Creating an eBook in ePub3 format from *InDesign CS6*

Chris Jennings 2012

Contents

Introduction

What we are going to do

From a public domain text and some pictures, we are going to create an *InDesign* document, export for ePub and then 'break open' the ePub file and make some changes to some included files.

What you need

You will need to be using Photoshop to build the cover image and edit the pictures and add the metadata.

You will need to be using *InDesign* version CS6, although version CS5.5 is similar but with a few differences when exporting to ePub.

You will need to be able to edit the ePub file after export from *InDesign* and I suggest the OxygenXML editor although other text editors can do a similar job.

This instruction document is written alongside some resources that you can use. It makes use of a Word document that has several fables from Aesop, some pictures to go with those fables and an image that can be used for the cover of the eBook.

Prepare

Create a folder somewhere for the eBook work and then create an images folder and an assets folder inside that.

The text can be already prepared in a word processor or text editor, but it must not have extra carriage returns or empty paragraph breaks. It is possible to remove these when we get the text in *InDesign*, but better remove first. The text 'may' be styled in a word processor like Word. You can bring those styles into *InDesign*, when you 'place' the text. Alternatively, you can create your own styles in *InDesign*. The provided text 'aesop.docx' does have styles already.

The images should be edited and sized to about 600 pixels wide but in 72DPI. The images need to include some metadata. In Photoshop, select 'File Info...' and add the title, description etc. This has already been done for the images provided.

The cover needs to be in portrait orientation at 1004x768 pixels although you may need to create different versions and proportions for specific ereader devices..
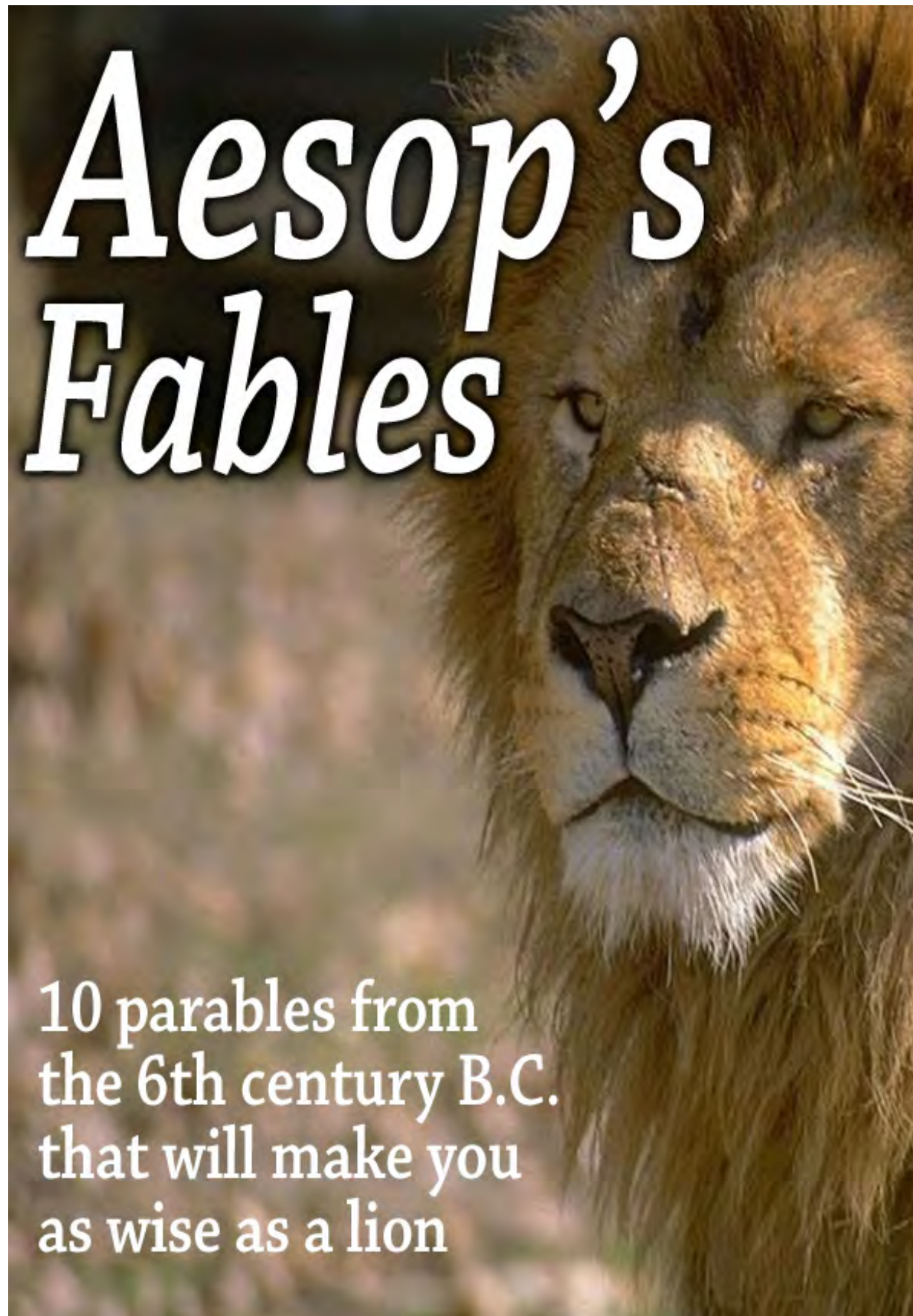
Start *InDesign*

You may want to configure your copy of *InDesign* to your liking. I prefer to have the units set up as pixels and the display performance to be set at 'High Quality'. I also prefer the pages panel to show medium sized thumbnails but NOT vertically.

