



## ***NAVIGATING THE MAZE OF EPUB PUBLISHING***

Chandi Perera

# What is EPUB?

- **Platform, Vendor and Device Independent open file format.**
- **Developed by the International Digital Publishing Forum (IDPF) – a industry consortium.**



# Reflowable

ABSTRACTS IN 中文, عربي

## Introduction

It is generally held that vertical transmission is the major route of hepatitis B virus (HBV) infection in regions where the disease is endemic.<sup>1-5</sup> The neonatal immunization programme using immunoglobulin and hepatitis B vaccination has been developed to prevent vertical transmission<sup>6-10</sup> and has been reported to be effective.<sup>11-16</sup> Neonatal immunization was introduced to the Hong Kong Special Administrative Region (SAR), China, in 1983<sup>1</sup> and was selectively applied to neonates born to mothers found to be carrying the hepatitis B surface antigen (HBsAg) on routine antenatal screening.<sup>17</sup> In November 1988, neonatal HBV vaccination has become universal irrespective of maternal HBsAg status.<sup>18,19</sup> Since the introduction has been readily available from general practitioners and nongovernmental organizations.<sup>17</sup>

In Hong Kong SAR, pregnant women receiving antenatal care constitute the only social group that undergoes HBsAg screening. We reviewed published reports on the prevalence of maternal HBsAg carriage in the area that, in the prevaccination era, it was 6.6% in 1976 between 1981 and 1983.<sup>1</sup> In 1996, it was 10.0% among women who gave birth between 1998 and 2001, it was 8.0%.<sup>21</sup> At our hospital, it was 9.1% overall in a survey in 2010, the prevalence was 9.1% overall among women who had undergone HBV vaccination.<sup>23</sup> Since the population is a low-risk group compared to

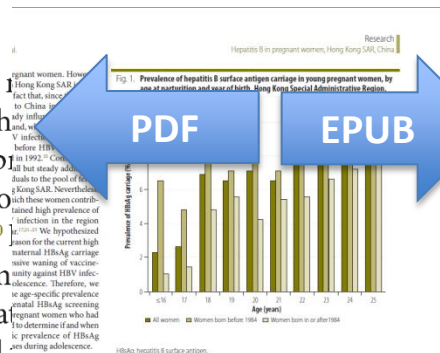


Fig. 1. Prevalence of hepatitis B surface antigen carriage in young pregnant women, by age at delivery and year of birth. Hong Kong Special Administrative Region.

The study was approved by the Joint CUHK-NTH Clinical Research Ethics Board. First, we analysed the age-specific prevalence of HBsAg carriage in the entire group. We investigated the effect on prevalence of the mother's year of birth (i.e. before or in or after 1984, when HBV vaccination became available) and parity (i.e. nulliparity or multiparity) and identified the age at which the transition from a low to a high prevalence occurred. Subsequently, we performed further analyses based on the age of transition identified and, by taking into account the influence of being born before or in or after 1984, we investigated the effect of vaccination on prevalence below and above the age of transition. Statistical analyses were performed using the  $\chi^2$  test and odds ratios (ORs) and 95% confidence intervals (CIs) were calculated as appropriate. Correlations between prevalence and age were evaluated using Spearman correlation coefficient. Multiple logistic regression analysis was used to determine whether the prevalence was significantly influenced by parity, maternal birth before the implementation of HBV immunization or maternal age above or below the age of transition. Calculations were performed using SPSS Statistics 20 (IBM, Armonk, United States of America).

### Results

Of the 93 306 women who gave birth between 1998 and 2011 at our hospital, 10 808 (11.6%) were aged 25 years or younger. The overall prevalence of HBsAg carriage in these young women was 7.5%. As only 129 were aged 16 years or younger, they were grouped together for the analysis. The age-specific prevalence of HBsAg carriage is shown in Fig. 1. There was a significant difference between age groups ( $P=0.020$ ) and a positive correlation between age and prevalence ( $P=0.006$ ). The age-specific prevalence for women who were born before or in or after 1984 is also shown in Fig. 1 and in Table 1. For those born before 1984, there was no significant difference between age groups ( $P=0.558$ ) and no correlation between age and prevalence ( $P=0.466$ ). For those born in or after 1984, there was a significant difference between age groups ( $P=0.018$ ) and a significant positive correlation with age ( $P<0.001$ ).

