

# Tablets: Understanding Software and Apps

Learn the ins and outs of the App Ecosystem model for tablet computers and how it is evolving.

Enhance your device for better Productivity, Enterprise functionality, Internet access, and Entertainment.



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## Introduction

Just last month I talked to you about the Operating Systems available for Tablet PCs – including Windows 7, Android and iOS, plus a few new favourites like MeeGo, Playbook’s QNX based OS, and Linux. We discussed what each of these operating systems provide both as pros and cons, and how their ecosystems have evolved over the last few months to attract new users.

The Operating System of a tablet PC is important, but it only gets you so far. Apple proved that to no end when they released the App Store for the iPhone 3G in 2008. When that same App Store was expanded in 2010 for the iPad, the beginning of what is becoming the “ecosystem” model for all tablet PCs was marked.

There is good reason no one thought of it before. Until App store modelling, software was something lofty and expensive. It needed to do a lot of things and it needed to be functional first and attractive second. Windows PCs and Macs alike were filled with programs that did a LOT of things but they were hard to find and it was even harder to gauge their effectiveness.

Apps, however, are different. They allow users to pick and choose functionality from a centralised database of options. They allow developers to be innovative without throwing their entire start-up capital into a single idea that could make or break them. They allow tablet makers to produce devices that focus on getting a smaller number of very important things right instead of a huge number of things passable.

In short, the App store model is perfect for mobile devices because it is a centralised interface for developers, users, and manufacturers. Moreover, that centralisation supports a uniformity of design, implementation, and availability of apps. I want to discuss not only why the App model works, but what enterprising developers have been able to do with it in the last year and where the future is likely to take it. I want to discuss the different ways this technology will change how we do business, entertain ourselves, and use our devices.

And of course, I want to show you some of my very favourite apps and what they’ve allowed me to do on my mobile devices in the last year. Let’s have some fun and see what creative things developers are cooking up for our tablets these days!

### The App Store Model

What do I mean when I refer to the App Store model? In short, this is the idea that Apple dreamed up a couple years ago to provide simple, easy software for mobile devices. In the past, producing content for a phone or tablet PC was not so simple. You needed a market, which proved frustrating when so few people knew software was available. Access was another issue. If you were not aware software existed, you could not use it.

With Apple's iOS platform, everything is centralised in the App Store. Every single app ever developed to run on a non-modified iPad is available in the same store, with the same star rating system, and the same review layout. Gone are the worries over fake reviews, spyware, and potential viruses.

Everything changed Apple developed the iOS and their new idea for how software should be developed and distributed on mobile devices. Here's how it works. App programmers download the iOS developer kit for a low annual cost and use it freely to produce content for the iOS.



As of July, 2010 there were more than 55,000 active developers on the App Store and 15,000 on the Android Marketplace, with 1,400 of them actively producing apps for both platforms. And while Apple has a strong lead right now (AppStoreHQ did a survey where 78% of respondents claimed Apple's platform was better in the near term) 54% said Android would perform better in the future.

When a company develops an app, they sell it directly through Apple's App Store and retain 70% of the revenue from each sale. Apple keeps the other 30% for distribution and provides a user-friendly storefront both on the device and in iTunes for users to seek out new Apps. Apple has stated that they run their App Store at just above breakeven, and the average developer makes roughly \$3,050 (the median is \$682) per year accordingly to research reported by Tomi Ahonen on his blog Communities Dominate Brands.

With a central distribution model and a number of initiatives by Apple to advertise those apps (not to mention rampant word of mouth with millions of new iOS users), developers can now reach a tremendous audience and produce software that solves one problem very well instead of addressing dozens of problems at a time.

In short, the App Store model works because it utilizes a pre-built ecosystem that all users have access to. And the most exciting part is that on other devices like Android or MeeGo, that ecosystem expands across multiple devices instead of the one offered by Apple.

### The Problem with Apple's Model

While Apple created this model and it's had a substantial impact on mobile computing, it is not perfect. There are many flaws here that not only drive certain developers away, but turn off users who would rather hold greater control over their device. Probably the biggest issue many have with Apple's model is that they cannot use it as they want. Apple has its own content editors and approval team in place to check over every app submitted to the store. Some apps are denied for no particular reason while others are censored or disallowed for things Apple finds objectionable – not always obscenely.

One particular instance in 2010 saw Apple denying apps that were developed using Flash tools. They had long come out against Adobe's Flash platform as draining battery life and resources and to this day do not support it on their devices. However, by disallowing its use in development, they put many developers into very hard spots.

They have since rescinded the ban, but the effect remains – Apple likes to control what people can buy and how they buy it on their devices. For most of their users that control is not a big concern. But, there are a number of users who have turned elsewhere to alternatives like these:



- **App Marketplace** – The biggest App Store alternative at the moment is Android's App Marketplace. Home to more than 150,000 apps, the marketplace is completely open, allowing anyone to produce anything and charge whatever they want for it. Of course, with that openness, there are trade-offs like viruses and security issues. Android users are strongly encouraged to install security apps on their phone or tablet for this reason.
- **MeeGo** – MeeGo is a strong open source platform that allows cross-development between manufacturers and software makers. Its focus on both openness and flexibility in design are highly attractive not only to the companies supporting its development (Intel, AMD, Linux, and Nokia), but software developers as well.
- **Playbook** – The Playbook is likely the one tablet that will find success in an already overcrowded market. Will its App store be successful? It's hard to tell. If the Playbook nets enough users and the price points are attractive enough, then yes, it will probably be successful. But, a quick look at BlackBerry's app offerings shows that RIM has not yet mastered the same kind of software distribution to pair with their

enterprise ecosystem.

- **Cyndia** – Cyndia is an alternative app store that allows iOS users to Jailbreak their tablets and access free content from third party developers. Everything is open source and while some content costs money, it is always done around Apple's store model. Be aware that jailbreaking is not legal in all countries.

And of course, there is the traditional software model – the one used by Microsoft for the last 20 years. The idea being that you provide a powerful operating system platform and then allow anyone to develop content for it without restrictions. Windows has long provided verification and developer support, but does not require approval of software before publication, nor do they offer a centralised distribution hub. As a result, the platform is open, but has the same security issues as Android.

It also means there is no interface in place for simple, easy to use Apps on a Windows Tablet. There are limited options if you have a software solution like Thinix installed. Thinix is useful because it mimics the app ecosystem of the iOS or Android with custom graphics, larger layouts and dashboard presentation of key pieces of information. While it's not ideal because only a native Windows 7 tablet ecosystem would be ideal, it goes a long way toward providing what the desktop operating system does not – tablet friendly interface.

### Feature Device vs. Commodity Portal

One thing I have long been concerned about with technology and Apple's approach in particular is the use of the device as a portal to the very lucrative distribution model rather than a truly fantastic device in its own right.

The iPad does a lot of things very well, but in some small ways I find it hard to shake the feeling that it acts as a portal for users to Apple's ever-growing stable of digital distribution brands – other than the App Store, this includes iTunes, iBooks and even the iAd platform which allows developers to advertise in their apps for a portion of the revenue.