Start a new document with File>New. Now for this work we are going to create one document so we choose >Document NOT >Book.
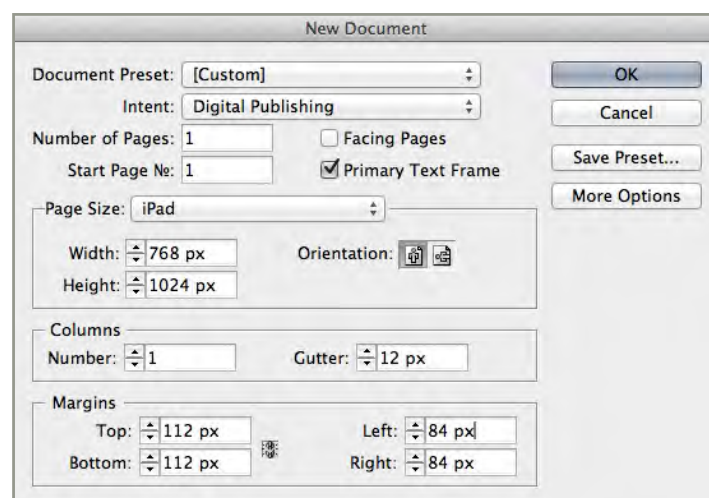
Because we are creating a 'flowable' eBook, the page size and intent are only really going to help visualise the final product. In the dialogue that appears you should choose 'Digital Publishing' under 'intent'. You can target the iPad if you prefer, but, in the end, we actually want an eBook that will display on a number of devices, however the proportions of the iPad are fairly common. You will see in the dialogue box image above, how I suggest setting this up. Much of this does not matter for the eBook, because the size will be automatically determined by the device. However, we do need to turn off 'Facing Pages' (at least, this is what I prefer!) and we should make sure that this is vertical (portrait) format. The number of pages is not relevant at this stage. I recommend the margin settings as seen in the dialogue box above. This will give you a good idea of the eBook proportions and available space. The iPad has a 20 pixel band at the top.

Before we place any text we need to make some further preparations:

Colours
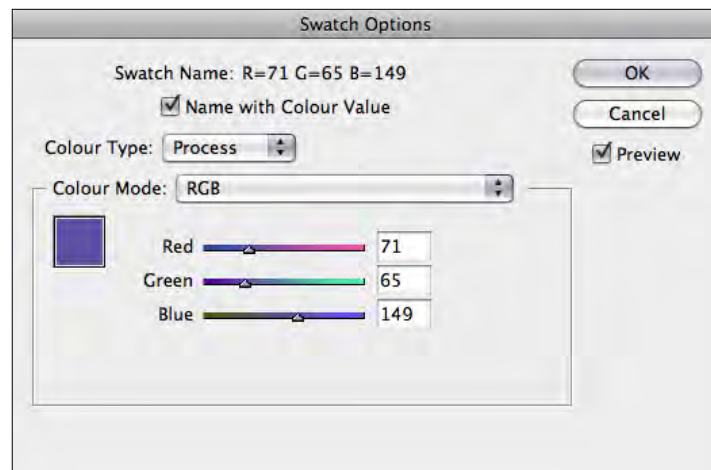
You may want to use colours in your eBook - maybe for the headings or to give emphasis here and there. You should really create the swatches for the colors that you might need but be sure to make them RGB not CMYK.
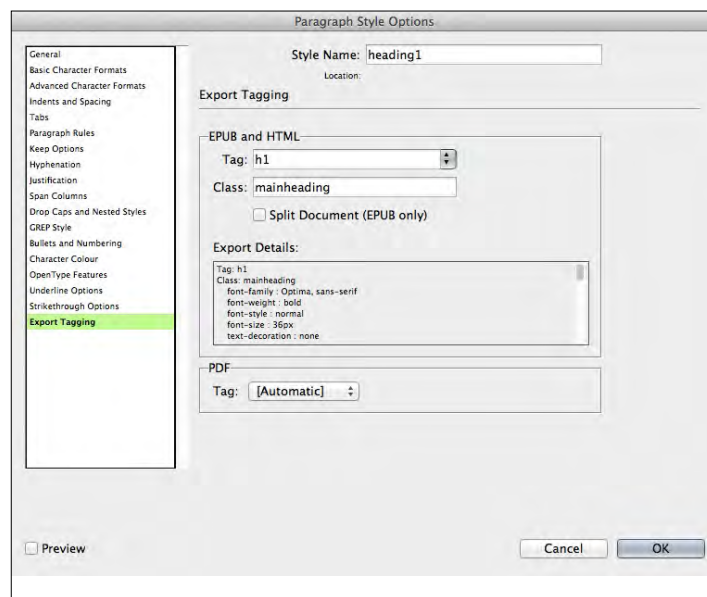
Styles

