

INT BOOKS - eBooks Questions

What exactly is an e-book? - The answer is variable as the format keeps changing.

AUDIO

The earliest e-books (in the sense of a digital file) was the audio book in digital format. These were mainly mp3 files delivered by download, on a CD disc, or on a special format memory stick that included the physical play controls and a head-phone port.

PDF

The next solution was to use the Portable Document Format (pdf). These are well known to PC users, the file is self contained, the page display is proportionally fixed, there can be imbedded active links to outside internet resources, or resources supplied with the pdf file (often on the same CD disc).

The fixed nature of the display, while a benefit in preserving layout integrity, does not cope well with small screen displays . This is being addressed by Adobe, but the "re-flow" capability has to be specified on creation of the file, and is not backwards compatible.

The advantage of pdf files is their ease of management and the way most document programs can recognise them and accept cut and paste elements into school reports and presentations.

EPUB

The most common new format is EPUB - a free and open e-book standard by the International Digital Publishing Forum (IDPF). Files have the extension .epub.

EPUB is designed for reflowable content, meaning that the text display can be optimized for the particular display device.

EPUB is an xml file format - this is like standard web pages in that all elements must be top and tailed with tags . Styling and layout is controlled by a form of CSS (style sheets) that must be included with the content. All images and audio must also be defined and tagged. The entire e-book comes as a form of compiled ZIP file.

As an open standard, the tags and included file types are very rigid. But it is also an evolving standard and e-books are backwards compatible - old books keep working. The xml format means that e-book parts have a relative relationship. This allows for display software and hardware readers to adjust the content to suit their display needs and to allow for extraction of text and other content.

It also allows for the inclusion of Digital Rights Management (DRM) software. Apple's iBook library and iBookstore, Adobe Digital Editions, and most subscription e-book library suppliers imbed their own DRM file and tags to control the physical readers available, to reduce pirating of content, and to commercialise content.

DRM also allows for the "expiry" of content - an e-book can stop working (and sometimes self-delete) on a preset date , or at a time after first recompiling (opening the book), or at the end of the read (after the last page has scrolled).

The drawback with EPUB is its poor handling of complex graphics (like graphic novels) and of complex technical drawings (technical references) and poor handling of audio. It is very suitable for adult text-based books, like novels, and books with limited and discrete illustrations.

As it is an open standard (DRM modifications aside) it has allowed for self and small publishing , web based services, community library collections, as well as a commercial pathway for major organisations.

Adobe offer Adobe Digital Publishing Solutions, and Content Server 4 - popular systems for major library services companies.

Most desktop publishing programs now export to EPUB format, with on-screen formatting being preserved in the digital form.

FLASH

A fourth format is the Adobe Flash based a-book . Flash was developed to display chunks of video on the Internet. But because it produces self extracting files, the definition of video now encompasses the entire screen display.

Flash files are viewable on most operating systems, from PCs to Electronic Whiteboards, using the Adobe Flash Player and related web browser plugins, or one of several third party programs like VLC or RealPlayer.

Flash e-books are created by taking graphical images and packaging them into a display with a time-line element. The advantage is that the original display proportions are preserved (like the first pdf e-books) but a multitude of additional digital elements can be added and introduced, with or without their own time-lines.

Flash e-books usually include the play and audio controls within the screen display, and don't need a specific hardware reader with external controls. A mouse or touch screen is enough.

Flash is much better for complex graphics, but the display is proportional, so text readability problems can arise with large screen displays.

Although Flash is a proprietary product, it has become a default standard on the Internet and in electronic publishing.

The first batch of Flash based e-books (f-books ?) took either re-scanned print books, or the original digital print files and layers, and built in audio, read along, sound effects and very basic page turn functions . The use of original image layers allowed for simple animation of background and foreground elements.

Progressively, more animated elements appeared . The neat page flick, page turn (with sound effects) was introduced, and each page became capable of multiple imbedded links to external web sites and resources.

Online Flash e-book publishing services have evolved, offering self publishing, and online sales services.

PROPRIETY FORMATS

DRM is used to encrypt as well. The original mobipocket books (.prc and .mobi files made popular when Terry Pratchett first published free online editions) evolved into the Kindle format once Amazon bought Mobi.