With Apple receiving a 30% share of all digital sales made on the iPad, I worry that their focus might shift from product features to pure profit through distribution. Don't get me wrong – I love the idea of centralised distribution. We have seen so many amazing ideas in the last year alone that the tablet market has been quite literally reborn because of it. But, at the same time, one has to worry when that very model makes it so easy for Apple to pare down their device for simplicity instead of optimal functionality.

### Traditional Software Suite Model

I won't spend a lot of time talking about how things used to be (and still are on PC), because even though I am a strong supporter of the Windows platform for tablet PCs, I can admit that Apps hold an exponentially larger attraction for the mainstream, and potentially enterprise too.

Right now, tablet users want and are utilizing tools purchased from centralised hubs that support an ecosystem. Windows does not have that kind of support. For me, cost is not as much of an issue as access. I will gladly pay for software that boosts productivity, but when there is such a dearth of touch optimized software on the Windows platform, options are thin.

There are some situations for sure in which powerful, traditional software is not only possible, but commercially viable. Microsoft Office is an extremely powerful toolset and I happily install it on every tablet I own, especially OneNote. Even with scaled down tablet only versions of software like iWork for iPad only costing \$10USD, the quality just isn't there – Office is too powerful not to have.



### Why it Won't Work

Why won't traditional software sell the same as it once did? If nothing else, because people are used to paying a la carte for simpler tools. On the iOS and Android platforms, you can purchase Apps that do only one thing and it is easy to find the best tool for that one thing. There are some software tools for Windows designed to do just one thing, but for many years, the focus on that platform was on larger, more powerful tools that could do a lot of stuff.

That was great for big time software developers and power users. Adobe, Microsoft, and others who put out large, expensive software made it work because there were power users out there who could afford the tools and needed the functions. That will not stop anytime soon.

However, with tablets the focus is on mobility, and even those that want to use their tablet for everything when away from a workstation do not need massive software suites. They need dedicated tools that fill a niche need on their device. Combine that with the fact that

most tablets have very limited storage space for software and you couldn't load up those larger software tools if you wanted to – they would eat up resources.

### How Windows Can Adapt

Right now, besides the fact that Windows doesn't offer the native touch interface that others are utilizing to great effect, the classic PC interface is falling behind in its software offerings by sticking to the traditional model.

Specifically, where other operating systems are creating an ecosystem for devices that melds software and OS, Windows is sticking with their twenty year old developer only model. Hundreds of thousands of programs have been developed for Windows since the 1990s and many of them still work very well on the Windows 7 architecture, even on a tablet, but without the centralised interface provided by an App store, it is hard to sell that model to a developer. It worked great for PC – but on a tablet, a central market is necessary.

One thing that has given hope to many Windows enthusiasts in the last few months is Windows Phone 7. Right now, Windows Phone 7 has one of the most attractive user interfaces in "Metro" and is steadily building support from the application developer community. It is the first time Microsoft has truly developed a strong, centralised design philosophy for one of their operating systems and while WP7 has a long way to go before it catches up to iOS or Android, it is making strides.

In February, Nokia announced a partnership with Microsoft that will put WP7 on all of Nokia's smartphones. It's easy to forget that Nokia is still the largest mobile phone producer in the world because of the hype surrounding Apple and Android. And while Nokia's market share has decreased quite a bit in recent years because of the centralised ecosystem model and the rapid fire release schedule of their competitors, WP7 offers a chance to pick up some steam once more.

How does this help the tablet industry? Microsoft very well may be sitting on a goldmine for tablet PCs if they take the time to adapt the Metro UI and their WP7 model to tablets. Apple and Google both did the same thing with iOS and Android and it is working out well for them. Why not Microsoft too? Just look at the layout for WP7. It's smoother, quicker and very attractive with quick access to Office applications, Xbox Live games, and Desktop Integration. Can you imagine the same speedy interface on a tablet allowing you instant access to your Office documents and spreadsheets? Or Xbox Live achievements and leader boards for the kinds of games that a Tegra2 process or can play? It's very enticing and one reason why a lot of developers are clamouring for WP7 tablet.

### Web Interactivity

We are going to get away from software in the App Store and App Marketplace for a few minutes and talk about a feature that is built into the OS of most devices – web browsing. Once considered a luxury on a computer, web browsing is now a feature as standard as the camera or touch screen.

In fact, in Australia alone, the number of daily active Internet users rose from 7.6 million to 21.2 million between December, 2000 and December, 2010. In North America, that number rose from 108 million to 266 million, reaching a saturation of nearly 77.4%. Around the globe, there are nearly 2 billion Internet users, or roughly 29% of the population. Without easy, fast web surfing, a tablet just wouldn't be much fun.

I covered a lot of what you can expect from an operating system in “Know Your Operating Systems”, but I want to go over some more in-depth content here because with a tablet PC, the odds are that you will spend a significant portion of your time on a tablet surfing the Internet. If the browsing experience doesn't work, what can you do?

### Safari

The most commonly used mobile browser right now is Safari – Apple's first party browsing solution for the iOS. I will admit that the Safari web browser has been very good for the industry. It was one of the first to offer a “full web experience” when it launched on the iPhone in 2007 and it has driven innovation across multiple platforms.

But as is often the case with software, just because you did something first doesn't mean you will always do it best. And the problems with Safari are brought into sharper focus when it is experienced on the iPad – a much larger interface.

Understandably, users expect to have a 100% web experience on a tablet. The screen is only slightly smaller than their laptop and with it so much closer to the eyes, you feel like there must be an easier way to integrate the technology. However, Safari on iPad is very similar to



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Safari on the iPhone and that makes it less than ideal for full browsing. Specifically, features missing include:

- **Flash** – The biggest problem with Safari is the fact that it does not support Flash playback. Yes, it looks fantastic when accessing HTML5 sites and it is very fast, but without Flash playback, millions of websites are rendered useless. In fact, a survey done by the Operate Developer Center in 2008 showed that more than 30% of all websites contained some Flash files. None of those files will run on an iPad. In some cases, it forces you to view the mobile site – a hair annoying on a 10” screen – and in other cases, the site simply does not work.
- **Tabbed Browsing** – Tabbed Browsing was by no means new when introduced by Mozilla in 2001, but it has become an industry standard, allowing quick access to multiple web pages at any one time. While Safari has a fairly useful multi-page interface, it is limited to only 9 websites at a time, and it is hard to keep track of which page is open at which time. Tabbed browsing would make this much simpler.

Admittedly, Safari became more user-friendly when multi-tasking was finally added to the iPad. Apps could direct to the web browser without closing down. You could easily switch between notes and research, and the general feel of the device became much more intuitive. Combine that with easy access to your bookmarks through the bookmarks bar and the popover bookmarks menu and you have a browser much closer to its desktop counterpart (if not completely the same yet).

### Chrome

Chrome was first released for the PC in September, 2008 as a high speed alternative to Firefox and Internet Explorer. It uses the bare minimum of on screen real estate with a single search/URL bar and a single menu for finding bookmarks and browser history. Its market share has increased over time, largely due to its devotion to speed and simplicity.



