

PubIt! ePub Formatting Guide

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I. Introduction

ePub is an open source, industry standard format for eBooks. Barnes & Noble sells digital content that is in the ePub format. Because ePub is reflowable, customers can read files that are formatted in ePub on the NOOK dedicated eReading device and on iPad, iPhone/iPod touch, Android, and PC via Barnes & Noble's free NOOK eReading software.

Publishers looking to sell highly formatted eBooks should convert their eBooks to ePub before uploading them via PubIt! to ensure optimum formatting.

In this document, we provide background information on the ePub format and guidelines for optimizing your ePub to render well across the NOOK line of eReading products.

II. What is ePub?

As defined by the International Digital Publishing Forum (IDPF),

".epub" is the file extension of an XML format for reflowable digital books and publications. **".epub"** is composed of three open standards, the [Open Publication Structure](#) (OPS), [Open Packaging Format](#) (OPF) and [Open Container Format](#) (OCF), produced by the IDPF.

More information on the ePub standard is available at the following websites:

- http://www.openebook.org/2007/ops/OPS_2.0_final_spec.html
- http://www.openebook.org/2007/opf/OPF_2.0_final_spec.html
- <http://www.idpf.org/ocf/ocf1.0/download/ocf10.htm>

Publishers not familiar with the ePub specification should follow the above links to learn more about the file format and container requirements.

III. ePub Requirements

ePubs are essentially “zip” files with a different extension. By renaming the file name of an ePub from “xyz.epub” to “xyz.zip”, it can be zipped, unzipped, etc.

There are three fixed elements to every ePub file:

1. MIMETYPE file
2. META-INF folder
3. OEBPS folder

The MIMETYPE file occurs at the root level; both the META-INF and OEBPS folders occur below that. All other files can be organized as works best for the publisher. Two required files are CONTENT.OPF and TOC.NCX.

ePubs should be validated using EPUBCHECK (the latest version as of this writing is 1.0.5), available at <http://code.google.com/p/epubcheck/>. Documentation is forthcoming, but you can either open the ReadMe file or visit here for instruction on how to use it: <http://code.google.com/p/epubcheck/wiki/Running>.

IV. OPF specifications

The basic OPF file contains metadata statements, a manifest of included files, and a list of the “playing” order of the files. While additional information can be supplied in the OPF that controls the behavior of other ebook readers, this is not a requirement for nook.

Metadata – The metadata starts with these three required lines of code. Note the unique-identifier declared in the second statement -- this should represent a unique identifier scheme in use in your organization.

- `<?xml version="1.0" encoding="UTF-8" ?>`
- `<package version="2.0" unique-identifier="PrimaryID" xmlns="http://www.idpf.org/2007/opf">`
- `<metadata xmlns:dc="http://purl.org/dc/elements/1.1/" xmlns:opf="http://www.idpf.org/2007/opf">`

Barnes & Noble requires these statements:

TITLE `<dc:title>title</dc:title>`

AUTHOR `<dc:creator>author name</dc:creator>`

PUBLISHER `<dc:publisher>publisher name</dc:publisher>`

PUB DATE `<dc:date>date</dc:date>`

ID `<dc:identifier id="PrimaryID">identification code</dc:identifier>`

LANGUAGE `<dc:language>en</dc:language>`

Barnes & Noble does not currently require a unique metadata statement defining a cover.

Manifest – The manifest identifies every file contained in the epub – if a file is not identified, it will not be accessible. Example of different file statements:

- `<item id="pt" href="my_page.xpgt" media-type="application/vnd.adobe-page-template+xml"/>`
- `<item id="style" href="mystyle.css" media-type="text/css" />`
- `<item id="image001" href="image001.jpg" media-type="image/jpeg" />`
- `<item id="image002" href="image002.png" media-type="image/png" />`
- `<item id="cover" href="cover_page.xhtml" media-type="application/xhtml+xml" />`
- `<item id="toc" href="content_page.xhtml" media-type="application/xhtml+xml" />`
- `<item id="ncx" href="toc.ncx" media-type="application/x-dtbncx+xml" />`

Note that item id "toc" refers to the physical contents page while item id "ncx" refers to the file that controls ebook navigation.

Spine – the spine controls the playing order of the ebook and determines which file precedes/follows another.

Guide – the guide is a list of references defining structural elements of the ebook (TOC, List of Illustrations, Index, Copyright, etc). Use of guide elements is optional for nook.

