Android tablet e-reading apps

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"Tablets" -- flat, thin, computing devices controlled through a touchscreen system -- mostly fall into two groups: the Apple iPad, running proprietary software created and closely controlled by Apple, and those from other manufacturers running the open-source, Linux-based Android operating system, funded and supported -- but not owned – by Google. There are a few Microsoft Windows-based tablets on the market, but they are still comparatively rare. All three types of device offer network and internet connectivity as a standard feature, and all provide one-stop centralised access to a wide variety of free and paid apps software. This article examines and compares some of the display applications available for text-based and PDF ebook formats on the Android tablet.

TABLETS: A FIRST IMPRESSION

I recently took delivery of a generic Android[1] tablet sourced from China and acquired via eBay. There are two standard sizes currently available – seven inches and 10 inches, measured diagonally across the screen. As I already have a seven-inch ebook reader, I purchased a 10-inch tablet. Included in the package were a plug and cable for charging the battery, adaptors for connection to a wired network and a PC, a micro-SD memory card, a protective plastic overlay for the glass screen, a rubber-tipped stylus and a small detachable keyboard. The device itself contains a basic digital camera and reasonably good stereo speakers. It connects via Wi-Fi to our domestic network, and also supports Bluetooth, although I have not tested this. The device weighs about 700 grams, and the screen display area is slightly larger than an A5 sheet of paper. The touchscreen is capacitive, rather than the older resistive type, which makes it respond better to finger touches, but rules out the use of a hard stylus.

Its built-in software includes a web browser, a rudimentary word processor, spreadsheet and presentation package, Adobe Reader, a music player, an image and video browser, a basic file manager, and Google Maps. There is a choice of two keyboard programs; these display a keyboard on the screen when the user needs to enter text. A screen lock can be set so that users require a password to activate the device, giving some basic data protection. A version of the popular Angry Birds game was also provided. All the software worked as expected.

There were a few things about the tablet that took some getting used to. First, it is quite heavy, and the weight feels awkwardly distributed: if it slips out of your hands and falls on your face while you are reading in bed it will not break your nose, but it may feel as if it has. The smoothness of its back and base make it difficult to prop up, and judging from eBay, there is already a substantial after-market in stands and other devices to keep the things upright. I purchased one of these, but later found a better solution -- buy a couple of non-skid gel pads and attach them to the back.

Secondly, the device contains a motion sensor which optionally rotates the screen when you rotate the tablet, provided it is upright. I have not made up my mind yet whether to leave this on or turn it off; it is handy sometimes but it is also disconcerting to lower the tablet when you talk to someone and find when you go back to it that it has turned sideways. The decision is complicated by the fact that some applications work happily in all four orientations, some in only two, and a few in only one. And when laid on a flat surface, the tablet has no way of knowing which way is up.

The tablet is clearly intended to be connected to the internet for much or all of the time, and some of the applications are supported or subsidised by online ads, which are displayed on the screen while

you use the app. With Wi-Fi turned on, it uses up a battery charge fairly quickly, and has to be recharged every night, while my smaller ebook reader, without Wi-Fi, will run for several days. And I found the Wi-Fi on my unit to be less responsive than that on my netbook computer, possibly because the tablet size entails a smaller aerial.

The hardest feature to come to terms with, however, is doing everything through the screen. The tablet user has to learn a complicated repertoire of strokes, drags, taps and pats which vary from one app to another. It is crucial to avoid inadvertently brushing or tapping the screen while reading it or using it for other things. But if you can live with these issues, the Android tablet is a very likeable device.

SOURCING APPS: THE PLAY STORE

New software for the tablet can be found and downloaded from a Google-hosted site called the Play Store.[2] Business users should not be put off by the name – there are business applications there too. The items are grouped into apps, books and games, and each category can be browsed or searched. The books category represents Google's own as-yet half-hearted attempt to compete directly with the Amazon Kindle, while apps and games are sourced from other suppliers. Many apps are free and/or funded by advertising. Prices for commercial apps range from 99 cents to $15 or more. Most cost substantially less than equivalent programs for a PC.

Access to the Play Store is tied into your Google account, so you can also browse the store on your PC, and select apps to be sent to a tablet later. The number of apps is growing daily and existing apps are continually under development; upgrades will normally download and install automatically when your tablet is online. The Play Store includes reviews (good *and* bad), recommendations and "users of this app also downloaded" links, which can provide guidance for a novice.

Independent app stores are maintained by other suppliers, notably Amazon,[3] although their prices appear to be similar.

Because the tablet is a cloud-oriented device, you should consider installing some security apps, such as the free Zoner AntiVirus, to prevent malware from making its way on to your tablet and possibly into your home network.

E-READING APPS

My two main interests in purchasing a tablet were to try it as an ebook reading device, and – as an indexer – to see if I could use it as an alternative to marking up manuscripts on paper. I have described the results under two headings: general reading apps which handle text-based formats, and apps which specifically mention a PDF mark-up capability. Those in the first group were generally free, while most of those in the second group required purchase. None cost more than $4. Most of these apps are also available for the iPad, iPod and iPhone systems.