We can build the styles as we go, but it will be worth analyzing your text resource to think about how you might want different styles. There are two possible scenarios; we may already have styles in the MS Word document and those styles can be imported automatically when this is 'Placed' into the *InDesign* document. The Word documents that comes with this excercise includes some styles but you will certainly need to create more in *InDesign*. You will need paragraph styles for the following:

- The body text

- The title

- The headings

- The captions

We will also need a character style for:
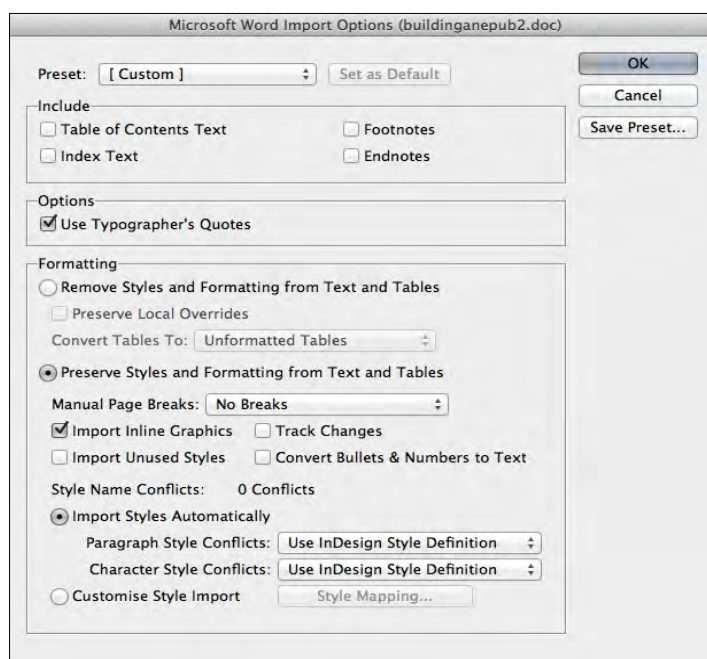
- The opening words of each fable

Save the (as yet) empty *InDesign* document in the folder prepared above.

Paragraph and character styles must be exported as specific HTML tags and class names

Place the text

Now we are ready to place the text from the Word document already prepared

The Place menu item under File will allow you to select the word document but please be sure to have the 'Show Import Options' checked. You should then see a number of choices with regard to the Word document.

For the purpose of this tutorial we can accept the styles from Word. We can ignore the table of contents and footnotes etc. Once you hit OK, the cursor will change to show that you have loaded the text into the memory ready for placing. Go to the top left of your one page in *InDesign* and with the SHIFT key depressed the cursor will change to show that the pages will be added automatically.

You should now have a couple of pages of text.

Let's get styling

As a general rule, we need a root style for our document and this can be the paragraph style call 'Body' that has come in from the Word document.

Put your text cursor in the title and select the 'title' style. Adjust the style to your liking. Same with the headings for each of the fables and the heading of the introduction.
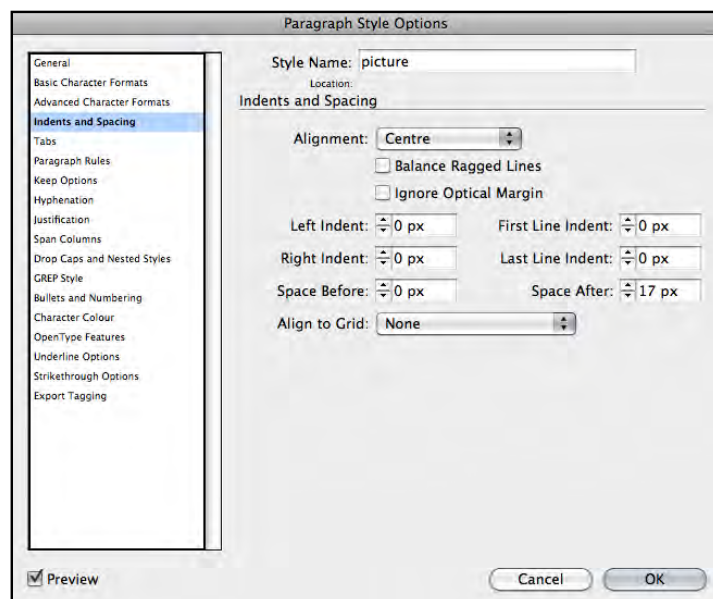
To style the first few words of each fable (or the first sentence), you need to go through and select each collection in turn and press over the character style that you have made.
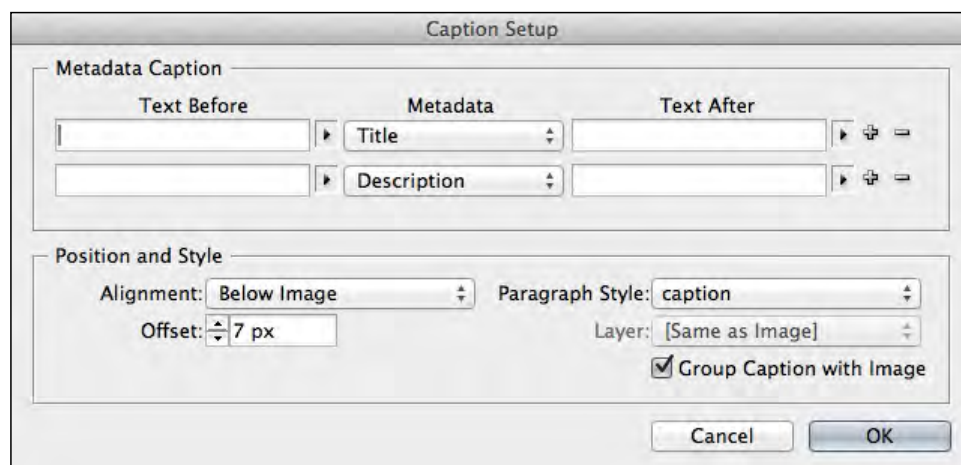
Place the images

The images folder should contain an image for each fable as well as one for the introduction and the eBook cover.