V. NCX specifications

The NCX file contains the hierarchical table of contents and is represented by the Navigation Panel in Adobe Digital Editions. The listings in the NCX file are visible under the “Go To Chapters” feature on nook. While ADE displays a multilevel TOC, nook will display only one level. Consequently, an NCX set to display in multiple levels in ADE

```

PART ONE
  Section One
    Chapter 1
    Chapter 2
  Section Two
    Chapter 1
    Chapter 2

```

Will display as a single levels on the nook

```

PART ONE
Section One
Chapter 1
Chapter 2
Section Two
Chapter 1
Chapter 2

```

VI. Image optimization

The maximum viewing size of the nook screen is 600 x 730 pixels.

Images should be optimized for web delivery and can either be PNG, JPG or GIF. The choice of format is optional and should be based on a compromise of image quality and file size. Typically, GIF supports a maximum of 256 colors while JPG supports 16.7 million. PNGs support 24 bit color.

Cover images supplied for marketing purposes typically range between 500x600 to 600x730 pixels.

VII. Files

Content should be organized into separate HTML or XHTML files. For example, Title_page.xhtml, Contents.xhtml, Copyright.xhtml, Dedicatio.xhtml, Chapter_One.xhtml, Chapter_Two.xhtml, etc.

Each file should be less than 300kb and listed in the <manifest> of the OPF file. Files contained in the ePub but not listed in the <manifest> and files listed in the <manifest> but not contained in the ePub will interfere with nook performance.

VIII. CSS/Fonts

When defining styles in the CSS, margins should be set as “pixels”, not “ems”, or “% of ems”. This will optimize the viewing area regardless of selected font or type size.

The page margins should be set at 30 pixels on the top and sides, with 20 pixels on the bottom.

Embedded fonts are allowed: we discourage their inclusion due to licensing issues and the added filesize.

Note that if you use Adobe InDesign to export an ePub and choose to encrypt embedded fonts, the resulting ePub will produce numerous errors in epubcheck.

IX. Special Characters

Nook supports Basic Latin UTF characters – see Appendix A for examples.

X. General eBook Conventions

- Covers are not mandatory in the eBook, but a Title Page is.
- The page order does not need to follow the print book.
- Blank pages are to be avoided.
- It is helpful to have a Contents Page in the eBook, even if there is not one present in the print version. The ebook Contents Page is linked to the individual chapters and helps with ebook navigation.
- Ideally, footnotes are linked.
- A linked Index is not necessary, but there is usually a disclaimer indicating that the page references are from the print version.
- The Copyright page should show the ebook ISBN
- Html tabular layout should only be used for tables, and not page formatting.
- The text in tables rendered as images cannot be searched.

XI. Appendix A

Basic Latin Unicode Characters

Unicode code point	character	UTF-8 (hex.)	name
U+0000		00	<control>
U+0001		01	<control>
U+0002		02	<control>
U+0003		03	<control>
U+0004		04	<control>
U+0005		05	<control>
U+0006		06	<control>
U+0007		07	<control>
U+0008		08	<control>
U+0009		09	<control>
U+000A		0a	<control>
U+000B		0b	<control>
U+000C		0c	<control>
U+000D		0d	<control>
U+000E		0e	<control>
U+000F		0f	<control>
U+0010		10	<control>
U+0011		11	<control>
U+0012		12	<control>
U+0013		13	<control>
U+0014		14	<control>
U+0015		15	<control>
U+0016		16	<control>
U+0017		17	<control>
U+0018		18	<control>
U+0019		19	<control>
U+001A		1a	<control>
U+001B		1b	<control>
U+001C		1c	<control>
U+001D		1d	<control>
U+001E		1e	<control>
U+001F		1f	<control>
U+0020		20	SPACE
U+0021	!	21	EXCLAMATION MARK
U+0022	"	22	QUOTATION MARK
U+0023	#	23	NUMBER SIGN

