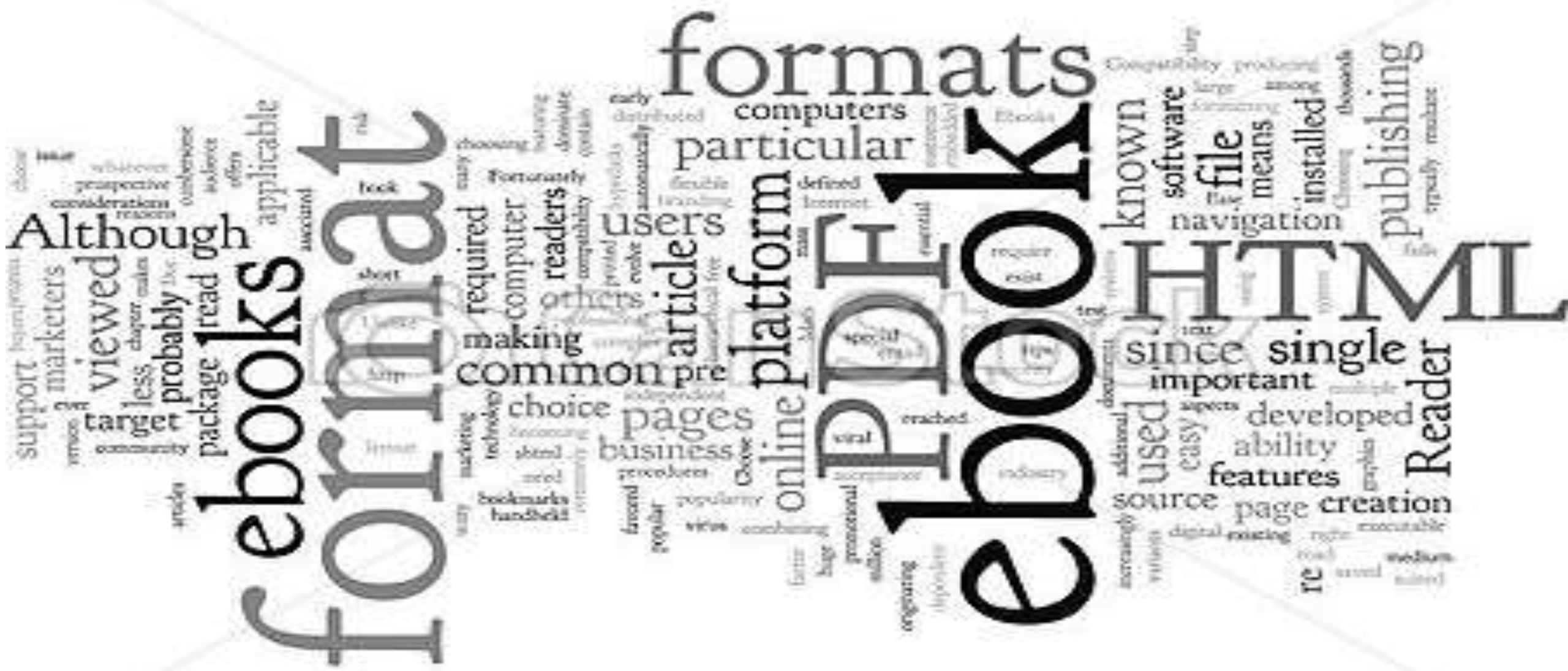


eBook File Formats



Features of an eBook

Before we look at specific eBook file formats, we need to understand the features that make an eBook an eBook.

- There are common eBook features supported by most eBook file formats.**
- Some of these features are supported by other types of file formats as well.**
- Some file formats that are often used for eBooks do NOT support common eBook features.**

Features of an eBook

Whether or not the eBook file format supports a feature, it is up to the publisher/creator of the eBook to implement that feature in the book.

Features Supported By Most eBook File Formats

Reflow – Probably the most important feature for an eBook

Reflow adapts the book's presentation to:

- To the output device (e.g. smartphone, eReader, computer, tablet),**
- To the device orientation (portrait, landscape), and**
- To user selected format changes in fonts, font sizes, background colors, etc.**

Features Supported By Most eBook File Formats

Reflow – Probably the most important feature for an eBook

Reflow is also supported by some file formats that are NOT specifically eBook formats like MS Word (.doc, .docx), Rich Text Format (.rtf) and most other word processor formats.

