on GIS systems and iPad apps, send an email to ogita@ogita.org and ask for one of our GIS task force members to contact you and give you current information:

1. Google Earth (<http://maps.google.com/>)
2. AutoCAD WS (<https://www.autocadws.com/>)
3. ESRI (<http://itunes.apple.com/us/app/arcgis/id379687930?mt=8>)
4. Terrapad (<http://www.fasterre.com/en/products/terrapad/terrapad.html>)
5. GIS4Mobile (<http://www.gis4mobile.com/>)
6. IGIS HD (<http://www.geometryit.com/>)
7. GISRoam (<http://www.gisroam.com/>)
8. PDF Maps (<http://www.avenza.com/pdf-maps>)
9. iExtMap (<http://www.extmap.com/index.php?pid=5>)
10. iCMTGIS (<http://www.cmtinc.com/>)
11. Cartographica (<http://www.macgis.com/>)
12. KMLMap HD (<http://intelligentgadgets.us/>)

GIS systems are more complicated so GIS apps take longer software developers come up with full interfaces to collect data and not just view it. Some of these vendors have applications already that are usable but the apps will continue to mature. We suggest you use an iPad 3 if possible, if not an iPad 2 minimum, which has a faster CPU to help with the intense data that is the nature of GIS systems and the video has a faster refresh.

IT Staff/Support Configuration

Most of the applications in the Council Configuration as well as the Department Heads Configuration can be used based on IT staff needs, plus:

- Scany (Networks and Ports). This app allows you to scan network ports, servers, routers, switches, etc. It also allows ping and trace and whois look up. It costs \$5.99
- INetQCheck. This will do a full network evaluation and tell many things about your network as well as the quality. It is free.
- Ookla Speed Test. There are many network speed tests out there and many are good. The Ookla one uses the same test servers as the www.speedtest.net servers so you can compare to your desktop speeds. It also provides a visual of the speed every packet gets in a graph form, something no other does. It is free.
- WiFiTrack. This will tell you all WiFi networks your iPad can see. **UPDATE:** Apple has disabled the calls that allow this app or any app that scans networks to work. So this app is no longer available and you can delete it on iPads you already have it on. There are no plans to allow it to work.
- Netstat. This will list all your wifi sockets that are running in the background. If you have the 3G iPad, it will also list all the open sockets that are using the 3G radio. Many applications continue to run in the background and use up battery. This tool lets you see what is communicating in the background. For an in App purchase of \$2.99 it will also allow you to see information about the IP address on the other end of the connection, do WhoIs, email csv files, see ports the socket is using, amount of data it has sent or received, last activity, and more.
- SubnetCalc. This is a subnet calculator. It is free.
- Host Tracker. Allows you to input a list of servers, routers, switches, etc and then at a glance it will tell you if it can see them or if they appear to be offline. **UPDATE:** Apple has disabled the calls that allow this app or any app that scans networks to work. So this app is no longer available and you can delete it on iPads you already have it on. There are no plans to allow it to work. There are newer options listed below
- Vtrace. This allows you to input a host ip address or domain name and it will trace through all the hops to get to that location, even if it goes over seas to hit a domain. You will get a text based list as well as a visual map of these hops. You can click on any hop to get more information about that hop. It is free.
- ISSH. Is a remote SSH terminal. It costs \$9.99.
- Mocha Telnet. Is a telnet application with automation. It costs \$5.99 but there is a free lite version.
- MyRoutersPro. Is a remote access application to get to your routers and change or view their configurations. It allows you to program automated router/switch commands or use some

of the many built in. This makes remote administration fast and easy. You can always manually type in commands as well. It costs \$3.99.

- VAInfo or WiFi Net Info. These tell you many of the hidden workings of the iPad. How much memory is being use? What apps are running in the background? What version of stacks are you using, etc, etc. Both are free.
- SkyGrid. This is an automated news collector but covers many technology based feeds. It is free.
- Engadget. Covers various technology feeds and has a review of most every Apple announcement or new accessory for Apple products and other mobile hardware.
- PulseNews. Yet another news collector but you can pick out all the feeds to collect. Can use it to get Engadget, SkyGrid, and other feeds in one application.

There are many more network related utility apps available. Many have “lite” versions of their applications which allow you to install and evaluate a limited featured version of the application for free before purchasing the full feature rich version.

Department End User Configuration

These are the daily people in the field who need access to some various parts of your network plus general business applications like:

- GIS information.
- Word documents or Excel spreadsheets
- Remote access to a servers or workstation

You can pick from all the applications listed in the above three configuration areas and select the applications based on department needs.

iAnnotate Server Setup

If you use iAnnotate as your agenda distribution system instead of email then you have to share your agendas using a cloud storage like Dropbox or something else. **UPDATE:** the Aji PDF service is being phased out so we no longer describe it here. Instead we now suggest using Dropbox as your distribution method. Using the Dropbox method you can give access to all elected officials, administration, employees, as well as media and become totally paperless. Share the Agenda folder to those you wish to grant access. Have the folder mirror a folder on your server, which is your main storage and control.

We suggest you use a folder named Agendas, one named Archived Agendas. This way the main Agenda directory only has the last four or five so it is quicker to locate the current ones. The same secretary moves agendas from the Agendas directory to the Archived Agendas directory as they expire pass the top four or five. You can use this method to distribute any PDFs.

For more help on this just contact us at ogita@ogita.org for a demo.

Sample Information Technology Policy

This policy will dictate to users that agency provided technology devices like iPads, Cell Phones and other electronic devices are not to be used for official agency business and not for personal use or personal gain. The policy follows traditional IT municipal practices. OGITA recommends that each agency should use the following sample policy to develop a technology policy for their agency, before issuing technology devices to users. OGITA also recommends that each user acknowledge receiving a copy of the policy with their signature. Other sample policies should be available on the OGITA website in the future.

CITY OF SAMPLE

TECHNOLOGY, EMAIL, CELLULAR, MESSAGING, AND INTERNET POLICY

In connection with your employment or involvement with the City, you may be furnished technology, which is to be used by you for official City business purposes only. Technology is defined as including cell phones, iPads, laptops, notebooks, netbooks, desktop computers, and other devices issued to you from the Technology Services department. Technology equipment, its component parts, all hardware, software, and its stored electronic memory are the sole property of the City. The City may, from time to time, for any reason or without reason, access any technology equipment, monitor all contents, copy (download) any and all contents and use any such contents for any purpose it deems necessary.

For these reasons, you are advised that you have no expectation whatsoever of privacy as to any communication generated, received by, sent by or stored by any technology device. Additionally, the use of passwords does not ensure confidentiality. “Deleting” documents does not ensure confidentiality, as deleted messages may also be stored and may be retrieved by management.

Under no circumstances should anyone load any hardware or software to a City technology device without first obtaining approval from the City Manager or the Information Technology Director, unless prior approval has been granted in form or by definition of use. All external storage devices (flash drives, external hard drives, diskettes, DVD’s or CD’s must go through a virus scan before being used on any City owned technology devices. Electronic Agendas, GIS related software, and other electronic data used by standard desktop computers is excluded from requiring approval and is defined by form.

The City maintains an electronic mail (email) system and Internet access. This is provided to assist in the conduct of business and should be used for work purposes only. Use of email and/or Internet access is prohibited for personal, recreational, or non-City business use except for occasional incidental personal usage that does not interfere with the email system operation. Using Internet access to post on electronic bulletin boards, blogs, Twitter, Facebook, chat rooms, or any other recreational, and non-City business use is not allowed.

Email and Internet use may be monitored, and is the property of the City. Users of the City's email system will have no expectations of privacy regarding e-mail, text messaging or Internet use. Even when messages are erased, it is still possible to retrieve and read those messages. The City utilizes an automated archive system that captures all emails and may be accessed by the City as needed for any means.

Cellular phones, text messaging, or sending and receiving from any technology device to another, provided by the City, is not allowed for personal or non-City business if that usage incurs additional charges to the City. If unauthorized use incurs any charges to the City, those charges will be passed on to the user to pay and disciplinary action may occur. Cell phone calls in a moving vehicle should be done using a hands-free device. At no time should the driver use a cell phone that requires attention to be taken from the main task at hand, driving. Text messaging is not allowed in a moving vehicle by the driver or while the vehicle is on a marked or public roadway. Such user should pull over off the roadway to use text messaging or place a cell phone call. A passenger in the vehicle can use text messaging and dial using a cell phone, as long as it does not require the driver's attention.

During City Council meetings, the use of computer hardware, including cell phones, iPads, notebooks, netbooks, desktop computers, and other technology devices, by Council members, to access the Internet/intranet or receive/send email or text messages is not permitted. This prohibition shall also apply to City Board, Commission, and Committee members during their respective public meetings.

Employees who violate this policy or use the email system or Internet for improper purposes shall be subject to discipline, fines, up to and including termination and may be subject to criminal prosecution under the laws of the State of Oklahoma.

ACKNOWLEDGEMENT:

I understand my password and user ID create a unique user account and that the City of _____ reserves the right to monitor my activity on any City provided or City issued technology device and within any application therein. I understand I am accountable for any activity within the application linked to my unique user account and that I may be questioned about my activity. I understand I will be accountable for any document or data creation or modification linked to my unique user account. I understand that sharing my password, using someone else's password or signing on for others to use the application are all breaches of security, patient confidentiality and my duty to ensure the safety and security of confidential system information. I acknowledge that I will follow proper computer security procedures (such as signing off, not sharing passwords, etc.) to protect information maintained electronically from being accessed by an unauthorized user.