The most marked increase in prevalence occurred around the age of 18 years in women born both before 1984 and in or after 1984: there was a twofold and a greater than threefold increase between the ages of 17 and 18 years in the two groups, respectively.

Abstracts in 中文, Français, Русский and Español at the end of each article.

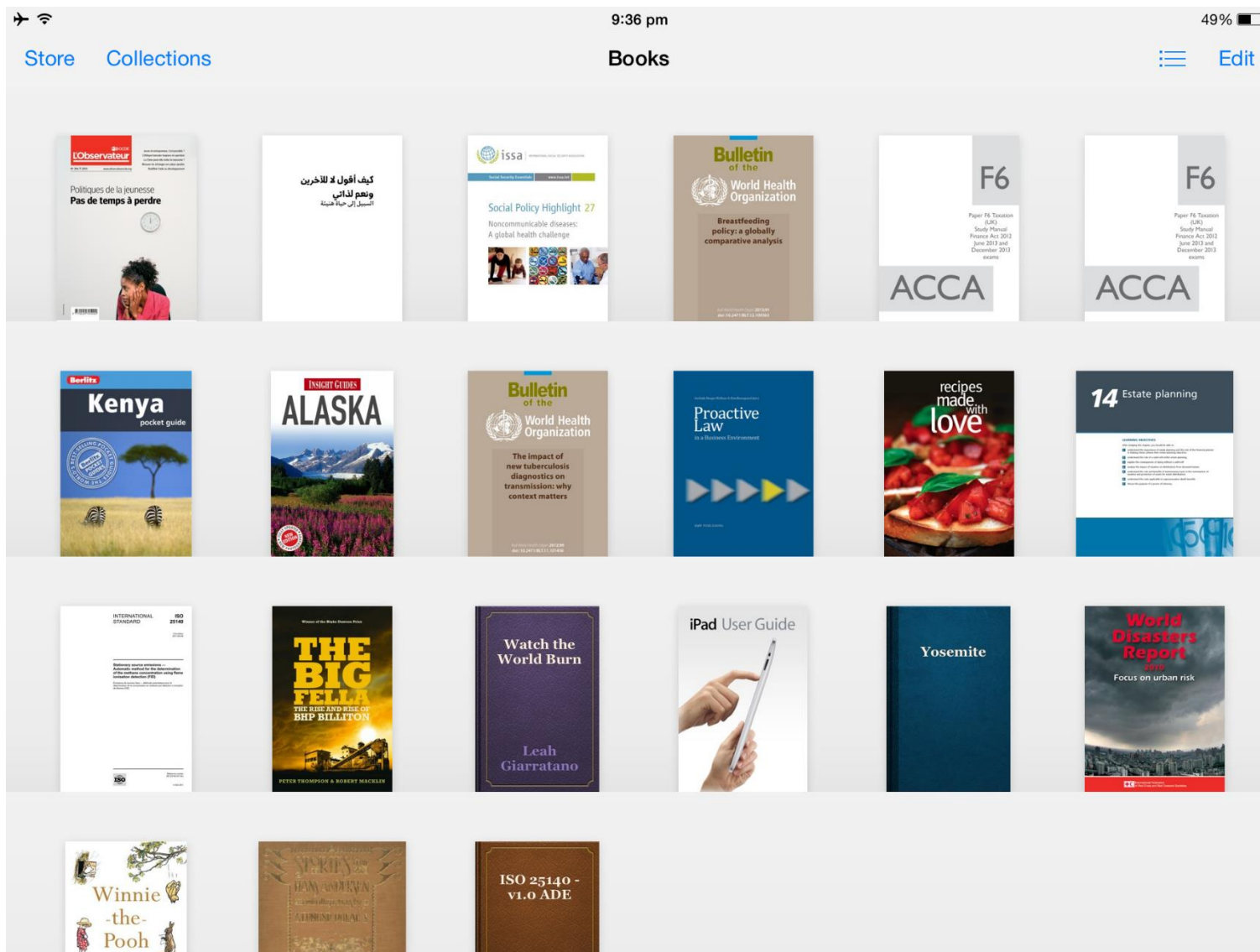
## Introduction

It is generally held that vertical transmission is the major route of hepatitis B virus (HBV) infection in regions where the disease is endemic.<sup>1-5</sup> The neonatal immunization programmes using immunoglobulin and hepatitis B vaccination that have been developed to prevent vertical transmission<sup>6-10</sup> have widely been reported to be effective.<sup>11-16</sup> Neonatal immunization was introduced to the Hong Kong Special Administrative Region (SAR), China, in 1983<sup>1</sup> and was selectively applied to neonates born to mothers found to be carrying the hepatitis B surface antigen (HBsAg) on routine antenatal screening.<sup>17</sup> In November 1988, neonatal HBV vaccination has become universal irrespective of maternal HBsAg status.<sup>18,19</sup> Since then, vaccination has

# Portable and Offline



# Create personal collections



# No fine grain layout control

Library

☰

International Organ...for Standardization

6:59 am

ISO 25140 - v1.0 iPad

AA

Q

🔖

f) operating range;

g) details of the quality and the concentration of the span gases used;

h) description of plant and process;

i) identification of the sampling plane;

j) actions taken to achieve representative samples;

k) description of the location of the sampling point(s) in the sampling plane;

l) description of the operating conditions of the plant process;

m) changes in the plant operations during sampling;

n) sampling date, time and duration;

o) time averaging on relevant periods;

p) measured values;

q) measurement uncertainty;

r) results of any checks;

s) any deviations from the requirements of this International Standard.

NOTE Requirements for the test report are specified e.g. in EN 15267-3[7] for the results of performance tests, in EN 15259[6] for the results of intermittent monitoring, and in EN 14181[5] for the results of continuous monitoring.