For Windows tablet users, it is a great choice as a third party browser (and my preferred option after Internet Explorer). For Android tablet users, it comes standard on your device and provides instant access to the web in much the same way as Safari on an iPad. In older devices, the Chrome browser had many of the same problems as Safari, but with Honeycomb, Google upgraded their tablet browser with some important features including:

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- **Tabbed Browsing** – One of the larger complaints about Safari is not an issue for anyone using a Honeycomb tablet. Chrome’s intuitive and unique single instance tabbed browsing method is now available for Chrome.
- **Incognito Mode** – Another fun trick that PC Chrome users have had for a while now is incognito mode. This opens a new tab or turns your current window into a non-saved instance. No cookies, files, or history will be formed while in incognito mode.
- **Sync** – The ability to sync at least your bookmarks from your desktop and laptop Chrome installations with your tablet is a fantastic addition in Honeycomb.
- **Autofill** – You can now autofill forms and logins with the settings menu. It’s a good feature, but should be used with caution considering the nature of a mobile device.
- **Most Visited** – The home page interface on PC Chrome browsers has long had a “most visited sites” interface that shows 8 sites you visit more often than any others. It is also available on Honeycomb tablets.

In short, Chrome is a pretty fantastic tablet PC browser. That doesn’t mean it is without its faults, but for the most part, unless you are a power user, it will get things done.

### Internet Explorer

On my Windows tablet, I use Internet Explorer most of the time. While it has lost some ground to other browsers like Firefox and Chrome, Internet Explorer is still integrated fantastically well into the Windows architecture and with recent updates in IE 8 and IE 9 it is much more user friendly for touch screen surfing.

For those times when I am not using Internet Explorer, Chrome is a close second. It is very fast, intuitive and seamlessly integrates into Google Search. Luckily, you can download and install any browser you want on a Windows tablet, and both IE and Chrome work well with the touch screen.



### Third Party Apps

The three major browsers work well on each of their devices, but there are alternatives. Even Apple's devices now have alternatives available in the App Store (or through jailbreaking) that provide more features and faster web surfing. Here are some of those options and how to use them.

#### Opera

Opera has been around for years as a high speed, open source alternative to the other browsers. While Opera has only a 2.37% share of the browser market, it has grown over time with substantial market share in Eastern Europe and more than 100 million mobile phone installations. It works so well because processing of web content is done on an Opera server, reducing the work done by your device by nearly 90%.

It allows quick browsing on everything from game consoles to older handsets. It took some time before Apple allowed any third party browsers on its devices, but Opera will soon be available on the iPad and will likely soon follow on Android. Already, we've seen the raw speed increase that Opera provides on the iPhone and Android smartphone platforms so it will be interesting to see how well it works on tablets.

#### LastPass

For iPad, this alternative to Safari provides tabbed browsing, slow connection options to speed up access, especially to larger images and text files, and other content-blocking options to speed things up.

#### SnowBunny

Snow Bunny is very simple in execution, possibly even more so than Safari. However, it does offer private browsing and has a complete full screen mode to view pages without the address bar.

#### SkyFire

This new browser, released in December of last year, provides a workaround to let iPad users view Flash video on their device. Since Apple won't allow processing of Flash on the iPad, SkyFire processes it on their server and then delivers the video through the browser connection. It's not flawless and it has limits (no games or apps, just Flash movies), but it is quite popular for users tired of visiting websites they cannot view.

There are quite a few browser alternatives for the iPad, all of which have their own merits. You will also find quite a few for Android, though with none of them optimized for tablet browsing just yet, Chrome is the clear winner.

### **Full Function or Speed**

One of the big questions when it comes to web browsing is speed and function. Right now, we are in a state where the speed of a web browser is directly impacted by its functionality. With the current wave of Tegra 2 dual core processors and the announcement of upcoming quad-core processors for tablets, I don't think this will be an issue for long. But at the moment, it does impact how you browse the web.

### **The Battery Life Question**

One of the reasons Apple does not support Flash is the battery life issue. The use of Flash will drain battery power much faster than if it is disabled. That said, there are some benefits to certain browsers and browser options when using your tablet PC.

Since Flash is available in at least one way on the iPad with SkyFire you do have options, but be aware of the heightened battery life cost of running Flash. Adobe is working on a 10.2 upgrade to Flash that will supposedly reduce the battery consumption by optimizing Flash for mobile devices.

Additionally, content producers who optimize their content for mobile can reduce battery consumption significantly. Already, Android users are seeing sharp increases in battery efficiency from their devices with some optimized sites. However, it will be some time still before we see the kind of universal 10-15+ hour battery life with 100% desktop functionality that we're hoping for.

## Software Recommendations

Web browsing is probably one of the tasks you will perform most on a tablet, but apps are the bread and butter of any tablet ecosystem, so let's take a closer look at some of the top options available for iOS and Android.

There are thousands of apps available right now and thousands more being produced seemingly every month, so don't treat this as a complete list by any means. It's more of a sampler – showing you top picks for specific things you may want to use your tablet device for. Don't assume that because you do not see something on this list that it is not a good app. I'm sure there are hundreds if not thousands of apps I've never even heard of that are fantastic. That's the nature of the App store model – anything can be useful.

## Enterprise Apps

Enterprise functionality for a tablet is a big deal and yet it still languishes far behind the consumer market and the desire by so many manufacturers and software developers to produce the next big mass market app. That said, I think we are on the precipice of an explosion in enterprise functionality.

Whether it is on RIM's Playbook – marketed toward a built-in audience of millions of BlackBerry business users – or on Android or iPad it's hard to tell. But, I foresee we will witness a sharp uptick in the number of people who produce high quality apps for businesses. Hopefully that means some help for IT support systems to supplement the built-in ecosystems of these mobile operating systems.

## Enterprise Execution

Large scale adoption of tablet PCs for enterprise use is the next major hurdle in the market and it will likely be, if not settled, pushed forward in the months to come. Apple touts their iPad as a viable enterprise solution, claiming that 80% of Fortune 500 companies are currently testing them for wide scale implementation. Microsoft has come out against iPad implementation, making statements that the iPad lacks a security environment to protect company assets and data.

There are, however, quite a few solutions being put forward by companies that will help with these problems. Especially on Android devices where IT control of app installation and multi-user access is much more feasible, enterprise integration is growing rapidly.

### iOS

The iPad supports Microsoft Exchange Server, and Apple provides a substantial support section on their website and through their account managers to help businesses integrate iPads into existing enterprise environments. Apple also provides CalDAV calendaring, CardDAV contacts, and Virtual Private Networks. Apple's iOS 4.2 provides its own built-in VPN client, while third party applications from Cisco and Juniper also work for existing or new VPNs. There are security features coming into play that will lock certain features and provide a more stable security environment for businesses in need of direct control over how these iPads are used.

What really matters, however, is the applications currently available, and while solutions are limited for direct App deployment outside the App Store, some companies like Good are offering security, encryption, and remote application password policies for IT management.

The developer community for iOS is very large, providing a huge number of applications and software solutions in a variety of fields. Here are just a few of the many solutions currently being offered.

