



Epub3 and HTML5 Explained*



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*in 20 minutes or less

History of Technology

8,000 BC – 5 minutes ago

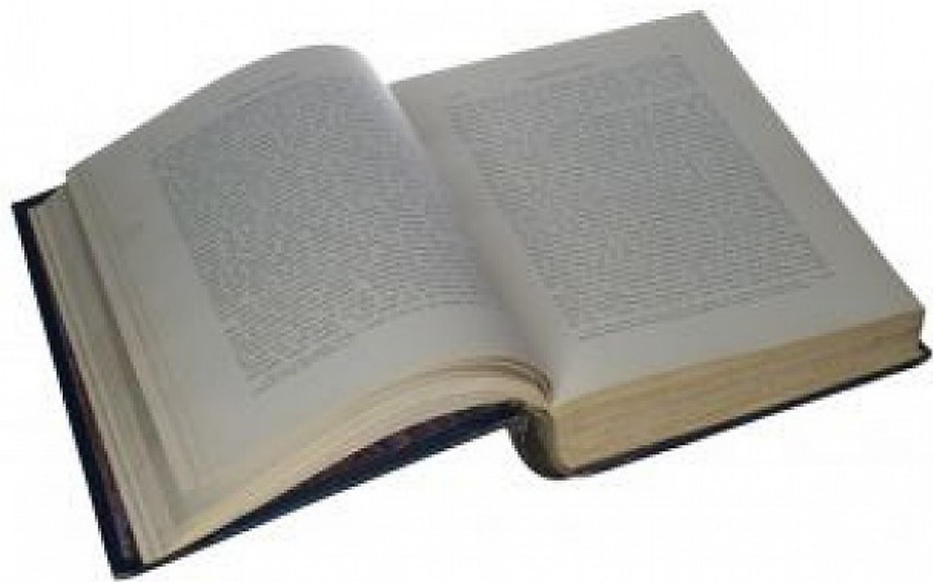


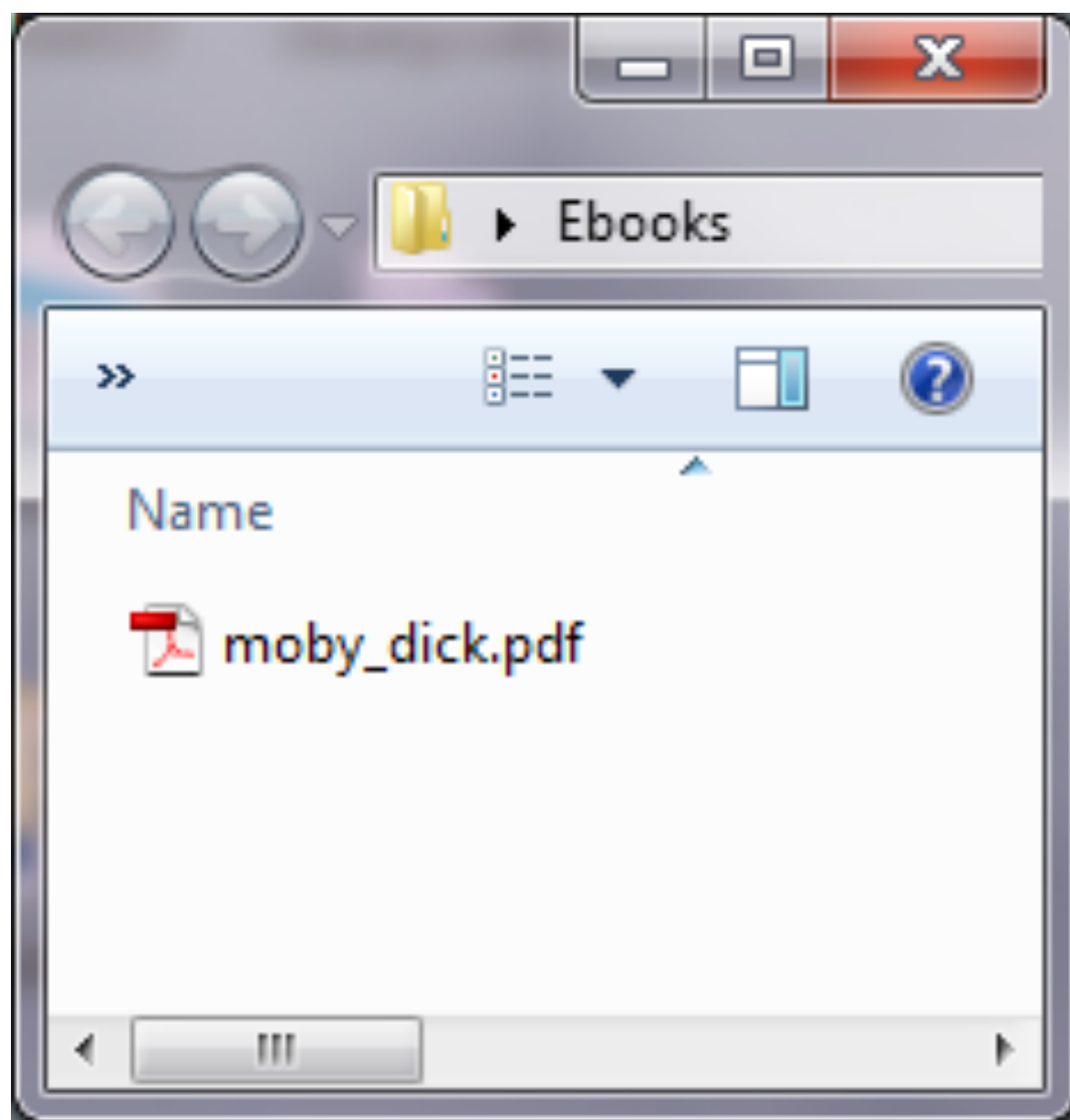














How did they make that?