Note: Using hard carriage returns and hard page breaks can defeat reflow.

Features Supported By Most eBook File Formats

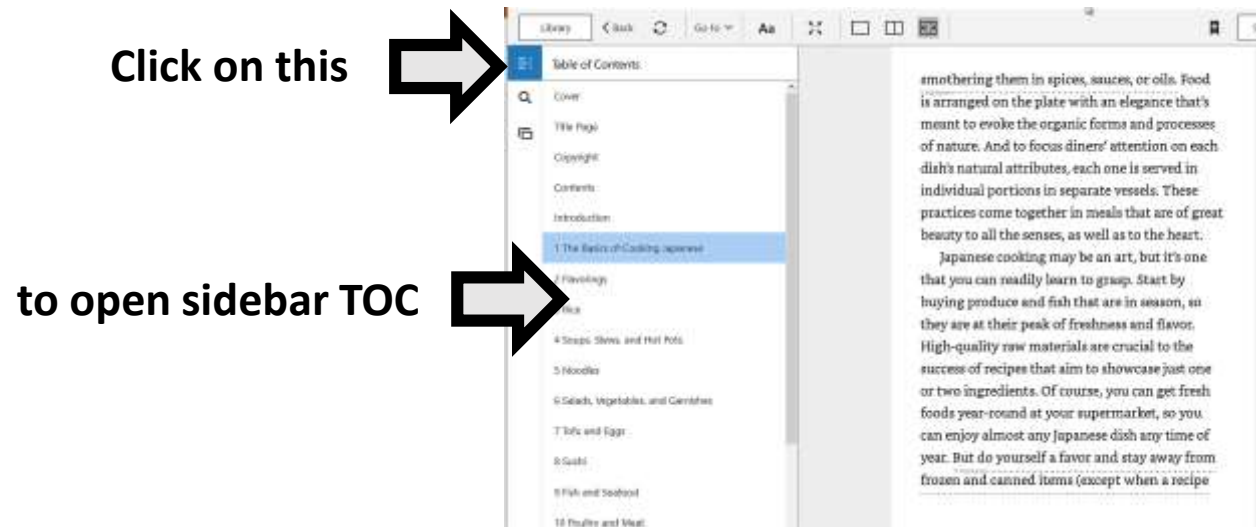
- **Embedding of pictures, illustrations, audio and videos.**
- **Enhanced Typesetting - Allows the user to change fonts and font sizes without messing up page layouts, even at larger font sizes (can be considered a part of reflow).**
- **Page Flip - Allows the user to explore the book without losing their place.**
- **Word Wise - Explains the most challenging words in the book.**

Features Supported By Most eBook File Formats

- **Table of Contents, Indexes and References (as part of the main document) with Internal and External Hyperlinks (also supported by PDF and some word processor file formats).**

Features Supported By Most eBook File Formats

- Some eBook file formats, as well as PDF's, also support a sidebar ('metadata') Table of Contents



eBook File Formats

**There are MANY different file formats used for eBooks.
We're going to take a quick look at the five most popular.**

**The last two of these are not full eBook file formats but are
popular for eBooks anyway.**

EPUB (.epub)

- **Because EPUB is free to use, open standard, and vendor-independent, it has grown to become the most common eBook format.**
- **An .epub file is an unencrypted zipped archive containing a set of interrelated resources that can be uncompressed and read by an eReader device or app.**
- **Through internal media overlays books can have synchronized audio narration and can be both an eBook and audio book.**

EPUB (.epub)

- Epub supports color images, SVG (Scalable Vector Graphics), interactive elements and full videos.
- Epub supports interactive elements like page bookmarking, passage highlighting and notes.
- Epubs can support DRM (Digital Rights Management, aka 'copy protection') although the specific methodology is up to the publisher.
- Most Amazon Kindle devices cannot read epub's, but most other eReaders such as Kobo, Sony, Nook and iPad can.