U+0024	\$	24	DOLLAR SIGN
U+0025	%	25	PERCENT SIGN
U+0026	&	26	AMPERSAND
U+0027	'	27	APOSTROPHE
U+0028	(28	LEFT PARENTHESIS
U+0029)	29	RIGHT PARENTHESIS
U+002A	*	2a	ASTERISK
U+002B	+	2b	PLUS SIGN
U+002C	,	2c	COMMA
U+002D	-	2d	HYPHEN-MINUS
U+002E	.	2e	FULL STOP
U+002F	/	2f	SOLIDUS
U+0030	0	30	DIGIT ZERO
U+0031	1	31	DIGIT ONE
U+0032	2	32	DIGIT TWO
U+0033	3	33	DIGIT THREE
U+0034	4	34	DIGIT FOUR
U+0035	5	35	DIGIT FIVE
U+0036	6	36	DIGIT SIX
U+0037	7	37	DIGIT SEVEN
U+0038	8	38	DIGIT EIGHT
U+0039	9	39	DIGIT NINE
U+003A	:	3a	COLON
U+003B	;	3b	SEMICOLON
U+003C	<	3c	LESS-THAN SIGN
U+003D	=	3d	EQUALS SIGN
U+003E	>	3e	GREATER-THAN SIGN
U+003F	?	3f	QUESTION MARK
U+0040	@	40	COMMERCIAL AT
U+0041	A	41	LATIN CAPITAL LETTER A
U+0042	B	42	LATIN CAPITAL LETTER B
U+0043	C	43	LATIN CAPITAL LETTER C
U+0044	D	44	LATIN CAPITAL LETTER D
U+0045	E	45	LATIN CAPITAL LETTER E
U+0046	F	46	LATIN CAPITAL LETTER F
U+0047	G	47	LATIN CAPITAL LETTER G
U+0048	H	48	LATIN CAPITAL LETTER H
U+0049	I	49	LATIN CAPITAL LETTER I
U+004A	J	4a	LATIN CAPITAL LETTER J
U+004B	K	4b	LATIN CAPITAL LETTER K
U+004C	L	4c	LATIN CAPITAL LETTER L

U+004D	M	4d	LATIN CAPITAL LETTER M
U+004E	N	4e	LATIN CAPITAL LETTER N
U+004F	O	4f	LATIN CAPITAL LETTER O
U+0050	P	50	LATIN CAPITAL LETTER P
U+0051	Q	51	LATIN CAPITAL LETTER Q
U+0052	R	52	LATIN CAPITAL LETTER R
U+0053	S	53	LATIN CAPITAL LETTER S
U+0054	T	54	LATIN CAPITAL LETTER T
U+0055	U	55	LATIN CAPITAL LETTER U
U+0056	V	56	LATIN CAPITAL LETTER V
U+0057	W	57	LATIN CAPITAL LETTER W
U+0058	X	58	LATIN CAPITAL LETTER X
U+0059	Y	59	LATIN CAPITAL LETTER Y
U+005A	Z	5a	LATIN CAPITAL LETTER Z
U+005B	[5b	LEFT SQUARE BRACKET
U+005C	\	5c	REVERSE SOLIDUS
U+005D]	5d	RIGHT SQUARE BRACKET
U+005E	^	5e	CIRCUMFLEX ACCENT
U+005F	_	5f	LOW LINE
U+0060	`	60	GRAVE ACCENT
U+0061	a	61	LATIN SMALL LETTER A
U+0062	b	62	LATIN SMALL LETTER B
U+0063	c	63	LATIN SMALL LETTER C
U+0064	d	64	LATIN SMALL LETTER D
U+0065	e	65	LATIN SMALL LETTER E
U+0066	f	66	LATIN SMALL LETTER F
U+0067	g	67	LATIN SMALL LETTER G
U+0068	h	68	LATIN SMALL LETTER H
U+0069	i	69	LATIN SMALL LETTER I
U+006A	j	6a	LATIN SMALL LETTER J
U+006B	k	6b	LATIN SMALL LETTER K
U+006C	l	6c	LATIN SMALL LETTER L
U+006D	m	6d	LATIN SMALL LETTER M
U+006E	n	6e	LATIN SMALL LETTER N
U+006F	o	6f	LATIN SMALL LETTER O
U+0070	p	70	LATIN SMALL LETTER P
U+0071	q	71	LATIN SMALL LETTER Q
U+0072	r	72	LATIN SMALL LETTER R
U+0073	s	73	LATIN SMALL LETTER S
U+0074	t	74	LATIN SMALL LETTER T
U+0075	u	75	LATIN SMALL LETTER U