I am aware that my unauthorized or inappropriate use of the Internet may result in disciplinary action against me, up to and including fines and/or termination. I further acknowledge my responsibility to keep my password confidential and in the event of a suspected compromise or a security problem, I will immediately notify the Technology Services Director. In addition, when sending files or attachments via e-mail, I will observe the City of _____ security and confidentiality policies as well as the policy defined on Page 1, 2, and 3 of this document titled TECHNOLOGY, EMAIL, CELLULAR, MESSAGING, AND INTERNET POLICY.

With my signature, I indicate I have read and understand this Acknowledgment.

Signature _____

Date _____

iPad Training Notes for End Users

These are sample training notes to help a department prepare a manual for iPad users to reference. These are generic as much as possible but you will need to edit them for your particular installation.

Inside the Carrying Case



Stylus – Use the rubber tip of your stylus for screen use. Do not use just any stylus as it has to be one designed for Apple iPhones or iPads. Others will scratch and ruin the screen.

Charger – Must be an iPad charger. Some iPhone chargers work but charge at a slower rate. *White*

Cable – iPad syncing and charger cable. One end can plug in your computer or the wall charger.

Black Cable – Keyboard charger cord if you received a Zagg Wireless keyboard.

Soft cloth for cleaning the screen. Use the solution first and then the cloth to dry. Make sure if you purchase something that it is iPad screen compatible.

Cleaning your iPad

Your iPad has a special Zagg screen installed; use the soft cloth to remove fingerprints. Any damage to the Zagg screen that makes it unreadable requires us to replace the Zagg screen. It has a lifetime warranty but we must take it to Zagg representative to replace it. Do not replace with your own or remove the Zagg screen, bring it to IT staff and it will get replaced.

Charging your keyboard

If you received a Zagg wireless keyboard, the keyboard plug to connect the charger is on the left of the keyboard. Plug the charger into the black keyboard cable & connect to the plug on the left. You can also charge your keyboard from your desktop computer.

Charging your iPad

Your iPad charger will charge your iPad and your iPhone.

Some iPhone chargers will NOT charge your iPad so plug it in and check to see if it is charging or not.

Car chargers specifically made to charge iPads will charge your iPad & your iPhone, but the older car iPhone chargers typically do not charge iPads or charge them very slowly.

Buttons / Connectors



Silent Button – located on the right side of your iPad when iPad is vertical. If the orange dot is showing on the slider than your iPad is on mute. If not, then people will hear it. You can change this button to be a screen rotation lock so the screen does not rotate if you wish. This is changed in the Settings area described later.

Volume Button – located on the right side of your iPad when iPad is vertical. Touch one side to decrease and the other side to increase the volume. If the Silent Button is on mute, this will not make a difference.

Home Button – It is located on the front of the iPad when you are looking at the screen. It is round and in the middle bottom. It will be at the bottom when vertical or the right side when horizontal. It is used to wake up the iPad when it is asleep or to go to main menu when awake. As you use it more you will learn it does several things depending on where you are at currently on the iPad. If iPad is asleep simply press Home Button. Slide the slider on the screen to the right to unlock. Your screen goes blank and sleeps after 2 minutes (settable in settings area of iPad) of non-use.

On/Off & Sleep/Wake Button – located on one of the top right side when iPad is vertical. Hold for less than a second to turn iPad on or off. Hold for three seconds to turn your iPad completely off. When off

you will not get emails, agendas, notices, anything. Normally just put the iPad to sleep by touching the On/Off button for less than a second. BUT it is good to turn it completely off about once a week to clean the ole cob webs out. Then turn it right back on. If you are having problems, turn it off and restart it, this solves a lot of problems.

Cameras – On the iPad 2/3 located on the front top middle and the rear top right side when vertical. These cameras are activated by various programs. On some programs you will be able to choose which camera you wish to use. Use the front camera when doing apps like Skype or FaceTime so you can see yourself as well as the person you are talking to. This allows you to see what they see. The iPad 1 does not have cameras.

Microphone – Is located on the middle upper back when the iPad is vertical. Keep it clear when using apps like Skype or FaceTime to ensure it picks up your voice clearly.

Headphone Jack – You can use the built in speaker but if there is too much noise or if you need to be quiet you can plug in any standard headphones or ear buds.

Speaker – The speaker will work when in a quiet room but you may need an external speaker or headphones if in a noisy area. They do make adapters so that your sound can go to your TV or Stereo.

Dock Connector – This is where you plug the cable that came with your iPad to charge it, or to dock it to your computer to sync and transfer items back and forth. This Dock Connector also can send out HD video with the proper cable to your HDMI TV. It will also send out audio to your stereo with the proper cable. It is a multi-purpose connector. Keep it clean and do not let dirt get in to it or you will not be able to charge your iPad.

Placing the iPad on Your Zagg/Logitech Keyboard



If you received a Zagg or Logitech wireless keyboard, gently press the clip at the top of the keyboard to release or set the clip that serves as a iPad and holder. Center the iPad on the clip either vertically or horizontally your choice, but keep your volume & silencer buttons to the top usually is the best choice and easiest to use. Looks more like a laptop screen in that orientation.

How to Turn On Your iPad

Press the Home button and then slide the slider to the right. If you have a passcode turned on, as we like you to have, then you will enter it as well. If you press the Home button and nothing happens, your

iPad may be completely asleep. In that case, just press the On /Off button and follow the same procedure.

Status Bar

The Status Bar is located at the top of the iPad screen, whether you have it vertical or horizontal. The only time it is not displayed is when you are using an app as most apps, not all, turn the status bar off to use that part of the screen.

Status icon	Status Description	What it means
	Airplane mode	Shows that airplane mode is on—you can't access the Internet, or use Bluetooth® devices. Non-wireless features are available.
LTE / 4G	LTE / 4G	Shows that your carrier's 4G or LTE network (on iPad Wi-Fi + Cellular Models) is available, and you can connect to the Internet using the current fastest Cellular connection.
3G	3G	Shows that your carrier's 3G network (on iPad Wi-Fi + Cellular models) is available, and you can connect to the Internet over 3G.
E	EDGE	Shows that your carrier's EDGE network (on Pad Wi-Fi + Cellular models) is available, and you can connect to the Internet over EDGE.
	GPRS	Shows that your carrier's GPRS network (on iPad Wi-Fi + Cellular models) is available, and you can connect to the Internet over GPRS.
	Wi-Fi	Shows that iPad has a Wi-Fi Internet connection. The more bars, the stronger the connection.
	Activity	Shows network and other activity. Some third-party apps may also use this icon to indicate an active process.
	VPN	Shows that you're connected to a network using VPN.
	Lock	Shows that iPad is locked.
	Screen orientation lock	Shows that the screen orientation is locked.
	Play	Shows that a song, audiobook, or podcast is playing.
	GPS Location Services	Shown if GPS Location Services is turned on. If not shown, you can turn Location Services on in the Settings area.
	Bluetooth	White icon: Bluetooth is on and a device, such as a headset or keyboard, is connected. Gray icon: Bluetooth is on, but no device is connected. No icon: Bluetooth is turned off.

Keys to your iPad

There are multiple screens of App icons; the first screen is called the Home Screen. The iPad can accommodate up to 19 pages. To get to different pages, swipe the screen with your finger from right to left or left to right to reverse screens.

You can return to the Home screen by pressing the Home Button or if you have the Zagg keyboard, pressing the Escape key on the keyboard.

There is a series of dots on the bottom of the home page indicating the number of pages; the lit dot is the current page.

On the Zagg keyboard:

- ESC Escape. Upper Left button. Used much like Escape on computer. Also can use to exit an application or to return to the Home menu.
- F1 Search
- F2 Show slide show
- F3 Brings up keyboard on the screen for touch screen typing
- F4 Locks the iPad
- Mute Second Button from right on top row
- World Button on upper right: Connects to Bluetooth; DON'T PUSH IT unless you have to reconnect to your iPad!

IPad Folders

You can make group apps into folders to make room for more apps. Push and hold an icon till they all vibrate; then drag one app on top of another. The 2 apps will be placed in a folder, and you will have an opportunity to change the automatic file name if you want. Click the Home Button to finish. Apps will stop vibrating. To add another app to the same group just repeat the above but this time drag the app on to the group and release. You can have up to twenty apps in one group. And with up to twenty groups per page and up to 19 pages that means you can have 7,600 apps on one iPad. You would run out of memory and storage before ever reaching that many but theoretically it could be done.

NOTE: If you put your finger on the BLACK X on the vibrating icon, the app will uninstall. Put your finger elsewhere on the icon to move it. So don't click on the X unless you want to remove that app from the iPad completely. It will ask you if you are sure so answer NO unless you want to uninstall the app.

What's Running on Your iPad?

Double click the Home Button, and a row will appear at the bottom of your iPad screen showing all the apps that you have open. Since these apps use memory (some use battery power), it is a good idea to close those you aren't using and clear up memory. Press one of the apps till they begin to vibrate, then click on the Red Minus sign of each app you want to close. Clicking the minus sign will simply close the app, not uninstall it.

If you are using apps from different pages, this is a useful tool to use to go from one app to the next. You don't have to close your app; When you are in another app, double click the Home Button and it will open the bottom row of running apps and click on the app you need to go to.

Keeping Your iPad OS up to date

You should use the charging cable and plug your iPad in to your desktop computer that has iTunes on it at least once a month if not more and sync it. This ensures that all your Apps are backed up and if there are any updates from Apple they are installed. If you fall too far behind, your iPad may not work properly or have a security problem. You can only sync with one computer so make sure you set your iPad when it is brand new with the computer you wish to sync to.

