01101110000 1
110010001111 1
000110011000 1
110101001 11
000101011 10
011010101010
010101000111 0
101001111010
011010001001

01101110000 1
110010001111 1
000110011000 1
110101010011 1
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011101010101 0
101010001110

Making eBooks
from InDesign,
Part Two

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Editing eBooks

In Part 2 of this 2-part series, you'll learn how to unlock the full potential of EPUB files by opening and editing them after exporting them from InDesign.

By GABRIEL POWELL

In part 1 of this series (see CreativePro.com), you learned how to create a file in InDesign that successfully exports to a format eBook readers can display. But after exporting an EPUB file from InDesign, it's sometimes necessary to modify it. For instance, you might want to insert a forced page break, add metadata to the file, or change table formatting.

In this article, I'll walk you through the process of opening an EPUB file, and I'll explain how the file's components work. You'll learn how to make common edits, and I'll direct you to some tools you can use to validate an EPUB file after you've made significant changes to it.

To edit an EPUB file, you need a basic understanding of XHTML, XML, and CSS. If you've never been exposed to these technologies, you'll want to learn more about them before you try your hand at EPUB file editing.

Once you have that grounding, follow these two guidelines when modifying an EPUB file:

1. Since it's easier to modify an InDesign document than an EPUB file, first try making the changes in your original document and re-exporting it. Then, only if necessary, modify the EPUB file. So, for example, if you need to add a new section to your publication, you should create a new InDesign document, add it to your book file, and then export a new EPUB file. But if you want to add more metadata or customize the navigation map that's displayed as a menu in most eBook readers, you will likely need to tweak the EPUB file itself, after exporting it from InDesign.
2. Different eBook readers display the contents of an eBook in different ways, so after editing an EPUB file, test it on the eBook readers you're going to publish it on.

Opening an EPUB File

An EPUB file is really just a ZIP-compressed package that contains all the pieces of a digital publication. There are two ways to open an EPUB file: extract the contents of the file or use Oxygen XML Editor to open the file directly without extracting it.

Extracting the Contents of an EPUB File

To extract the contents of an EPUB file, change its file name extension from .epub to .zip, and then use a ZIP utility to extract the contents of the ZIP archive. (On the Mac, you must use a tool such as BetterZip or The Unarchiver to unzip the files; the operating system's built-in ZIP utility won't unzip these files.)

You can then view and edit the various components of the EPUB file using a simple text editor, such as Notepad on the PC or TextEdit on the Mac (or, better, the free TextWrangler application). You can also use a dedicated HTML editor such as Adobe Dreamweaver or even a dedicated XML editor.

After making the necessary edits, archive all the components as a ZIP file again. If you're working on a PC, you can simply copy the modified files back into

the original ZIP archive. Double-click the archive to view its contents and then drag the modified files into the same location within the archive to copy them over. The last step is to change the .zip file extension back to .epub so that it can be recognized as an EPUB file.

On the Mac, you'll have to use the command line in Terminal to create the archive. Terminal is in the Utilities folder, which is in the Applications folder. After launching Terminal, copy and paste each of the following commands in consecutive order into the Terminal window. Do not copy and paste the phrase *[Press Enter or Return]:*

1. `cd ~/desktop/"Folder Name"`
   [Press Enter or Return]
   Note: This assumes your EPUB folder of files is on your Desktop. Replace `"Folder Name"` with the actual name of your folder. If your folder's name contains spaces, enclose the name within quotation marks; otherwise they are not necessary. Another option is to type "cd" and then drag the folder enclosing the files into the Terminal window; when you let go, the folder path is inserted for you.

