Producing E-Books from InDesign: EPUB and Kindle

By Anne-Marie Concepción and Gabriel Powell

The material in this article is taken from one of the most popular and well received presentations at the recent InDesignSecrets Print and ePublishing Conference. Two lively and effective speakers delivered this fast-paced presentation, and it was obvious the hundreds of people in attendance were hanging onto every word. Some even photographed the material as it was presented on screen. TSR is pleased to present this information because it delivers in-depth insights on a task many publishers are struggling to complete efficiently.

Some publishers are turning to third-party services to convert books to e-books when the process could be done with lower costs and better results in-house. The material in this presentation will help publishers create effective multi-channel workflows. It will also help graphic designers and production staff who need to know how to convert files into an e-book.
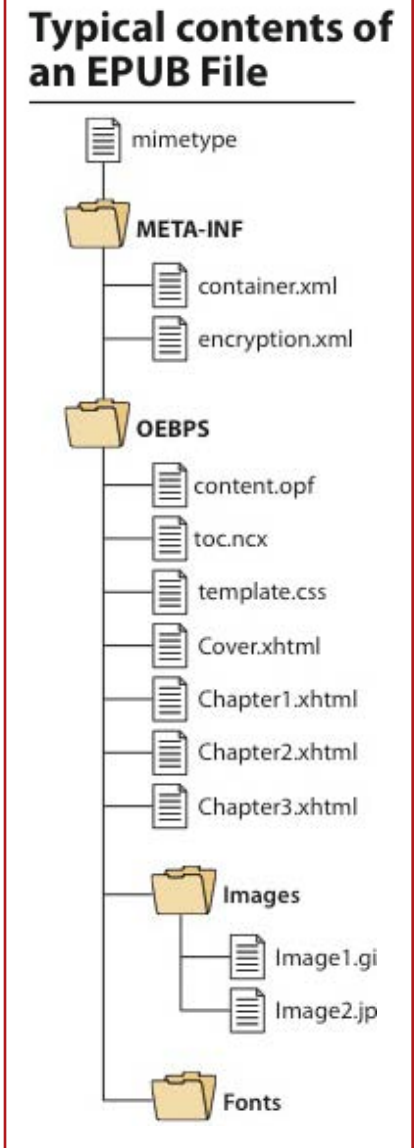
The Anatomy of an EPUB File

The EPUB format is a free and open e-book standard developed by the International Digital Publishing Forum . It is essentially a mini Web site. An EPUB is a package of several XML files, any number of HTML files, one or more CSS files, all the images for the publication, and possibly a few font files. All of these files work together to create the e-book experience. The files are packaged together into a single ZIP archive that is given the .epub file extension.

Preparing a Document for Export from InDesign

- InDesign CS4: Choose File > Export for Digital Editions.

- InDesign CS5: Choose File > Export For > EPUB.

- InDesign CS5.5: Choose File > Export and then select EPUB from the Format drop-down list.

What is NOT exported from an InDesign file?

- Master page items such as automatic page numbers.

- Page breaks, column breaks, and frame breaks.

- The formatting of text formatted with nested styles and GREP styles (CS4 and CS5).

- The exact position of images unless they are anchored within text, added to the XML structure pane (CS5 and CS5.5), or added to the Articles panel (CS5.5).

- Table and cell formatting (CS4 and CS5).

- A table of contents generated with a TOC style (CS4 and CS5).

- An index generated with InDesign's Index panel.

Typical contents of an EPUB File

- mimetype
- META-INF
  - container.xml
  - encryption.xml
- OEBPS
  - content.opf
  - toc.ncx
  - template.css
  - Cover.xhtml
  - Chapter1.xhtml
  - Chapter2.xhtml
  - Chapter3.xhtml
  - Images
    - Image1.gi
    - Image2.jp
  - Fonts

Controlling the Reading Order of Text and Graphics

There are three methods for controlling the reading order of text and graphics in an EPUB file. The method to select depends on the version of InDesign:

- Based on page layout (CS4–CS5.5),

- Same as XML structure (CS5 and CS5.5), or

- Same as Articles panel (CS5.5).

Controlling Page Breaks and Chapter Breaks

There are four methods for controlling page breaks and chapter breaks:

- **Use an InDesign book file:** To start a chapter or specific section of an e-book on its own page, create a separate InDesign document for it. Then, combine all the documents together into an InDesign book file (File > New > Book) and export the EPUB file.