If you have upgraded to at least iOS 5 you can now sync and update your iPad completely wirelessly and not have to connect to your computer or iTunes. So if you are currently on an older version, plug in to a computer as described in the previous paragraph and update to iOS 5. Then after that you can update any time you have a wireless connection. Apps, Music, etc, can all be done over the Internet wirelessly now.

Using the Settings App Icon

- Wi-Fi Networks. On the road, use Wi-Fi networks from trusted sources only (hotels, restaurants, etc). Verify them as many pretend to be legitimate but turn out to be people trying to get access to your iPad or computer. Typically if they are named “FreeInternet” or “FreeSomething” with no description, you may want to verify their provider. Untrusted sources use this method to gain access to your iPad and its data.
 - To Connect to Wi-Fi networks:
 - Make sure you are in the Settings menu still
 - Tap the Wi-Fi icon
 - Wi-Fi at the top right should be set to ON. If off, you will not be able to get agendas, email, Internet, etc.
 - In the list of Networks on the right in the section titled “Choose a Network...” find the network you wish to access. If it has a lock on the right hand side on the same line then it requires a password. If you do not have the password, then you cannot connect to it.
 - On the road, use Wi-Fi networks from trusted sources only (hotels, restaurants, etc). Verify them as many pretend to be legitimate but turn out to be people trying to get access to your iPad or computer. Typically if they are named “FreeInternet” or “FreeSomething” with no description, you may want to verify their provider. Untrusted sources use this method to gain access to your iPad and its data.

- Once you are connected than the Wi-Fi status icon in the Status Bar will display and show you the strength of your connection. Refer to the Status Bar section on a previous page.

- Notifications Normally set most to OFF

OFF (to conserve battery) but some may require to be on. Turn ones that need to be on for work related apps, on. But games, weather, dictionaries, etc, should be off. Unless you use WeatherRadio mentioned in the app section on future pages, you will want notifications on for this app to allow it to warn you.

- BlueTooth Normally set to ON

This is used to connect to items such as speakers, headsets, keyboards, etc. If you have none, then you can turn this off. If you have a keyboard, this must be ON to use the keyboard.

- Brightness

Auto Bright – drag icon to brighten or dim screen

- Wallpaper

2 wallpapers available by default. You can also add your own pictures using apps like Fotopedia and choose from many more backgrounds.

Lock Screen wallpaper appears only when iPad is turned on but before it is unlocked.

Home Screen background wallpaper is used for all your application screens.

- Picture Frame

Once you have photos saved to your iPad, Picture Frame can be activated for a slideshow presentation while the iPad is locked. Useful to use as a kiosk or a presentation that needs to loop.

- Auto Lock ON

Screen will lock at 2 minutes (recommended) & will require a 4-digit numerical password to unlock.

The lock time can be changed from immediately to never and several in between.

- Simple Pass Code Normally set to ON

The simple pass code is your 4-digit numerical pass code. If you remove the pass code completely and lose your iPad then whoever finds it will have access to everything on it. Including email, contacts, documents, etc. We recommend you always leave a pass code on. If you forget your pass code, the iPad will have to be erased and reset.

- To Change your Pass Code

- Ensure you are in the Settings area by choosing the Settings App
 - Tap on General
 - You can choose Auto-Lock and change the time before the iPad automatically locks.
 - To change your Pass Code tap on Passcode Lock and it will ask you to enter your current Pass Code
 - Then choose “Change Your Passcode” and it will ask you to enter your old passcode once more,
 - Then it will ask you to enter your new passcode, twice, so it can verify you entered it the same. After that it is changed. Remember your new passcode. It can not be retrieved.

- Simple Pass Code OFF

If you turn off Simple Pass Code, you can use a word as your pass code to unlock your screen.

- Erase Data OFF

DO NOT TURN THIS ON!

It will erase all data from your iPad should unauthorized or accidental pass codes be entered too many times. This has happened to someone just messing around and not realizing that is what it does. Do not use it unless prepared to restore after it erases the entire iPad.

- Mail

For City employees, your government email account is installed & automatically syncs with your desktop and iPad wirelessly. You can install other email accounts here. As with your iPhone, you must update your password whenever your desktop password is changed.

For Mayor and Commissioners, you can set up your email here if you desire. Please keep in mind that email sent to this iPad may be subject to Open Records if ever such a request made. It is up to you whether you wish this or not. It is very useful to have an email so you can send items from several applications to other people for collaboration.

- To setup a new Email Account

1. Go to Settings by choosing the Settings App
2. Choose Mail, Contacts, Calendars menu item
3. Choose the Add Account... area on the right side.
4. Choose the type of email. Exchange, Gmail, Yahoo, or Other are the most used.
5. For our Example we will choose Gmail. It then wants you to enter your Name, Email Address, Password to get your email, and a Description you will recognize it on your Email iPad later.
6. It will verify and then allow you to choose what you want to access: Mail, Contacts, and/or Calendar. Some email systems do not have all of these so it will depend on your email system.
7. Then choose Save. To access your email in the future, use the Email App from your Home screen.
8. Setting up Exchange is the only one that is different. You will have to know your Server name or IP address, Domain, and whether to use SSL or not.

- Calendar

For City employees, your Exchange Calendar is installed. It automatically syncs with your desktop and iPhone wirelessly.

For Mayor and Commissioners, you can sync to a calendar of your choice or have it just use the calendar built into the iPad.

- Contacts

For City employees, your Exchange Contacts are synced wirelessly. It automatically syncs with your desktop & iPhone.

For Mayor and Commissioners, you can sync to a contacts list as desired.

Siri

- Siri lets you use your voice to send messages, schedule meetings, place phone calls, and more on the iPhone. But on the iPad it is currently only used to dictate. From any application that pops up a keyboard you can click on the little microphone on the lower left side of the keyboard and talk (dictate) instead of typing. Siri will put your words in to text and type it in to the current input box, message, email, document, or whatever. On the iPhone you can ask Siri to do things just by talking the way you talk. Siri understands what you say, knows what you mean, and even talks back to you. You can give it full sentence commands and it does multiple commands, much like the Star Trek computer of yester year. All of this and more will come to the iPad when Siri gets an update in iOS 6 which Apple has already announced for Fall, 2012.

Searching

- To search your iPad for any particular word or subject you can use the main iPad Search screen.
 1. Press your Home button until you are looking the main Home screen of apps.
 2. Then press it once more and the Search page will appear.
 3. Enter any word, person's name, or subject. As you type a list of matching records will appear.
 4. You can scroll the list up and down and look for the item you want. Choose it and it will be displayed. The list will contain contacts, documents, emails, videos, music, anything with that word in it or referenced.
 5. If you don't see what you need, there is a last choice to search the web using your word(s).

Applications

1. iAnnotate PDF

This app stores PDF files which is how the City Commission agendas are now being distributed. This app will download the agenda PDFs by doing the following routine:

- a. Click on the Library icon in the upper left corner area of iAnnotate. If you are in the Library view already then you are where you need to be. If it says Exit Library View in the upper left corner, you are where you need to be.
- b. Choose Manage Connections in the very bottom left corner of the Library View area.
- c. Choose Setup New Connection in upper left area of screen.
- d. Choose Dropbox or if your system is using a different storage area, use what your IT administration has told you to use. We will describe Dropbox here though.
- e. Enter a Description, and the login name and password given to you by your IT administrator that will grant you access to the agendas. The description is for you only so use something like Agendas, or anything helps you to remember the folder is for agendas.
- f. Choose Setup Connection and your new Dropbox folder will show up in your library.
- g. Do not click on the Down Arrow on the left side of the folder, as that will start a download of everything at this folder and down. So if you click on the down arrow of the top folder you will get all agendas below that. If that is the root and you have done this for a couple of years, you will get ALL of those agendas. Instead click on the folder itself to drill down until you see the folder or single file you wish. Normally this is the Agendas Current folder. Typically there are the last four to six agendas there and the rest are in the Agenda Archived directory so you can retrieve them if needed in the future.
- h. You will see a list of Agenda Packets by date. From here you can click the Down arrow on the packet you wish to download and it will download all the documents for that packet. If you only need a single file, then click on the folder itself and then choose the single file in that folder and click the down arrow to get it.
- i. Repeat Step g and h for additional dates.

After they are downloaded you will use the Library View to go through the list of downloaded agendas and documents. Pick one or multiples to look at it. Once you are viewing the agenda, you can use the various tools to mark it up such as highlight, underline, cross through, etc. You can also type notes or touch an area and write notes using your stylus.

iAnnotate comes with a tutorial document. It will greatly help you to go through that tutorial, as this is a great tool once you understand its usage. It has saved thousands of trees since so many cities have gone paperless with agendas.

2. PaperDesk, NoteTakerHD or Penultimate

This app allows you to use the stylus & take handwritten notes.

By default Wrist Protection is on which ever one you use.

You can write on the screen with the stylus, no other device should be used on the screen.

Go through the short tutorial that comes with them for best use practices.

3. Weather Radio

This app will send you critical voice and text alerts on life threatening weather events or alerts based on the level of warnings you wish. Compare to a standard weather alert radio that monitors local on air warnings. Ensure to leave notifications for this app on if you would like it to warn you of coming severe weather. You can also use it just to listen to the daily forecast.

4. Weather Channel

Capability to daily forecasts, radar, hourly or 10 day projections, and watch live Weather Channel. It defaults to your local city but you can add multiple cities.

5. Google Translate

Google Translate will translate words and phrases between more than 50 languages. You can speak your word or phrases and then hear the translations. You can also type in words and phrases and it will then translate and let you see the words and speak them if desired. You can also have someone else speak in to it and translate back to your language desired. You can store phrases that you use often as well. This app is useful if you travel or have other countries visit your organization.

6. USA Today

Read news items of various areas as they are printed in USA Today.