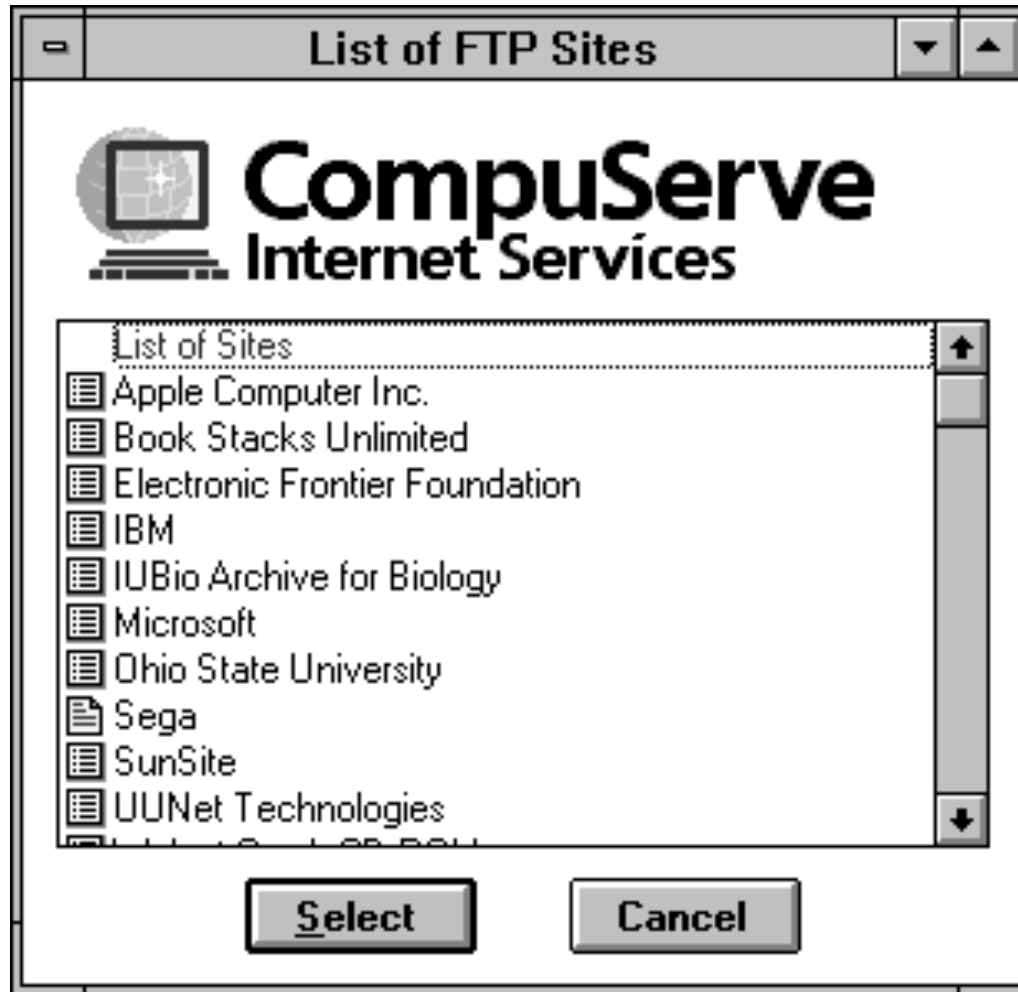
Step 1

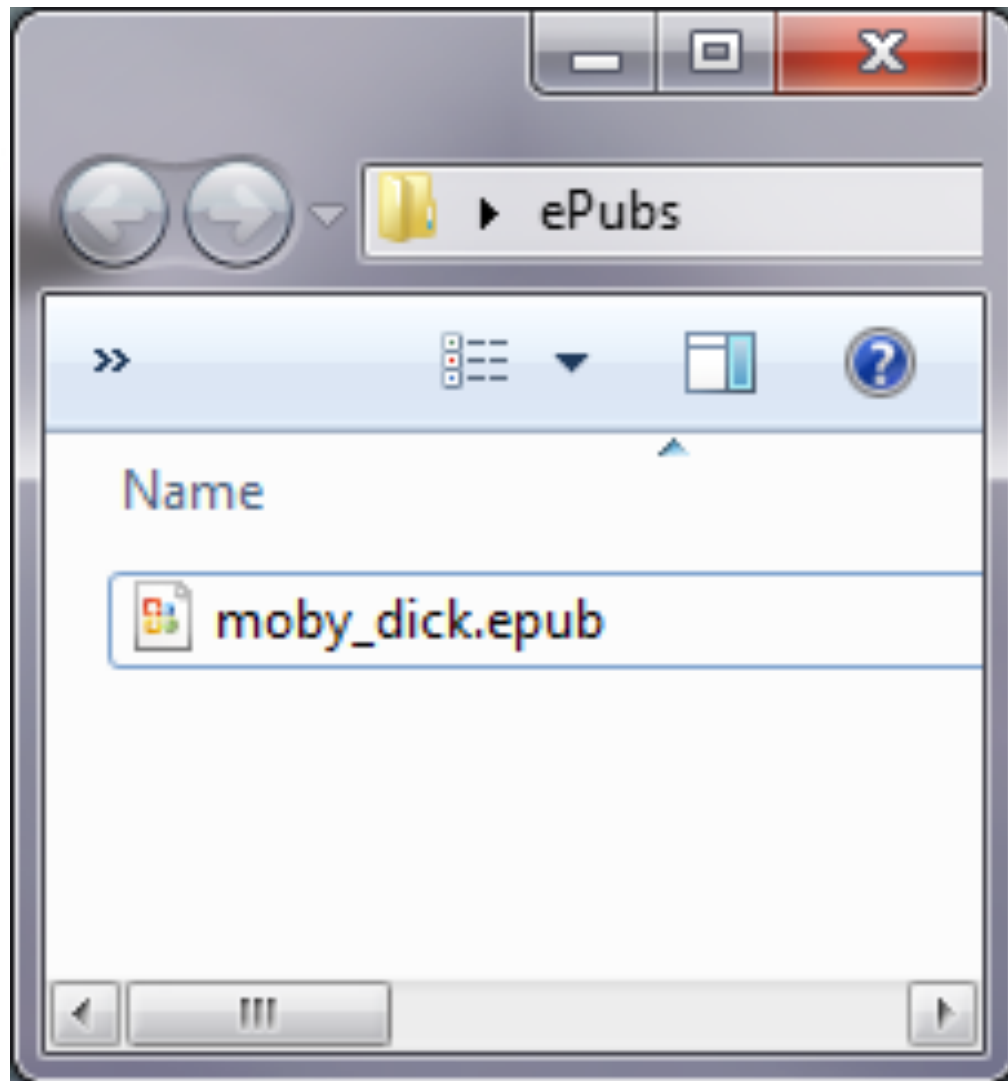


Step 2



Step 3





**"An ebook is a frozen website
packaged in a container."**

-- Mary Siderwicz, W3C



GREEN
MOUNTAIN
COFFEE®

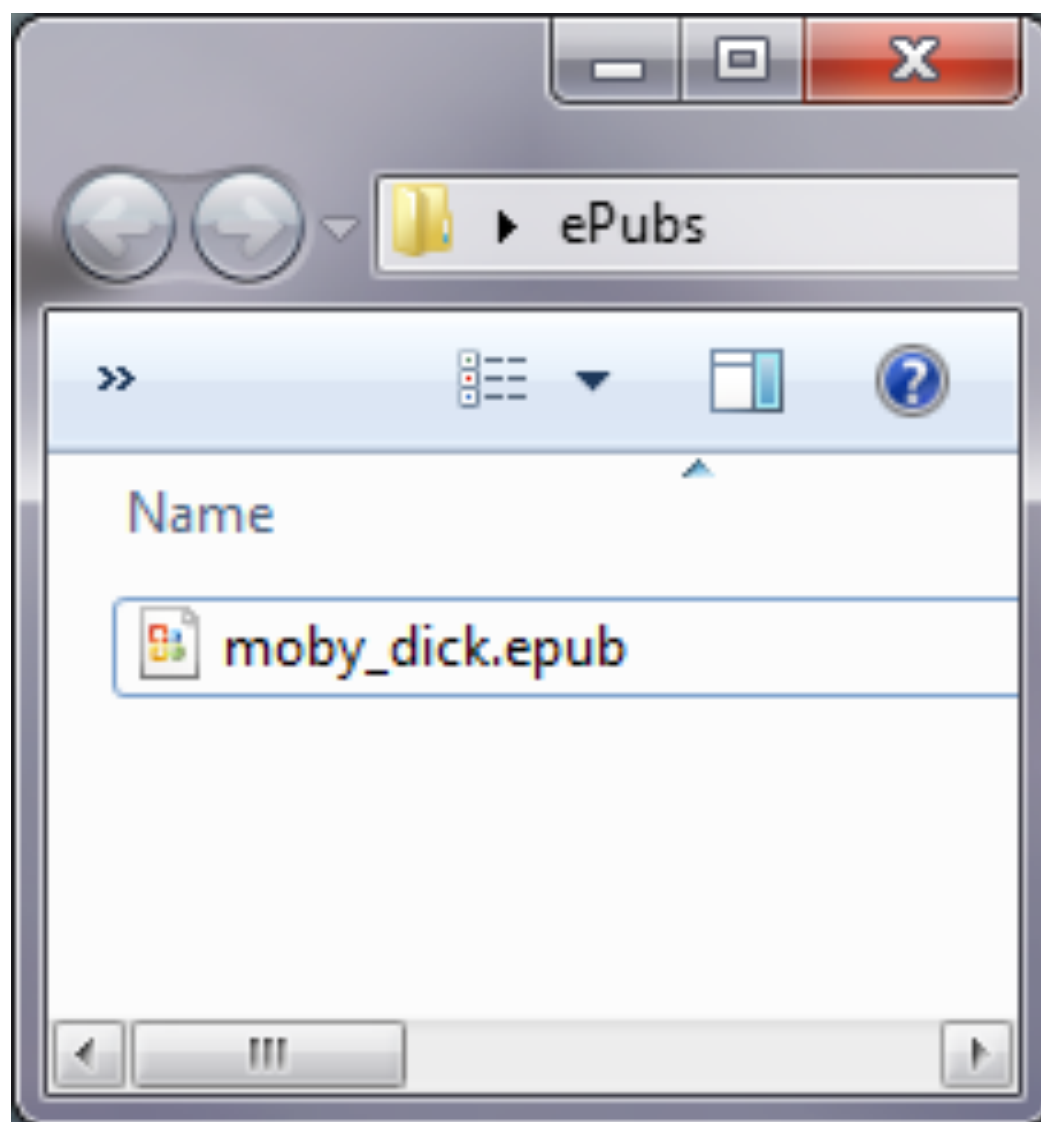
LIMITED EDITION

THE PERFECT PEACH™
FAIR TRADE CERTIFIED™