- **Base the breaks on the first level TOC entries (CS5 Only):** To use this method, first create a TOC Style (Layout > Table of Contents Styles). Define one or more first level TOC entries. When exporting the EPUB file, select Include InDesign TOC Entries (Contents section) and then select Use First Level Entries as Chapter Breaks.

- **Insert page breaks before and/or after images (CS5.5):** Specify a page break before and/or after specific images (via Object Export Options) or insert them globally for all images when exporting an EPUB file.

- **Create chapter breaks at a specific paragraph style (CS5.5):** Create and apply a paragraph style (such as Chapter Title) to all paragraphs which start at the top of a new section or chapter. When exporting the EPUB file, select Break Document at Paragraph Style (Contents section) and specify a paragraph style in the menu to the right of the option.

Text Formatting Tips

- Use paragraph and character styles to control the formatting of text. The applied styles are used as the basis for generating the CSS styles in the EPUB file.

- The appearance of text formatted locally (without using a style) can be maintained by selecting the Preserve Local Overrides option when exporting an EPUB file. However, this process can result in a messy CSS file.

- Convert nested styles and GREP styles to character styles (CS4 and CS5). Download the handy Apply Nested Styles script to automate this process.

- Remove all unnecessary forced line breaks (soft-returns). InDesign CS5.5 provides an option to remove all soft-returns when exporting an EPUB file.

- Replace all non-breaking (hard) hyphens with discretionary (soft) hyphens using the Find/Change feature.

- Replace all extra paragraph returns between paragraphs with Space Before and/or Space After.

- Points are converted nicely to EM units in the CSS file (12pt = 1em).

  The EM unit is very useful in CSS, since it can adapt automatically to the font size the reader uses.

- If using InDesign's Bullets and Numbering feature to create bulleted and numbered lists, export these as HTML lists.

- Footnotes are converted to bidirectional hyperlinks. With InDesign CS4 and CS5, hyperlinks are converted to endnotes. With InDesign CS5.5, users may choose to place footnotes after the paragraph or convert them to endnotes.

Optimizing Images for CS4 and CS5 exports

- Insert images as anchored objects to control their position in the EPUB file.

- To control the space before and after an anchored image, apply a paragraph style to the paragraph to which the graphic is anchored and define the appropriate Space Before and Space After values.

- Create a single image for the cover if the image is made up of multiple components.

- Convert InDesign artwork to external images and place them back into the file. Keep in mind an InDesign file can be placed within an InDesign file.

- Use the points or pixels measurement systems when sizing graphics.

- When exporting an EPUB file, choose Optimized from the Copy Images menu in the Images section of the Export Options dialog box. Also specify the Formatted option.

Optimizing Images for CS5.5 exports

InDesign CS5.5 significantly improves image export to EPUB. Here are the highlights:

- Resolution: A standard resolution of images in pixels per inch (ppi) may be selected. Choose 72, 96, 150, or 300 ppi.