The important thing to remember, is that this process is more about the flow of the document rather than the appearance, so we cannot just place the images anywhere and expect them to appear in the right place within the text. The images need to be 'anchored' correctly.

Starting with the introduction then, go to File>Place and select the image 'aesop. jpg'. You should simply place this (for the moment) on the paste board to the left or right of the document. You can resize it but do so proportionally with the **shift-option** keys pressed.

Paragraph Style Options

General
Basic Character Formats
Advanced Character Formats
Indents and Spacing
Tabs
Paragraph Rules
Keep Options
Hyphenation
Justification
Span Columns
Drop Caps and Nested Styles
GREP Style
Bullets and Numbering
Character Colour
OpenType Features
Underline Options
Strikethrough Options
Export Tagging

Style Name: picture
Location:
Indents and Spacing

Alignment: Centre
☐ Balance Ragged Lines
☐ Ignore Optical Margin

Left Indent: 0 px   First Line Indent: 0 px
Right Indent: 0 px   Last Line Indent: 0 px
Space Before: 0 px   Space After: 17 px
Align to Grid: None

☑ Preview   Cancel   OK

Select the image and in the links panel, find the captions>captions setup. You want to select the 'title' and 'description' from the metadata. Choose an offset below the image for the caption of about 6 pixels. Choose the paragraph style -- this will be 'caption' and check 'group caption with Image'.

Caption Setup

Metadata Caption

Text Before | Metadata | Text After

Title
Description

Position and Style

Alignment: Below Image   Paragraph Style: caption
Offset: 7 px   Layer: [Same as Image]
☑ Group Caption with Image

Cancel   OK

Once done, go back to the Links palette and find the 'Generate static captions'. You should then get the caption appearing under the image. This is then a group.

Create a 'Paragraph style' (call it 'picture') based on the body text style but with the alignment set to 'Centre'. You can optionally try to make the images float left or right, but we may need to 'break open' the epub file to make this work properly. Now insert a new paragraph (with the 'picture' style) where you want the picture (and its caption) to appear. The picture and caption is on the pasteboard, and you need to grab the small black square (top right), and shift-drag it to the new paragraph that you have just created. This will place the image and caption inline and thus anchored to the text.

Drag from here

Do the same for as many pictures as you need.

Note: There is an alternative method for placing images; instead of creating an empty paragraph before anchoring the image, you can create an object style and anchor the image inside an existing paragraph. Setting up the object style, will then allow you to position the object (image and caption) as you prefer. You will see, that we will then need to edit the CSS inside the ePUB file later.

The Cover

We need an extra page for the cover so we need to go to our pages panel and with the first page selected use 'insert pages' > before the current page.

There are two possible strategies for creating the cover. We could create the whole thing in Photoshop, using layers to combine the text and image. In many ways this is the best approach, because we will need the cover image for marketing puposes. In fact if you plan to distribute on the Apple iBooks store then you will need a large version to include when adding to the store. On the other hand, you can create a cover within *InDesign* by combining text and image and forming a group.