2. `zip file.epub -XOD mimetype`
   [Press Enter or Return]
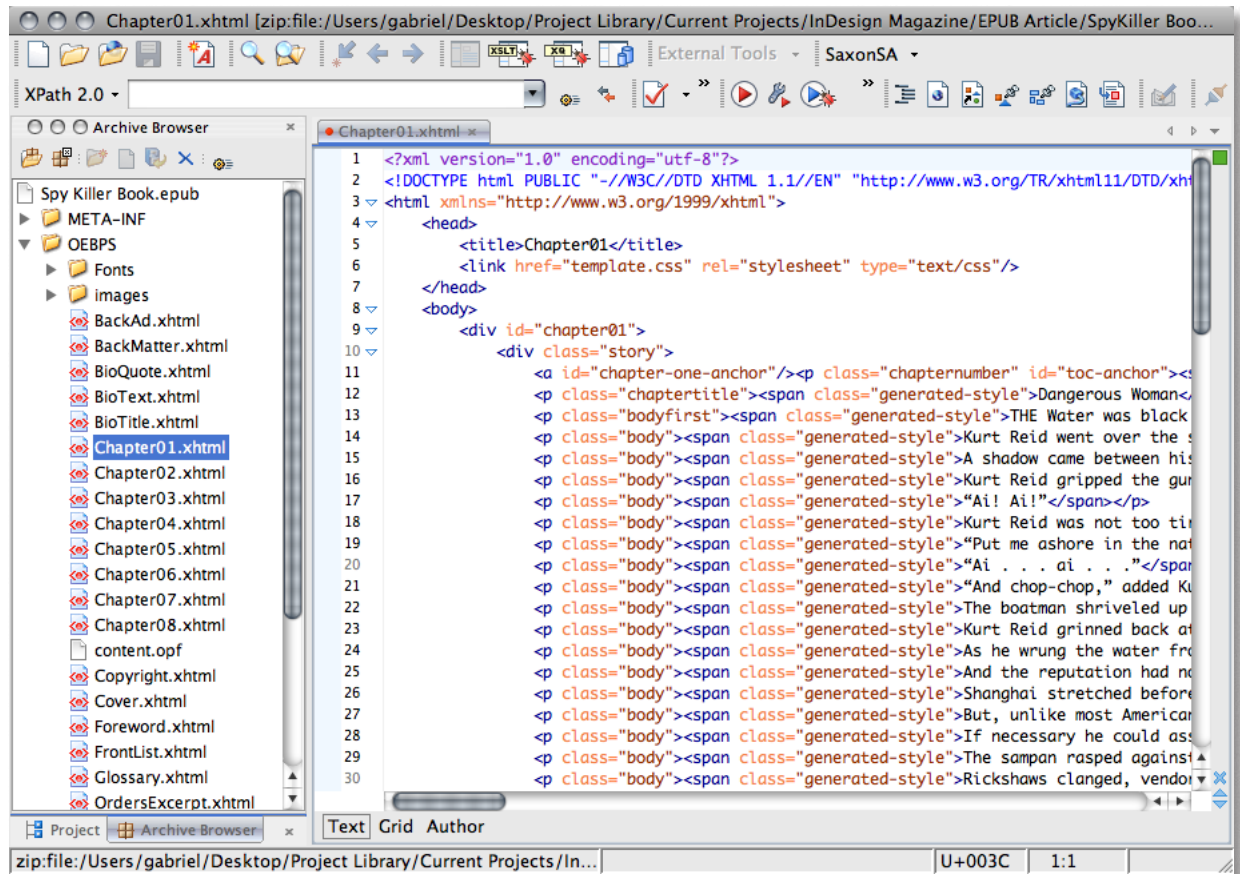
3. `zip file.epub -X9rD OEBPS/`
   [Press Enter or Return]

4. `zip file.epub -X9rD META-INF/`
   [Press Enter or Return]

Once you've entered the last command, the EPUB file can be found within the original folder. It will be named "file.epub," so you'll want to change its name. While this method of opening and editing EPUB files

doesn't require any additional software, it is a bit cumbersome. If you plan to work with a lot of EPUB files, I recommend using Oxygen XML Editor instead.

Opening an EPUB File with Oxygen XML Editor.
Oxygen XML Editor is a professional XML development platform that allows you to work with a wide range
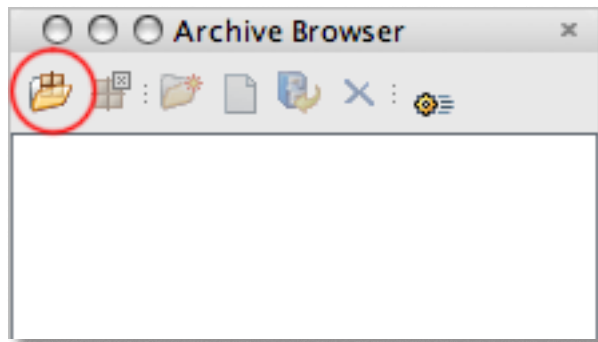
of XML standards and technologies (Figure 1). This cross-platform application makes it easy to work with EPUB files. I've tested a number of XML editors, but Oxygen is the only one I've discovered that can work with EPUB files. (Oxygen is also particularly well-suited for editing IDML files—see "IDML: InFinite Possibilities" on for more about IDML.) It costs from $64 to