FOR KEURIG® BREWERS
Ⓢ



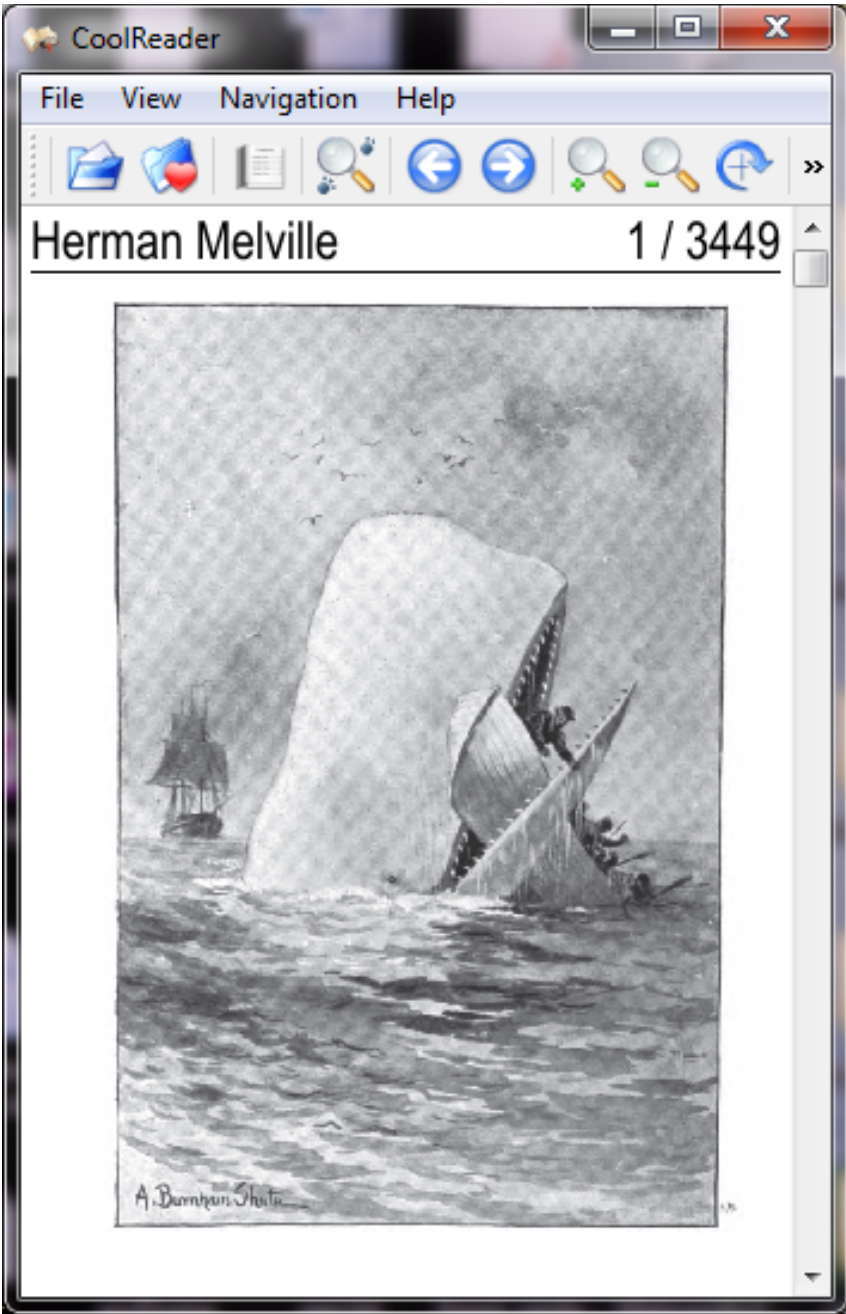


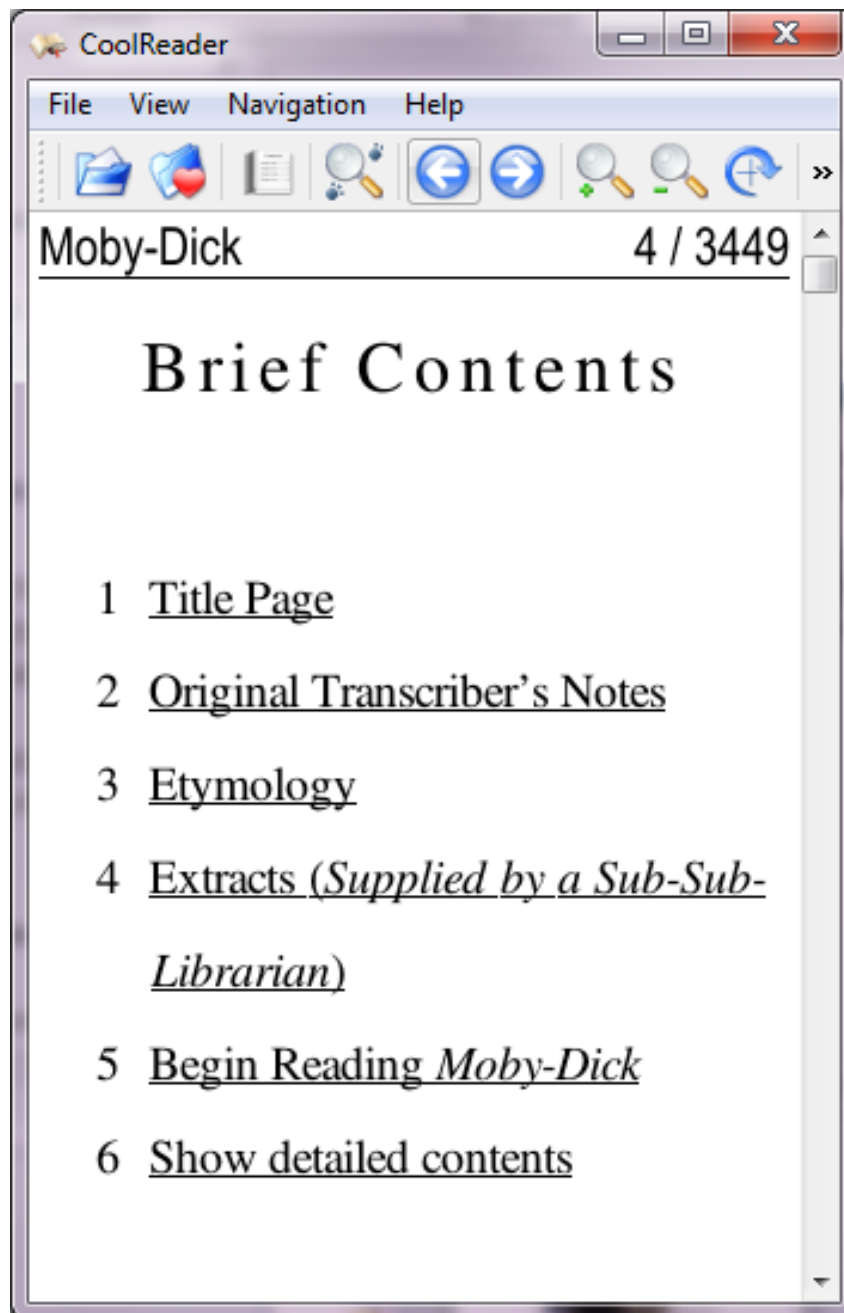




Radium









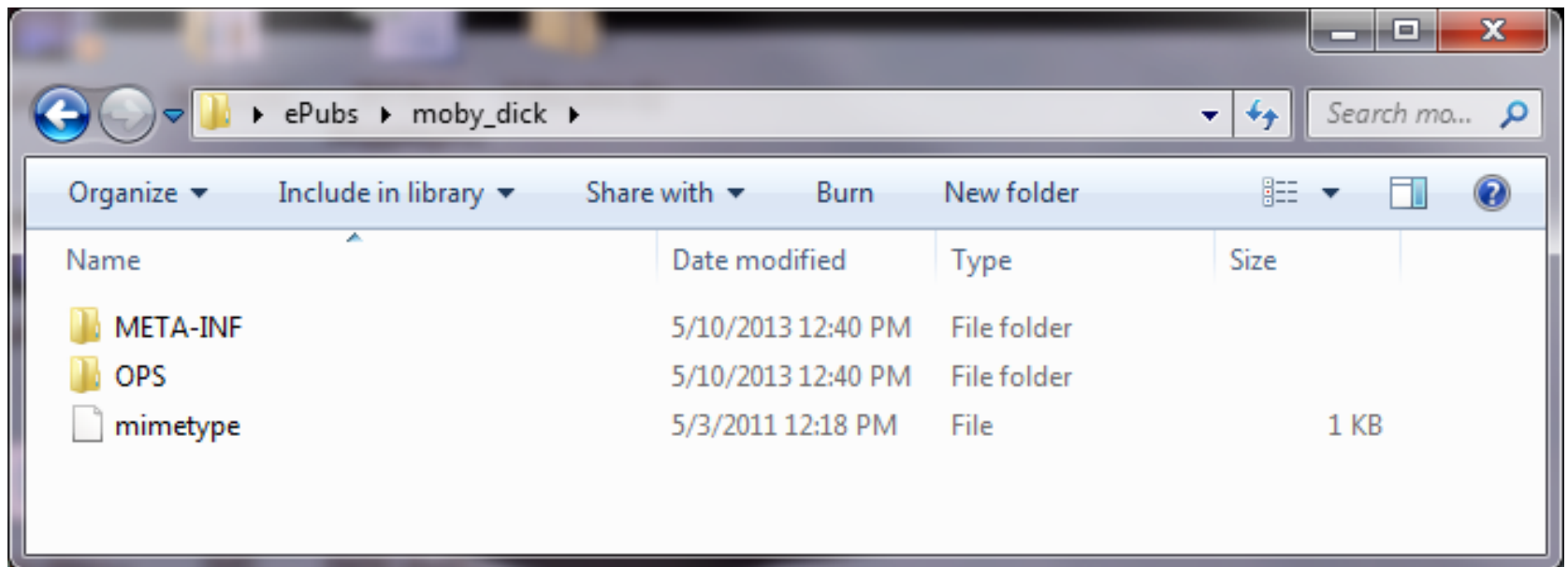


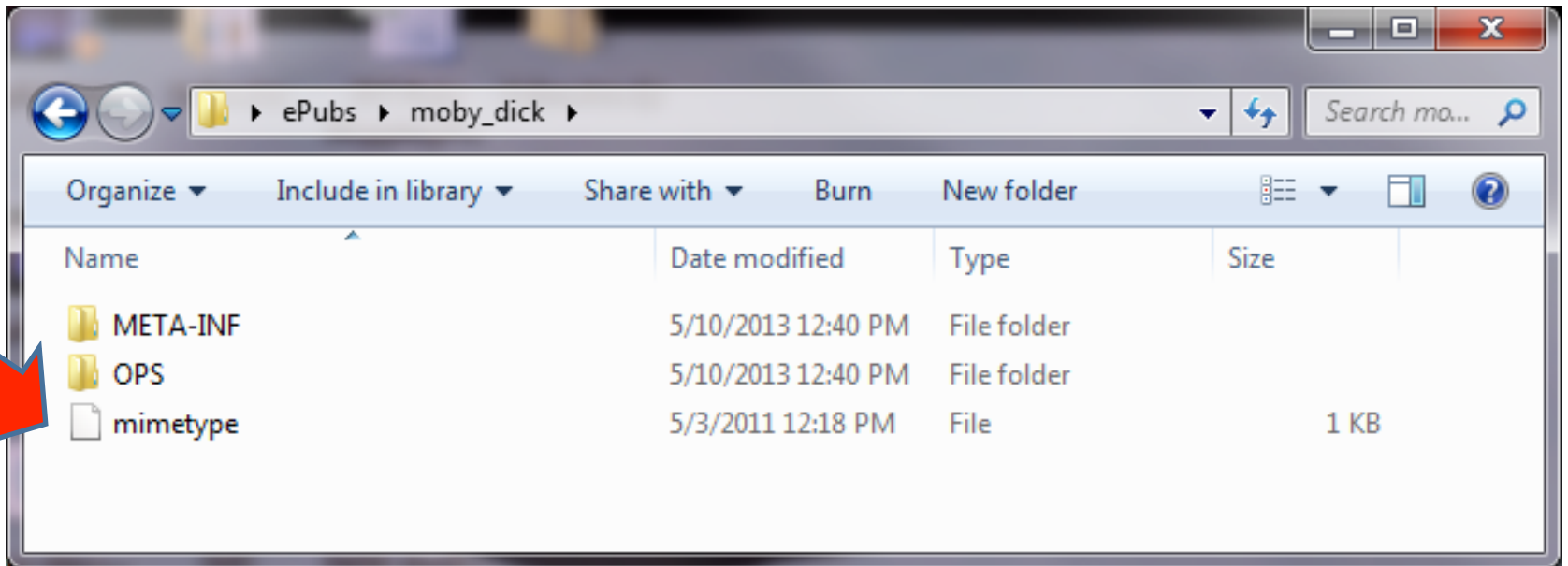


moby_dick.epub

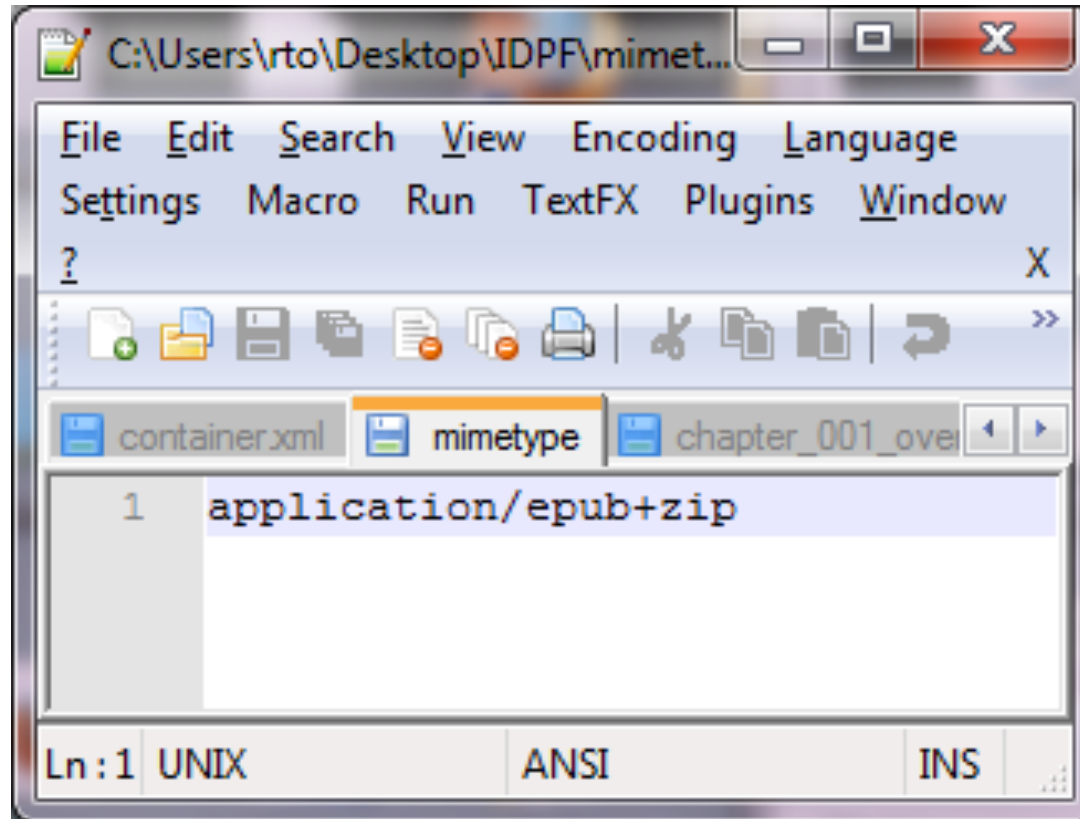
WinZip™ 16.5

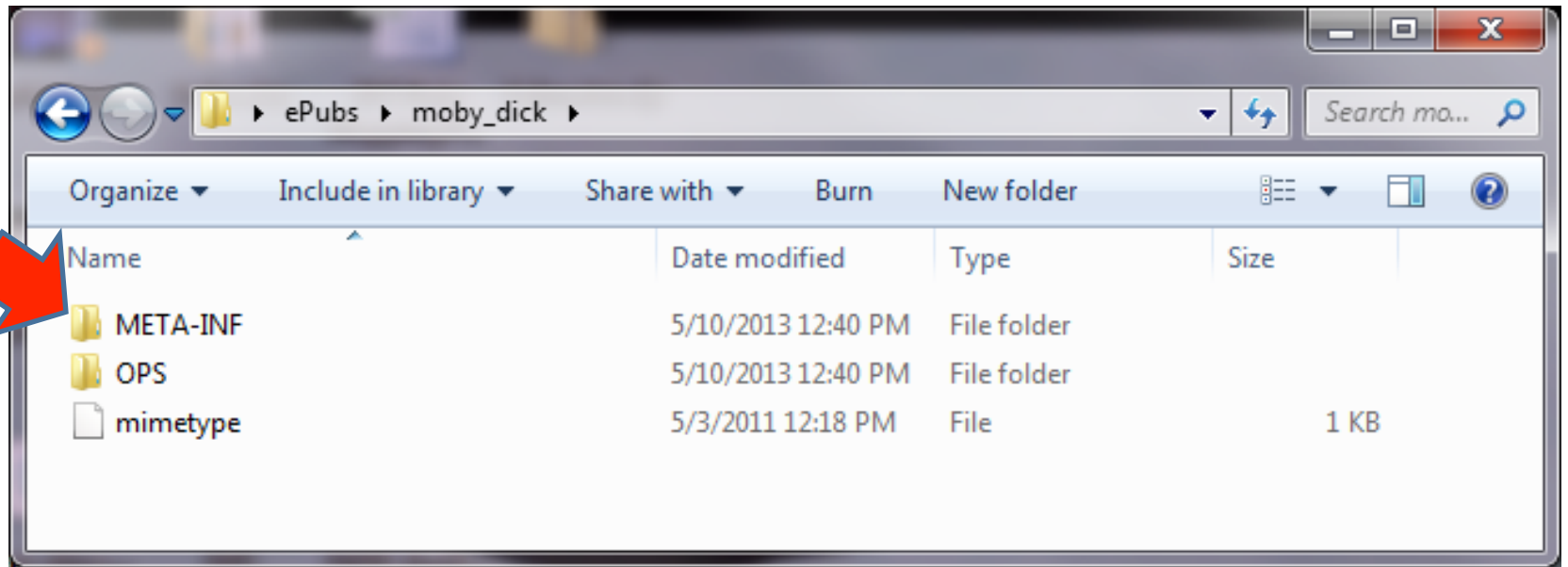