AZW, AZW3 (KF8), KFX

- **These are Amazon's proprietary eBook formats for their Kindle readers and the Kindle apps for smartphones, tablets or computers.**
- **These formats support video and sound, as well as page bookmarking, passage highlighting, notes and other features.**
- **Most Kindle books have DRM (Digital Rights Management).**
- **Kindle devices/apps have the ability to sync your reading between the devices/apps.**

AZW, AZW3 (KF8), KFX

- On a Windows computer with the Kindle app, the AZW, AZW3, KF8 or KFX file is usually in a subdirectory with supporting files.
- The sub-directory and file names are usually obfuscated so that it is not clear what book they are for or what the files do.

c:\Users\Username\Documents\My Kindle Content\ *(directory for Kindle books)*

B000QCS93M_EBOK *(subdirectory for the book with the name of the book obfuscated)*

amzn1.drm-voucher.v1.ff5e8298-4262-4cba-8658-a84aadb7cc7.voucher

B000QCS93M_EBOK.apnx

B000QCS93M_EBOK.azw

B000QCS93M_EBOK.phl

CR!AXBDFQ8E8D08H74RR9CM6AMESSKT.azw.res

CR!QVRXM9DRS91S12KS29HZ4M98P1BG.azw.md

KePub

- **KePub is Kobo's proprietary variant of epub.**
- **They can only be read with a Kobo eReader or the Kobo apps for smartphones, tablets or computers.**
- **Most Kobo books have DRM (Digital Rights Management).**

KePub

- On a Windows computer with the Kobo app, the filename for the book has no extension and the name of the book is obfuscated
- Like an epub, the file is a container for all the elements required to display the book

c:\Users\Username\AppData\Local\Kobo Desktop Edition\kepub\ *(directory on computer for Kobo books)*
0da4c734-ba3c-47c1-bb0f-723161b41b8f *(file for a book)*
30d6bcf8-b46d-4d61-9e3d-cfc9633ec33b *(file for a book)*
562ae06a-4a48-4133-b2a6-cdfb5372089b *(file for a book)*

PDF (Portable Document Format)

- **Because of its widespread adoption around the web, PDFs have become a popular way of delivering eBooks.**
- **PDF's are designed to mimic printed documents and so do not support some eBook features. Its biggest downside is the lack of native reflowing.**
- **PDF's support interactive elements such as annotations and form-fields, pictures, and audio and video content.**
- **PDF was originally proprietary to Adobe, but is now an open international standard (ISO 32000).**

RTF (Rich Text Format)

- **The Rich Text Format (.rtf) is compatible with every major eReader on the market.**
- **RTF supports embedded pictures and illustrations.**
- **RTF supports embedded objects (e.g. tables and charts from a spreadsheet app).**
- **RTF is a proprietary Microsoft format, although they publish the specifications and allow others to use it royalty free.**

RTF (Rich Text Format)

- **Most eReaders also support plain text (.txt).**
- **RTF has an advantage over TXT because of its ability to retain special characters and its support for text formatting.**
- **Both RTF and TXT support reflow.**

Convert Between eBook Formats

The Calibre eBook manager can convert between most eBook and text formats

- **Input Formats: AZW, AZW3, AZW4, CBZ, CBR, CB7, CBC, CHM, DJVU, DOCX, EPUB, FB2, FBZ, HTML, HTMLZ, LIT, LRF, MOBI, ODT, PDF, PRC, PDB, PML, RB, RTF, SNB, TCR, TXT, TXTZ**
- **Output Formats: AZW3, EPUB, DOCX, FB2, HTMLZ, OEB, LIT, LRF, MOBI, PDB, PMLZ, RB, PDF, RTF, SNB, TCR, TXT, TXTZ, ZIP**
- **Calibre also allows you to edit the text, edit the metadata, change the text size and font, create a table of contents, customize the output page size, etc.**

Convert Between eBook Formats

- **To convert from Kindle (AZW, AZW3, KF8 or KFX), Kobo (Kepub) or other proprietary DRM'ed eBook formats you first need to remove the Digital Rights Management ('copy protection').**
- **Removing the DRM is illegal in some countries.**
- **Some countries allow removing the DRM in order for the owner to backup their files or otherwise use them for their own personal use, but it is still illegal to remove the DRM for the purpose of distributing copies of the book to others or retaining a copy of a library book.**
- **Epubor (epubor.com) is a good app for converting DRM'ed books**

A Quick Note on eReaders

- **In Canada, Kobo (Indigo/Chapters/Coles) has ~45% of the dedicated eReader market, Kindle (Amazon) has ~25 to 30%, Sony is in third place and the balance is shared by a number of other brands (2016).**
- **I will be doing a brief overview on eReaders and eReader apps at some point in the future.**