General apps for text-based ebooks

For reasons of space I have avoided specifying the ebook formats used by each app. Details of these can be found on the websites referenced for each. All apps work in both portrait and landscape orientation.

Kindle Reader

The Kindle Reader app requires the user to have an account with Amazon.[4] It will synchronise the ebooks on the tablet with those on the reader's Kindle device and/or PC, including keeping track of the reader's progress through each book. Users can also purchase and download new books directly

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[2] "Home – Google Play", https://play.google.com/store.

[3] "Amazon.com: Appstore for Android", http://www.amazon.com/mobile-apps/b/ref=sa_menu_adr_app4?ie=UTF8&node=2350149011.

[4] "Amazon.com: Kindle eBooks, Newspapers, Magazines, Blogs", http://www.amazon.com/kindle-store-ebooks-newspapers-blogs/b?ie=UTF8&node=133141011.

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from Amazon via the tablet. Page turning is via a tap or sweep gesture. Dragging over the text produces a magnifying lens and allows text to be selected. The user can then add a note or highlight the text. There did not appear to be any way to extend a highlight between pages, but the text can be reduced in size to fit more on each page. Users can also search for selected text in the book. A progress bar along the bottom allows the user to move – rather clumsily – to any page in the book. Tapping the screen brings up a menu where the user can select from a limited set of font sizes and screen colours. Unlike a "real" Kindle, the app does not allow the user to categorise their books in any way.

The app is limited to Kindle-formatted books, but for many users its connection with Amazon and their other reading devices will make it an attractive option.

Kobo

The Kobo reader app links up with another proprietary ebook retailing system.[5] Setting up an account is free, and you are automatically sent two books, including Jane Austen's *Pride and Prejudice*. Unlike Google, there does not appear to be a provision for offline storage, but Kobo keeps a log of your reading activities, which may be of value to readers who want to blog or otherwise record these. As with the Kindle, it is possible to add notes and highlights, but the slowness of this process – over 30 seconds to switch into selection mode – make it unlikely to be much use in practice. This is a pity, because the method of selecting text in the Kobo app is the best I have yet encountered. If its speed problem could be fixed, Kobo would be capable of competing with the Kindle app. Amazon is still the merchandising leader, however, with about three times as many ebooks available.

Aldiko

The website[6] for the free Aldiko ebook app boasts of more than five million downloads. It links to its own ebook store, Books on Board.[7] The number of books available here is smaller again than on the Kobo site, but Aldiko will also read non-proprietary formats such as EPUB. These can be imported to your own Aldiko library or viewed "in place" – eg on an SD card or via a network connection. The user can drag over text to select it for searching or copying, and look words up in a dictionary, but there does not appear to be any way of highlighting or adding bookmarks. Tapping near the base of the screen displays a progress bar and a brightness setting. The minimalist presentation is attractive, and file handling is quick and fairly intuitive, but a lack of options puts this particular app near the bottom of the ebook reader list. One plus, however – Aldiko will also display PDF files.

Cool Reader

Cool Reader[8] is a free open-source app which comes with a useful introductory ebook manual. It takes the opposite approach to Aldiko, with adjustable settings for every imaginable aspect of your reading experience. These include a choice of dictionaries for word lookups, autoscrolling of text for hands-free reading, reading text aloud, and customising how the screen responds to taps in any location. A bar across the top displays progress through the book in terms of pages. Text can be selected fairly easily for copying or making notes, and tapping the centre of the screen brings up a menu with access to innumerable options.

On the negative side there is a horrible wood-grain pattern on the file selection screen, and the automated voice used for reading aloud sounds dangerously ill. Overlooking these minor failings, Cool Reader is a superb attempt to give people exactly what they want in an e-reading app.

[5] "Kobo eBooks – Explore Great eBooks and Read in Your eReader, Computer, Smartphone or Tablet – Kobo", http://www.kobobooks.com.

[6] "Aldiko – eBook Reader Application for Android", http://www.aldiko.com.

[7] "BooksOnBoard: Find eBooks for iPads, Free eBooks, iPhone eBooks, Android eBooks, Kindle Fire eBooks | Ebooks | BooksOnBoard", http://www.booksonboard.com/index.php?ebooks-audio-books.

[8] "CoolReader Homepage", http://coolreader.org/e-index.htm.

Moon+ Reader

Moon+ Reader[9] is Cool Reader with a haircut and a new suit. The most important options have been retained, but the menus are tidier and the interface a little friendlier. Even the reading voice is healthier, though not yet fit to leave the hospital. Better still, it hooks directly into online sources of free books like Project Gutenberg. If you want a responsive customisable e-reader but cannot be bothered tweaking all the fine details, Moon+ Reader is for you. There is a Pro version ($5) which adds extra features. Both are highly recommended by reviewers on Google Play.