Uses OpenCL™ to get 135% faster compressions speeds

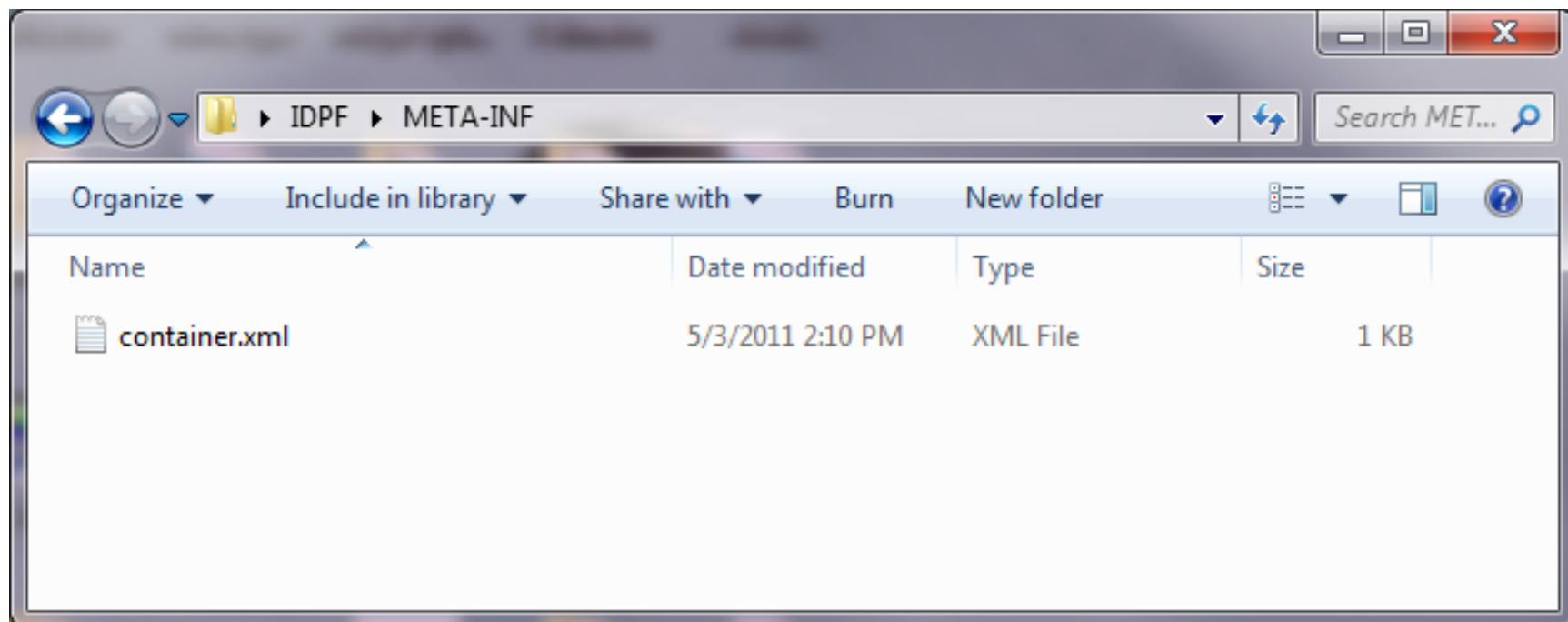




MIME = Multipurpose Internet Mail Extension








C:\Users\rto\Desktop\IDPF\META-INF\container.xml - Notepad++

File Edit Search View Encoding Language Settings Macro Run TextFX
Plugins Window ?