- **iWork** - When Apple announced the iPad, the iWork suite was a nice surprise. It made the iPad appear more like a fully functional office oriented tablet than we'd previously anticipated. The end result wasn't quite as satisfying as the initial promise, but Pages and Numbers are both solid apps in their own right. While there have since developed new apps that provide a better, more feature rich interface for editing documents (especially Microsoft Office documents), the iWork trio is effective nonetheless.
- **QuickOffice Connect** – Originally released for the iPhone, the Quick Office Connect mobile suite is one of the top productivity suites available for the iPad. Short of getting actual Microsoft Office apps, this is the best way to edit spreadsheets, documents and presentations using Microsoft's formats. Simple tasks are perfect in here, but if you want the more advanced features of a full set of desktop tools, you'll still need to plug in to a PC with Office on it.
- **Cortado Workplace** – One of the simpler desktop application converters, essentially turning your PC into an interface on your tablet. Cortado works by turning your desktop into a cloud server that can be accessed on the go. Like Dropbox, you receive 2GB of online storage. It works for both PC and Mac and allows mobile



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wireless printing and faxing.

- **SharePlus Office** – Another office tool, but with the added benefit of allowing access to your Share Point data. This is a universal app on all iOS devices and allows you to sync your lists and libraries on the go. It makes for easier collaboration on documents, quick on the go sharing with people out of the office and an extremely fast way to add new content to the SharePoint server. It is also available in seven languages with more planned for the future and works with SharePoint Services 3, and SharePoint Server 2007 and 2010.
- **AutoCAD** – AutoCAD has been a standard tool for drafters and builders for decades and those same power tools are now available on the iPad with the AutoCAD WS app for iOS. It allows for easy access on the go to all AutoCAD drawings, and the iPad version allows you to actually interact with the drawings, adding notes, making adjustments and annotate accordingly for future reference.
- **Roambi** – Analytics has traditionally been relegated to big workstations in the office where data is locked down by IT security certificates. Roambi allows you to take that data on the road and interpret complex business data through mobile analytics. With server synchronization, you can easily move data to your phone or iPad on the go, using it in meetings, building on the data you've gathered and creating more advanced reports.
- **QlikView** – If you already have a QlikView account, the iPad app is free to download, allowing you simple access to your data and BI wherever you happen to be. Added to that, you'll get cover flow for easy access to your reports, multi-touch support, and sharing tools to easily send your reports or numbers to other members of your team.
- **AnalyticsHD** – If you own a website or run them for your clients, Analytics HD is a must have tool. It provides instant access to your Google Analytics data, including enhanced reports, segmentation and goal tracking. While Google Analytics does work in the Safari browser, it is clunky and hard to navigate due to a lack of touch optimization. Analytics HD takes care of that by providing 55 different reports, full size charts, day by day reports and metrics for each report to break down your data accordingly.
- **Dragon Dictation** – Dragon Naturally Speaking is an industry leader in speech to text interaction for your PC, but thus far options on mobile devices have been limited. While Dragon Naturally Speaking for iPad is not ideal the very simple Dictation tool provided by Dragon is not only free, it works decently well. It can integrate your contact list into its dictionary and learns along with your adjustments. Just

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remember to speak clearly into the microphone when dictating.

- **ZipThat** – Currently, the iPad does not open Zip files – it’s an interesting deficiency that will probably be remedied eventually. ZipThat offers this much needed functionality in the simplest possible way. This is a must have app for any iPad user.
- **Calculator Pro** – Another very odd omission from the iPad considering the iPhone has an intuitive calculator (after all, touch screens are perfect for quick sums). So, you’ll need to buy one from the App Store if you want access to the simple calculation tool (or whip out your phone and use it). Luckily, Calculator Pro is a perfect calculator with every tool you’ll need for everyday use. CalculatorHD is also a good option and provides enhanced scientific functions.
- **Things** – If Apple designed and developed a task management tool, it would look like “Things”. This app, while a little pricey, is extremely efficient for quick management of projects, due dates, to do lists and notes. There are quite literally hundreds of task management tools on the App Store and some have more advanced tools, but this is the easiest to use and most intuitive for simple tasks.
- **GoodReader** – The iPad does support PDF reading, but it’s not that functional. If you want to annotate, highlight or save files to your Dropbox, the best route is GoodReader, a simple and inexpensive App for iOS that provides a number of different features for your iPad. It also allows you to open Office and iWork files in the Safari browser and your email when you download them directly to your iPad. You can then save them to your Dropbox account or transfer them to another editing program like QuickOffice.
- **iA Writer** – For every super advanced tool there with a thousand different functions, there is an app like iA Writer that provides simplicity and intuitive design. This app is a great alternative to Pages. It also provides easy access to an expanded keyboard with extra buttons we’ve always wanted on the iPad. It’s not great if you plan on writing an advanced, formatted document, but if you’re brainstorming ideas it’s significantly better than the built in Notes app or the Pages iWork application.



### Android

Right now, iOS has a substantial head start in the Enterprise due simply to execution. The device itself is not optimized for enterprise use yet (with a few exceptions), but without any

real alternatives and with the relatively low battery life of many Windows tablets, it is the best option out there.

However, Android's Honeycomb tablets are likely to provide a much better platform for IT departments interested not only in offering the higher end technology demanded by employees, but in tackling things like remote support, app deployment, and security. Companies like MobileIron already offer Android security roll-outs that will provide inventory tracking for devices and apps, remote access blocking for lost or stolen devices, security policy integration, deletion and control of unwanted or third party apps, certificate control and limitation of roaming costs. In short, it provides all of the same security benefits IT managers have been using for Windows laptops or BlackBerry phones. Plus there are many companies with similar offerings preparing to take on the Android tablet market.

In terms of Apps, Android is still new to the tablet market. While iOS has been active for the better part of a year and there are more than 60,000 iPad only apps available in the App Store, Honeycomb's first release occurred on February 24<sup>th</sup> in the United States and the apps for it are growing. However, enterprise support has already been fantastic on Android smartphones. Here are some of the many software tools I'm looking forward to seeing on an Android tablet:

### **Google Apps**

A solution quickly becoming quite popular for enterprise users is Google Apps – an upgraded version of their standard services like Gmail, Calendars, Docs, and the App Marketplace. The idea is fairly simple. As an alternative to Microsoft's services, Google provides hosted service to cut down on IT costs and streamline installation and individual setup for users within a company.

You can run your company email, calendars and contacts off a single Google Apps account and it does not require added hardware or software on site. Best yet, Google Apps is optimized for use on many phones and tablets, especially Honeycomb Android models. It provides easy enterprise solutions for tablet PCs without spending tremendous volumes of money to setup an Exchange Server or license apps from dozens of other companies.

Google Apps is free for up to 50 users with access to all collaboration and messaging apps, as well as unlimited mobile access for those users in your company. A Google Apps for Business account costs \$50/year per user and provides unlimited user options, along with upgrades for things like Groups, Video, extra email storage and interoperability for Outlook and BlackBerry, as well as enhanced security features.

So, is Google Apps a good solution for your business? It depends largely on the size of your company and how powerful you need your software and email to be. However, because it is cloud based and because the features are all so familiar, if your business doesn't require

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heavy duty applications on the go, this will work wonders on an Android tablet. Less training, less support, and tablet PCs that make your workforce more mobile and productive almost overnight – you can't go wrong there.