You can compose a cover from graphics and text components such as in this screen shot:
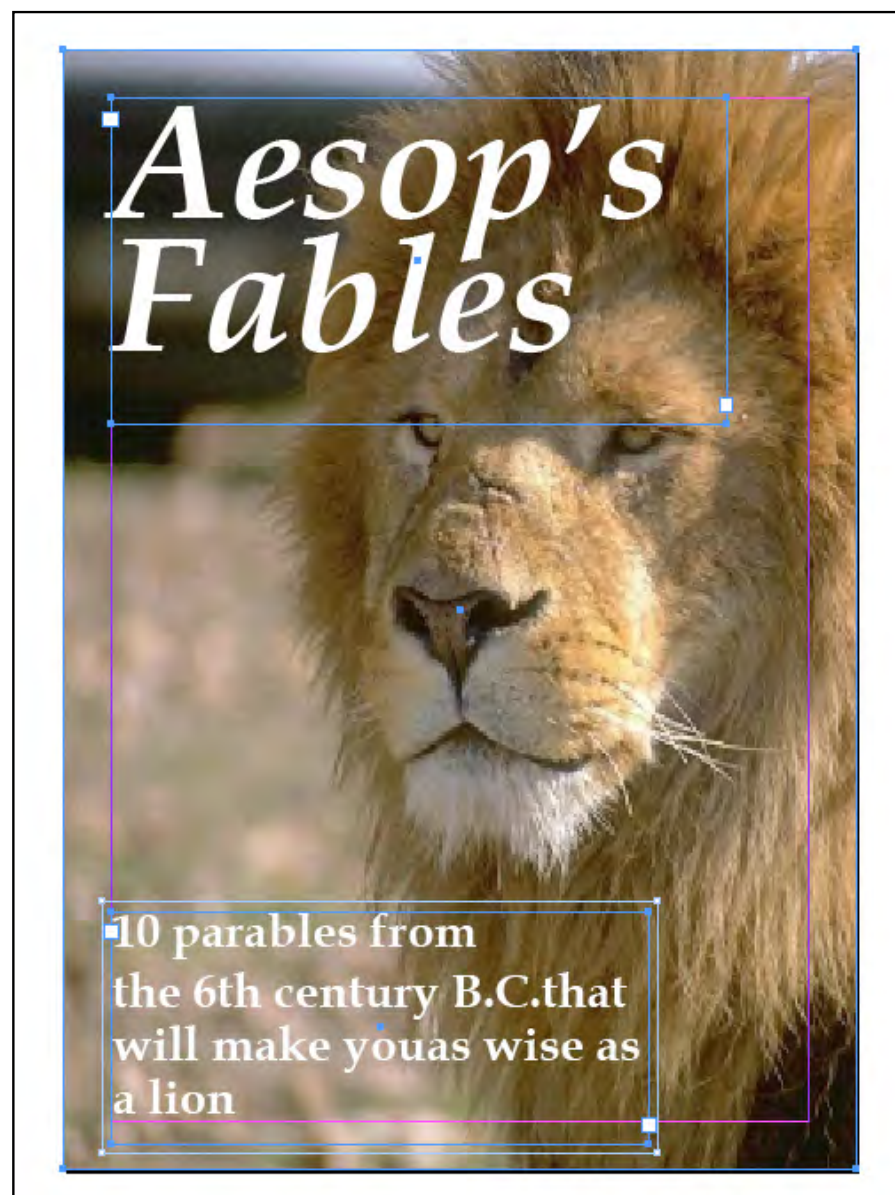
As you may see, this consists of an image covering the whole page and 2 text fields placed over the top.

This image does not need to be anchored but it must be on a new separate page, at the beginning of the book.

These objects need to be grouped and then under the object menu select 'Object Export Options...'.

In the dialogue box that appears you will need to select the EPUB and HTML tab.

Tick 'Custom Rasterisation' and I recommend selecting 150ppi as the resolution, although you may experiment with these settings.

Selecting 'Relative to Page Width' will give the largest size.

This will then result in a graphics cover for the eBook.
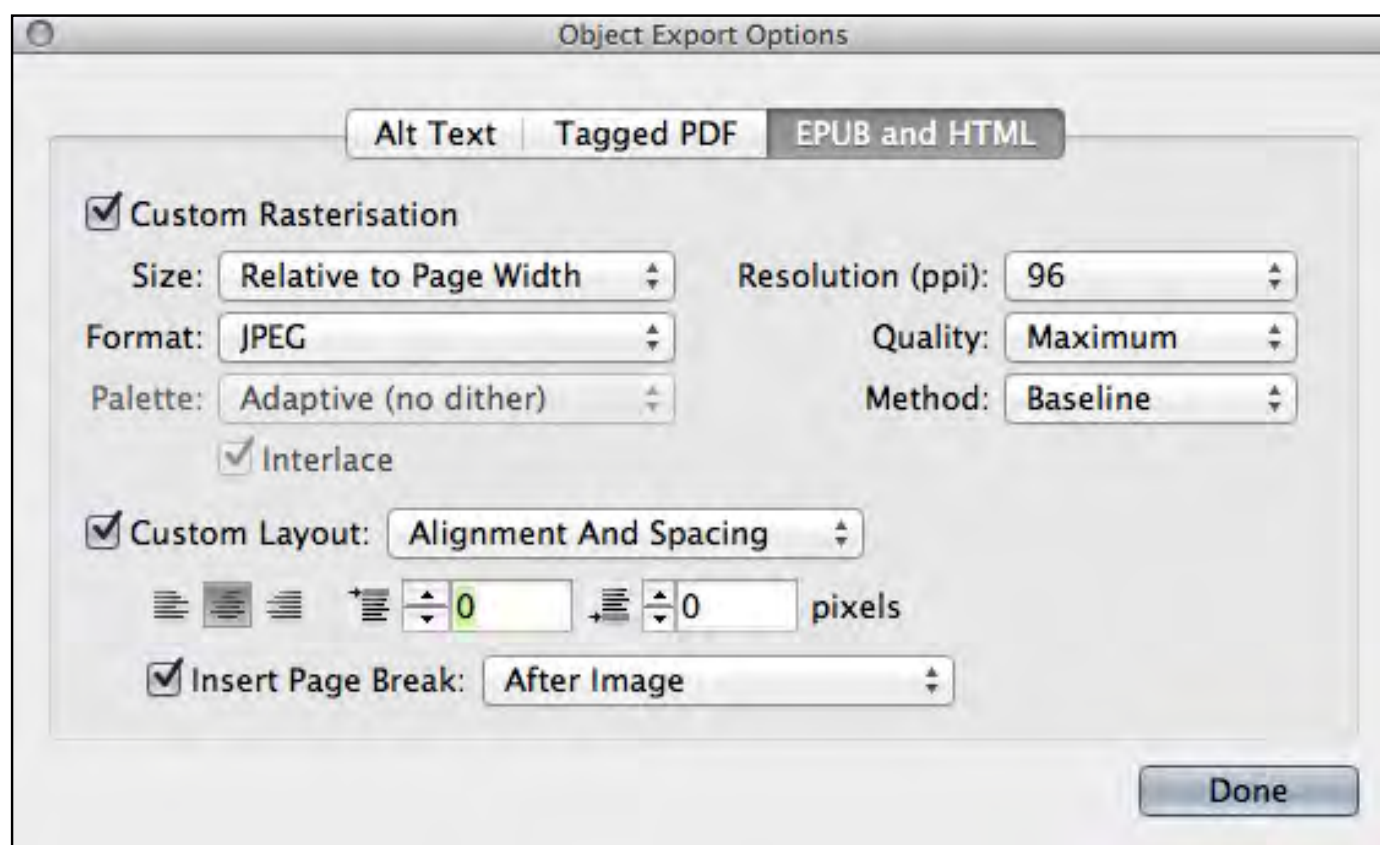
Optionally, the whole image can be created in PhotoShop and then place on this first page, giving you some finer control of the relationship between the text and background.