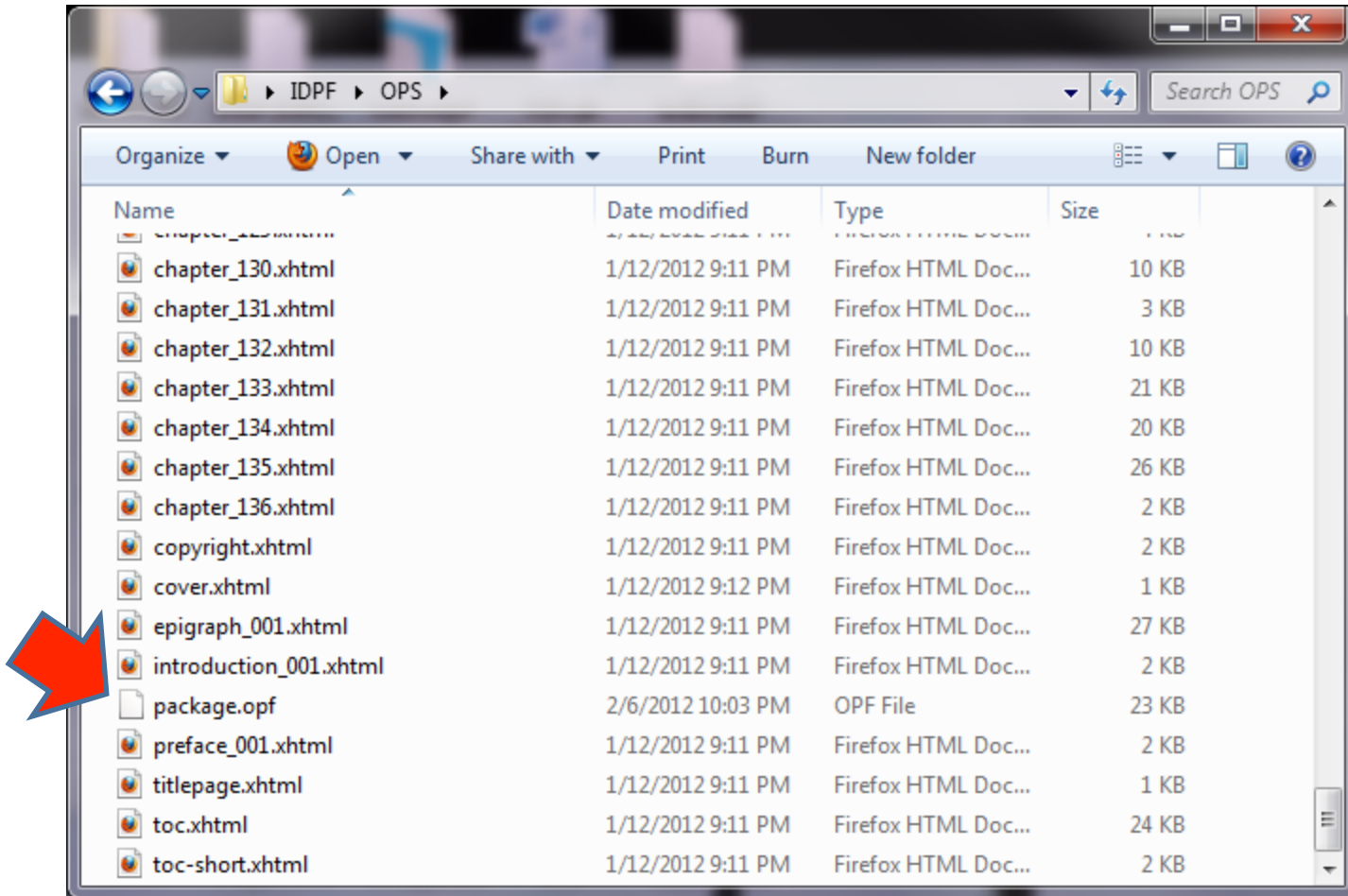
script_JHU.txt MUSE1.xsl quiz.css pilot.txt PO_20130418.xml

```
1 <?xml version="1.0" encoding="UTF-8"?><container
  xmlns=
    "urn:oasis:names:tc:opendocument:xmlns:container"
  version="1.0">
2 <rootfiles>
3 <rootfile full-path="OPS/package.opf" media-type=
  "application/oebps-package+xml"/>
4 </rootfiles>
5 </container>
```

Ln: 5 Col: 13 Sel: 0 | 0 UNIX ANSI as UTF-8 INS



OPF = Open Packaging Format



C:\Users\rto\Desktop\IDPF\OPS\package.opf - Notepad++

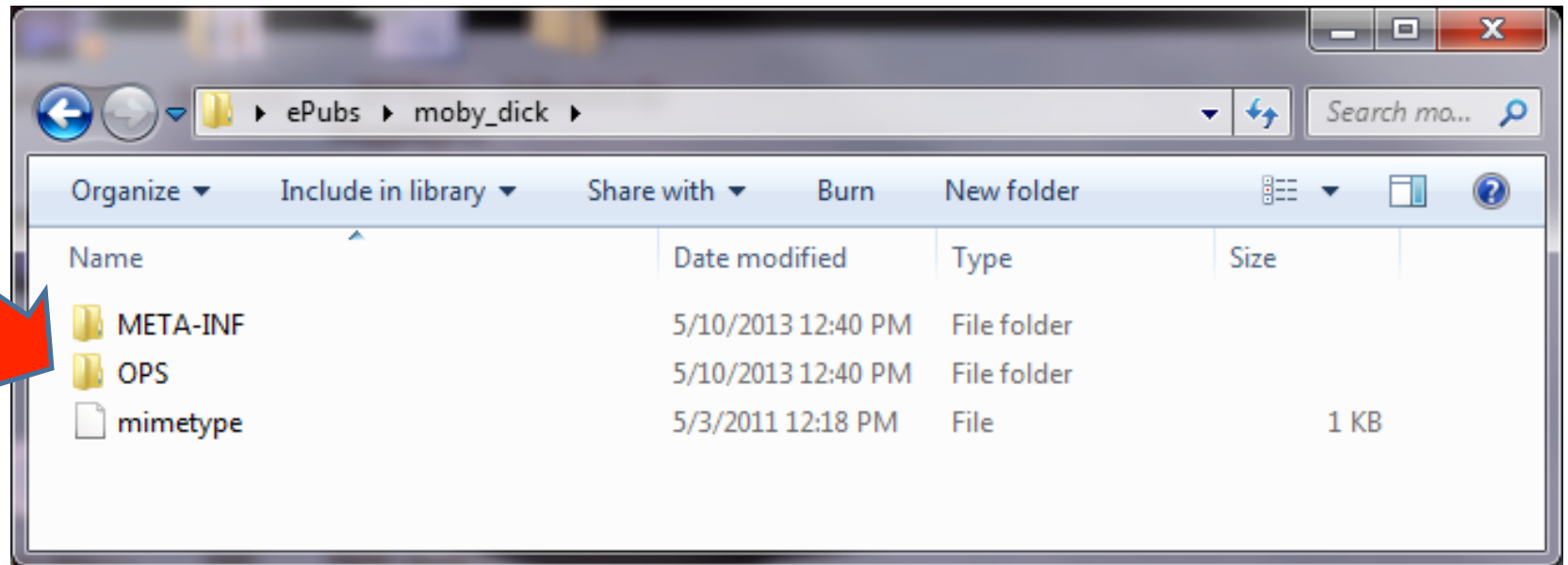
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?