AnnexA  
(normative)

## Operational gases

### A.1 General

A number of operational gases are required when using this International Standard.

### A.2 Combustion air

The combustion air shall consist of synthetic (hydrocarbon-free) or purified air. The hydrocarbon volume fraction should not exceed 2,0 % of the upper limit of the measuring range used during the whole operation.

### A.3 Fuel gas

The fuel gas for the FID usually consists of hydrogen. If required by the FID manufacturer, the fuel gas can be a hydrogen-helium mixture or a hydrogen-nitrogen mixture.

The purity of the fuel gas used shall be at least 99,999 %.

For safety reasons the fuel gas line should be made of metal.

### A.4 Zero gas

The zero gas shall consist of hydrocarbon-free synthetic air. The hydrocarbon volume fraction should not exceed 1,0 % of the upper limit of the measuring range used.

NOTE Combustion air can be suitable if it is sufficiently purified.

### A.5 Span gas

Span gas shall consist of methane in synthetic air. It shall have a known concentration with a maximum permissible expanded uncertainty of 2,0 % of its nominal value traceable to applicable standards.

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Last page in this chapter



# But there are workarounds



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100%

Library International Organ...for Standardization

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## 8 Quality assurance and quality control procedures

### 8.1 General

QA/QC is important in order to ensure that the uncertainty of the measured values for methane is kept within the limits specified for the measurement task.

The following applications of the automatic measuring system have to be distinguished:

- a) AMS for intermittent measurements (8.3);
- b) permanently installed AMS for continuous monitoring (8.4).

### 8.2 Frequency of checks

Table 2 shows the minimum required frequency of checks. The user shall implement the relevant standards for determination of performance characteristics or procedures described in Annex B.