Amazon (via Kindle) do not support native EPUB format instead offering .AZW files, limited support for native pdf files, and some conversion of .pdf and .epub files to AZW format.

Barnes &Noble are supporting the Palm Digital eReader format - this was developed for the Palm range of PDAs and moved on the many smart-phones and PDAs mostly using third party applications. Some support for .epub and .pdf formats.

INT BOOKS - eBooks Questions

Sony have a special e-book format for their readers, but do support .epub and .pdf formats.

The majority of commercial e-books suppliers, library systems suppliers, and secondary and tertiary online services suppliers go with Adobe Digital Editions DRM encoded materials.

These are delivered mainly using Adobe Content Server. These are .epub format e-books and use "ADEPT" DRM (spawning the development of DRM removing software). The Adobe package allows for price-per-use/download and book expiry making this attractive to libraries.

Other .epub based formats are available - Mills and Boon use .nbl - developed by an Australian company that also supplies e-book publishing software, and the NBL Reader.

THE FUTURE

The EPUB format has been very successful for traditional text based materials.

However it does not yet allow the flexibility of Flash based books to include interactivity and complex media mixes - that said it is a very compact and powerful format for novels, and will underpin the mass e-book market and the flow on social media sites.

FLASH is very resource hungry and Apple rejected it for the iPad, partly for this reason.

But Android powered tablets and netbooks do support FLASH so there will be plenty of scope for Flash driven ebooks - especially in online subscription based services.

HTML5

The latest format is an extension of standard open source web coding, to include animation of the elements. This can be very clean code and light on resources.

Apple have released an i-Books Author desktop publishing package specifically to design and publish HTML5 ebooks - these are currently tightly linked to the Apple i-Bookstore distribution model, but this type of publishing software will be quickly copied by the open source community and the other major IT companies, opening up the distribution choices and options.

e-BOOK ECONOMICS

In general, publishers are still trusting the print book to create the marketing impact to support the e-book version. A stand alone e-book ends up costing the same as a printed paperback edition if you add in the cost of the marketing and promotions needed to gain attention and sales.

It can cost the publisher/author up to \$1500 a title to create and edit a novel into e-book format.

Amazon 's \$9.99 books are reportedly costing Amazon \$13 a sale in fees and costs. But they are loss-leaders into everything else Amazon sell.

However, the flexibility of e-books, especially the new HTML5 format, to include video, audio, 3D images, and reader controlled animations of illustrations, maps, and charts, in the basic text book design means that e-books will both extend current book styles, and make specific topic books possible.

e-BOOKS IN SCHOOLS & COLLEGES

Higher level colleges and upper level grades in secondary schools have experienced e-books in mainly the pdf format for many years. These are mainly scholarly journals delivered by subscription. Some of these are major encyclopedic collections.

Below that are the State Education intranets - The Learning Federation, Scootle, The Learning Place, MyClasses (catholic education) - these provide a web based catalogue of documents,

INT BOOKS - eBooks Questions

pdfs, interactive programs, and actual programs, plus links to web sites.

Below that again are discrete software packages - most designed to run on electronic whiteboards, and some on networked computers.

And last are consumer programs and applications - usually manually loaded on computers and ipads or e-book readers, and linked to individual teacher accounts .

BOOKSELLERS AND e-BOOKS

There are a number of options:

Social-media style networks - eg: ReadCloud - where the bookseller pays for a "territory" of people sharing information on (and hopefully buying) ebooks.

Online e-Books - eg; Booki.sh - where the bookseller has an e-book portal on his web site for customers to buy and read e-books via a central server and service.

Kiosks - eg: Collins KOBO model - with a proprietary kiosk that sells and downloads to e-readers a range of selected books.

Subscriptions - eg: the bookseller acts as an agent promoting signups to online e-book systems. While these are mostly large scale subscription services and education textbook delivery by subscription or links to printed books, managed e-platforms where the library or school own the e-books and pay for a e-resource management system on a fee-per-use basis are becoming popular.

CDRoms - mainly pdf, Flash, and HTML5 e-books supplied on a disc or USB stick, for direct sale and supply to the end customer. This model is like the print book sales systems, and is efficient as it uses existing expertise and accounting patterns.