$1,347, but it's well worth it if you'll be publishing a lot of eBooks. (The developers of Oxygen XML Editor also sell Oxygen XML Author, which is a simplified editor that can also edit EPUB files and that costs less for some license types.) To download Oxygen, visit www.oxygenxml.com.
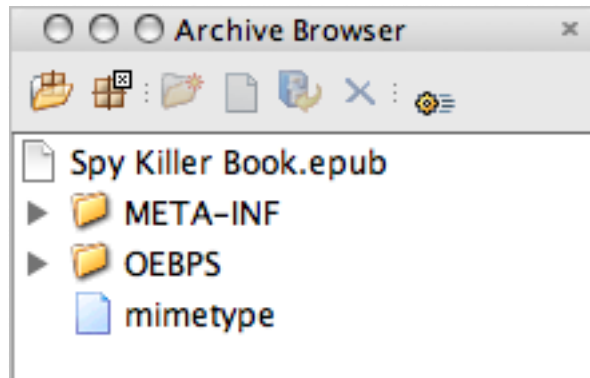
Using Oxygen to open an EPUB file directly is the most straightforward method since you don't have to extract the contents of the file before you can make edits. To open an EPUB file, click the Open Archive button at the top of Oxygen's Archive Browser panel (Figure 2).

After opening an EPUB file, its contents are displayed in the Archive Browser, where you can navigate through the package and double-click a file to open it for editing (Figure 3). The first time you open an EPUB file, a dialog may appear asking if you want to map the .epub extension to a known archive

Figure 2: By default, the Archive Browser panel is located at the top left side of the Oxygen interface. If you don't see the panel, you can open it by choosing Perspective > Show View > Archive Browser.

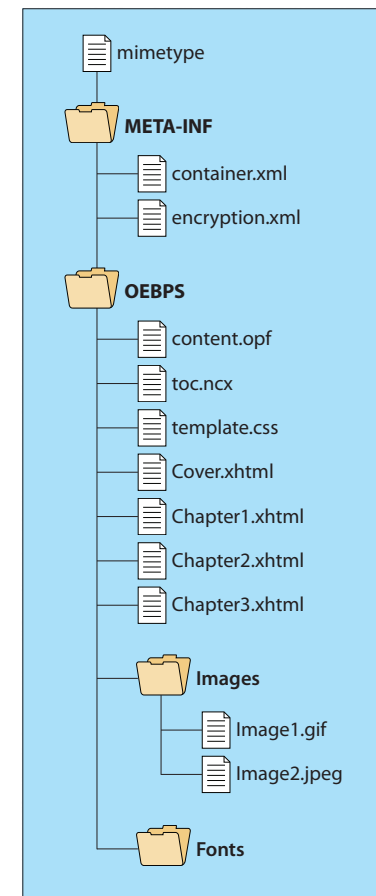**Figure 3:** Viewing the contents of an EPUB file with Oxygen XML Editor.

type. Click Yes and then click OK to the next dialog that appears.

After opening an EPUB file and making edits to the various files within it, you can save the files and then open the EPUB file into Adobe Digital Editions to view the results of your changes. Each time you make a change in Oxygen, you need to reopen the EPUB file in Adobe Digital Editions to view the new changes. If you're using Oxygen on a PC, you must close the EPUB file if you have it open in Adobe Digital Editions before you can save changes to one of the files in the package.

When it comes time to validate your EPUB file (which I'll discuss later in this article), you may run into a mimetype error. If you do, you may need to extract all the files from the archive and recompress them. I've provided more details on my Web site.

What's Inside an EPUB File?
As I noted earlier, the EPUB file format is basically a ZIP file that contains all the files necessary to create an eBook, including a table of contents, the text, a CSS file, and so on (Figure 4). Technically, the EPUB

Figure 4: These are the components and file structure of an EPUB file.

format is based on three open standards: Open Publication Structure (OPS), Open Packaging Format (OPF) and Open Container Format (OCF). OPS is based on XML and describes the content of the eBook. The OPF standard defines how the eBook components are related. OCF is a zip-based standard that defines how all the components of an eBook should be encapsulated into a single file.