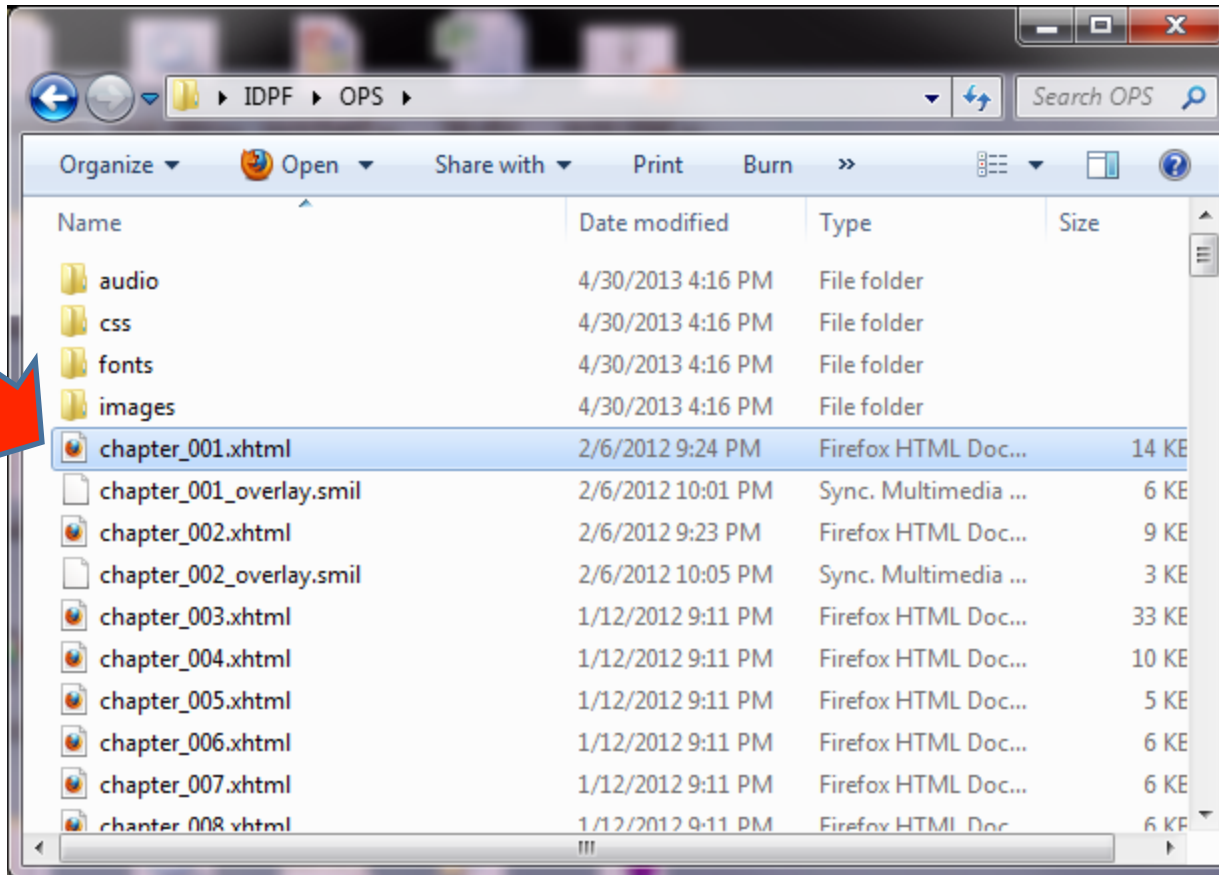
package.opf

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <package xmlns="http://www.idpf.org/2007/opf" version="3.0" xml:lang="en"
  unique-identifier="pub-id">
3 <!--I'm assuming prefixes for marc, onix, and xsd are predefined-->
4
5 <metadata xmlns="http://purl.org/dc/elements/1.1/">
6
7 <dc:title id="title">Moby-Dick</dc:title>
8 <meta refines="#title" property="title-type">main</meta>
9
10 <dc:creator id="creator">Herman Melville</dc:creator>
11 <meta refines="#creator" property="file-as">MELVILLE, HERMAN</meta>
12 <meta refines="#creator" property="role" scheme="marc:relators">aut</meta>
13
14 <dc:identifier id="pub-id">urn:isbn:9780316000000</dc:identifier>
15 <meta refines="#pub-id" property="identifier-type"
  scheme="onix:codelist5">15</meta>
16
17
18
19
20 <dc:language>en-US</dc:language>
21
22 <meta property="dcterms:modified">2012-01-13T01:13:00Z</meta>
23
24 <dc:publisher>Harper & Brothers, Publishers</dc:publisher>
25
26 <dc:contributor id="contrib1">Dave Cramer</dc:contributor>
```

length: 22641 lines: 346 Ln: 21 Col: 1 Sel: 0 | 0 UNIX ANSI INS

OPS = Open Publication Structure





Moby-Dick - Mozilla Firefox

File Edit View History Bookmarks Yahoo! Tools Help

file:///C:/Users/rto/Desktop/IDPF/OPS/chapter_001.xhtml

wikipedia

59°

International Digital Publishing Foru... x Mozilla Firefox Start Page x Moby-Dick x +

CHAPTER 1. LOOMINGS.

Call me Ishmael. Some years ago—never mind how long precisely—having little or no money in my purse, and nothing particular to interest me on shore, I thought I would sail about a little and see the watery part of the world. It is a way I have of driving off the spleen and regulating the circulation. Whenever I find myself growing grim about the mouth; whenever it is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing before coffin warehouses, and bringing up the rear of every funeral I meet; and especially whenever my hypos get such an upper hand of me, that it requires a strong moral principle to prevent me from deliberately stepping into the street, and methodically knocking people's hats off—then, I account it high time to get to sea as soon as I can. This is my substitute for pistol and ball. With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship. There is nothing surprising in this. If they but knew it, almost all men in their degree, some time or other, cherish very nearly the same feelings towards the ocean with me.

There now is your insular city of the Manhattoes, belted round by wharves as Indian isles by coral reefs—commerce surrounds it with her surf. Right and left, the streets take you waterward. Its extreme downtown is the battery, where that noble mole is washed by waves, and cooled by breezes, which a few hours previous were out of sight of land. Look at the crowds of water-gazers there.

Circumambulate the city of a dreamy Sabbath afternoon. Go from Corlears Hook to Coenties Slip, and from thence, by Whitehall, northward. What do you see?—Posted like silent sentinels all around the town, stand thousands upon thousands of mortal men fixed in ocean reveries. Some leaning against the spiles; some seated upon the pier-heads; some looking over the bulwarks of ships from China; some high aloft in the rigging, as if striving to get a still better seaward peep. But these are all landsmen; of week days pent up in lath and plaster—tied to counters, nailed to benches, clinched to desks. How then is this? Are the green fields gone? What

x Find: Next Previous Highlight all Match case

```
C:\Users\rto\Desktop\IDPF\OPS\chapter_001.xhtml - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
container.xml mimetype chapter_001_overlay.smil chapter_002_overlay.smil hello.smil H20130430142121.csv chapter_001.xh
1 <?xml version="1.0" encoding="UTF-8"?>
2 <html xmlns="http://www.w3.org/1999/xhtml" xmlns:epub="http://www.idpf.org/2007/ops">
3 <head>
4 <title>Moby-Dick</title>
5 <link rel="stylesheet" href="css/stylesheet.css" type="text/css"/>
6 <meta charset="utf-8"/>
7 </head>
8 <body>
9 <section class="body-rw Chapter-rw" epub:type="bodymatter chapter">
10 <h1 id="c01h01">Chapter 1. Loomings.</h1>
11 <p><span id="c01w00001">Call</span> <span id="c01w00002">me</span> <span id="c01w00003">
12 Ishmael.</span>
13 <span id="c01s0002">Some years ago—never mind how long precisely—having little or no
14 money in my purse, and nothing particular to interest me on shore, I thought I would
15 sail about a little and see the watery part of the world.</span>
16 <span id="c01s0003">It is a way I have of driving off the spleen and regulating the
17 circulation.</span>
18 <span id="c01s0004">Whenever I find myself growing grim about the mouth; whenever it
19 is a damp, drizzly November in my soul; whenever I find myself involuntarily pausing
20 before coffin warehouses, and bringing up the rear of every funeral I meet; and
21 especially whenever my hypos get such an upper hand of me, that it requires a strong
22 moral principle to prevent me from deliberately stepping into the street, and
23 methodically knocking people's hats off—then, I account it high time to get to sea as
24 soon as I can.</span>
25 <span id="c01s0005">This is my substitute for pistol and ball.</span>
26 <span id="c01s0006">With a philosophical flourish Cato throws himself upon his sword;
```

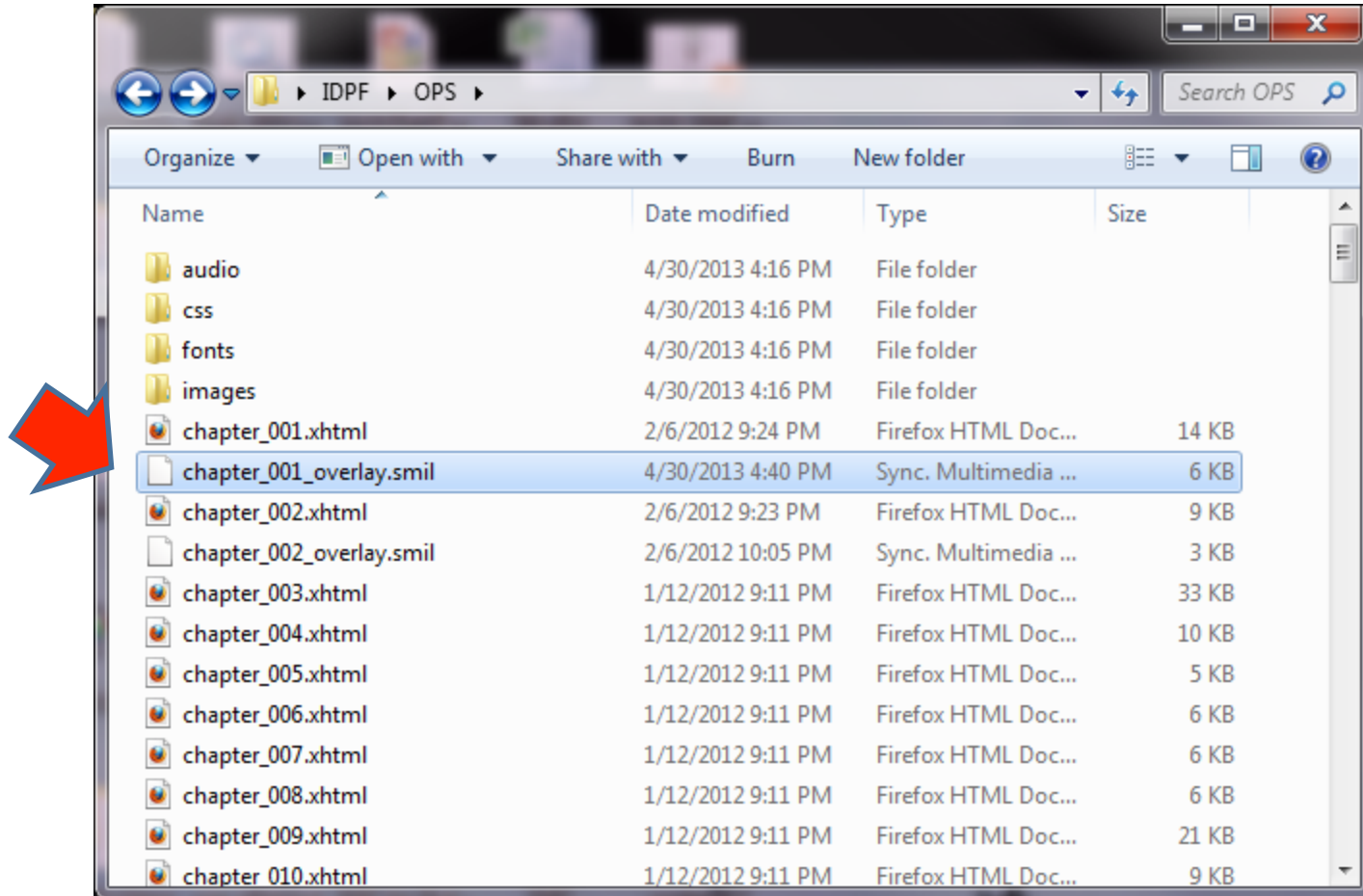
Hyper Text Ma length: 13328 lines: 38 Ln: 1 Col: 1 Sel: 0 | 0 UNIX ANSI as UTF-8 INS

```
<h1 id="c01h01">Chapter 1. Loomings.</h1>
```

```
<p><span id="c01w00001">Call</span> <span id="c01w00002">Ishmael.</span></p>
```

```
<span id="c01s00002">Some years ago-  
money in my purse, and nothing part  
sail about a little and see the wat  
<span id="c01s00003">It is a way I h  
circulation.</span>
```

```
<span id="c01s00004">Whenever I find  
is a damp, drizzly November in my s  
before coffin warehouses, and bring  
especially whenever my hypos get su
```