### Zenprise

Zenprise is not an App, but a service provider that allows remote control push access to Android tablets. Specifically, Zenprise provides Task Manager access to apps or other user problems on the device. It also allows Instant Messaging between PC and Android for quick troubleshooting, and remote control rebooting and control of the Android device from a third party access point. Additionally, apps are pushed to devices and access to the Marketplace can be blocked by IT security policies, in effect controlling what and how things are installed on the device, something currently impossible on the iOS architecture.

### Documents to Go

Documents to Go is actually available on all mobile platforms including the iPad and BlackBerry (which likely means Playbook support when it is released). However, I choose to mention it for Android because it goes above and beyond the rest as a fantastic option for Android devices. While not fully optimized for Honeycomb tablets yet, it will likely come soon.

This app allows you to not only view but edit the documents you have from Office 2007 including .DOC, .XLS, and .PPT files. It also provides full Google Documents support, desktop synchronization and multi-language localization. If you need a good app to access your data on the go or to work on your documents while away from home, this is the best place to start.

### Playbook Use

While there are quite a few devices slated to reach the market in 2011, the one at the top of the list for business users and IT departments is the Playbook from RIM. While no one knows for sure how it will perform, RIM's pedigree in providing unparalleled support for the BlackBerry is well known and with so many users still sporting



their QWERTY based smartphones, brand recognition is strong.

Right now, we know that the Playbook will offer full web browsing, natural multi-tasking, dual HD cameras for conferencing, Bluetooth pairing and immediate out of the box compatibility with the BlackBerry Enterprise Server. Users will essentially be able to view their smartphone data on the Playbook via secure Bluetooth connection, all under the control policies of the IT department.

Of course, with a brand new operating system from QNX, the Playbook does not have the App support that Apple enjoys, but by allowing direct connection to the 250,000 BlackBerry Enterprise Servers already out there, it makes enterprise integration of tablets a lot easier for IT departments hesitant to integrate a completely new device and system. This is one to keep a close eye on.

### Games and Entertainment

The most visible aspect of the App arms race has been in gaming. While developers do some very cool things with enterprise and cloud apps, games have become a huge market for Apple and Android devices. In fact, games have become so popular on the iPhone that major companies like Nintendo and Sony have restructured their handheld gaming units to directly compete with the device.

Even so, millions of people each year play games on iOS and Android devices and they are not likely to switch back to dedicated devices like the Nintendo 3DS or the Sony NGP. Dedicated devices cost more, they are more limiting and software titles range from \$25-\$50 each while Apps for your tablet cost between \$2 and \$10 each. It's a gap that most consumers are very well aware of. Toss in the fact that users are growing used to these same games on their phones and they become that much more enticing when released on a tablet.

- Angry Birds
- Flight Control
- Fifa 11 HD
- Geometry Wars
- Glow Hockey HD
- Osmos
- Plants vs. Zombies
- Words with Friends (Scrabble)
- World of Goo
- Fruit Ninja



- Let's Golf

The list goes on and on. While business developments and enterprise upgrades for tablets in the last 12 months have been significant, the gaming scene is where the iPad and many Android devices have received much of their press. Companies like Rovio became household names thanks to apps like Angry Birds. For all fellow business leaders out there, these games may represent a big distraction for your employees. For those of you who welcome the distraction, there is much fun to be had on a tablet device these days.

### Cloud Tools

Cloud computing is the future of Tablet PC software. Not only does the cloud provide a number of opportunities for users interested in keeping their multiple devices synced, cloud apps allow business users to better protect their files and sensitive technical data from being stolen or lost. With files and applications loaded into the cloud, users can rest assured that they will never lose data if something happens on a trip or they simply drop it in the bar.

#### Evernote

The cloud is the key to cross platform computing and it works extremely well for all devices, especially in the case of Evernote. This has been around for a long time in fact, since the first apps were being released for the iPhone. The idea was simple. Provide a tool that syncs your notes and ideas on a cloud server to every device you own.

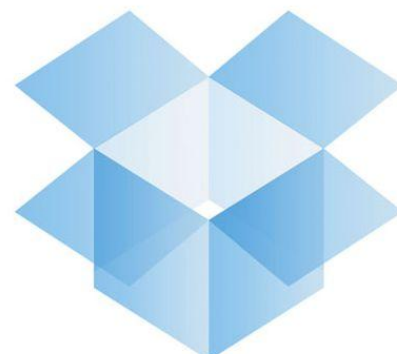


I love Evernote and personally use it every day to cross between the multiple platforms I use. While One Note is my Windows note taking application of choice, Evernote's simplicity and ability to integrate into any platform is a major boon, especially with how many tablets I spend time on each year.

It works on PC, Mac, iOS, Android, BlackBerry and likely any new formats to reach the market this year. You can jot down text notes or you can record video, audio or photos to save for later. The tool syncs automatically across all devices and works instantly on most desktop computers.

#### Dropbox

Dropbox has become one of the default file storage tools for anyone with a mobile device. In fact, since almost no



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tablet PC has more than 64 GB of storage built into it and the iPad doesn't offer an SD slot for expansion, Dropbox is a must to keep your files synced between devices and to minimize how much space you use on your device. It also comes with handy tools for viewing the most common file types such as XLS, DOC, PDF, and PPT.

That makes it universal across all platforms and because you can get a 2GB plan for free, if you plan only on syncing documents it is very affordable. And for iPad users, it allows you much quicker access to your files. Instead of having to email them to yourself or plug your device into iTunes, simply save it to the Dropbox folder of your choice and it syncs directly to your home PC.

### Citrix Receiver

Citrix is known for cloud based tools that allow mobile and remote users to access content via "receivers". While generally used by larger companies, Citrix is available for anyone who

wants easy remote access to secure desktops when away from home. The service requires a monthly fee, but the Citrix Receiver for both iOS and Android is free.



### Box.net

Box is one of the big time cloud server providers. Their approach has been decidedly more enterprise focused than Dropbox, the other big name in this market.

However, either service can provide every day consumers with powerful tools to take their files on the road with them. It is easy to share files and folders with other people as well, setting them up as collaborators designated as either viewers or editors.



Box.net also integrates with Google Docs and a number of other tools like Gmail and Outlook to provide a fully functional integrated cloud service. Viewing of documents on your iPad through Box.net is intuitive and efficient as well. For those that do not have GoodReader or Documents to Go, Box.net allows instant access to your data and some basic editing functionality depending on the format.

### Soonr

Soonr's focus is purely on enterprise users, as is immediately evident when you login to the



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dashboard for the first time and see the projects laid out carefully according to entry dates and due dates. You can create a team and then designate specific documents and tasks to users which are then updated to their iPad or Android device directly through the Soonr server.

Currently, the interface is optimized for smartphones, but tablet upgrades are in the works. It also provides desktop syncing and team based access control. You can just as easily allow one or two people to see a document as you can let the entire team see or edit it. There are quite a few cloud services out there, but Soonr's interface is attractive and ideal for small teams with multiple collaborative projects.

### SMESStorage

I like the idea behind SMESStorage. After all, while cloud access does mean easily using and collaborating on documents from anywhere, there are usually multiple clouds to draw from, especially in enterprise situations. Each of us has access to different clouds depending on our status and current work projects. If I have a Dropbox account, but am also part of a Soonr account with colleagues in the tablet industry and occasionally receive files from Box.net accounts, having a centralized service that compiles all of those different services is very useful.