Here's a detailed look at the various components of an EPUB file and how they're organized:

mimetype File: This plain text file, which must be in the archive's top level, identifies the content type within an EPUB file.

container.xml File: This file is within the META-INF folder. It simply points to the content.opf file, which, in turn, references all the files that make up the content of the EPUB file, among other things.

encryption.xml File: This file is also within the META-INF folder and is used to encrypt the contents of an EPUB file on an individual file level. It's an optional file that isn't required by the OCF v1.0 specification, but it's included in EPUB files exported from InDesign and, in this case, is only used to encrypt the fonts used in a publication. If you don't include the embeddable fonts when you export an EPUB file, the encryption.xml file won't be created.

content.opf File: This XML-based file is the root file of the EPUB package. It contains the publication's

Figure 5: An example OPF file as it is viewed in the Oxygen XML Editor. The text is color coded to make it easier to distinguish between the markup and the data.

metadata, identifies all of its components, describes the reading order for the contents of the eBook, and provides the fallback information for files that are not core content types. The file's structure and content is based on the OPF standard.

You'll find three required elements in the content.opf file: `<metadata>`, `<manifest>`, and `<spine>` (Figure 5):

❭ The `<metadata>` element is used to provide information about the publication as a whole. If you choose to include the document metadata when you export an EPUB file from InDesign, most of the information in the `<metadata>` element will be filled out already. However, InDesign doesn't fill out all the available elements within the `<metadata>` element, so you might want to fill them out yourself after exporting the initial EPUB file. See "Adding Additional Metadata" later in this article for instructions.

❭ The `<manifest>` element references the files that are part of the publication, including the NCX file, all of the XHTML content files, the CSS style sheet, and any embedded image files. The actual order of the `<item>` elements in the `<manifest>` is not significant.

❭ The `<spine>` element is used to determine the linear reading order of the publication. The order of the `<itemref>` elements within the `<spine>`

```xml
<?xml version="1.0"?>
<package xmlns="http://www.idpf.org/2007/opf" xmlns:dc="http://purl.org/dc/elements/1.1/"
   unique-identifier="bookid" version="2.0">
   <metadata>
      <meta name="generator" content="Adobe InDesign"/>
      <dc:title>Spy Killer</dc:title>
      <dc:creator>L. Ron Hubbard</dc:creator>
      <dc:subject>Fiction</dc:subject>
      <dc:subject>Thrillers</dc:subject>
      <dc:description>This classic 1936 Hubbard tale takes listeners to pre-Communist China where
         a man named Kurt Reid has fled murder charges only to find himself thrust into the
         exotic world of foreign espionage.</dc:description>
      <dc:publisher>Galaxy Press, LLC</dc:publisher>
      <dc:date/>
      <dc:source/>
      <dc:relation/>
      <dc:coverage/>
      <dc:rights>© 2008 Galaxy Press LLC. All Rights Reserved.</dc:rights>
      <dc:identifier id="bookid">urn:uuid:31bd0356-5605-1ce4-1acc-48b33799c145</dc:identifier>
      <dc:language>en</dc:language>
   </metadata>
   <manifest>
      <item id="ncx" href="toc.ncx" media-type="application/x-dtbncx+xml"/>
      <item id="css" href="template.css" media-type="text/css"/>
      <item id="cover" href="Cover.xhtml" media-type="application/xhtml+xml"/>
      <item id="titlepage" href="TitlePage.xhtml" media-type="application/xhtml+xml"/>
      <item id="copyright" href="Copyright.xhtml" media-type="application/xhtml+xml"/>
      <item id="toc" href="TOC.xhtml" media-type="application/xhtml+xml"/>
      <item id="foreword" href="Foreword.xhtml" media-type="application/xhtml+xml"/>
      <item id="chapter01" href="Chapter01.xhtml" media-type="application/xhtml+xml"/>
      <item id="chapter02" href="Chapter02.xhtml" media-type="application/xhtml+xml"/>
      <item id="chapter03" href="Chapter03.xhtml" media-type="application/xhtml+xml"/>
      <item id="chapter04" href="Chapter04.xhtml" media-type="application/xhtml+xml"/>
      <item id="chapter05" href="Chapter05.xhtml" media-type="application/xhtml+xml"/>
      <item id="backmatter" href="BackMatter.xhtml" media-type="application/xhtml+xml"/>
      <item id="f001-01-fmt-jpeg" href="images/f001_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f003-01-fmt-jpeg" href="images/f003_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f006-01-fmt-jpeg" href="images/f006_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0100-01-fmt-jpeg" href="images/f0100_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0101-01-fmt-jpeg" href="images/f0101_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0103-01-fmt-jpeg" href="images/f0103_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0104-01-fmt-jpeg" href="images/f0104_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0105-01-fmt-jpeg" href="images/f0105_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0106-01-fmt-jpeg" href="images/f0106_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0109-01-fmt-jpeg" href="images/f0109_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="f0110-01-fmt-jpeg" href="images/f0110_01_fmt.jpeg" media-type="image/jpeg"/>
      <item id="spybook-800px-fmt-jpeg" href="images/SpyBook_800px_fmt.jpeg"
         media-type="image/jpeg"/>
   </manifest>
   <spine toc="ncx">
      <itemref idref="cover"/>
      <itemref idref="titlepage"/>
      <itemref idref="copyright"/>
      <itemref idref="toc"/>
      <itemref idref="foreword"/>
      <itemref idref="chapter01"/>
      <itemref idref="chapter02"/>
      <itemref idref="chapter03"/>
      <itemref idref="chapter04"/>
      <itemref idref="chapter05"/>
      <itemref idref="backmatter"/>
   </spine>
</package>
```