The contents

Often, when we make a document we want to see a table of contents at the beginning. In fact, *InDesign* will help with this, and if we were going to create a PDF we might want to see this 'TOC' on one of the early pages. However, eBook devices like the iPad and eReader software like Adobe Digital editions, have the TOC 'built-in' to the interface, so we won't actually want the table of contents in the document itself. The table of contents, though is created from the information in the document about the headings, so we will use *InDesign*'s ability to create the TOC to help with this.
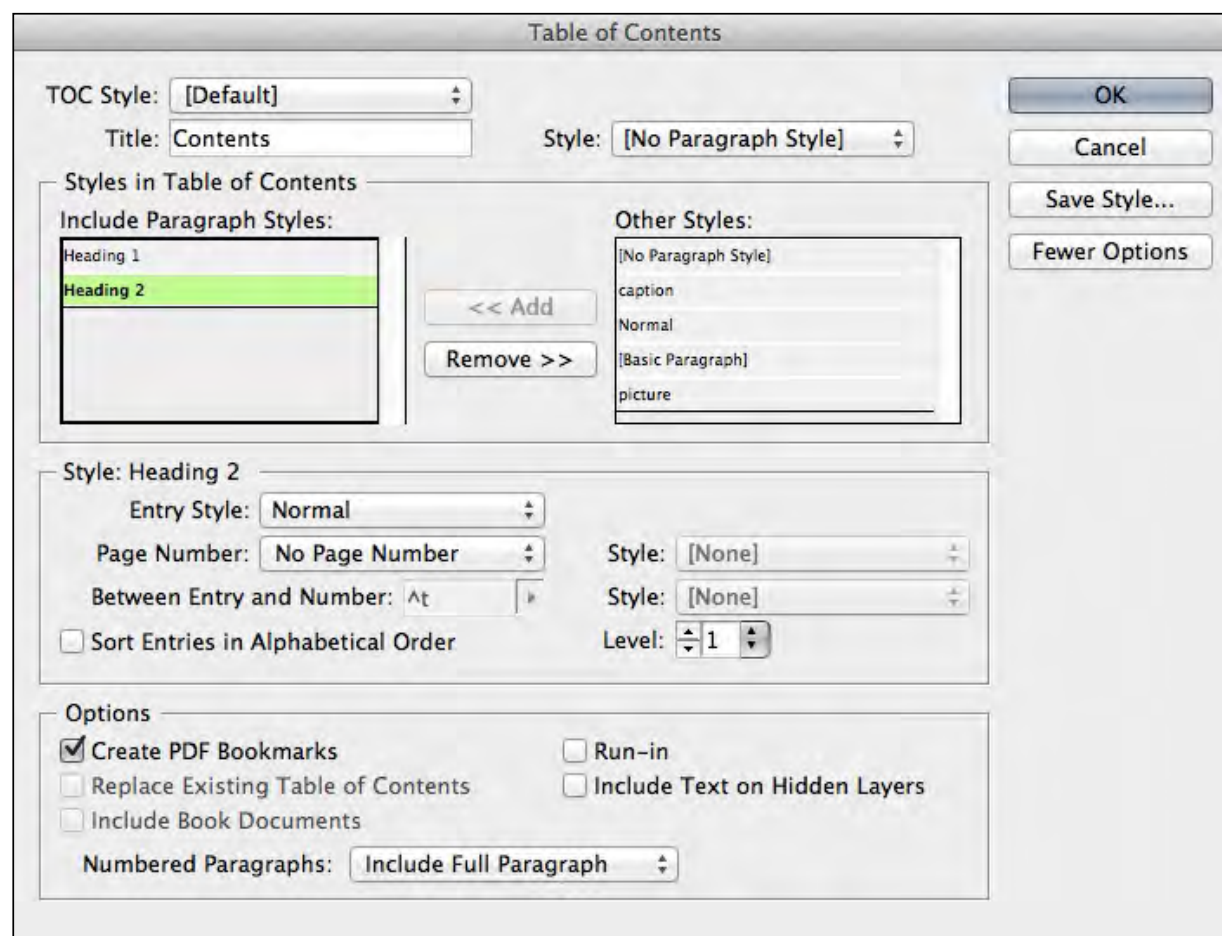
If we export the ePub for the ePub3 format then 2 files will be created; one called *toc.xhtml* and one called *toc.ncx*. This latter is for backward compatabilty for devices that can only read the ePub2 format. If we want to convert for the Kindle, we will also need to add a reference to this toc.xhtml document.