```
C:\Users\rto\Desktop\IDPF\OPS\chapter_001_overlay.smil - Notepad++
File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window ?
chapter_001_overlay.smil chapter_002_overlay.smil hello.smil H20130430142121.csv chapter_001.xhtml
1 <smil>
2   xmlns="http://www.w3.org/ns/SMIL"
3   xmlns:epub="http://www.idpf.org/2007/ops"
4   version="3.0">
5   <body>
6
7
8     <seq id="id1" epub:textref="chapter_001.xhtml" epub:type="bodymatter chapter">
9
10      <par id="heading1">
11        <text src="chapter_001.xhtml#c01h01"/>
12        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:24.500"
13              clipEnd="0:00:29.268"/>
14      </par>
15
16      <par id="word1">
17        <text src="chapter_001.xhtml#c01w00001"/>
18        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.268"
19              clipEnd="0:00:29.441"/>
20      </par>
21
22      <par id="word2">
23        <text src="chapter_001.xhtml#c01w00002"/>
24        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.441"
25              clipEnd="0:00:29.640"/>
26      </par>

```

Normal text file | length : 5214 | lines : 172 | Ln: 11 Col: 55 Sel: 0 | 0 | UNIX | ANSI | INS

```
<par id="heading1">
```

```
<text src="chapter_001.xhtml#c01h01"/>
```

```
<audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:24.500"  
clipEnd="0:00:29.268"/>
```

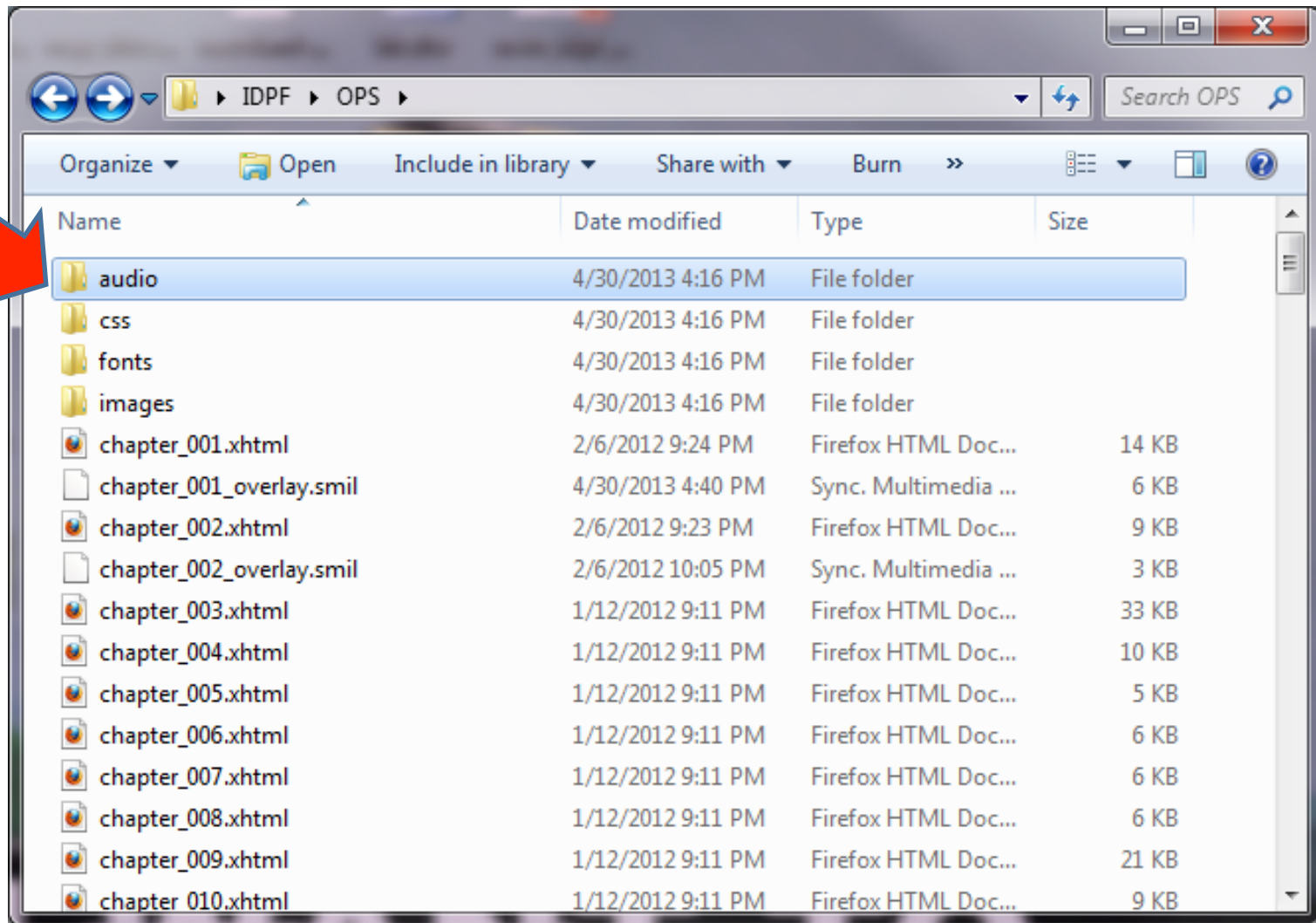
```
</par>
```

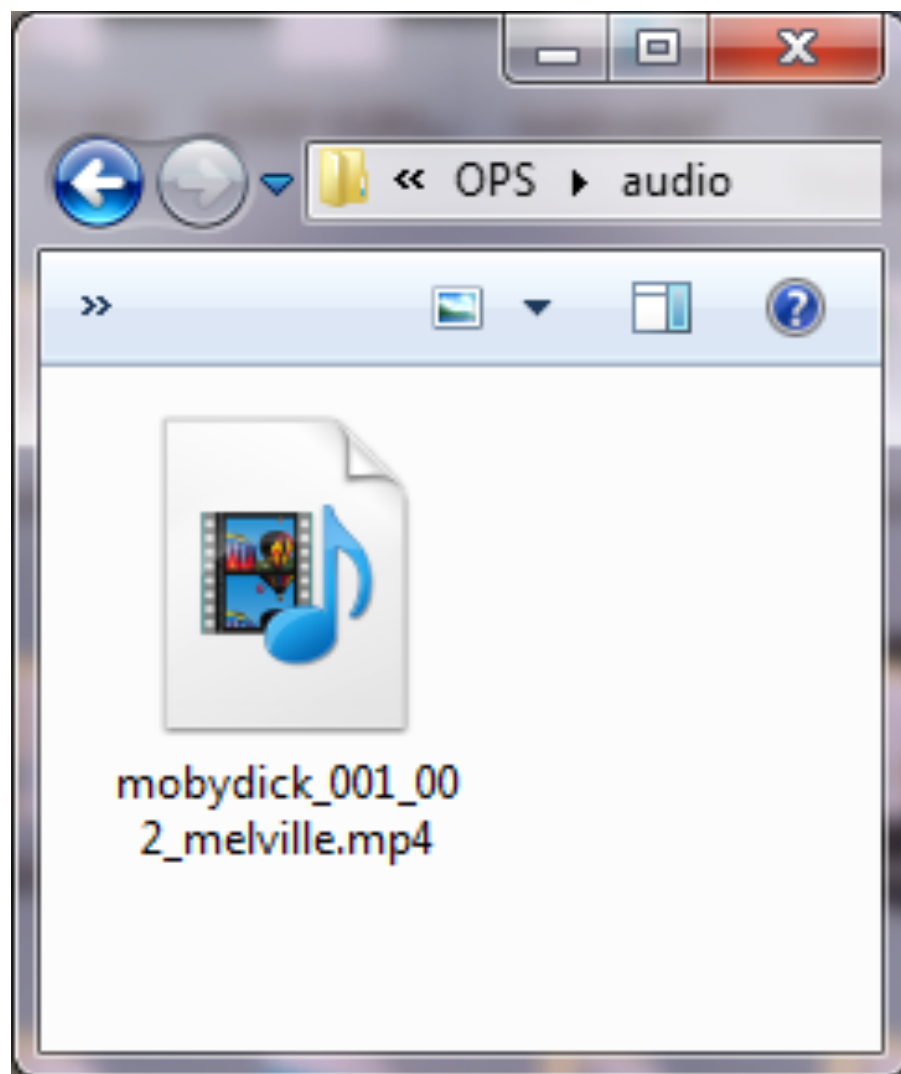
```
<par id="word1">
```

```
<text src="chapter_001.xhtml#c01w00001"/>
```

```
<audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.268"  
clipEnd="0:00:29.441"/>
```