element determines that reading order. When you export an EPUB file from an InDesign book file, the order of the documents in the book file determines the reading order of the EPUB file.
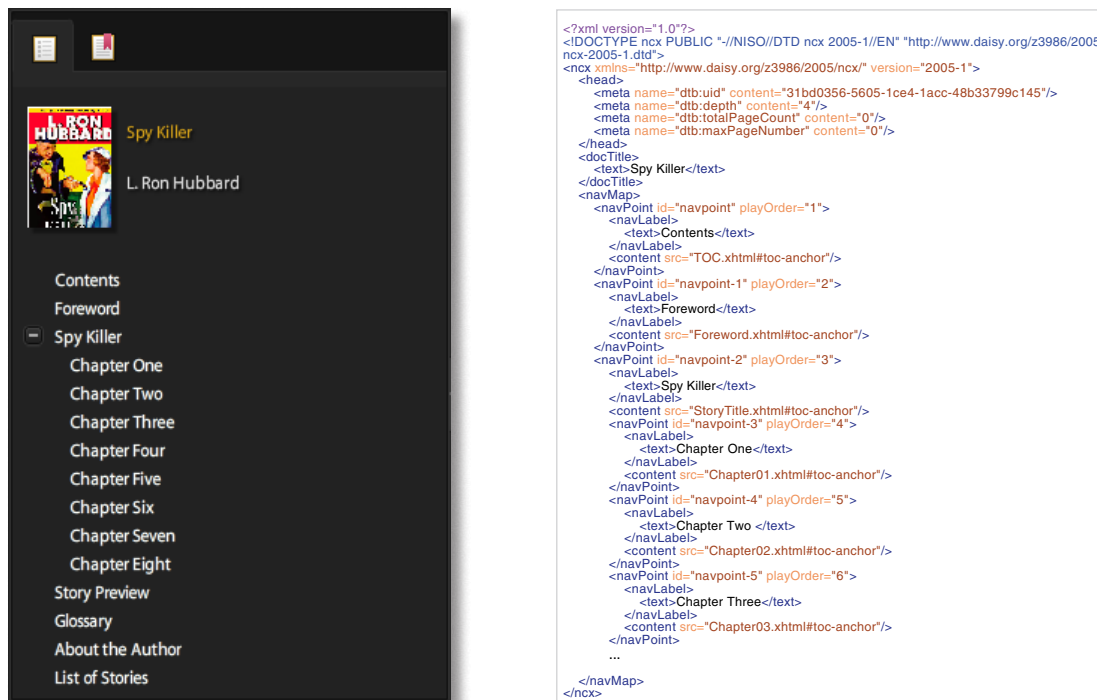
toc.ncx File: This XML-based file gives eBook readers detailed navigation information. The file's structure

and content is based on the OPF standard. Don't confuse its purpose with the purpose of the `<spine>` element in the OPF file. Where the `<spine>` element determines the reading order of the eBook, the NCX file serves as a navigation map that is generally displayed as a menu in an eBook reader, enabling you to jump directly to any of the major sections in the eBook. In Adobe Digital Editions, the navigation map is displayed in the panel at the left of the application window (Figure 6). Other eBook readers display the navigation map in a different location.