7. American City and County

Read news, events, policies and other items for government.

8. ABC News

Can read or watch news information as ABC reports it.

9. CBS News

Can read or watch news information as CBS reports it.

10. My Congress

Can check out congressional members by district or state of the United States Congress. Shows members information, activity, etc.

11. Playbook

Can check out congressional activities from Washington.

12. RealTime Congress

Shows live votes of Congress and other live feeds from Washington.

13. iBooks

This is Apple's version of Kindle. Has thousands of free books as well as books for purchase. If you acquire a book here you can also read it on your iPhone.

14. PCalc Calculator

iPad does not have a built in calculator. So here is one to use. You can get hundreds of other free or paid ones in the App store.

15. Wikipanion

Same information you can get on a standard computer from Wikipedia. Very similar to an encyclopedia except it is kept up to date by the internet viewing audience.

16. Dictionary

A dictionary.

17. QR Code

Use QR code to read the square barcode looking items you see on business cards, magazines, in stores, etc. When it is started you are in scan mode. Aim the camera at the QR code to read and move the iPad around until the QR code is centered and the app accepts the code. It will then display the information it read. You can then add the information as a contact, send an email, go to a webpage, or whatever else the QR code was created for.

18. Google Earth

GIS information – GIS overlays are not open to the public, only on your iPad.

To View GIS Maps:

1. Click Upper Left Hand corner labeled *Layers*.
2. Click *My Maps*.

3. Then choose layers you wish to view on Google Earth. The more you click, the more data needs to be downloaded and thus the slower to display. Too much data and it may not show if you have too many other apps running in the background. Use the Double Click Main Menu Button method to stop some.

Two fingers on the map will spread the map (zoom in or out)

Click N on the top of the screen and north will be at top. Might have to do this as you use the map as Google Earth tends to rotate.

19. Maps

Maps is installed by default on the iPad from Apple. It will show street-based maps and search data is provided by Google. You can first search for a town. Then search for something in that town such as a specific name of a business or a general name like food. It can also give directions but it does not automatically talk like a Tom Tom. There are apps in the App Store that do give driving turn by turn verbal directions for a price.

20. White Yellow Pages

This is a White Pages and Yellow pages searching app in one. You can also do phone reverse look-up searches.

21. Safari

Is the iPad's Internet access program. Similar to Internet Explorer on Windows.

22. Citrix Receiver, Log Me In or VMware View

For City Employees: Remote access to desktop or other City resources as we give permissions out. If you need to set this up on your machine or access to our remote machines, give IT a call first for training and access.

23. TextPlus or Textfree

For City Employees: Text Messaging with capability to send text messages to more than 1 person with a single text or conversations with one person on a cell phone. With Textfree you can obtain a normal phone number and make real phone calls using the internet.

24. Quick Office (City Employees) (Commissioners will have to purchase if desired)

Word – Excel – PowerPoint

Click Getting Started for a short tutorial on each program. Is not as full blown as desktop versions but does what 95% of users need to do. Can read files from Dropbox, email, our network, etc.

25. Facetime

Facetime is a lot like Skype but is built in to iPads, iPhones, Mac Laptops, and Desktops. It can use your contacts to get contact information to notify the person that you wish to Facetime them. With Facetime you will be able to see and hear the person you are talking to and they will see and hear you. You can use either the front or rear camera depending on how you are setup. If you use Skype on a laptop or desktop you may want to download use the Skype App from the App Store. It is free.

26. Bat Reminder

Bat Reminder will display information about your battery remaining if you do certain activities such as use Cellular or Wi-Fi Internet, watch a video, listen to music, etc.

27. App Store

Your iTunes account is tied to your personal credit card. You can purchase apps you desire but always ensure you know or research they are from a reputable company. The City will not purchase apps or reimburse you for apps you purchase that are personal in nature. If you know an app that you require for City business, you can contact IT and they will gift it to you so you can install it and they will do the accounting to pay for it. More on how to use the App Store and iTunes on your desktop to get more apps in the next section titled "Using the App Store and iTunes to get more Apps". If your City is using a MDM tool, then they may have disable the capability to download apps. Check with them.

28. Music

Plays & stores music you download or add by syncing to your desktop or to iTunes in the Cloud.

29. Dropbox

File sharing for files on the iPad, desktop, or any other Internet connected device.

Files saved to your Dropbox can be accessed from any computer that has Dropbox installed or by going to a login screen using a web browser. This allows you to have access to your files that normally you only can get to while in your office or home. You can install Dropbox at home, office, iPhone, iPad, or any other smart device and share your documents among all of them automatically. It syncs them up every time you make a change to a file or create a new one. Quickoffice uses Dropbox to store your documents in.

30. Print Central

For City Employees: Print Central ties to office printers; can also be tied to a home printer if you install the Print Central Windows or Mac app at home you can print to a printer there . It needs

a program installed on the desktop computer printer to be used which IT will install in your office. This allows you to print most items like email, Word, Excel, Web pages, etc.

For Mayor and Commissioners: Same as above but you will probably want IT to help you set it up at home or your office. Make an appointment with IT to get someone to come set it up.

If your printer supports AirPrint from Apple then that is the best way to print and not install PrintCentral.

31. Once a GIS solution besides Google Earth is decided on, the app will be gifted to you and you will receive an email with instructions on how to install. Then you will have access to the GIS system.
32. Other Apps: There are a few apps that Apple installs on the iPad that cannot be removed. You can use them and most are self-explanatory. iPad 2 and 3s have some photo taking and editing tools.

Get Better Battery Life

Between the new iPad's extra battery requirements and iOS 5 changes, the battery on an iPad does not last as long as previous iOS versions. So many apps are running in the background to keep the iPad connected for notifications, location, emails, etc.

Some of the items that you can fine tune will help extend the battery a little longer:

1. Push Email
 - a. To turn off push email go to Settings>Mail, Contacts, Calendar>Fetch New Data and change PUSH to off.
 - b. You can now pick out how often to check for new email: 15 minutes, 30 minutes, etc.
2. Location Services
 - a. Many apps now what to trace where you are and give you information based on your location. This uses a lot of battery for some apps. You can turn off Location services entirely using Settings>Location Services. But if you do this and lose your iPad it will not be traceable to locate it.
 - b. Or look at the list in Settings>Location Services and turn off individual ones. Some apps only use Location Services when the app is actually running so you will need to experiment and see which ones are tracking you all the time.
3. iCloud Syncing

- a. With iOS 5 Apple added the capability to sync all kinds of data, photos, etc to their iCloud service.
 - b. You can save battery by turning off items that really don't need synced or you can manually sync. Continually syncing uses the battery a lot. Turn it off or modify it at Settings>iCloud.
4. Notifications
- a. Another iOS 5 addition is the Notifications. This allows you to have a notification pop up on your screen from many apps to let you know the weather, you have email, new FaceBook post, etc. But having too many of these running uses battery to connect to the internet and collect that information all the time.
 - b. You can choose which ones to turn on or off at Settings>Notifications. Keep the bare minimum to let you know what you need to know but cutting back on these will save battery.
5. Brightness
- a. The brighter your screen is the easier it is to see but also uses more battery.
 - b. To change the brightness to a level you are comfortable with but save battery, go to Settings>Brightness & Wallpaper.
6. Bluetooth
- a. If you are not using a Bluetooth keyboard, wireless headset, or some other Bluetooth device, you can save battery by turning Bluetooth off.
 - b. Go to Settings>General>Bluetooth to turn it on or off as needed.
7. Auto-Lock
- a. If you have not set your iPad to lock the screen and power down after a certain amount of no activity, you should. This saves battery as well as secures the iPad.
 - b. Go to Settings>General>Auto-Lock and choose a time to lock. Usually 5 minutes is a good time.
 - c. You should also set a Passcode Lock while you are right there on same menu. This is a 4 digit number to enter to unlock your screen with.

iCloud

With iOS 5 Apple has introduced iCloud, a internet based service that will sync much of your data from your iPad and iPhone to their servers and other devices you own. It will sync Mail, Contacts, Calendars,

Reminders, Bookmarks, Notes, Photos, Documents, Data, and also allow you to find your lost device if that happens. If you are using Exchange server than you probably want to turn off syncing of Mail, Contacts, and Calendars sync Exchange takes care of that. Photos will use a lot of airtime between your multiple devices if you take very many photos. It will also use a lot more battery. Documents & Data is good if you are using other software on a Mac and want to access the data from your desktop as well as iPad or iPhone. Most use some other third party storage like Dropbox that is supported by more apps at this time. Find My iPad/iPhone will probably be going away as Apple is opted out of areas like that. Stay tuned to Apple to watch it closely as many people use this area to trace devices. See the section on Find My iPad earlier in this document on setup.

One of the nice things about iCloud is it allows you to sync a backup of your iOS device to it. This allows you to store a backup incase you drop your iPad or iPhone. But keep in mind that you cannot sync with your desktop and iCloud you will have to decide which to use. You cannot go back and forth either, once you choose, you are chosen. Apple is working toward an iOS that will allow you to activate, update, and backup all with out a desktop computer. They are just about there with iCloud and iOS 5. You can buy more storage on iCloud if you use the free 5GB they give you.

You use your iTunes ID to setup your iCloud account. You can also use that old Mobile Me ID if you got one of those, but no longer since they are gone. When you activate iCloud it will tep you through setup and ask you questions much like the first time you setup your iTunes account. Overall, iCloud is a good service and will continue to improve.