**Table 2 — Minimum frequency of checks for QA/QC during the operation**

Check	Minimum frequency	
	AMS for intermittent measurements	Permanently installed AMS
Response time	once a year	once a year
Repeatability standard deviation at zero point	once a year	once a year
Repeatability standard deviation at span point	once a year	once a year
Lack of fit	once a year and after repair of the AMS	once a year and after repair of the AMS

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Calibration	—	at regular time intervals specified, for example, in legislation or applicable standards by comparison with an independent method of measurement
Interference check	once a year	once a year
Converter check	once for each measurement series	once a year
Sampling system and leakage check	once for each measurement series	once a year
Cleaning or changing of particulate filters at the sampling inlet and at the monitor inlet	once for each measurement series, if needed	once in the period of unattended operation
Zero drift	every 3 h and at the end of measuring period	once in the period of unattended operation
Span drift	every 3 h and at the end of measuring period	once in the period of unattended operation
Regular maintenance of the analyser	as required by the manufacturer	once in the period of unattended operation

The user shall implement a procedure to ensure that the zero and span gases used meet the uncertainty requirements specified in Annex A, e.g. by comparison with a reference gas of known quality.

### 8.3 AMS for intermittent measurements

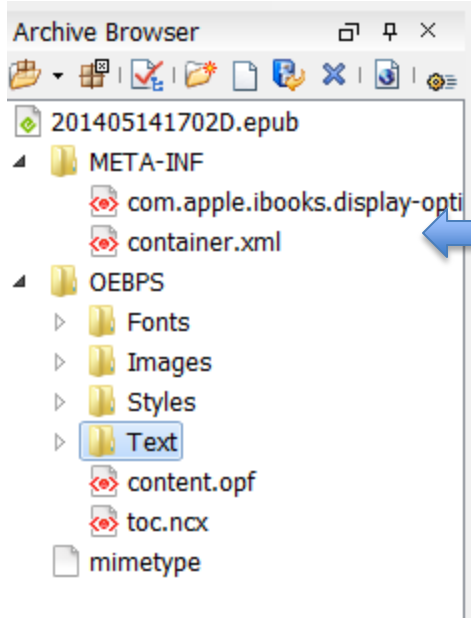
Check	Minimum frequency	
	AMS for intermittent measurements	Permanently installed AMS
Response time	once a year	once a year
Repeatability standard deviation at zero point	once a year	once a year
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Lack of fit	once a year and after repair of the AMS	once a year and after repair of the AMS
Calibration	—	at regular time intervals specified, for example, in legislation or applicable standards by comparison with an independent method of measurement
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Converter check	once for each measurement series	once a year
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Cleaning or changing of particulate filters at the sampling inlet and at the monitor inlet	once for each measurement series, if needed	once in the period of unattended operation
Zero drift	every 3 h and at the end of measuring period	once in the period of unattended operation
Span drift	every 3 h and at the end of measuring period	once in the period of unattended operation
Regular maintenance of the analyser	as required by the manufacturer	once in the period of unattended operation

a The particulate filter shall be changed periodically depending on the dust load at the sampling site. During this filter change, the filter housing shall be cleaned.

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# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



container.xml

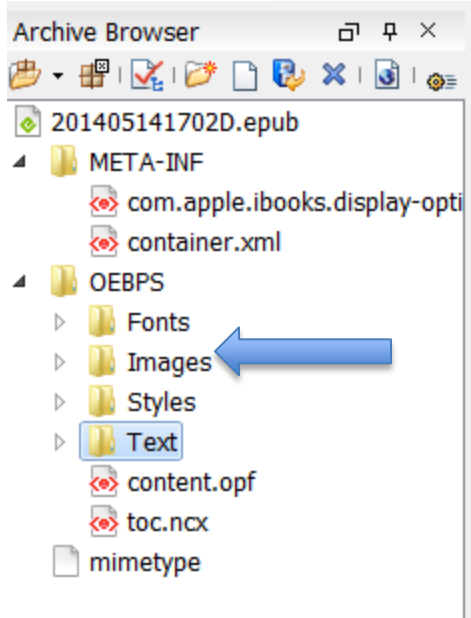
**This XML file points to the file defining the contents of the book.**

```
<rootfile full-path="OEBPS/content.opf" media-type="application/oebps-package+xml"/>
```



# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



## Fonts directory

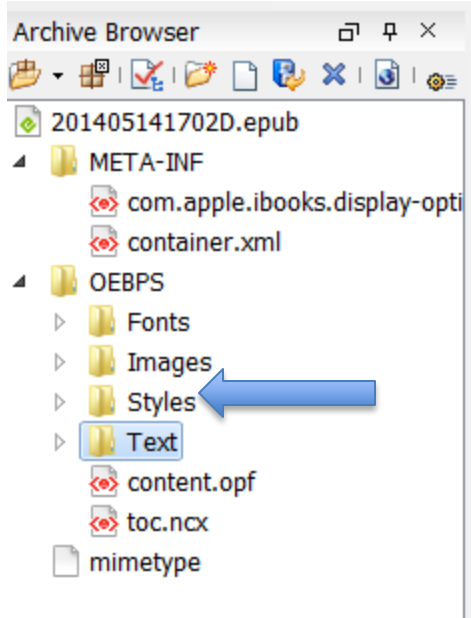
Your licensed fonts

## Images directory

Your images (jpeg, png, svg...)

# Some Technical Detail

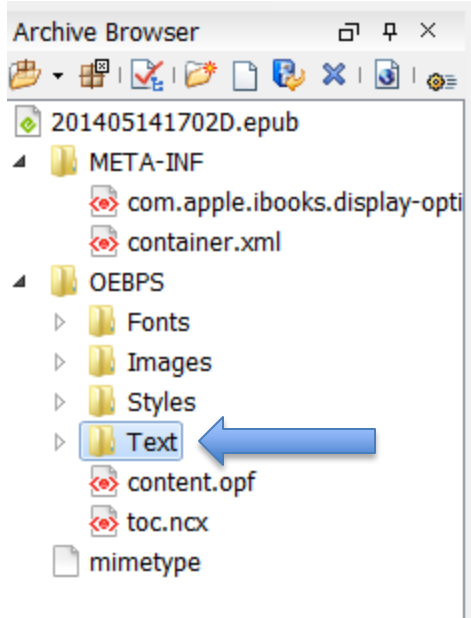
- Really a ZIP file container (OPF - Open Container Format 2.0.1)



**Styles Directory**  
CSS style sheets

# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



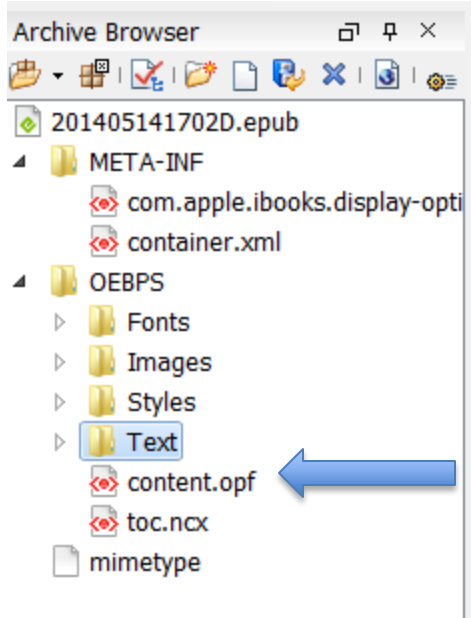
## Text Directory

Actual Content in HTML file(s).