That is what SMESStorage does. It allows private fileserver clouds for enterprise users, public clouds like Google Docs and Calendars, Amazon S3 and Microsoft's sharing services. It also features a number of apps for active collaboration via Twitter, Facebook, Wordpress, Joomla and more. And it's available for more than just one mobile platform. There are iOS and Android apps as well as BlackBerry (soon to be Playbook).

### Google Docs API

Google Docs is one of the most popular cloud based services on the Internet, but because Google does not offer a direct app for either iOS or Android, users must access the service through the web browser. However, because the Docs API is freely available to third party developers, there are quite a few useful tools that integrate directly with Google Docs including GoodReader, Quick Office and Documents to Go.



### Encryption

Security is a big issue for many companies and individuals alike. So, encryption is vital when implementing cloud based storage. Services that use the Amazon S3 Service like Dropbox or Spot Documents offer at-rest encryption that stores a key you generate on their server.

There are also companies that provide their own encryption such as Box.net, which offers 256-bit AES for enterprise users.

It will take time before the encryption issue is worked out to most users' satisfaction. Even larger companies like Box.net receive questions regularly about how effective their encryption services are, and what type of security they can offer for those encryption keys. There will always be inherent risk in using a third party. Some enterprise solutions are now arriving that integrate cloud services with an existing Windows or BlackBerry server to get around these encryption key concerns for far better security.

### Innovation and Creativity

This category is home to everything that doesn't fit elsewhere. In the last year we have seen more people come along with creative, out of this world ideas than ever before in software development. The slick, high quality look of a tablet device only makes their work that much more impressive. So, what can you look forward to when you first boot up your tablet? Here are a few options and what they have meant to me so far.

- **SketchBook Pro** – When the first tablets hit the market roughly ten years ago, my impression was that they would make fantastic tools for artists. For a while, screen quality and software were limitations, but now we can easily integrate drawing and painting tools on a tablet. SketchBook Pro is a prime example. Produced by the company behind AutoCAD, Sketchbook Pro is a desktop application with a powerful iOS app that allows for easy drawing, editing and special effects. You can easily save to the Dropbox or email files directly to contact list members.
- **Apps to SD Card** – I wish I could say this applied to the iPad too but alas Apple still does not offer expandable storage for their mobile devices. Android users, however, can now install Apps directly to SD cards with this app, backing them up and saving them in a separate place. Android users already have the benefit of being able to perform updates and backups through a wireless connection; now they can backup apps and access them from SD cards as well.
- **FireKeys** – This is a fantastic text input tool that borrows heavily from the idea behind AutoText tool for BlackBerry. It allows you to enter text short cuts like “cyp” for “could you please” to streamline messages to your contacts. While not necessarily as valuable for your tablet as your phone, it significantly cuts down on

the amount of time it takes to type an email.

- **Google Voice Search** – Google’s Voice Search is now available on all mobile platforms via the Google Apps app or a standalone app of its own on Android. Simply speak into the microphone on your tablet and Google will perform a quick search. While the extra time needed to open an app and initiate the search detracts some from the coolness factor here, we will likely see this technology integrated far more heavily into Android devices in the future.
- **SkyGaze** – Augmented reality isn’t new by any means, but for those with cameras on their tablets, there are quite a few interesting things you can do with it. Technically, this is an iPhone app, but in short order it will be available on Android and there are plenty of other AR apps available for Android tablets.
- **NFC Apps** – Near field communication is a big buzz word coming into 2011. It is already available on iPhones in a handful of apps, and may soon be a standard on tablets as well. How it will be implemented and what security measures will be available remain to be seen, but it will be fun to see the technology develop.
- **Google Translate** – Google’s translation app goes above and beyond the standard text translation tools we’ve used in the past and allows you to speak directly into the microphone on your tablet and receive text output in the target language. Like all translation devices, it is not 100% accurate, but the possibilities here are endless as the technology continues to advance.

### News and Accessibility

News access is very important on a mobile device. You want it at your fingertips, not hidden within five menus in the web browser. Unfortunately, most devices do not provide integrated RSS readers. Luckily, there are apps that take care of that and in recent months some very attractive options have arrived.

- **Pulse** – Pulse is available on Android and iPad and allows you to add specific news sources to the interface. This includes both RSS feed items and predefined feeds like BBC, CNN, and the Financial Times. There are hundreds of news sources built into the interface that preload with a quick search, or you can use your Google Reader or Feedburner accounts to load up a list of followed sites.
- **Flipboard** – Flipboard is currently only for the iPad and made quite an impression last year as the iPad



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app of the year. Initially it was a magazine style way of reviewing your social networking updates such as recent tweets and Facebook wall posts. However, since then, the tool has been upgraded with dozens of content partners like Wired, Time, and Fast Company, as well as RSS functionality for Google Reader.

- **CNN** – CNN’s iPad app is an impressive feat in visual news distribution. The app features a series of panels featuring stories from the CNN website. The app also offers push notifications to your device for breaking news headlines, and all videos play within the app as HTML5 optimized content. Comments are easy to add as well. A similar app launched on the Motorola Xoom, and will be compatible with all Android Honeycomb tablets.
- **NY Times** – The original New York Times app was interesting for sure, and it looked great, but it only offered a small fraction of the news to readers. The current app features the entire online portion of the newspaper and while it does crash occasionally and has issues updating, the overall execution and ability to integrate video and slideshows into a story is impressive.
- **Wall Street Journal** – The Wall Street Journal was among the first newspapers to offer a full digital version of online content. While it does require registration and a monthly subscription, if you are interested in the Journal’s financial news and editorials, they are all available in full on the iPad or Android tablets.
- **Instapaper** – Instapaper is very simple. After installation on your iPad, you can tap the “read later” button that is now integrated into your browser and it will save a copy of any web page or article to your account. The content can then be accessed from any of your devices, including your PC, iPad or Kindle. It’s a great idea and works incredibly well in practice.



### Enhancing the OS

Each tablet operating system has its drawbacks. Whether it is raw functionality on iOS, security on Android, or touch functionality on Windows, there are some things you may want to upgrade or replace on your operating system. Some of these were discussed in “Know Your Operating Systems”, but it’s worth mentioning them again because of how important they will be for you to get the most out of your device.

### OneNote

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I cannot write about tablet software without mentioning OneNote (especially since the iOS App for OneNote was recently approved by Apple). Whenever I receive a new tablet, the first thing that gets installed is OneNote. It allows easy handwriting within notes, multiple notebook syncing, cloud backups using Microsoft's SkyDrive, and multi-device access. In short, it is the ultimate note taking and organizing software. I love Evernote because of its multi-platform functionality, but I will always use OneNote for the raw productivity gains it affords me.



The original purpose of tablet PCs was to digitize handwritten notes. Many of Microsoft's competitors have moved away from that functionality, providing limited opportunities beyond third party apps. However, One Note remains the ultimate tool, when combined with an Active Digitizer pen, for taking, filing and annotating notes. It goes beyond simple taking notes too. One Note allows you to actively search your handwritten notes, something I could only dream of ten years ago. Can you imagine the raw value this provides not only to business users, but to students, doctors, lawyers, and other professionals who take copious amounts of handwritten notes? It's incredible.