Using the App Store and iTunes to get more Apps

To get more Apps on your iPad you can use the App Store icon that is on your iPad or you can use iTunes on your desktop or laptop, whichever computer you sync your iPad to if you sync it. If your city is using an MDM check with your IT staff to see if downloading of Apps is allowed or turned off. Make sure you remember your Apple ID and password that was used or setup for you. You will use this for to obtain new Apps, and updates. Do not share this with anyone or they can use it and purchase Apps and music themselves on their iPad or iPhone.

- **Using the App Store icon on your iPad**
 1. From your Home screen choose the App Store icon.
 2. You have multiple ways of finding the app you want.
 - a. Featured
 - I. This area lets you see what are the newest apps, what's hot, which apps the Apple staff like, etc.
 - II. You can also use this section and scroll down to the area that says Redeem. If someone gifts you an app you will get a number that you

type in here and it will download for you. Free, since they gifted it to you.

b. Genius

- I. This area looks at the apps you already have and recommend other apps that are in the same area and genre.
- II. Not too many people use this as they prefer to look for their own apps and not have the Genius system recommend them.

c. Top Charts

- I. This area lists the TOP PAID apps, the TOP FREE apps, and the TOP GROSSING apps. This does not mean they are the best just that they were able to describe their app good enough to get lots of people to download it. But many times these apps are more in the view of Apple and tend to work good and have a good developer backing them up.

d. Categories

- I. This area allows you to choose apps based on their Category. For instance there are categories in Business, Finance, Navigation, Sports, etc...
- II. This helps to narrow it down but there are still thousands of apps.
- III. It is good to go here and then at the top right area you can type in something to search for and then the App Store will list all the apps that match what you type in.

e. Purchased

- I. This area lists all your apps you have purchased. Just in case you delete an app from your iPad and want to go back and reinstall it. You may download an app, try it, delete it, and a month later decide you want to use it again. Saves you from having to search all over again.
- II. If you use iTunes on your desktop to buy or get a free app, it will show up here so you can get it with out having to dock and sync your iPad to get the app from your computer running iTunes.

f. Updates

- I. As developers fix bugs, improve their apps, or just wanting to make a change to an app, it will appear here. If you ever see a little number on

the App Store icon on your Home Screen, it is telling you how many apps you have that have an update.

- II. If you have an update or multiple updates, you can pick one or tell Apple to update them all. Make sure you will have an Internet connection long enough for all updates to download and they will install automatically after downloaded.
- III. Watch for the App Store icon to get numbers on it. Do not fall behind and forget to update your Apps. Sometimes it is critical.

3. Once you find the app that you want it will have a price next to it. Sometimes it is free and sometimes discounted for a short time. Once you touch on the price on the displayed app, it will change to buy. You then buy the app. If you have not logged in recently to the App Store it will ask you for your user id and password.
4. Once the purchase is approved it will immediately start downloading from the Internet. Make sure you are connected to the Internet until the App finished downloading. Once it downloads it will automatically install.
5. The first time you run a new app it may ask you for some information. Be wise and don't give away secret information. Remember these apps are written by people from all over the world and some can contain Trojan horses or even malware type applications. If concerned always go to the website of the developer and do a little research on them.

- **Using iTunes on your desktop or laptop computer to get more Apps**

1. Using iTunes on your computer is close to the same as using the App Store icon on your iPad. On your desktop or laptop computer that your iPad syncs to, start iTunes.
2. Then from the menu on the left hand side choose iTunes Store.
3. Once the Store loads, choose App Store from the menu in the middle of the screen in the Store screen area.
4. You then have a lot of the same choices that you have above in the app Store on your iPad. You can also still search for Apps here.
5. Once you find the one you want, buy or get it free, it will ask for your ID and password again if you re not already logged in.
6. Once it downloads it shows up in iTunes in the area that is labeled Apps in the menu that is down the left side of iTunes.

7. To get it to your iPad you have to plug your iPad in to your computer and then click on sync in iTunes. Some iPads are set to Auto sync once they are plugged in so watch your screen and see what it does.
8. Or you can to the App Store icon on your iPad and choose that section named Purchased and download it from there.
9. In iOS 5 that is expected to come out in October, 2011, it will sync wirelessly through the Internet saving you valuable time and updating.

Mobile Device Management Tools (MDM)

Mobile Device Management, MDM as it is usually referred to, is becoming a hot topic as more and more mobile devices are deployed. Devices can be iPads, iPhones, Mac or Windows based Laptops, Android based phones or pads, or other mobile devices such as printers, POS devices, and can include BYOD (Bring Your Own Device) configurations. MDM software is used to monitor and manage mobile devices while enforcing security and configurations of the owner enterprise. Typically it requires the device to connect to the main controlling server by using a wireless connection of some sort, internal network or Internet based.

Some MDM tools will distribute applications to the mobile device or monitor and restrict the applications the mobile device user can install. Some track the location of the device so that at any time the enterprise can know the location of its assets. Some MDM tools also will update the device using over the air tools thus cutting down the requirement for the end user having to remember to update precious applications.

Some MDM tools are cloud or Internet based while others allow installation of a control server inside the enterprise firewall for more local control. All require either an iOS device with profile management built in or a device that can run a small snippet tool that communicates with the main server. Most offer remote wiping and messaging capabilities.

OGITA looked at over twenty-five different MDM tools. Some are free and others thousands of dollars. On the following pages you will find a table that details a short comparison of the chosen ones. There were five that just were not ready or did not even come close enough to make the list. After the top six comparison table you will find individual pages on the top six followed by the remaining fourteen and their limitations. The top six that were deemed to be the best overall solutions by our members offer the most over all solutions and depending on your own requirements which one will work for your enterprise. There are many review sites out there and OGITA's evaluated MDM solutions based on what our members felt the most important requirements. MDMs were installed and tested in various environments to get the best test results. Another good review of MDMs is located at www.enterpriseios.com/wiki/Mobile_Device_Management but it is from 2010 with some updates in 2011. Enterprise iOS is working on an updated 2012 version but it is not yet out. There are many updates to their review from 2010 as MDM developers really stepped it up at the end of 2011 and the first half 2012, since the release of iOS 5 added so many new management features.

The following pages have all the various tables. This review is using MDM tools from April-May, 2012. Soon MDM tools will become as common as firewalls, security servers, and management consoles and these tables will fade away as their solutions become common and much more powerful.

Comparison Table of Top Six MDM Tools

	Airwatch	Absolute	Amtel	Sophos	Symantec	Zenprise
Is Control Server cloud based or LAN based?	Both	Lan	Cloud	LAN	Both	Both
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	All	All	All	ALL	All
Enforce device specific policies?	Yes	Yes	Yes	Yes	Yes	Yes
Enforce Active Directory policies?	Yes	Yes	No	No	Yes	Yes
Security features and compliance	Yes	Yes	Yes	Yes	Yes	Yes
Ability to collect new devices into Inventory on the fly	Yes	Yes	No	No	Yes	No
Applying policies on the fly to new devices.	Yes	Yes	Yes	Yes	Yes	Yes
Distribution of Apple Store Apps	Yes	Yes	Yes	Yes	Yes	Yes
Distribution of Internal Apps	Yes	Yes	Yes	Yes	Yes	No
Stop or block downloading of applications	Yes	Yes	Yes	Yes	Yes	Yes
GPS tracking	Yes	Yes	Yes	Yes	Yes	Yes
Remote wiping	Yes	Yes	Yes	Yes	Yes	Yes
Messaging between devices and/or server	Yes	Yes	Yes	Yes	No	Yes
Delivery to devices	Yes	Yes	Yes	Yes	Yes	Yes
Changes delivered to devices	Yes	Yes	Yes	Yes	Yes	Yes
Detect Jail Broken Devices?	Yes	Yes	Yes	Yes	Yes	yes
Block non-compliant devices?	Yes	Yes	Yes	Yes	Yes	Yes
Restrict access to the web? Cloud?	Yes	No	Yes	No	Yes	Yes
Enforce Passwords?	Yes	Yes	Yes	Yes	Yes	Yes
Detect malicious software and quarantine it	No	No	Yes	No	No	No
Antivirus	No	No	No	No	No	No

	Airwatch	Absolute	Amtel	Sophos	Symantec	Zenprise
Retrieve SMS, IM other messaging data?	No	No	No	No	No	No
Data Encryption	Yes	Unknown	Yes	Yes	Yes	Yes
Support Dropbox or other cloud storage?	Yes	Yes	Yes	Yes	Yes	Yes
Imaging and reimaging of devices	Yes	Yes	No	No	Yes	No
Check App updating status	Yes	Yes	No	No	Yes	No
Roll out app updates	Yes	Yes	No	Yes	Yes	No
Console on control server: Pros and Cons	Excellent	Good	Excellent	Good	OK	Good
Work with all email systems or have to use theirs?	All	All	All	No	Yes	Yes
Real Time monitor usage	Yes	Yes	Yes	Yes	Yes	Yes
Collect user installed Apps if allowed	Yes	Yes	Yes	Yes	Yes	Yes
Enforce Network Policies / Connectivity	Yes	No	Yes	Yes	Yes	Yes
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	Unknown	Yes	Yes	Yes	Yes
Support Business to Business apps?	Yes	No	Yes	Unknown	No	No
Cost per user (some require minimum number of users)	\$3.25	\$2.00	\$25.00	\$46.00	\$45.00	\$91.00

Twenty MDM Tools Specification Sheets

Airwatch www.air-watch.com

Is Control Server cloud based or LAN based?	Both	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	Yes	Using AirWatch Content management system
Imaging and reimaging of devices	Yes	Can do full wipe, or just delete corporate data only.
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Excellent	HTML 5 Web interface
Work with all email systems or have to use theirs?	All	
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	Can Create them
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	Can create them
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$3.25	\$4 per month hosted. \$3.25 per month using LAN. Also have option to pay one time \$50 per device + A yearly cost of 20% total order. \$1500 one time setup fee for under 100 devices. Costs the same to do hosted or on-site hosting. Also offer content management for \$4.00 per month per device with 2gb storage. Content management pushes files securely and encrypted to devices.