```
</par>
```





“So he was like ‘Call me Ishmael’ and I was like...”



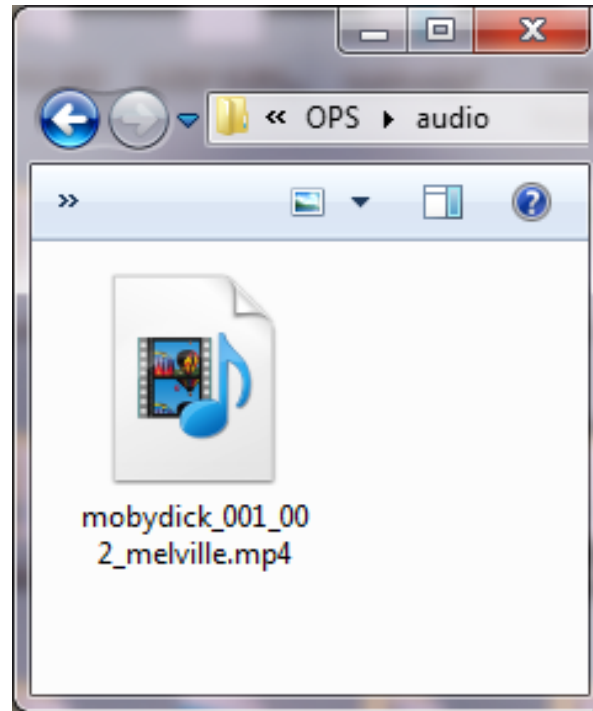
“Call...me...Ishmael”



**"Damn thee thou curse'd whale,
from the depths of hell I stab at
thee!"**



What else can EPUB3 have besides audio?

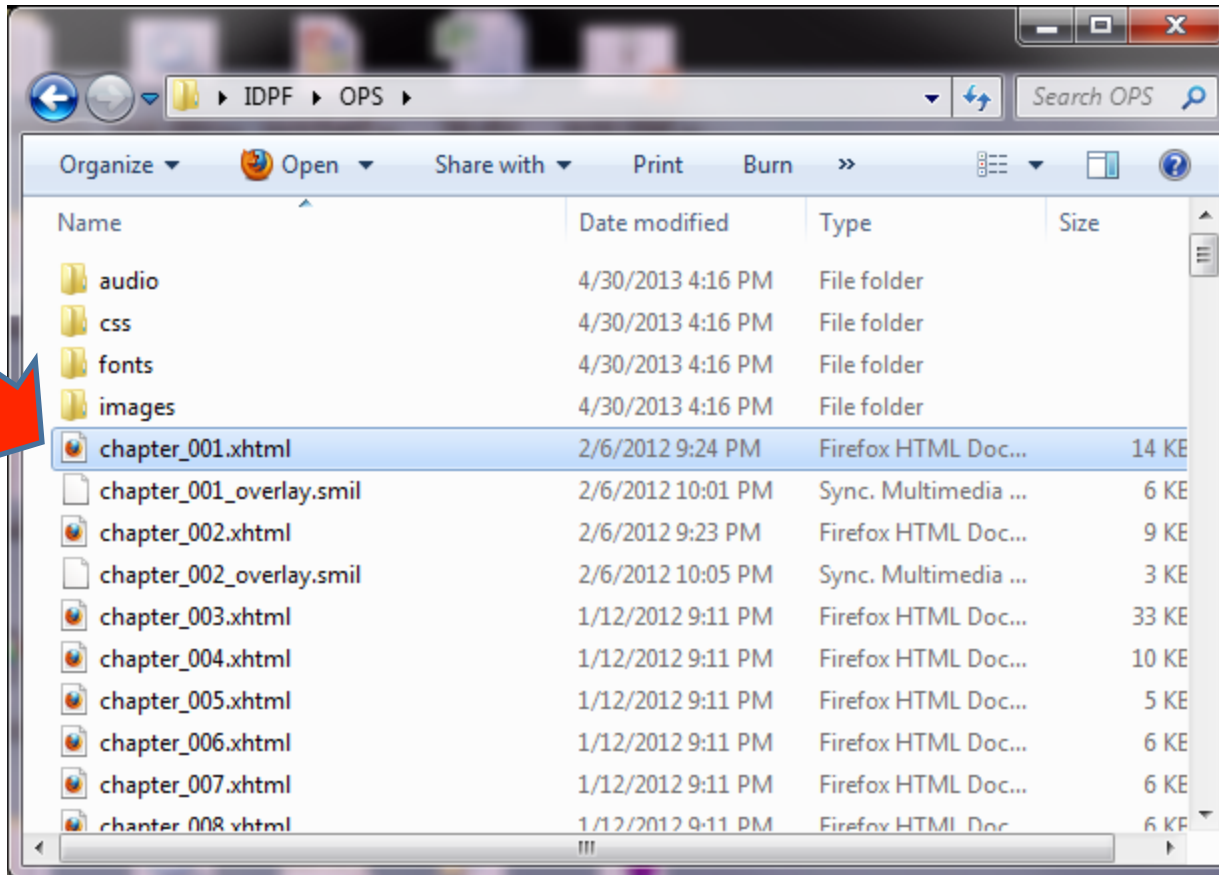


EPUB 3

- Support for complex content
(**math**, high-design textbooks)
- Enriched content
(**audio and video**)
- Global language support
- Accessibility

Feature	EPUB2	EPUB3
HTML 5 <nav>	No	Yes
CSS3 support *	No	Yes
Multiple style sheets	No	Yes
OTF & WOFF	No	Yes
SVG support	No	Yes
Metadata	No	Yes
epub: type	No	Yes
epub: trigger	No	Yes
<bindings>	No	Yes
XHTML 5 support	No	Yes
MathML	No	Yes
Scripting	No	Yes
Audio & Video	No	Yes
Aural renditions & Media Overlays	No	Yes





Is this HTML5?

```
<smil>
  xmlns="http://www.w3.org/ns/SMIL"
  xmlns:epub="http://www.idpf.org/2007/ops"
  version="3.0">
  <body>
    <seq id="id1" epub:textref="chapter_001.xhtml" epub:type="bodymatter chapter">

      <par id="heading1">
        <text src="chapter_001.xhtml#c01h01"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:24.500"
          clipEnd="0:00:29.268"/>
      </par>
      <par id="word1">
        <text src="chapter_001.xhtml#c01w00001"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.268"
          clipEnd="0:00:29.441"/>
      </par>

      <par id="word2">
        <text src="chapter_001.xhtml#c01w00002"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.441"
          clipEnd="0:00:29.640"/>
      </par>
      <par id="word3">
        ...
```

HTML5 New Media Elements

Tag	Description
<audio>	Defines sound content
<video>	Defines a video or movie
<source>	Defines multiple media resources for <video> and <audio>
<embed>	Defines a container for an external application or interactive content (a plug-in)
<track>	Defines text tracks for <video> and <audio>

Is this HTML5? Yes!

```
<smil>
  xmlns="http://www.w3.org/ns/SMIL"
  xmlns:epub="http://www.idpf.org/2007/ops"
  version="3.0">
  <body>
    <seq id="id1" epub:textref="chapter_001.xhtml" epub:type="bodymatter chapter">

      <par id="heading1">
        <text src="chapter_001.xhtml#c01h01"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:24.500"
          clipEnd="0:00:29.268"/>
      </par>
      <par id="word1">
        <text src="chapter_001.xhtml#c01w00001"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.268"
          clipEnd="0:00:29.441"/>
      </par>
      <par id="word2">
        <text src="chapter_001.xhtml#c01w00002"/>
        <audio src="audio/mobydick_001_002_melville.mp4" clipBegin="0:00:29.441"
          clipEnd="0:00:29.640"/>
      </par>
      <par id="word3">
        ...
```

But is it XHTML 5?

XML vs HTML?

Item	Metaphor
XML	Regular Coffee
HTML	Decaf Coffee

XML vs HTML vs **X**HTML?

Item	Metaphor
XML	Regular Coffee
HTML	Decaf Coffee
XHTML	Decaf with shot of Espresso

So is it **XHTML 5**? Yes again!


```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <html xmlns="http://www.w3.org/1999/xhtml" xmlns:ep
3 <head>
4 <title>Moby-Dick</title>
5 <link rel="stylesheet" href="css/styleSheet.css" type='
6 <meta charset="utf-8"/>
7 </head>
8 <body>
9 <section class="body-rw Chapter-rw" epub:type="body
10 <h1 id="c01h01">Chapter 1. Loomings.</h1>
11 <p><span id="c01w00001">Call</span> <span id="c0'
12 <span id="c01s0002">Some years ago—never mind
13 <span id="c01s0003">It is a way I have of driving off
14 <span id="c01s0004">Whenever I find myself growin
```

Text Grid Schema/WSDL Authentic Browser

chapter_001.xhtml

validation

File C:\Users\rto\Desktop\IDPF\OPS\chapter_001.xhtml is well-formed.



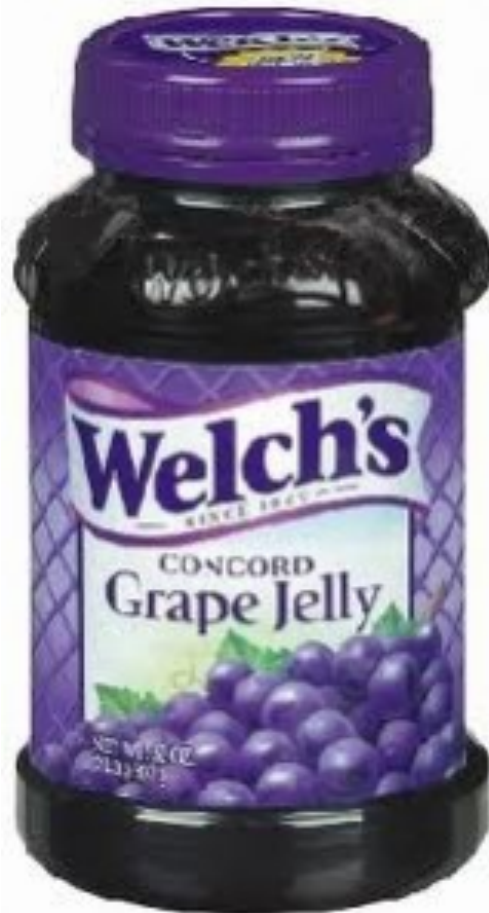
“Strictly speaking HTML5 refers to the W3C specification. But many in the industry have extended its meaning to include a related set of web technologies that collectively make the Internet more application-like.”

– Armando Roggio, April 2011

“Flash is no longer necessary to **watch video or consume any kind of web content...New open standards created in the mobile era, such as **HTML5, will win.**”**

– Steve Jobs, April 2010

EPUB 3



HTML5



What does the future hold?



Audio

```
...  
<audio controls>  
  <source src="horse.ogg" type="audio/ogg">  
  <source src="horse.mp3" type="audio/  
mpeg">
```

Your browser does not support the audio element.

```
</audio>
```

```
...
```


Video

...

```
<video poster="movie.jpg" controls>
  <source src="movie.webm" type='video/webm;
codecs="vp8.0, vorbis"/>
  <source src="movie.ogg" type='video/ogg; codecs="theora,
vorbis"/>
  <source src="movie.mp4" type='video/mp4;
codecs="avc1.4D401E, mp4a.40.2"/>
  <p>This is fallback content</p>
</video>
```

...

Smelleo

...

```
<smelleo="lilacs.olf" controls>
```

```
  <source src="lilacs.olf" type='smelleo/olf; codecs="vp8.0, vorbis"/>
```

```
  <source src="lilacs.olfg" type='smelleo/olfg; codecs="theora, vorbis"/>
```

```
  <source src="lilacs.sml" type='smelleo/sml; codecs="avc1.4D401E, mp4a.40.2"/>
```

```
  <p>This is fallback content</p>
```

```
</smelleo>
```

...

HTML 99

...

```
<happy>me</happy>
```

...



Thank you!



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