Beyond One Note's advanced search functions, the voice dictation tool allows you to record audio clips and embed them into your notes as you are writing, effectively providing multiple input methods at the same time. Instead of jotting down notes from what someone is saying, just turn on your microphone and record it for an addendum to your meeting notes.

Ultimately, a true Windows tablet, with enough RAM and processing power to truly multi-task, along with One Note and an Active Digitizer is the best experience you can have with a tablet PC. There is no more productive way to enter data on these devices.

### **AntiVirus and Security**

For a single user, the iPad is a relatively secure device. Apple's strict control of development and App distribution means that viruses from downloads are extremely rare. Security for multiple users on an enterprise scale is a different matter entirely, though it is one that many third party companies are working on to make the iPad a viable enterprise tool.

For Android users, however, while third party security is less of an issue because the platform is more open, there are quite a few problems to be had with apps and viruses.

Hence the need for good antivirus protection. While a tablet-specific edition has yet to be released, there are a few good tools out there to help with your potential virus problems including:

- **Lookout** – Lookout is fantastic for a few reasons. First, it's free. Second, it offers a "find my device" tool so you can track down your tablet (if it has 3G or 4G access) from a PC. Finally, Lookout also provides backup services to go with your antivirus scanning.
- **Super Security** – For single users, the idea of having a mobile device with personal data on it can be worrisome. Super Security not only scans for viruses regularly; it allows you to store certain important documents and files in a strongbox where no one can access the data. And if your device goes missing, it also has a tracking tool.
- **AVG Antivirus** – AVG has long provided a powerful PC antivirus tool for free. Now, you can integrate it on your Android device for quick, easy scans.

### Windows Touch Functionality

Thought I'd forgotten about Windows hadn't you? It's not that there are no good apps for Windows. It's just that few if any developers have produced "touch-specific" software for the operating system. So, if you know which software you already use on your Windows PC, there isn't much different here.

However, there are some software tools that will make Windows friendlier on a tablet. I covered these in-depth last month when discussing the Windows OS, but they deserve a mention here as Thinix, FrontFace and Eyesboard are all great function adding tools for Windows 7 on a tablet.

- **Thinix** – Thinix provides an overlay to the standard Windows 7 interface, essentially creating a more user friendly touch screen layout. With larger icons for frequently used applications and a number of dashboard shortcuts, it is a very useful upgrade for users who want a faster, touch-friendly Windows 7 layout.
- **FrontFace** – Front Face is similar to Thinix, providing a simple overlay for the normal Windows 7 layout that makes tablet PC interaction much easier. It provides a number of simple apps as well that can be used to expand quick and easy access to common tools on your PC.
- **SWYPE** – This was originally developed as a mobile phone technology using the same ideas behind autocompletion – likely available on your phone. However, since tablet PCs started to take off in 2010, SWYPE is starting to appear on multiple tablets (such as the TEGA v2). Here's why. When you use SWYPE, the digital keyboard on your

tablet will actively prefill words based on an algorithm that analyses your hand motions. If you want to type the word “tablet”, you would place your finger on the letter “t” and then trace it across the “a-b-l-e-t” keys in one fluid motion. SWYPE determines which word you’re trying to type and then displays it on screen. Not only is it incredibly accurate; it is much faster than hunting and pecking on a keyboard.

### Handwriting Recognition

Windows 7 does have one thing that Android and iOS do not – the integration of handwriting recognition. Luckily, there are third party apps to help us out:

- **Graffiti** – If you ever owned one of the early Palm devices of the 90s and early 2000s, you probably remember Graffiti – the handwriting recognition software that made nearly everything easier on what were at the time very advanced smart phones. It’s free and while not very fast due to a lack of in-app integration, it does work quite well.
- **WritePad** – Write Pad is the first app to really pull off handwriting recognition on the iPad. It unfortunately does not integrate easily with existing software yet, so it also has limited capacity, but allowing you to make notes on existing documents in its basic viewer and take simple notes with a stylus is a nice step in the right direction.
- **Apple’s Attempts** – Just because the iPad does not include handwriting recognition doesn’t mean Apple hasn’t tried in the past. For those of you who remember the Apple Newton, you remember Apple’s first attempt to create a pocket device for entering notes. It didn’t work for a number of reasons, but Apple still has the technology under wraps somewhere. They’ve tried in other ways to introduce handwriting recognition to their products as well. Apple Ink is a feature on Mac OS X 10.3, allowing users to writes notes with an input device such as a desktop tablet or a writing pad. Apple hasn’t spent a lot of time developing this technology and you don’t hear about it much, largely because they have not yet developed a touch screen desktop computer or laptop. However, if Apple decided to make the move against Microsoft’s far more popular and powerful TIP on the iPad, technology is available to do so.

There are a lot of people working on this so we can expect more Apps to hit the market in the next few months that allow better handwriting recognition. It’s not simple software, as Microsoft’s decade long development and redevelopment of the Tablet Interface Panel (TIP) can attest to, but when it works right, it provides much needed functionality for tablet interfaces.

### Cross Platform Use

Not every device we use operates on the same platform. There are plenty of people who own Windows PCs, an iPhone and an Android tablet. Those are three very different platforms with very different tools installed. How do you communicate between each device so that the files and tools you need are available at all times?

Luckily, when an app is successful, developers tend to want it on every possible platform. In some cases, it just makes sense for something to be available from every possible angle, and in other cases, it's a matter of money, but if you plan on operating on a multi-platform technology basis, you should know which tools you *must* have on hand.

### **New Ideas on the Horizon**

Right now is a period of major transition in the tablet PC market. There are millions of users finding new ways to use their devices as developers corner markets that did not exist only one or two years ago. Touch screen uses, mobile interaction, and on the fly updating of documents and tasks are all becoming the norm and that means new apps, new tools and new ways to use this technology. It's an exciting time for anyone who loves tablets.

But, what will we see next? How will the app store model continue to scale and what will developers start doing when many of the needs for these devices have been met? Will we see scaling of new ideas or will old ideas be revamped and overhauled to the point of perfection? With a free market model in effect, nearly anything can happen. Demand shapes innovation.

### **Where App Stores are Going**

The App Store model is by far the most successful way of distributing software for tablet computers. I don't see it going anywhere, and in fact, it will likely become ubiquitous on other platforms as well. Apple has already opened a Mac App Store on their home computers and while Microsoft is still avoiding the role of centralized distributor, they have embraced the App model on Windows Phone 7. It may just be a matter of time before we see a similar option made available in Windows 7 for tablet PCs.

Whatever happens, the App Store model will continue to grow and startups will continue to make millions of dollars from simple yet intuitive software ideas. Gaming is becoming a mobile industry, enterprise users will turn more and more to their tablets, and interactivity will take off as 4G networks become the norm. This is the age of mobility and that means the App model will not only continue – it will flourish.

### **Integrating with the PC**

Right now only a handful of Apps provide direct interaction with your home PC. I'm interested to see where this goes in the future. Part of me wants to believe that we will use our home PCs less as mobility becomes both more affordable and more widespread. With LTE networks being activated around the globe and mobile broadband speeds actually exceeding the in-house broadband speeds of most companies in the United States, how many people will want to sit in the office or at home and use a bulky machine anymore?