Absolute MDM www.absolute.com

Is Control Server cloud based or LAN based?	Lan	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	No	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Unknown	
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	Yes	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Good	Over all Console is easy to use after you get the feel for it's layout.
Work with all email systems or have to use theirs?	Yes	Can user Internal Exchange server or Cloud based email.
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	No	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Unknown	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)		\$2

Amtel www.amtelnet.com

Is Control Server cloud based or LAN based?	Cloud	Has a Gateway add-on option to be installed on your server that is used to integrate with AD \$2000 one time fee, is NOT required
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	Choice of Devices: Apple iOS, Android, Blackberry, Windows, Symbian, WebOS, Tablets
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	No	Need Gateway. The role of the Gateway Application is to automate the process of registering users and allowing / blocking devices connecting to the enterprise Exchange server for corporate resources based on qualifying Amtel MDM configuration installed on their device.
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	No	Can set up users quickly and easily and then send out emails and SMS messages for registration
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	Has what's called GeoTracking where you can limit the use of certain apps within a perimeter as well as it can track where and iPad goes, even internationally.
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	Yes	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	Has a documentation feature where you can upload documents and password restrict the file it goes in
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	No	
Check App updating status	No	
Roll out app updates	No	
Console on control server: Pros and Cons	Excellent	Friendly, can even require a password after every changes made. Can change preferences if you need too. Probably works better in Safari
Work with all email systems or have to use theirs?	All	
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$32.50	\$2000 for full support up to 200 devices; \$3000/100 devices @ \$2.50/per device per month per year. Have a limited free version.

Sophos www.sophos.com

Is Control Server cloud based or LAN based?	LAN	Local Server, public facing IP
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	iOS, Android, Blackberry, Mobile Windows
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	No	By user via exchange, not tied to AD, no GPO
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	No	Self Service portal
Applying policies on the fly to new devices.	Yes	Email policies to user
Distribution of Apple Store Apps	Yes	Push out links to install links.
Distribution of Internal Apps	Yes	Upload package to server, allow users to download.
Stop or block downloading of applications	Yes	iOS - yes, Android - not possible via UI, can blacklist (negative reinforcement).
GPS tracking	Yes	Android. iOS controlled by Apple.
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	Pps or documents
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	Can be determined as non-compliant
Block non compliant devices?	Yes	Can wipe, or block email.
Restrict access to the web? Cloud?	No	Not really possible. Working towards proxy solution.
Enforce Passwords?	Yes	And complexity
Detect malicious software and quarantine it	No	iOS -no. Android - yes. Flag and uninstall - not quarantine.
AntiVirus	No	iOS -no. Android - yes.
Retrieve SMS, IM other messaging data?	No	Can backup Android
Data Encryption	Yes	Force encryption on local storage.
Support Dropbox or other cloud storage?	Yes	Can use encryption app to encrypt data in Dropbox.
Imaging and reimaging of devices	No	Can set apps to be required. Android, upload to server and push out.
Check App updating status	No	Can report version of app on device.
Roll out app updates	Yes	Push out new versions.
Console on control server: Pros and Cons	Good	Web interface, admin portal and self service portal.
Work with all email systems or have to use theirs?	No	Exchange only
Real Time monitor usage	Yes	Web traffic
Collect user installed Apps if allowed	Yes	Yes
Enforce Network Policies / Connectivity	Yes	Yes
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	Will use if setup.
Support Business to Business apps?	Unknown	
Cost per user (some require minimum number of users)	\$46.00	MSRP \$46/yr/user \$30/3yr/device

Symantec www.symantec.com/mobile-device-management

Is Control Server cloud based or LAN based?	Both	sales says cloud too, nothing in docs/web to prove
What devices? iPad, iPhone, Windows, Android, Blackberry, others	ALL	
Enforce device specific policies?	Yes	Assigned by mailbox/USER.
Enforce Active Directory policies?	Yes	Imports A/D through LDAP,
Security features and compliance	Yes	Passwords, encryption, feature blocking
Ability to collect new devices into Inventory on the fly	Yes	Devices must be enrolled
Applying policies on the fly to new devices.	Yes	Centrally roll out as desired
Distribution of Apple Store Apps	Yes	Managed in your mobile library, can be media links as well
Distribution of Internal Apps	Yes	Same
Stop or block downloading of applications	Yes	Application restrictions,
GPS tracking	Yes	Sales says yes, do not see it built into console/docs
Remote wiping	Yes	Remote lock, selective corp data wipe, full wipe/reset
Messaging between devices and/or server	No	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	Can Allow or not allow
Block non compliant devices?	Yes	Can set Min iOS
Restrict access to the web? Cloud?	Yes	VPN on demand-requires cert or SSL based VPNs
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	Android Only - add on to base MDM
AntiVirus	No	Android Only - add on to base MDM
Retrieve SMS, IM other messaging data?	No	Sales says yes, didn't see in software
Data Encryption	Yes	Cert server required, add on to base
Support Dropbox or other cloud storage?	Yes	Symantec cloud - Norton Zone
Imaging and reimaging of devices	Yes	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	OK	Not easiest to use.
Work with all email systems or have to use theirs?	Yes	Primarily Exchange server
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	VPN on Demand - add on to base
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	\$45.00	Per device, no min, estimated from CDWG

Zenprise www.zenprise.com

Is Control Server cloud based or LAN based?	Both	On-Premise, Cloud, or Hybrid
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	ALL as well as non-C2DM Androids like the Amazon Kindle Fire
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	No	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	No	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	Selective wiping where only corporate info is wiped or full wipe to factory default
Messaging between devices and/or server	Yes	Provide remote support and troubleshoot, including support-to-device VOIP and chat
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	Yes	Supports SharePoint
Imaging and reimaging of devices	No	
Check App updating status	No	
Roll out app updates	No	
Console on control server: Pros and Cons	Good	Web based and seems user
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	\$91.00	\$9100/2yr this is the starter pack pricing that doesn't have the discount included - Includes 100 licenses, support, setup, & training

Boxtone www.boxtone.com

Is Control Server cloud based or LAN based?	Lan	LAN Based
What devices? iPad, iPhone, Windows, Android, Blackberry, others	Yes	Will require buying the right Module
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	Set Encryption and selective remote wipe of data and apps
Ability to collect new devices into Inventory on the fly	Yes	Through OTA and Auditing
Applying policies on the fly to new devices.	Yes	Features OTA self provisioning
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	Yes	Private Enterprise App Catalog provides users with internal access to enterprise apps
Stop or block downloading of applications	Yes	Full Application-Level Blacklist/Whitelist support
GPS tracking	No	
Remote wiping	Yes	Selective and total
Messaging between devices and/or server	No	
Delivery to devices	Yes	OTA with user Self-Service Claimed
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	No	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	No	
Console on control server: Pros and Cons	Yes	
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	No	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	No	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	Varies	Contact Vendor. Prefer to quote price. Modular.

Casper www.jamfsoftware.com

Is Control Server cloud based or LAN based?	LAN	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	No	Mac OSX & iOS only
Enforce device specific policies?	Yes	Profiles
Enforce Active Directory policies?	No	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	No	Self Service
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	No	
Remote wiping	Yes	
Messaging between devices and/or server	No	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	Via turning off access to Safari/App Store
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	No	
Imaging and reimaging of devices	Yes	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Good	Web Based
Work with all email systems or have to use theirs?	All	
Real Time monitor usage	No	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$100.00	

Excitor www.excitor.com

Is Control Server cloud based or LAN based?	Lan	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	No	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	No	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	Yes	
AntiVirus	Yes	
Retrieve SMS, IM other messaging data?	Yes	
Data Encryption	Unknown	
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	Unknown	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	OK	
Work with all email systems or have to use theirs?	Internal	
Real Time monitor usage	Unknown	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Unknown	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	Unknown	

Fiberlink Maas360

www.maas360.com

Is Control Server cloud based or LAN based?	Both	Does have on premise SaaS option but they prefer cloud
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	Also provides cloud based visibility
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	Through Cloud Extender using Exchange server
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	WiFi not as accurate as 3G
Remote wiping	Yes	
Messaging between devices and/or server	Yes	Can message a device from MDM but not block device messaging
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	Can push policy to block them until they are back into compliance
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	Blocks and quarantines new devices/apps until deemed safe
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	Yes	MaaS360 Doc Cloud through the Cloud Extender Module
Imaging and reimaging of devices		
Check App updating status	No	
Roll out app updates	No	
Console on control server: Pros and Cons	Good	Web Based - Nicely done interface, easy to use but has some limitations
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	Yes	Through their Mobile Expense Management Software
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$7.00	\$7/per device/per month all-inclusive in MDM and Cloud Extender or just iPad support is \$1.50/per iPad/per month