For speed it is recommended that each chapter is a single HTML file

# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



## content.opf

1. EPUB book's metadata,
2. File manifest,
3. Linear reading order.

```

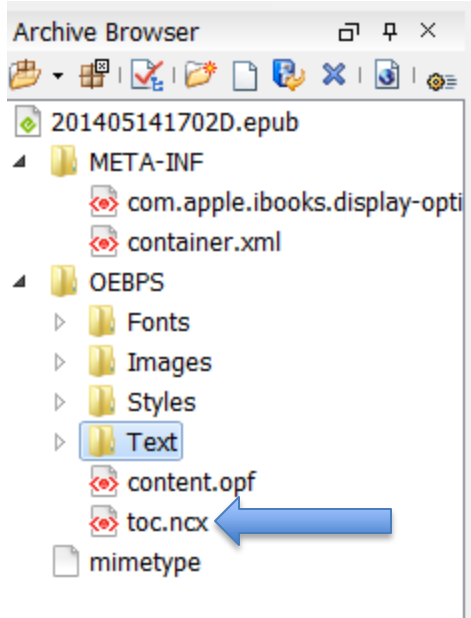
1 <?xml version="1.0" encoding="utf-8" standalone="yes"?>
2 <package xmlns="http://www.idpf.org/2007/opf"
3     prefix="ibooks: http://vocabulary.itunes.apple.com/rdf/ibooks/vocab
4     unique-identifier="ISBN" version="3.0" xml:lang="en">
5     <!--prefix='ibooks' above necessary for iBooks versioning-->
6     <metadata xmlns:dc="http://purl.org/dc/elements/1.1/">
7         <dc:title>GCSE Maths - Pythagoras Foundation</dc:title>
8         <dc:source id="src-id">urn:isbn:97803PRINTversion</dc:source>
9         <dc:identifier id="ISBN">201405141702D</dc:identifier>
0         <dc:identifier id="isbn-id">urn:isbn:201405141702D</dc:identifi
1         <dc:creator>Cambridge University Press</dc:creator>
2         <dc:publisher>Cambridge University</dc:publisher>
3         <dc:language>en</dc:language>
4         <meta name="cover" content="cover_image"/>
5         <meta property="ibooks:specified-fonts">true</meta>
6         <meta property="dcterms:modified">2014-04-10T11:41:00Z</meta>
7         <meta content="0.7.4" name="Sigil version"/>
8     </metadata>
9     <manifest> [108 lines]
0     <spine toc="ncx"> [3 lines]
1 </package>

```

**This file has a root element package and four child elements: <metadata>, <manifest>, <spine>, and <guide>. All of these except guide are required. Furthermore, the package node must have the unique-identifier attribute.**

# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



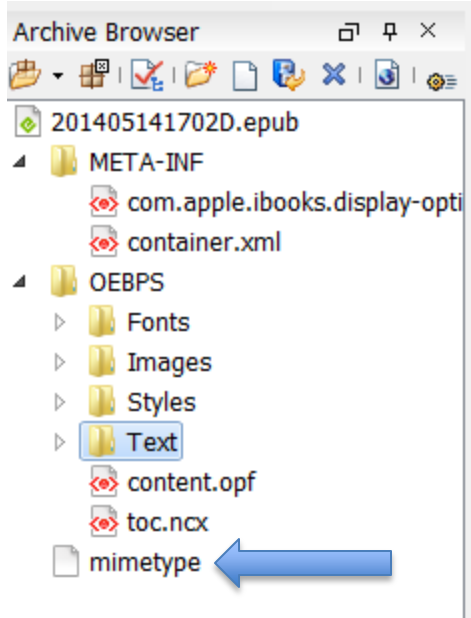
## Text Directory

The NCX file (Navigation Control file for XML), traditionally named *toc.ncx*, contains the hierarchical table of contents for the EPUB file. Actual name is specified in OPF file

```
<item href="toc.ncx" id="ncx" media-  
type="application/x-dtbnx+xml"/>
```

# Some Technical Detail

- Really a ZIP file container (OPF - Open Container Format 2.0.1)



## mimetype

The *mimetype* file must be a text document in ASCII that contains the string *application/epub+zip*



# How to produce an EPUB

- **Manually create the EPUB file (like an old school website)**
- **Number of Word to EPUB conversion tools**
- **Use XML/XSLT – Many JATS to EPUB tools around**
  - Laura Kelly <http://www.ncbi.nlm.nih.gov/books/NBK47314/>
- **Adobe InDesign**
- **Outsource**