Mantano Reader

Mantano Reader[10] has similar features to Moon+ Reader, without the Gutenberg links, but it deserves special mention for its excellent highlighting mode; with this switched on, users can highlight words with a tap, drag over sentences to highlight them, and move from one page to the next. Other designers please copy! Users can also add notes and drawings. Like Moon+ Reader, Mantano Reader also has a paid version without advertising – called "Premium" – at the extravagant (for Android) price of $6.12. Mantano will display PDF files, but highlighting in these files does not work as well, because each new page appears at a large scale, which makes it impossible to select individual lines.

PDF reading and mark-up apps

I did not attempt to survey all specialised PDF reader apps, but focused on those which had page mark-up capabilities. I have also included Adobe Reader, as a widely used program that should be pre-installed on most tablets. All these responded to finger taps and swipes to turn pages, and could be zoomed in and out with a "pinch" or "reverse pinch" gesture. All of them appeared to work in any orientation. From my perspective, all the apps suffered from the same problem: to highlight text it was necessary to jump from "reading" mode to "editing" mode, and the speed and ease of that transition varied from excellent to very poor. There were also substantial variations in how quickly the apps were able to render scanned pages.

Adobe Reader

Adobe, of course, has a finger in every platform pie, and the Android is no exception. The free Adobe Reader app[11] will be familiar to most people from its incarnations in Windows and Macintosh versions, and the Android version adds little to these other than a progress bar along the bottom. It is a minimalist, efficient display, although a little slow to render page images. It supports reflowing to fit the page size for pure text documents, but the file retrieval system is very clumsy, especially with large collections. Users should install a good file management app, and use that to locate and open files instead; in fact that applies to all the reading apps listed here.

RepliGo Reader

RepliGo[12] is another minimalist PDF reader. It has some nice features: tap to zoom, for instance, and the ability to hide a page image and just display the text. But highlighting is awkward because it involves five steps: open a menu, click a button, choose a menu option, drag over the text, and then, finally, select "Highlight" from a pop-up menu. This is a pain, to say the least.

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[9] "Moon+ Reader – Android Apps on Google Play", https://play.google.com/store/apps/details?id=com.flyersoft.moonreader&hl=en.

[10] "Mantano – E-Reading Applications Mantano – E-Reading Applications", http://www.mantano.com.

[11] "Adobe Reader – Android Apps on Google Play", https://play.google.com/store/apps/details?id=com.adobe.reader&feature=search_result#?t=W251bGwsMSwxLDEsImNvbS5hZG9iZS5yZWFkZXIiXQ.

[12] "RepliGo Reader – Android Apps on Google Play", https://play.google.com/store/apps/details?id=com.cerience.reader.app&feature=search_result#?t=W251bGwsMSwxLDEsImNvbS5jZXJpZW5jZS5yZWFkZXIuYXBwIl0.

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ezPDF Reader

Files are reasonably quick to load and render text in ezPDF Reader.[13] Moving to highlight mode was a little faster than RepliGo, requiring just a tap and a button press, and the selected area could be adjusted before highlighting, although the adjustment controls were a little fiddly. ezPDF Reader took a little getting used to, and its sensitivity to screen taps and strokes caused – and still causes – a good deal of frustration, but with use I found it the best program for marking-up PDF files with highlights. Hopefully it will get better still with time. A "Lite" version of the app is available for $1 from the Play Store.

Foxit PDF

Foxit[14] has a long and distinguished history on the Windows desktop as a provider of better and/or cheaper alternatives to Adobe's PDF-related applications, and it is satisfying to report that it has done it again on the Android tablet. Rendering was fast, page transitions are smooth, and the highlighting mode can be turned on and off via a single generously-sized button. This all makes a big difference when highlighting several lines on each page for hundreds of pages. For now, exPDF Reader is my program of choice for annotating PDFs, but Foxit just edges it out for actually reading them. It would be nice if either app used the same methods for highlighting PDFs that Mantano Reader uses for EPUB files, but you cannot have everything -- yet.

CONCLUSION

Reviewing tablet apps at the moment is akin to shooting at moving targets. During the time I was writing this article, I received several automatic updates to my apps each day, although none of them so far made a game-changing difference. With prices dropping rapidly and the quality and quantity of software shooting upwards, the future of the Android tablet market seems assured. Relatively cheap, robust, portable, responsive and incredibly versatile, they seem custom-made for a library environment. Most of us will have a tablet – or two – somewhere in our future.

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[13] "ezPDF Reader – Android Apps on Google Play", https://play.google.com/store/apps/details?id=udk.android.reader&feature=search_result#?t=W251bGwsMSwyLDEsInVkay5hbmRyb2lkLnJlYWRlciJd.

[14] "Foxit Mobile PDF Reader for Android – Overview", http://www.foxitsoftware.com/products/mobilereader/android.