Good Technologies www.good.com

Is Control Server cloud based or LAN based?	Lan	Secure outbound using port 443
What devices? iPad, iPhone, Windows, Android, Blackberry, others	Most	No Windows 7 or Blackberry
Enforce device specific policies?	Yes	Through own management tool
Enforce Active Directory policies?	No	
Security features and compliance	Yes	secure TCP & HTTP calls; Over the air encryption using AES
Ability to collect new devices into Inventory on the fly	No	
Applying policies on the fly to new devices.	No	
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	Yes	Through containerized application
Stop or block downloading of applications	Yes	Through device app registration in the management program
GPS tracking	Yes	
Remote wiping	Yes	remove passcode; remote lock; remote wipe
Messaging between devices and/or server	Yes	protected
Delivery to devices	Yes	over-the-air mgt tool; resides on devices
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	user upload to authenticate
Restrict access to the web? Cloud?	Yes	access to corporate resources w/o enabling VPN
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	Yes	
Data Encryption	Yes	AES-192
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	Yes	
Check App updating status	No	
Roll out app updates	No	
Console on control server: Pros and Cons	OK	Web-based; API
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	No	
Collect user installed Apps if allowed	Yes	catalogs in-house previously approved apps only
Enforce Network Policies / Connectivity	Yes	authenticate by user upload only
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$175.00	<u>one-time costs</u> : server license \$1500; CAL per device - \$159 for 100 devices <u>Support/maintenance pricing</u> : basic support \$20 per device per yr + \$400 per server

Intune www.microsoft.com/en-us/windows/windowsintune

Is Control Server cloud based or LAN based?	Cloud	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	Yes	Windows 7+, iOS 4.0+, Android 2.1+
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	via Exchange
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	No	
GPS tracking	No	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	Using Exchange Sync
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	Can lock down Web access
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	Yes	On Windows Based devices
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	No	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Limited	
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	No	
Collect user installed Apps if allowed	No	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	\$11.00	

MAC Lion MDM www.apple.com/ipad/business/integration/mdm

Is Control Server cloud based or LAN based?	LAN	Profile Manager within Mac with set IP
What devices? iPad, iPhone, Windows, Android, Blackberry, others	iOS	
Enforce device specific policies?	Yes	only during initial config
Enforce Active Directory policies?	No	
Security features and compliance	Yes	only during initial config
Ability to collect new devices into Inventory on the fly	No	
Applying policies on the fly to new devices.	Yes	after created with Mac & devices enrolled
Distribution of Apple Store Apps	No	USB Docking
Distribution of Internal Apps	Yes	with VPP codes
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	USB to original device only
Delivery to devices	Yes	USB
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	No	
Restrict access to the web? Cloud?	Yes	only during initial config
Enforce Passwords?	Yes	only during initial config
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	Yes	only if set up during initial config
Data Encryption	No	
Support Dropbox or other cloud storage?	Yes	iCloud.. not managed by anyone but the user
Imaging and reimaging of devices	Yes	when physically connected
Check App updating status	Yes	not unless connected
Roll out app updates	Yes	USB
Console on control server: Pros and Cons	Good	Standard Mac software look
Work with all email systems or have to use theirs?	Yes	what was set up in initial configuration
Real Time monitor usage	No	
Collect user installed Apps if allowed	No	
Enforce Network Policies / Connectivity	No	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	No	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	Free	

McAfee www.mcafee.com/us/products/enterprise-mobility-management.aspx

Is Control Server cloud based or LAN based?	LAN	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	User based
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	Self-Service Provisioning
Applying policies on the fly to new devices.	Yes	Other the Air (OTA) delivery
Distribution of Apple Store Apps	Yes	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	"Visualizes mobile assets"
Remote wiping	Yes	Full or selective
Messaging between devices and/or server	No	
Delivery to devices	Yes	Other the Air (OTA) delivery
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	Blocking available
Block non compliant devices?	Yes	Blocking available
Restrict access to the web? Cloud?	Yes	Has VPN support
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	"encryption and data protection controls"
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Subjective	Looked pretty simple and straightforward
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	Limited	For basic events/information
Collect user installed Apps if allowed	Yes	Apparently with the ePO portion of EMM
Enforce Network Policies / Connectivity	Yes	At least with Cisco VPN, Requires certificate
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	No	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	Unknown	No pricing details from vendor

Meraki www.meraki.com

Is Control Server cloud based or LAN based?	Cloud	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	iOS	
Enforce device specific policies?	yes	
Enforce Active Directory policies?	no	
Security features and compliance	yes	
Ability to collect new devices into Inventory on the fly	No	
Applying policies on the fly to new devices.	yes	
Distribution of Apple Store Apps	yes	
Distribution of Internal Apps	No	
Stop or block downloading of applications	yes	
GPS tracking	yes	
Remote wiping	yes	
Messaging between devices and/or server	yes	
Delivery to devices	yes	
Changes delivered to devices	yes	
Detect Jail Broken Devices?	yes	
Block non compliant devices?	no	
Restrict access to the web? Cloud?	no	
Enforce Passwords?	yes	
Detect malicious software and quarantine it	no	
AntiVirus	no	
Retrieve SMS, IM other messaging data?	no	
Data Encryption	no	
Support Dropbox or other cloud storage?	yes	
Imaging and reimaging of devices	no	
Check App updating status	yes	
Roll out app updates	no	
Console on control server: Pros and Cons	none	
Work with all email systems or have to use theirs?	all	
Real Time monitor usage	yes	
Collect user installed Apps if allowed	yes	
Enforce Network Policies / Connectivity	no	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	no	
Support Business to Business apps?	no	
Cost per user (some require minimum number of users)	Free	

MobileIron www.mobileiron.com

Is Control Server cloud based or LAN based?	Both	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	provides storefront
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	By Policy
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	Yes	
AntiVirus	Yes	pushes your antivirus
Retrieve SMS, IM other messaging data?	Yes	
Data Encryption	Yes	Disabling will result in policy action
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Yes	
Work with all email systems or have to use theirs?	Yes	Exchange and Lotus
Real Time monitor usage	Yes	4 hour check in recommended
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$34.00	sold by reseller/Verizon/Att etc. Min 50 user license. \$4 per device per month.\$3,000 initial server setup fee. Required VM ware or 2 appliances @ \$5000 ea. full blown MDM management solution Expensive.

Notify MDM www.notifycorp.com

Is Control Server cloud based or LAN based?	Both	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	All	
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	Yes	With Apple iDEP developer account
Distribution of Internal Apps	Yes	With Apple iDEP developer account
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	Selective wipe with Apple iDEP developer account
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	Push
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	Yes	
Block non compliant devices?	Yes	
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	No	Blackberry and Android Yes
Data Encryption	Yes	
Support Dropbox or other cloud storage?	No	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	With Apple iDEP developer
Console on control server: Pros and Cons	Yes	Web Based
Work with all email systems or have to use theirs?	Yes	Any that support Active Sync
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	Can create wifi/vpn policies iOS only
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	With Apple iDEP developer account
Cost per user (some require minimum number of users)	\$48.00	Cloud: 5-99 Users: \$48 per year. On-Site: 5-99 Users: \$38 per year. Cost goes down with more users. One Times set up fee \$1000. iDEP certificate costs \$299 per year.

Sybase www.sybase.com

Is Control Server cloud based or LAN based?	LAN	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	Most	Iphone, ipad, BlackBerry, Android, windows mobile
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	
Ability to collect new devices into Inventory on the fly	Yes	
Applying policies on the fly to new devices.	Yes	
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	Yes	
Stop or block downloading of applications	Yes	
GPS tracking	Yes	
Remote wiping	Yes	Data is encrypted and can be deleted.
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	Apps
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	No	
Restrict access to the web? Cloud?	No	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	Yes	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Yes	Centralized control
Work with all email systems or have to use theirs?	Yes	
Real Time monitor usage	Yes	
Collect user installed Apps if allowed	Yes	
Enforce Network Policies / Connectivity	Yes	
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	Yes	
Cost per user (some require minimum number of users)	\$29.00	

Tarmec www.equinix.com/us/products/tarmac

Is Control Server cloud based or LAN based?	LAN	
What devices? iPad, iPhone, Windows, Android, Blackberry, others	iOS	
Enforce device specific policies?	Yes	SCEP, certificate management
Enforce Active Directory policies?	Yes	
Security features and compliance	Yes	Apply certs to Exchange, VPN & WiFi; SSL/TTL encr
Ability to collect new devices into Inventory on the fly	No	
Applying policies on the fly to new devices.	Yes	only by LDAP groups
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	Yes	push web apps; catalog of in-house apps
Stop or block downloading of applications	Yes	through device restrictions
GPS tracking	No	
Remote wiping	Yes	remove passcode; remote lock; remote wipe
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	wireless push from TARMAC
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	Yes	passcode required
Restrict access to the web? Cloud?	No	
Enforce Passwords?	Yes	
Detect malicious software and quarantine it	No	
AntiVirus	No	
Retrieve SMS, IM other messaging data?	Yes	Exchange Account seeding;
Data Encryption	Yes	SSL/TTL encryption; WPA
Support Dropbox or other cloud storage?	No	
Imaging and reimaging of devices	Yes	remove passcode; remote lock; remote wipe
Check App updating status	Yes	app inventory
Roll out app updates	No	
Console on control server: Pros and Cons	Yes	Web-based only
Work with all email systems or have to use theirs?	Yes	MS Exchange, IMAP
Real Time monitor usage	Yes	device history & status only
Collect user installed Apps if allowed	Yes	catalog of in-house apps
Enforce Network Policies / Connectivity	Yes	authenticate by Active Directory,
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	Wifi; VPN-L2TP; Cisco anyconnect; juniper; F5
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	\$13.90	\$695 - designed for use with up to 50 iOS devices Enterprise server will support unlimited iOS devices