- Image Size: Specify whether the image size is fixed (same behavior as CS4 and CS5) or resized relative to the width of the page. The Relative to Page option sets a relative percentage value based on the size of the image relative to the InDesign page width. As a result, the images rescale relative to the width of the reading area.
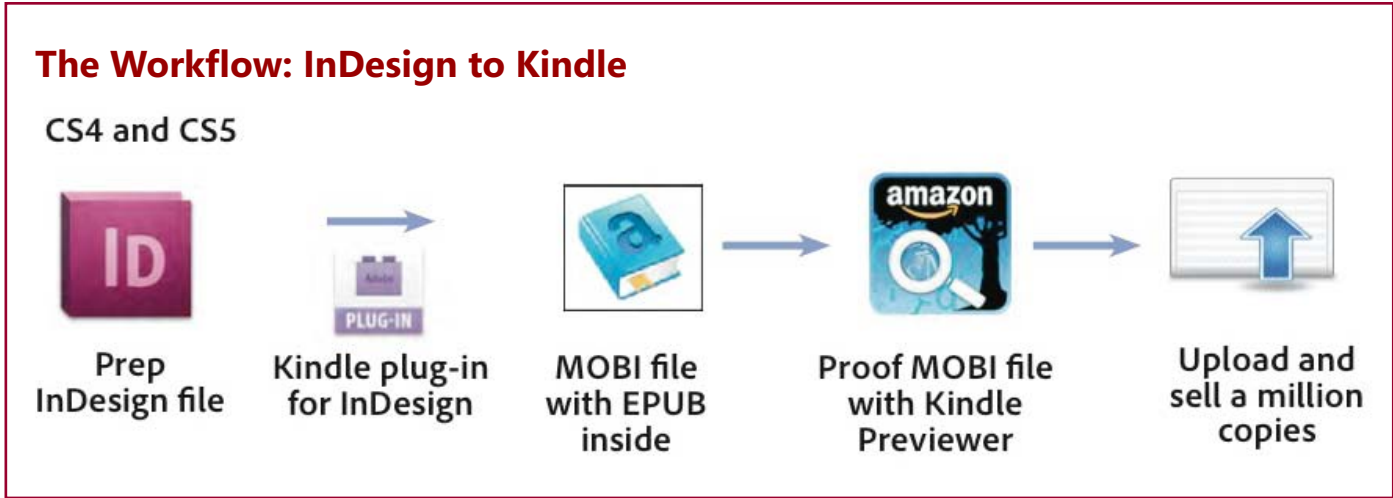
- Image Alignment and Spacing: Specify how the images are aligned (left, center, right) and spaced (top and bottom padding). These export options apply globally to all images unless custom alignment and spacing has been applied via Object Export Options (Object menu). Image Conversion: Images can be exported as GIF, JPEG, or PNG files.

Adding the Final Touches

- **Table of Contents.** To create a typical table of contents at the beginning of an e-book, manually insert the text and use hyperlinks or cross-references to create hyperlinked entries (CS4 and CS5). InDesign CS5.5 automatically exports a hyperlinked table of contents if the TOC is generated with InDesign's Table of Contents feature.

- **Navigation Guide.** The navigation guide often appears as a menu in an e-book and allows a reader to quickly jump to a particular section or chapter. InDesign automatically creates the navigation guide based on the document name(s) or a TOC style. Specify the TOC style to use when exporting an EPUB file (Contents section).

- **Insert Metadata.** Metadata is information about an e-book. It is essential to include metadata in every e-book, because it makes the material searchable. To insert metadata, choose File > File Info. Fill out Document Title, Author, Description, Keywords (subject categories), and Copyright Notice fields. When you export an EPUB file, fill out the Publisher Entry and Unique Identifier (ISBN) fields.

Editing an EPUB File

Once an EPUB file has been unarchived, any text editor can be used to edit the content. However, a dedicated XML/ HTML editor is ideal for its flexibility and power. (TSR note: this is an excellent recommendation. While a plain vanilla text editor will get the job done, the tasks of editing and tracking edits is much easier when a dedicated tool is used.)

The Workflow: InDesign to Kindle

CS4 and CS5

Prep InDesign file → Kindle plug-in for InDesign → MOBI file with EPUB inside → Proof MOBI file with Kindle Previewer → Upload and sell a million copies

oXygen XML Editor or oXygen XML Author are great because these programs open EPUBs directly, allows users to edit the content, save the changes, and instantly view the results in an e-reader.. Visit **oxygenxml.com**.

Sigil is a multi-platform WYSIWYG e-book editor. Visit **code.google.com/p/sigil/** to learn more.

Here are some of the reasons to edit an EPUB file:

- Add/modify the metadata,

- Customize the navigation guide, or

- Fix the CSS and HTML markup for drop caps, paragraph rules, boxed text, word spacing and letter spacing, floating elements (text wrap, table formatting, and other niceties InDesign does not do very well yet).

Testing and Validating

- View the e-books on different e-readers (desktop version):

- Adobe Digital Editions

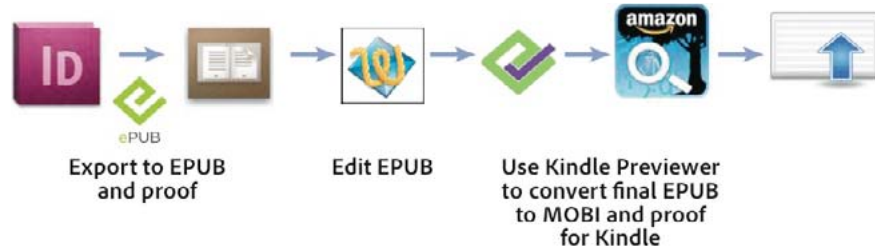- EPUB Reader Add-on for Firefox

- Sony Reader Library Application

Things to Look For

- Is the text properly formatted using paragraph and character styles?