When you export an EPUB file from InDesign, the NCX file is generated in one of two ways. If you specify a TOC style when you export the file, the NCX

Figure 6: A typical navigation map as seen in Adobe Digital Editions (below left). The NCX file (below right) determines the order and names of the items in the navigation map. It also provides links to the XHTML documents that are listed (not all records are visible in this example).


```xml
<?xml version="1.0"?>
<!DOCTYPE ncx PUBLIC "-//NISO//DTD ncx 2005-1//EN" "http://www.daisy.org/z3986/2005/ncx-2005-1.dtd">
<ncx xmlns="http://www.daisy.org/z3986/2005/ncx/" version="2005-1">
    <head>
        <meta name="dtb:uid" content="31bd0356-5605-1ce4-1acc-48b33799c145"/>
        <meta name="dtb:depth" content="4"/>
        <meta name="dtb:totalPageCount" content="0"/>
        <meta name="dtb:maxPageNumber" content="0"/>
    </head>
    <docTitle>
        <text>Spy Killer</text>
    </docTitle>
    <navMap>
        <navPoint id="navpoint" playOrder="1">
            <navLabel>
                <text>Contents</text>
            </navLabel>
            <content src="TOC.xhtml#toc-anchor"/>
        </navPoint>
        <navPoint id="navpoint-1" playOrder="2">
            <navLabel>
                <text>Foreword</text>
            </navLabel>
            <content src="Foreword.xhtml#toc-anchor"/>
        </navPoint>
        <navPoint id="navpoint-2" playOrder="3">
            <navLabel>
                <text>Spy Killer</text>
            </navLabel>
            <content src="StoryTitle.xhtml#toc-anchor"/>
        <navPoint id="navpoint-3" playOrder="4">
            <navLabel>
                <text>Chapter One</text>
            </navLabel>
            <content src="Chapter01.xhtml#toc-anchor"/>
        </navPoint>
        <navPoint id="navpoint-4" playOrder="5">
            <navLabel>
                <text>Chapter Two </text>
            </navLabel>
            <content src="Chapter02.xhtml#toc-anchor"/>
        </navPoint>
        <navPoint id="navpoint-5" playOrder="6">
            <navLabel>
                <text>Chapter Three</text>
            </navLabel>
            <content src="Chapter03.xhtml#toc-anchor"/>
        </navPoint>
        ...

    </navMap>
</ncx>
```

Additional EPUB Documentation
While the EPUB format is relatively simple on the surface, it has a huge number of permutations. These links will help you find your way as you start creating and editing EPUB files (and the files within them):

- International Digital Publishing Forum (IDPF) homepage: www.idpf.org
- Open Publication Structure: www.idpf.org/2007/ops/OPS_2.0_final_spec.html
- Open Packaging Format: www.idpf.org/2007/opf/OPF_2.0_final_spec.html
- Open Container Format: www.idpf.org/ocf/ocf1.0/download/ocf10.htm
- EPUB Best Practices Guide (Requires Adobe Digital Editions): www.adobe.com/devnet/digitalpublishing/epubs/EPUBBestPractices-1_0_3.epub
- EPUB Data Sheet: www.adobe.com/devnet/digitalpublishing/pdfs/EPUB_datasheet.pdf
- Adobe Digital Publishing Technology Center: www.adobe.com/devnet/digitalpublishing/
- Adobe Digital Editions Product Information: www.adobe.com/products/digitaleditions/
- Adobe Digital Editions Blog: http://blogs.adobe.com/digitaleditions/

file is based on the parameters of the TOC style. If you don't specify a TOC style, the NCX file is based on the document titles and the order of the documents in the InDesign book file, if you're exporting from one. After exporting an EPUB file, you might want to customize the names that appear in the navigation map. See "Customizing the Navigation Map" later in this article for how to do this.

template.css: This file contains the CSS style sheets, which are used to format the content of the EPUB file (Figure 7). Since it's an external style sheet, when you change it, the formatting for the entire publication updates. As I noted in Part 1 of this article series, InDesign bases the CSS style sheet names on the paragraph and character styles in your document.

The OPS specification defines a style language based on CSS 2, but not all CSS 2 properties are included. In fact, a few properties and values have been added to support page layout, headers, and footers. Together, these differences make up the OPS CSS 2.0 required subset. A comprehensive list of all the supported CSS properties goes beyond the scope of this article. For a detailed list, see Section 3.0 of the OPS specification on the IDPF Web site.

XHTML Files: These files contain the actual content of your EPUB file. If you export a single InDesign document as an EPUB file, only one XHTML file is generated. When you export an InDesign book file, an XHTML file is generated for each document in the book file. When you export an EPUB file using the DTBook format option, XML files are generated instead of XHTML files.