U+0076	v	76	LATIN SMALL LETTER V
U+0077	w	77	LATIN SMALL LETTER W
U+0078	x	78	LATIN SMALL LETTER X
U+0079	y	79	LATIN SMALL LETTER Y
U+007A	z	7a	LATIN SMALL LETTER Z
U+007B	{	7b	LEFT CURLY BRACKET
U+007C		7c	VERTICAL LINE
U+007D	}	7d	RIGHT CURLY BRACKET
U+007E	~	7e	TILDE
U+007F		7f	<control>
U+0080		c2 80	<control>
U+0081		c2 81	<control>
U+0082		c2 82	<control>
U+0083		c2 83	<control>
U+0084		c2 84	<control>
U+0085		c2 85	<control>
U+0086		c2 86	<control>
U+0087		c2 87	<control>
U+0088		c2 88	<control>
U+0089		c2 89	<control>
U+008A		c2 8a	<control>
U+008B		c2 8b	<control>
U+008C		c2 8c	<control>
U+008D		c2 8d	<control>
U+008E		c2 8e	<control>
U+008F		c2 8f	<control>
U+0090		c2 90	<control>
U+0091		c2 91	<control>
U+0092		c2 92	<control>
U+0093		c2 93	<control>
U+0094		c2 94	<control>
U+0095		c2 95	<control>
U+0096		c2 96	<control>
U+0097		c2 97	<control>
U+0098		c2 98	<control>
U+0099		c2 99	<control>
U+009A		c2 9a	<control>
U+009B		c2 9b	<control>
U+009C		c2 9c	<control>
U+009D		c2 9d	<control>
U+009E		c2 9e	<control>

U+009F		c2 9f	<control>
U+00A0		c2 a0	NO-BREAK SPACE
U+00A1	¡	c2 a1	INVERTED EXCLAMATION MARK
U+00A2	¢	c2 a2	CENT SIGN
U+00A3	£	c2 a3	POUND SIGN
U+00A4	¤	c2 a4	CURRENCY SIGN
U+00A5	¥	c2 a5	YEN SIGN
U+00A6	¦	c2 a6	BROKEN BAR
U+00A7	§	c2 a7	SECTION SIGN
U+00A8	¨	c2 a8	DIAERESIS
U+00A9	©	c2 a9	COPYRIGHT SIGN
U+00AA	ª	c2 aa	FEMININE ORDINAL INDICATOR
U+00AB	«	c2 ab	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00AC	¬	c2 ac	NOT SIGN
U+00AD		c2 ad	SOFT HYPHEN
U+00AE	®	c2 ae	REGISTERED SIGN
U+00AF	-	c2 af	MACRON
U+00B0	°	c2 b0	DEGREE SIGN
U+00B1	±	c2 b1	PLUS-MINUS SIGN
U+00B2	²	c2 b2	SUPERSCRIP TWO
U+00B3	³	c2 b3	SUPERSCRIP THREE
U+00B4	´	c2 b4	ACUTE ACCENT
U+00B5	µ	c2 b5	MICRO SIGN
U+00B6	¶	c2 b6	PILCROW SIGN
U+00B7	·	c2 b7	MIDDLE DOT
U+00B8	¸	c2 b8	CEDILLA
U+00B9	¹	c2 b9	SUPERSCRIP ONE
U+00BA	º	c2 ba	MASCULINE ORDINAL INDICATOR
U+00BB	»	c2 bb	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
U+00BC	¼	c2 bc	VULGAR FRACTION ONE QUARTER
U+00BD	½	c2 bd	VULGAR FRACTION ONE HALF
U+00BE	¾	c2 be	VULGAR FRACTION THREE QUARTERS
U+00BF	¿	c2 bf	INVERTED QUESTION MARK
U+00C0	À	c3 80	LATIN CAPITAL LETTER A WITH GRAVE
U+00C1	Á	c3 81	LATIN CAPITAL LETTER A WITH ACUTE
U+00C2	Â	c3 82	LATIN CAPITAL LETTER A WITH CIRCUMFLEX
U+00C3	Ã	c3 83	LATIN CAPITAL LETTER A WITH TILDE
U+00C4	Ä	c3 84	LATIN CAPITAL LETTER A WITH DIAERESIS
U+00C5	Å	c3 85	LATIN CAPITAL LETTER A WITH RING ABOVE
U+00C6	Æ	c3 86	LATIN CAPITAL LETTER AE
U+00C7	Ç	c3 87	LATIN CAPITAL LETTER C WITH CEDILLA