# Digital Rights Management

## (DRM)

- Ensures EPUB files can only be opened by authorized devices
- There is no single way. Each vendor uses their own
- You do not have to use DRM

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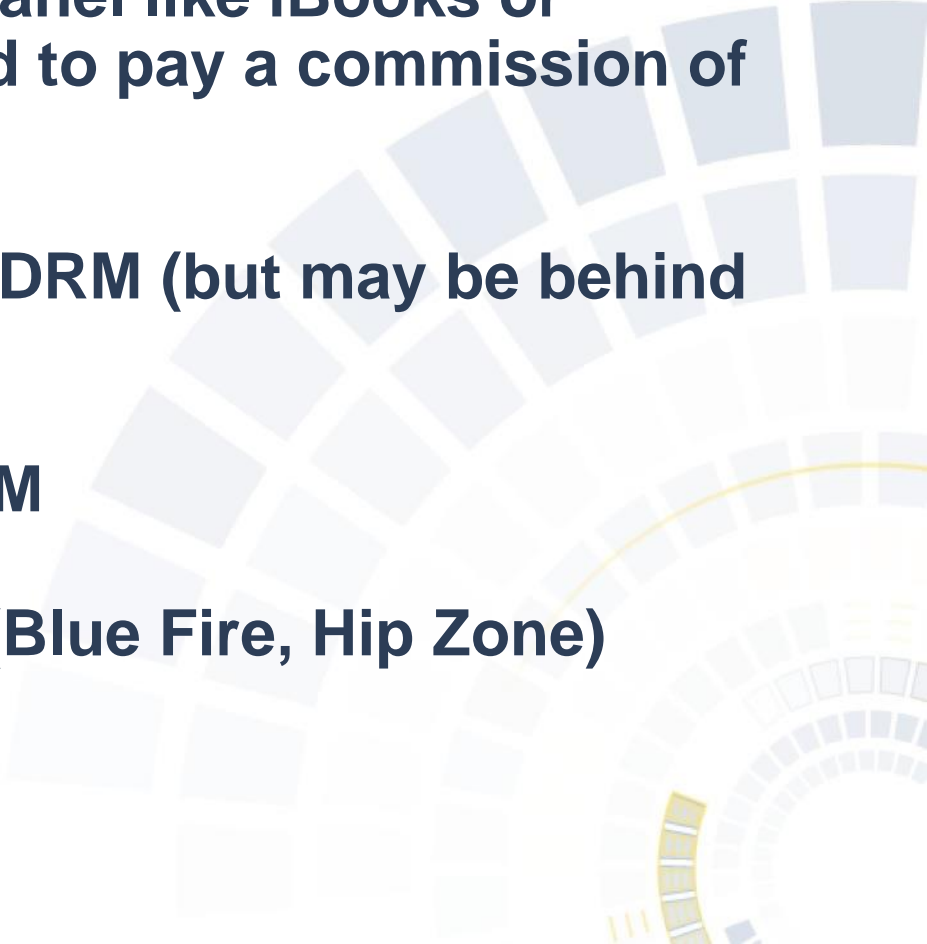
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[us.macmillanusa.com/piracy](http://us.macmillanusa.com/piracy).

# Digital Rights Management

Device/Application	DRM Scheme
Adobe Digital Editions	Adobe Content Server
Google Books	Lektz DRM
iBooks	FairPlay
Kindle	ZAW/TPZ & File Format
Sony	Adobe Content Server
Kobo	Adobe Content Server
Nook	Modified Adobe Content Server

# Channels

- **Go with a commercial Channel like iBooks or Amazon. You would need to pay a commission of around 30%-50%**
  - **Off your website without DRM (but may be behind a pay wall)**
  - **Off your website with DRM**
  - **Use a white label reader (Blue Fire, Hip Zone)**
  - **Build your own reader**
- 
- A decorative background graphic on the right side of the slide, featuring a spiral staircase with light blue and yellow steps, curving upwards and outwards.