Images Folder: If your publication contains images, they're copied to this folder according to the image options you specify when you export the EPUB file. The OPS specification supports the GIF, JPEG, PNG, and SVG file types; however, InDesign exports only GIF or JPEG files (unless you choose to copy the

```
@font-face {
font-family: Times;
font-style: normal;
font-weight: normal;
src:url(Fonts/Times.dfont);
}
@font-face {
font-family: Times;
font-style: normal;
font-weight: bold;
src:url(Fonts/Times.dfont);
}
@font-face {
font-family: Times;
font-style: italic;
font-weight: normal;
src:url(Fonts/Times.dfont);
}
@font-face {
font-family: Times;
font-style: italic;
font-weight: bold;
src:url(Fonts/Times.dfont);
}
p.section-title {
    font-family: "Times";
    line-height: 1.20em;
    font-size: 1.33em;
    margin-bottom: 1.88em;
    margin-top: 0.75em;
    text-indent: 0.00em;
    margin-right: 0.00em;
    margin-left: 0.00em;
    text-align: center;
    font-weight: bold;
    font-style: normal;
    color: rgb(0,0,0);
}
p.body {
    font-family: "Times";
    line-height: 1.20em;
    font-size: 1.00em;
    margin-bottom: 0.00em;
    margin-top: 0.00em;
    text-indent: 1.00em;
    margin-right: 0.00em;
    margin-left: 0.00em;
    text-align: justify;
    font-weight: normal;
    font-style: normal;
    color: rgb(0,0,0);
}
span.bold {
    font-family: "Times";
    font-weight: bold;
    font-style: normal;
}
span.italic {
    font-family: "Times";
    font-weight: normal;
    font-style: italic;
}
```

Figure 7: A typical CSS file generated by InDesign.

original images when you export the EPUB file). If your publication doesn't contain images, the Images folder won't be created in the EPUB package.

Fonts Folder: This folder is created in the EPUB package if you choose to include the embeddable fonts when you export the EPUB file. All of the supported OpenType and TrueType fonts will be copied into the folder.

Common EPUB Edits
There are several reasons to edit an EPUB file. Most commonly, you'll edit an EPUB file to add metadata to it, customize the navigation map, or insert forced page breaks.

Adding Additional Metadata. Metadata is used to describe such things as the title, author, and publisher of an eBook. Most importantly, it makes your eBooks searchable, so the more metadata your eBooks contain, the better. InDesign can export most of the metadata for you, but not all of the possible metadata elements are available in InDesign's File Info dialog box, so you might want to open your EPUB file and fill out the rest of the metadata.

To add metadata to an EPUB file, open it and then open the content.opf file in a text editor or (preferably) Oxygen XML editor. The 13 elements of metadata you can edit are at the top of the file within the `<metadata>` element (Figure 8).

Figure 8: The `<metadata>` element at the top of the content.opf file.

```
<metadata>
    <meta name="generator" content="Adobe InDesign"/>
    <dc:title>Spy Killer</dc:title>
    <dc:creator>L. Ron Hubbard</dc:creator>
    <dc:subject>Fiction</dc:subject>
    <dc:subject>Thrillers</dc:subject>
    <dc:description>This classic 1936 Hubbard tale takes listeners to pre-Communist China where
        a man named Kurt Reid has fled murder charges only to find himself thrust into the
        exotic world of foreign espionage.</dc:description>
    <dc:publisher>Galaxy Press, LLC</dc:publisher>
    <dc:date/>
    <dc:source/>
    <dc:relation/>
    <dc:coverage/>
    <dc:rights>© 2008 Galaxy Press LLC. All Rights Reserved.</dc:rights>
    <dc:identifier id="bookid">urn:uuid:31bd0356-5605-1ce4-1acc-48b33799c145</dc:identifier>
    <dc:language>en</dc:language>
</metadata>
```

If an element contains data, it will have both a start tag and an end tag; otherwise it will show up as an empty closed element, such as `<dc:date/>`. To fill out an empty element, simply remove the slash from the tag, insert your data after the start tag, and then insert the appropriate end tag to complete the element.

Tip: Don't change the value of the `<dc:identifer>` element. It contains the unique document ID, which is needed for the embedded fonts to function properly.

Note that the first time you open the content.opf file into Oxygen, you will be asked to associate the file with a known file type. Choose XML Document and make sure to select the Associate File Type With Editor option before clicking OK.

Customizing the Navigation Map. With some publications, you might want to customize the navigation map that's displayed as a menu in many eBook readers. For instance, if you've used a TOC style in InDesign to generate the navigation map, the main section headings in your publication will be the same names that appear in the navigation map. Let's say that one section heading is "The Stories from the Golden Age," but you want it to appear as "List of Stories" in the navigation map. You'll have to edit the name in the EPUB file to fix it.