Trend Micro www.trendmicro.com/us/enterprise1

Is Control Server cloud based or LAN based?	LAN	Local LAN
What devices? iPad, iPhone, Windows, Android, Blackberry, others	ALL	nearly all (no palm trio) requires BB enterprise server
Enforce device specific policies?	Yes	
Enforce Active Directory policies?	No	
Security features and compliance	Yes	AV/quarantine etc
Ability to collect new devices into Inventory on the fly	No	Must be added manually
Applying policies on the fly to new devices.	Yes	Trend OfficeScan policies
Distribution of Apple Store Apps	No	
Distribution of Internal Apps	No	
Stop or block downloading of applications	No	
GPS tracking	Yes	
Remote wiping	Yes	
Messaging between devices and/or server	Yes	
Delivery to devices	Yes	
Changes delivered to devices	Yes	
Detect Jail Broken Devices?	No	
Block non compliant devices?	Yes	Via application control policy
Restrict access to the web? Cloud?	Yes	
Enforce Passwords?	No	Only if defined by gpo
Detect malicious software and quarantine it	Yes	
AntiVirus	Yes	
Retrieve SMS, IM other messaging data?	No	
Data Encryption	Yes	
Support Dropbox or other cloud storage?	Yes	
Imaging and reimaging of devices	No	
Check App updating status	Yes	
Roll out app updates	Yes	
Console on control server: Pros and Cons	Yes	okay if familiar with Trend OfficeScan
Work with all email systems or have to use theirs?	Yes	all
Real Time monitor usage	Yes	default 8 hours - configurable
Collect user installed Apps if allowed	No	
Enforce Network Policies / Connectivity	No	only Trend OfficeScan policies
Utilize a tunnel and who is provider? Verizon? AT&T? Sprint?	Yes	
Support Business to Business apps?	No	
Cost per user (some require minimum number of users)	\$29.00	included with OfficeScan enterprise or \$29ea standalone

GIS on the iPad Project Report

Objectives of GIS on the iPad

Task Force

- Evaluate GIS applications (apps) for the iPad
 - Technology
 - Available functionality
 - Data sources
- Make recommendations based on findings
 - Apps' pros and cons
 - Types of users
- Presentation and written report for OGITA

Background and Technology

- GIS (Geographic Information System)
 - Smart mapping
 - Linked to other information systems
 - ESRI, AutoDesk, SmallWorld
 - PC or workstation, laptops, PDAs
- Mobile computing
 - Notebook computers and laptops
 - PDAs (personal digital assistants)
 - Smart phone
 - iPad

App Evaluation

Goals of Evaluation

- List criteria to be evaluated
- Define potential user categories
- Evaluate potential GIS apps currently available
- Determine the future development of upgrades or new apps

Evaluation Criteria

- GIS/Mapping functionality
 - Layering
 - Attribute viewing / ID capability
 - Query capability
 - Legend provided
 - Measuring tools
 - Markup tools
 - Graphic editing

- Attribute editing
- Ease of Use
 - Ease of navigation
 - Graphic rendering speed
 - Graphics quality
 - Menus and tools easy to understand
 - Free from bugs
 - Easily distributable
 - Administration simple and not time consuming
 - Data loading
- Application Support and Cost
 - Type of support
 - Phone, email, user manual, help screens, website
 - Costs
 - App
 - Support
 - Data hosting or data transfer fee
 - Training

Apps Evaluated by Task Force

- OGI Touch Map - OGInfo,LLP
- GISRoam - Cogent3D, Inc.
- iCMT GIS - CMT Inc.
- PDF Map - Avenza Systems, Inc.
- Google Maps / Google Earth - Google
- ArcGIS - ESRI
- Topo Maps - TrailBehind, Inc.
- iGIS - Geometry Pty Ltd.
- iEXT Maps - Alper Dincer
- AutoCAD WS - AutoDesk
- GIS4Mobile - GIS4Mobile
- Map Box - Development Seed
- KML Map HD - Intelligent Gadgets

GIS/Mapping Functionality Analysis

√	Meets criteria
•	May meet criteria
—	Does not meet criteria satisfactorily
?	Unknown
	Issues identified
text	Applications selected for focus

	ID	Query	Bookmark	Legend	Symbology	Measure	Markup	Export Data	Graphic Editing	Attribute Editing	Allows Printing	Data Format
iCMT GIS	?	—	?	√	—	√	√	√	√	√	—	SHP, PBM, PMP
ArcGIS	√	√	?	√	•	√	√	?	√	√	?	ArcGIS Server web service
OIG Touch Map	√	√	√	—	√	√	√	—	—	—	•	SHP
GISRoam	—	√	—	√	—	√	—	—	—	√	—	SHP (stored locally)
AutoCAD WS	—	—	?	—	—	√	√	√	√	—	—	DWG, DXF
PDF Map	?	—	—	—	•	√	—	•	—	—	—	PDF only
Google Maps / Google Earth	—	—	—	—	—	—	√	—	—	—	•	KML, KMZ
Map Box	?	—	√	—	—	—	—	—	—	—	—	KML, KMZ
KML Map HD	—	√	—	—	—	—	√	—	—	—	—	KML, KMZ
Topo Maps (topo maps only)	—	—	—	—	—	—	√	—	—	—	—	Topo Maps
iGIS (not ready)	?	?	?	?	?	?	?	?	?	?	?	SHP
iEXT Maps (not for iPad)	?	?	?	?	?	?	?	?	?	?	?	WMS, KML, other
GIS4Mobile (not for iPad)	—	—	—	—	—	—	—	—	—	—	—	ArcGIS Server map services

Ease of Use Analysis

	Ease of Navigation	Graphics Rendering	Graphics Quality	Menus / Tools	Behavior	Bug Free	Easily Distributed	Admin	Data Loading Ease
ArcGIS	√	√	√	√	√	?	●	—	ArcGIS Online or content server
PDF Map	√	√	√	√	●	●	√	●	iTunes, Dropbox
Google Maps / Google Earth	√	√	√	●	●	—	√	√	iTunes, Dropbox, online web account
AutoCAD WS	√	√	√	√	●	●	√	—	Webconnect
OGI Touch Map	●	●	√	√	●	●	√	√	Dropbox, FTP, Email
GISRoam	√	●	√	●		√	●	●	Webconnect, Localconnect SW
iCMT GIS	√	●	●	●	●	—	●	—	iTunes
Map Box	√	●	√	●	—	—	√	—	Dropbox, iTunes
KML Map HD	●	—	●	—	—	—	●	—	Email, Dropbox, iTunes
Topo Maps (topo maps only)	√	√	√	?	?	?	√	√	?
iGIS (not ready)	?	?	?	?	?	?	●	?	iOS URL via Wi-Fi
iEXT Maps (not for iPad)	√	√	√	—	?	?	√	—	URL
GIS4Mobile (not for iPad)	●	●	●	—	?	?	√	?	could not load

Application Support/Cost Analysis

	Support						Cost			
	Phone	Email	Online	Training Videos	Manual	Help	App	Support	Data Hosting / Transfer	Training
GISRoam	√	√	—	√	√	√	Free	—	Local - free Webconnect - \$19.99	—
ArcGIS	√	—	√	√	—	√	Free	Free with existing license	Free	Varies
iCMT GIS	√	√	√	—	—	—	Free	—	—	—
Google Maps / Google Earth	—	√	√	—	—	√	Free	—	—	—
PDF Map	•	—	√	—	—	√	Free	—	—	—
AutoCAD WS	—	√	—	—	—	√	Free	—	—	—
Map Box	—	√	√	—	—	—	Free	—	—	—
KML Map HD	—	—	—	—	√	—	Free	—	—	—
OGI Touch Map	√	√	—	—	—	—	\$3,500 +	Free	\$300/yr	\$45/hr
Topo Maps (topo maps only)	—	√	—	—	—	—	Free	—	—	—
iGIS (not ready)	—	√	√	—	—	—	\$29.99	—	—	—
iEXT Maps (not for iPad)	—	√	—	—	—	—	Free	—	—	—
GIS4Mobile (not for iPad)	√	√	—	—	—	—	\$552 +	\$345	\$172	—

Focus Applications for GIS on the iPad

iCMT GIS

Recommended User: GIS experience

- Pros
 - Best overall functionality
 - Free
 - Can perform editing
 - Can set projection
 - Can export shapefiles
 - Attributes easy to edit
- Cons
 - Behavior is rough
 - Naming conventions are odd
 - Issue with defining symbology
 - Issues with loading polylines and polygons

GISRoam

Recommended User: General Map User*

- Pros
 - App is free
 - Can be used beyond Wi-Fi
 - Fast processing
 - Dynamic legend control
 - Working on using ESRI map services
- Cons
 - *Data connection not streamlined
 - Limited symbology
 - Data stored on unit
 - *Had issues editing graphic data
 - Did not find means to print doc

PDF Map

Recommended User: Non-experienced Map User

- Pros
 - App is free
 - Clean interface
 - Map designed in GIS and made into georeferenced PDF
 - Can be used beyond Wi-Fi
 - Can export waypoints
- Cons
 - Only PDFs can be viewed
 - Unable to perform data query
 - All changes to data must be performed in ArcGIS

ESRI

Recommended User: General Map User*

- Pros
 - App is free
 - ID features
 - Find addresses/places
 - Query map layers
 - Can use ESRI web services
 - Can do data collection
- Cons
 - Must have ArcGIS Server to create maps (as web services)
 - Can get data only from ArcGISOnline
 - More oriented to existing ArcGIS users
 - *May need some training to learn functionality

In Conclusion...

Findings and Recommendations

- Applications to consider...
 - Experienced GIS User
 - iCMT GIS
 - ESRI ArcGIS for iPad
 - General Map User
 - GISRoam
 - ESRI ArcGIS for iPad
 - Non-Experienced Map User
 - PDF Map
- Very infant technology
- GIS' big world hard to put on little iPad
- Many city departments wanting to use iPad and see maps
- Expect to see fast growth in GIS/mapping capabilities on iPad
- The more power the better – trade in your iPad 1 for an iPad 2 or even better an iPad 3. GIS apps need the little bit of difference it provides in the graphic area and processor speed.