- Are all special or foreign characters displaying correctly?

- Are the images in the correct position?

- Do all the hyperlinks and cross-references work?

- Is the metadata is correct?

- Is the table of contents (navigation guide) in the right order?

Use a preflight profile in InDesign to flag issues. Test and validate e-books at **threepress.org**. Test each device used to read the e-book such as Adobe Supported e-readers (such as theSony Reader and Barnes & Noble Nook), and the Apple iPad.

The Workflow: Kindle (MOBI format)

CS4, CS5, CS5.5

Export to EPUB and proof → Edit EPUB → Use Kindle Previewer to convert final EPUB to MOBI and proof for Kindle

Converting an EPUB File for the Amazon Kindle

TSR Note: Although Amazon has added support for PDF in the most recent versions of the Kindle, the file of choice for the Kindle is still MOBI. Publishers wishing to have the most trouble-free reader experience on the Kindle should, at this time, still plan to convert EPUB files to MOBI for Kindle readers. The process, while involved, does not need to be time consuming or error prone. The instructions from the speakers presented here will aid the process enormously.

- Use KindleGen to convert an EPUB file to a MOBI file.

- Use KindlePreviewer to view the MOBI file on your computer.

- For more information about formatting a Kindle e-book, read the book Kindle Formatting: The Complete Guide by Joshua Tallent.

Special Requirements

- The cover image must be a 600 px by 800 px JPEG standalone file. The image must also be referenced in the content.opf file.

- A navigational TOC and a content TOC with hyperlinks must be included. **TSR**

About the Presenters

Anne-Marie Concepción owns a busy cross-media design studio in Chicago and is one of the industry's best-known Adobe trainers and consultants. She also presents many video tutorials at **lynda.com**.

In addition, Anne-Marie hosts **InCopySecrets.com**, designed for editors and designers working in an InDesign/InCopy workflow and writes the free monthly e-zine InCopyFlow. Learn more about Anne-Marie at her company's Web site: **senecadesign.com**.

Gabriel Powell is the author of Instant InDesign, Creating eBooks with Adobe InDesign CS4 & CS5, and Learn Adobe Photoshop CS4 by Video. He is also a contributing author to InDesign Magazine and the producer of the Instant InDesign video podcast. As a Senior Solutions Consultant for Typefi Systems and an Adobe Certified Instructor, Gabriel teaches InDesign, Typefi Publish, and other applications to creative professionals throughout Western Europe and the United States. He specializes in automated XML publishing, template building, and e-book publishing. He is also the founder of The Netherlands InDesign User Group in Amsterdam. Learn more about Gabriel at his company's Web site: **typefi.com**.

Resources

Books, Videos, and White Papers

Creating e-books with Adobe InDesign CS4 and CS5 by Gabriel Powell (**Video**)

InDesign to EPUB, Kindle, and the iPad by Anne-Marie Concepción (Video: **CS 5** / **CS4**)

Straight to the Point by Liz Castro (Peachpit Press) (**EPUB**)

How to Create an e-book with Adobe InDesign CS5 by Rufus Deuchler (Abracadabra) (**Book**)

E-Books: From Adobe InDesign to the Apple iBookstore by Adobe and Anne-Marie Concepción (**PDF**)

Ask a CS Pro: From InDesign to the iBookstore by Anne-Marie Concepción (**Recorded Webinar**)

Creating EPUBs for the iPad using InDesign CS5.5 by Terry White (**Video**)

Creating e-books with InDesign CS4 by Adobe (**PDFs**)

Producing e-books from Adobe InDesign by Gabriel Powell (**Videos**)

Software

Sigil, a free, multi-platform e-book editor

Adobe Digital Editions, a free mutli-platform e-book viewer (EPUB and PDF)

OxyGen, a commercial XML/EPUB editor

PhoneDisk, free/commercial multi-platform utility to mount iPads as a hard drive

Springy, commercial utility for Mac OS X to edit contents of EPUBs without extracting files

TextWrangler, free Mac OS X utility for editing an EPUB's XHTML and CSS files

EditPlus, commercial Windows utility for editing an EPUB's XHTML and CSS files

Notepad++, open source Windows text editor