To customize the navigation map, open the EPUB file and then open the toc.ncx file. Each item in the navigation map is contained within a `<navPoint>` element (Figure 9). Each `<navPoint>` element contains a `<navLabel>` and a `<content>` element. Within the `<navLabel>` element is a `<text>` element, which

Figure 9: A `<navPoint>` element within the toc.ncx file.

```
<navPoint id="navpoint-14" playOrder="15">
    <navLabel>
        <text>The Stories from the Golden Age</text>
    </navLabel>
    <content src="BackMatter.xhtml#toc-anchor"/>
</navPoint>
```

contains the text that is displayed in the navigation map. Simply modify this text to edit the name.

Note that the first time you open the toc.ncx file into Oxygen, you will be asked to associate the file with a known file type. Choose XML Document and make sure to select the Associate File Type With Editor option before clicking OK.

Inserting Page Breaks. The EPUB file format was designed to let content adapt to the characteristics of various reading devices. Consequently, it doesn't define page structure: All the content of an EPUB file flows together regardless of how it's laid out in your InDesign document. As I've said before, if you want a section of your publication to start on a new page, the best practice is to put it in a separate InDesign document and then combine it in an InDesign book file, from which you export the EPUB file.

But there is another way to force page breaks: use the CSS page-break-before or page-break-after property. For example, to insert a page break before each instance of a heading that has the paragraph style "heading" applied to it, open the template.css file inside the EPUB file. Then locate the "heading" selector and add the page-break-before property to it. The value of the property should be "always" (Figure 10).

Figure 10: I added the page-break-before property to the heading selector and set its value to "always" so a page break will occur before each heading in the publication.

```
p.heading {
    page-break-before: always;
    font-family: "Times";
    line-height: 1.20em;
    font-size: 1.50em;
    margin-bottom: 0.00em;
    margin-top: 0.00em;
    text-indent: 0.00em;
    margin-right: 0.00em;
    margin-left: 0.00em;
    text-align: left;
    font-weight: normal;
    font-style: normal;
    color: rgb(0,0,0);
}
```

Alternatively, if you had a paragraph style that you didn't want to show up at the top of a page (for example, the first paragraph after a heading), you could use the page-break-before property and use the value "avoid" instead.

While these work in Adobe Digital Editions, there are many other eBook readers that disregard page breaks defined by the CSS file. Test your EPUB file on a particular reading device before you publish to it to be sure that the page breaks are supported.

Tools for Validating EPUB Files
After making significant changes to an EPUB file, it's a good idea to validate it to make sure it's error free and fully compliant with IDPF specifications. There are several validation tools that are currently available.
❱ EpubCheck is a Java-based tool that checks the OCF container structure, OPF and OPS mark-up, and internal reference consistency. It can detect many types of errors. To download this tool, visit http://code.google.com/p/epubcheck/.

❯ The problem with EpubCheck is that you have to run it from a command line (if you don't know what that means, it's not for you). Fortunately, the folks at threepress.org (associated with O'Reilly) have bundled EpubCheck into a free Web site tool at www.threepress.org/document/epub-validate/. Once you upload your EPUB file, the site checks the file and provides you feedback.

Note: If you chose to include the embeddable fonts when you export your EPUB file from InDesign, EpubCheck won't validate it. After checking the document, a number of errors concerning the "encryption.xml" file are displayed. These errors are due to the fact that InDesign is using a non-standard approach to encryption in order to protect the fonts. eBook readers that natively support the EPUB format often ignore these errors, but if you want to be 100% sure that your eBook can be properly read on all reading devices, don't include the embeddable fonts when you export the EPUB file.

❯ EpubPreflight is a companion to EpubCheck that checks for empty content files, content files that are over 300KB, empty image files, and image files that are over 10MB. To download this command-line tool, visit http://blogs.adobe.com/digitaleditions/2008/11/epubpreflight_version_010_was_1.html.

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With this two-part article under your belt and the help of the additional resources I've mentioned, you too can add "e" to your book-design portfolio.

■

Gabriel Powell is the author of *Instant InDesign: Designing Templates for Fast and Efficient Page Layout* and *Learn Adobe Photoshop CS4 by Video*. He is also an Adobe Certified Instructor and CTT+ Certified Trainer. Gabriel teaches InDesign, InCopy, and other applications to creative professionals throughout the United States and Western Europe. He specializes in automated publishing, template building, and streamlining publishing workflows. He is also the founder of the Portland InDesign User Group and the founder and chapter leader of the InDesign User Group in Amsterdam. Check out his video podcasts at InstantInDesign.com!

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