Now navigate to first page of the book (with the cover image). From the menu select Layout>Table of Contents .. and then in that dialogue box open 'More Options'. From the styles pane you need to select each of the 2 main styles. The title and the heading and add them into the box on the left. You should make sure that both of these are set at 'level 1'. We do not need to be concerned with the styles of these headings other than to be sure to select a basic body text style. Just hit OK and the TOC will be loaded onto your cursor. Plop it down on the pasteboard. This does not need to go on the page. Just leave it on the pasteboard.

Metadata

You need to add some metadata to your document before you save it. You will find this under 'File Info....'. Put the title of the book, author and so on.

Save the *InDesign* File

Export

In the File menu find Export > ePub. The dialogue has three sections and you need to pay attention to the following:

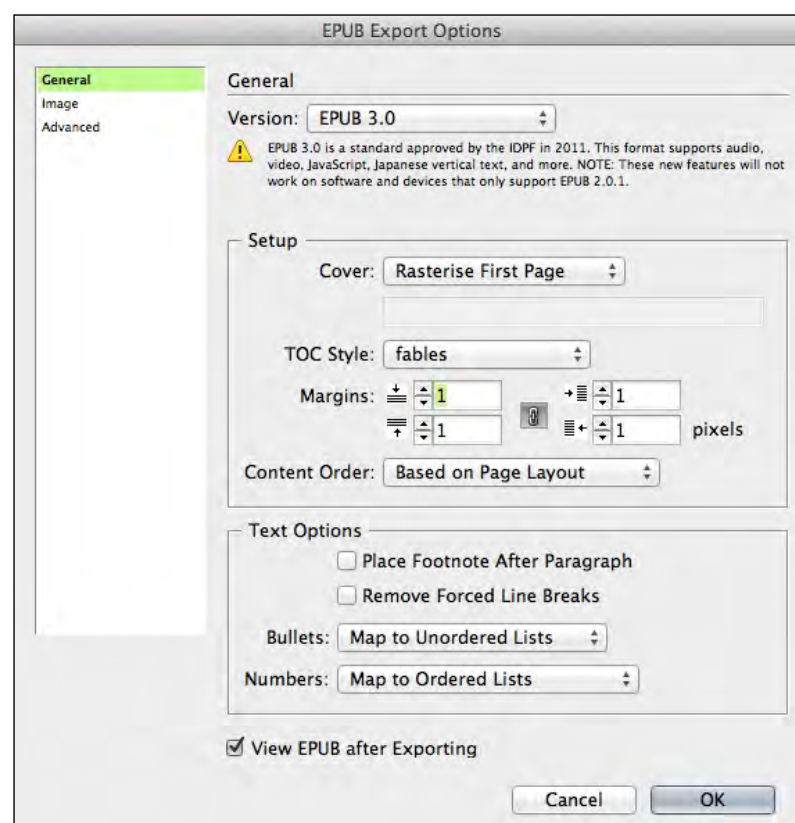Include the document metadata, add a publisher. Use 'based on Page Layout'

Image - if you check 'Preserve appearance from layout' then *InDesign* will dimension the images as you see them in your page layout. This is acceptable, but if you want to optimize your ePUB file for the iPad, then I suggest that you uncheck this option. To make sure that a thumbnail of the cover will appear within the iBooks bookshelf (on the iPad), then choose 'Rasterise First Page' or - you can select a separate existing image.
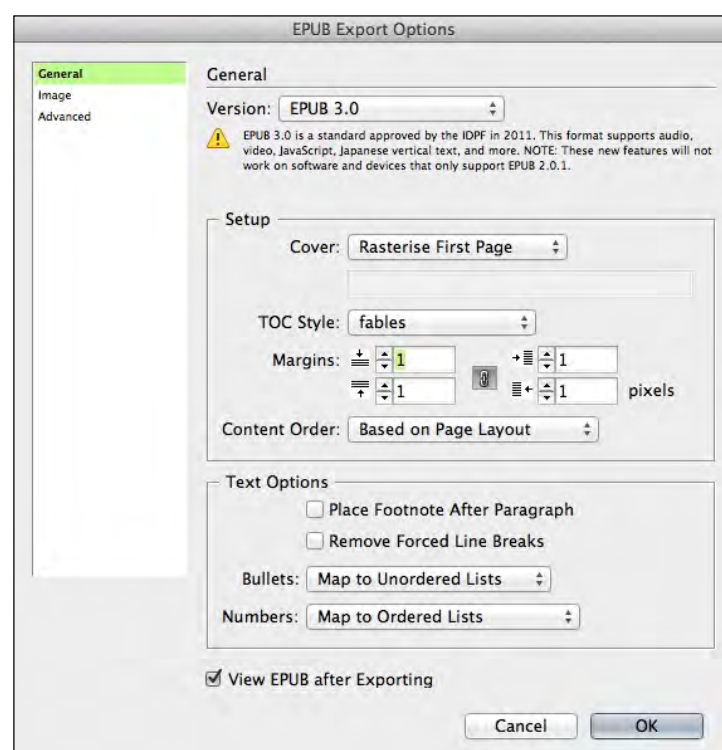

You can set up how images are formatted throughout the book. My suggestion is that you select 'relative to page'. This way, the image will be given a percentage width rather than a fixed pixel width.