Despite a dreamer's best wishes, I know that desktop PCs are not going anywhere. They are secure, they are easy to control and they are always more powerful. For things like desktop publishing, video and audio design, or gaming a desktop will always be the preferred tool of tech enthusiasts. But, those same techies are starting to want mobility to meet their on-the-go lifestyles.

Email, video chat, Internet surfing and even document editing can be done on the go, and that means these two platforms need to learn how to communicate better. Apps like Dropbox and Evernote have been designed to integrate as much cross-platform compatibility as possible, to the point of file structure sharing. But, there are other apps that can learn from this form of compatibility.

Integrating cloud server functionality into an app is a must right now if you offer file saving. Note taking, file editing, and even gaming should allow users to save directly to their Dropbox, Box.net or Soonr account. And while Apple may yet embrace cloud storage, Google remains focused on web based cloud applications, so developers can make inroads with better file storage integration on Android devices.

If you own an Android Tablet, Google provides a number of powerful tools to integrate your desktop and laptop PCs with your tablet. This includes much better Google App integration and Chrome Sync for web browsing. Apple languishes a bit on this one as their own cloud based services are still very expensive and limiting in many ways. However, the push is clearly underway and will have an impact in the very near future on how we use our mobile devices.

### Cloud Based Options Expand

Cloud computing is the future. It's not just because it is so much more useful than a local app model. It's because it is more affordable for manufacturers to support the idea of centralized storage compared to loading their devices with extra flash memory or SD slots.

Already, there are rumblings that Apple will make MobileMe, their previously paid cloud storage service free for iPad and iPhone users, much like Dropbox with its free 2GB plans. And while Google's philosophy turns away from storage and toward integration, every update of the Android OS has stronger support for Google's Apps.

Enterprise users clamour for cloud solutions for a number of reasons. Not only would it make devices more interchangeable – just login and access your data – it would make security much more viable on a mobile platform that is increasingly becoming a problem for people who take and use their devices everywhere. Lost device? Not a problem – just change the password or wipe the cloud account and sensitive data is safe.

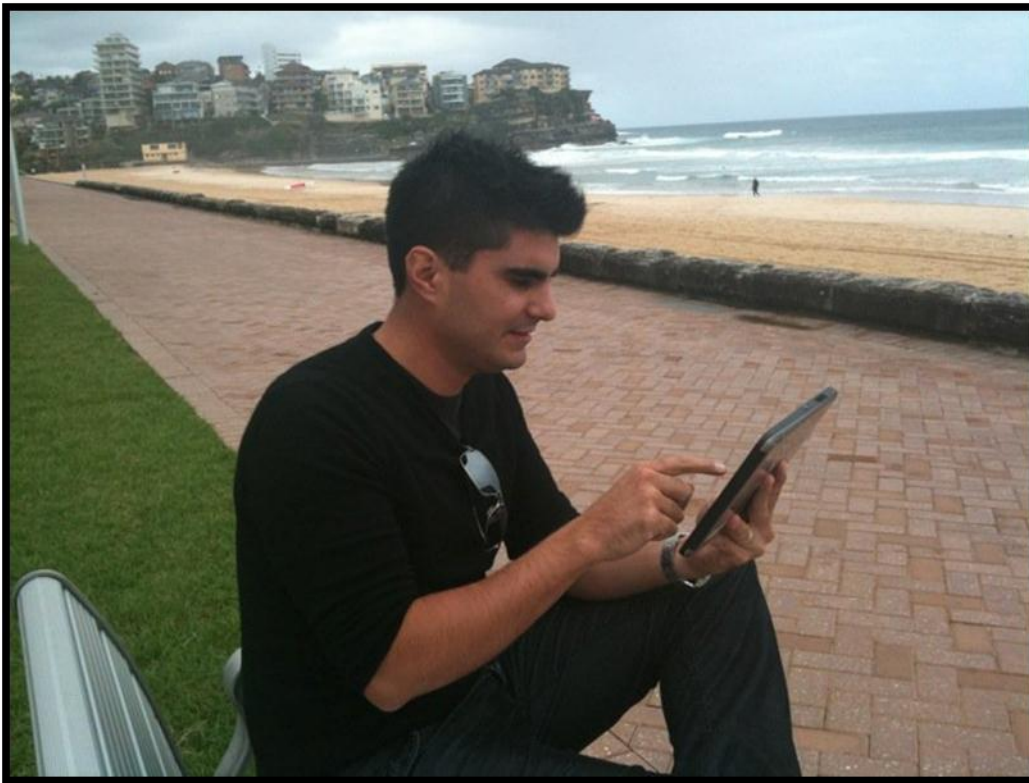
## Tablet PC Software and Apps

Cloud computing never really took off on desktops and laptops the way that some companies hoped it would. Sure, there are plenty of popular services making the hard drive less important than ever before, but it is mobile devices that will really push the computing industry into the cloud in the next five years. With limited built-in storage and manufacturers looking for more ways to reduce the cost for end users, cloud access is important in the retail sector. But, even more so for enterprise clients who need reliable data security for their mobile devices, cloud computing is the way of the future.

### Conclusion

Tablet computing is a major new addition to the tech industry. It will change how we think about your PCs and our mobile devices and it will keep us connected in ways we never dreamed possible. And more than ever before, the software developers and innovators outside of the manufacturers will have a big say in how that happens. Centralised app distribution and uniformity in design make it easy for users to grow comfortable using small, portable software applications for nearly all of their daily computing. It will be incredible to see what new ideas are developed in the months and years to come.

### About Hugo Gaston Ortega



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Hugo Gaston Ortega has been awarded the status of [Microsoft MVP](#) annually since 2006. His commitment to the better understanding of Tablet PC globally has been recognised by his peers and utilised through annual roles as Guest Speaker at events like Microsoft Teched Australia and New Zealand, CeBIT Hannover Fairs, IT Managers Conference for the AIS (Association of Independent Schools) and more. Ortega is the founder and Principal of [Tegatech Australia](#), [Tegatech North America](#) and [Tegatech Europe](#), and has helped expose thousands to the power of mobility and bolstered the reputation of countless manufacturers worldwide. Early 2010 saw Tegatech launch its own brand of Tablet across Australia, dubbed the TEGA, and with great success its predecessor the TEGA v2 globally.

Hugo's ability to take a complex subject matter and make it fathomable makes the messages he delivers all the more appealing. His blog has been quoted in newspapers, online media and event on mainstream television on several occasions. By tuning into Ortega's blog you will be tapping into an abundance of Mobile PC resources and simultaneously gain access to unique pockets of information often exclusively delivered through his @MrMobilePC alias.

As a father of two, and husband of 10yrs, Hugo often takes a real world look at technology today and shows how you can make major productivity improvements. Residing in Australia but spending much of his time circumnavigating the globe, his experiences are often published as they occur.

Enjoy being part of @MrMobilePC ([www.MrMobilePC.com](http://www.MrMobilePC.com)) and interacting with mobility expert, Hugo Gaston Ortega.