# Each device is different

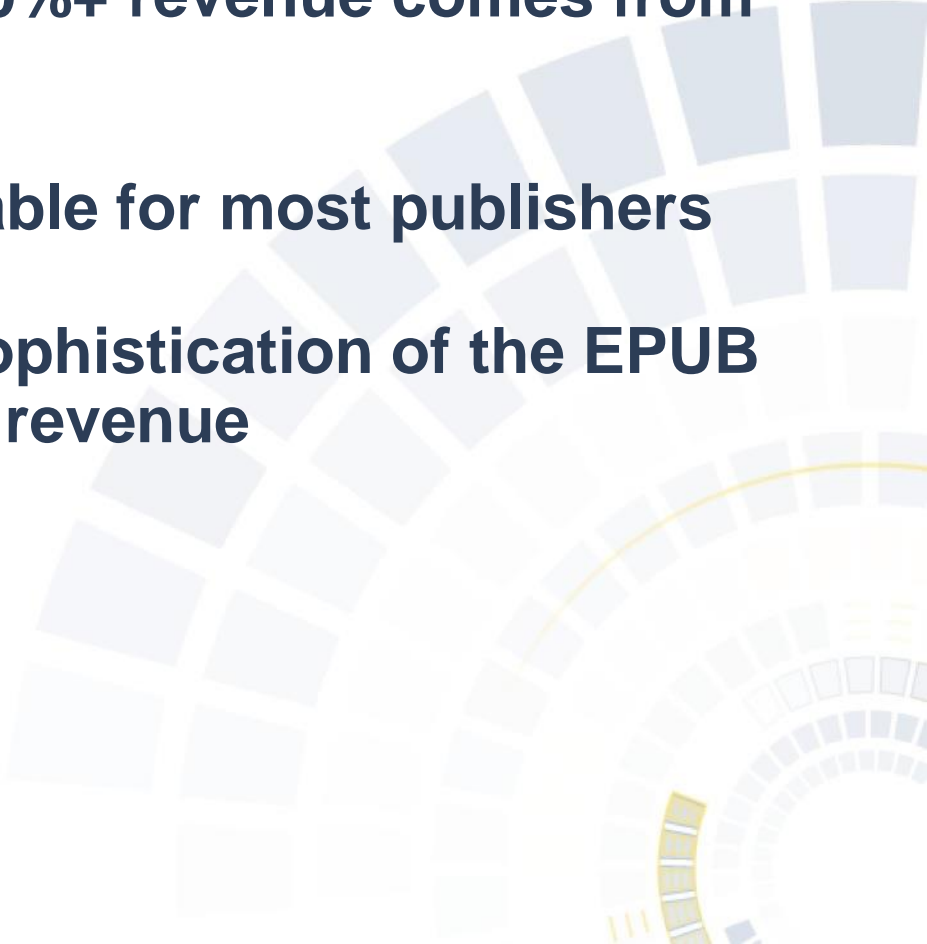
- **Each device and application renders content slightly differently (think browser wars)**
  - Eg. Formatting, Keeps, Lists, Boxes
- **Need to optimize content for devices, device classes or use the lowest common denominator**
- **More devices you support more accessible your content will be... but!!!**

# Device specific content

- Each device renders (or does not render) content differently e.g. MathML, Video
- Subset your content to different formats/devices or use lowest common denominator
- Keep content cut due to page budget



# Revenue

- **Most publishers report 80%+ revenue comes from print**
  - **EPUBs are not yet profitable for most publishers**
  - **Time/Money spent and sophistication of the EPUB has little correlation with revenue**
- 
- A decorative background graphic in the bottom right corner consisting of several concentric, semi-circular arcs. These arcs are composed of small, light blue and yellow squares, creating a spiral-like effect that fades into the white background.



# Competing platforms

- **Adobe Digital Editions**
- **Inkling**
- **Blue Fire / Hip Zone**
- **Large number of HTML5 apps**

# I can only proof in the final layout!!!!!!



# THANK YOU

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[www.typefi.com](http://www.typefi.com)



Solution  
PARTNER