U+00C8	È	c3 88	LATIN CAPITAL LETTER E WITH GRAVE
U+00C9	É	c3 89	LATIN CAPITAL LETTER E WITH ACUTE
U+00CA	Ê	c3 8a	LATIN CAPITAL LETTER E WITH CIRCUMFLEX
U+00CB	Ë	c3 8b	LATIN CAPITAL LETTER E WITH DIAERESIS
U+00CC	Ì	c3 8c	LATIN CAPITAL LETTER I WITH GRAVE
U+00CD	Í	c3 8d	LATIN CAPITAL LETTER I WITH ACUTE
U+00CE	Î	c3 8e	LATIN CAPITAL LETTER I WITH CIRCUMFLEX
U+00CF	Ï	c3 8f	LATIN CAPITAL LETTER I WITH DIAERESIS
U+00D0	Ð	c3 90	LATIN CAPITAL LETTER ETH
U+00D1	Ñ	c3 91	LATIN CAPITAL LETTER N WITH TILDE
U+00D2	Ò	c3 92	LATIN CAPITAL LETTER O WITH GRAVE
U+00D3	Ó	c3 93	LATIN CAPITAL LETTER O WITH ACUTE
U+00D4	Ô	c3 94	LATIN CAPITAL LETTER O WITH CIRCUMFLEX
U+00D5	Õ	c3 95	LATIN CAPITAL LETTER O WITH TILDE
U+00D6	Ö	c3 96	LATIN CAPITAL LETTER O WITH DIAERESIS
U+00D7	×	c3 97	MULTIPLICATION SIGN
U+00D8	Ø	c3 98	LATIN CAPITAL LETTER O WITH STROKE
U+00D9	Ù	c3 99	LATIN CAPITAL LETTER U WITH GRAVE
U+00DA	Ú	c3 9a	LATIN CAPITAL LETTER U WITH ACUTE
U+00DB	Û	c3 9b	LATIN CAPITAL LETTER U WITH CIRCUMFLEX
U+00DC	Ü	c3 9c	LATIN CAPITAL LETTER U WITH DIAERESIS
U+00DD	Ý	c3 9d	LATIN CAPITAL LETTER Y WITH ACUTE
U+00DE	þ	c3 9e	LATIN CAPITAL LETTER THORN
U+00DF	ß	c3 9f	LATIN SMALL LETTER SHARP S
U+00E0	à	c3 a0	LATIN SMALL LETTER A WITH GRAVE
U+00E1	á	c3 a1	LATIN SMALL LETTER A WITH ACUTE
U+00E2	â	c3 a2	LATIN SMALL LETTER A WITH CIRCUMFLEX
U+00E3	ã	c3 a3	LATIN SMALL LETTER A WITH TILDE
U+00E4	ä	c3 a4	LATIN SMALL LETTER A WITH DIAERESIS
U+00E5	å	c3 a5	LATIN SMALL LETTER A WITH RING ABOVE
U+00E6	æ	c3 a6	LATIN SMALL LETTER AE
U+00E7	ç	c3 a7	LATIN SMALL LETTER C WITH CEDILLA
U+00E8	è	c3 a8	LATIN SMALL LETTER E WITH GRAVE
U+00E9	é	c3 a9	LATIN SMALL LETTER E WITH ACUTE
U+00EA	ê	c3 aa	LATIN SMALL LETTER E WITH CIRCUMFLEX
U+00EB	ë	c3 ab	LATIN SMALL LETTER E WITH DIAERESIS
U+00EC	ì	c3 ac	LATIN SMALL LETTER I WITH GRAVE
U+00ED	í	c3 ad	LATIN SMALL LETTER I WITH ACUTE
U+00EE	î	c3 ae	LATIN SMALL LETTER I WITH CIRCUMFLEX
U+00EF	ï	c3 af	LATIN SMALL LETTER I WITH DIAERESIS
U+00F0	ð	c3 b0	LATIN SMALL LETTER ETH

U+00F1	ñ	c3 b1	LATIN SMALL LETTER N WITH TILDE
U+00F2	ò	c3 b2	LATIN SMALL LETTER O WITH GRAVE
U+00F3	ó	c3 b3	LATIN SMALL LETTER O WITH ACUTE
U+00F4	ô	c3 b4	LATIN SMALL LETTER O WITH CIRCUMFLEX
U+00F5	õ	c3 b5	LATIN SMALL LETTER O WITH TILDE
U+00F6	ö	c3 b6	LATIN SMALL LETTER O WITH DIAERESIS
U+00F7	÷	c3 b7	DIVISION SIGN
U+00F8	ø	c3 b8	LATIN SMALL LETTER O WITH STROKE
U+00F9	ù	c3 b9	LATIN SMALL LETTER U WITH GRAVE
U+00FA	ú	c3 ba	LATIN SMALL LETTER U WITH ACUTE
U+00FB	û	c3 bb	LATIN SMALL LETTER U WITH CIRCUMFLEX
U+00FC	ü	c3 bc	LATIN SMALL LETTER U WITH DIAERESIS
U+00FD	ý	c3 bd	LATIN SMALL LETTER Y WITH ACUTE
U+00FE	þ	c3 be	LATIN SMALL LETTER THORN
U+00FF	ÿ	c3 bf	LATIN SMALL LETTER Y WITH DIAERESIS