Fonts: You can embed the fonts that you use, but, not all fonts that you have on your system will display correctly in the eBook. *InDesign* will encrypt the fonts, on the presumption that font vendors would not want you to distribute their fonts without obvuscation. There are some very specific issues around font embedding for different devices.
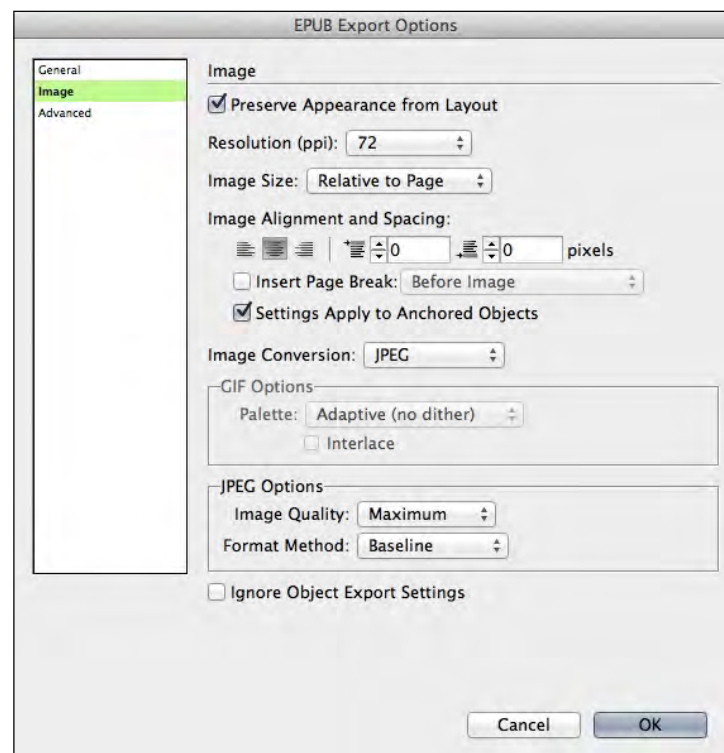
In the advanced pane, you can choose to split the ePub into 'chunks' based on one particular style or you can configure each heading style to be the point where the splitting occurs.
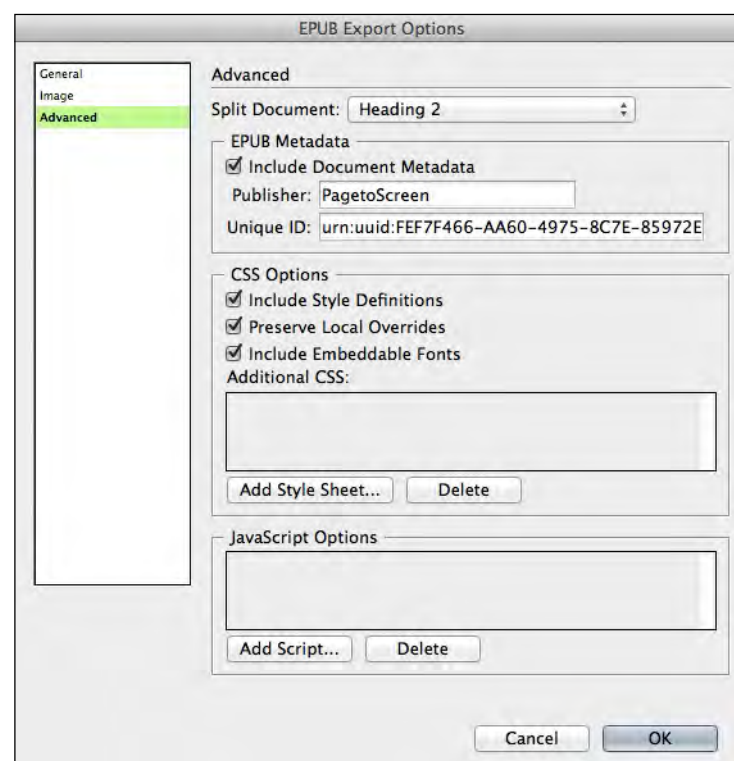
If you have been successful then you should see the eBook opening up in Adobe Digital Editions. You should have a table of contents on the left and the title and author of the book.

Check out the ePub file

In any case, you should have an ePub file. If you have not selected 'View ePub after exporting', locate the ePub file and drag it to a copy of Adobe Digital editions. Hopefully, it will show you a cover image and you will get a TOC on the left. You may not be happy with some of the styles and you most certainly will probably not be happy with the thumbnail image showing on the left of ADE. Now is the time to 'dig in' to the ePUB file and make some modifications.

Cracking open the ePUB file

An ePUB file is actually a ZIP file that has been renamed with the .epub extension, so if you want to delve into the files, you can use any unzip program. I don't recommend this unless you know how to re-zip it up in the correct way. One tool that I recommend is OxygenXML editor. With this tool we can inspect the various files and make changes and re-save. So the fist thing to do is to open the file inside the OEBPS folder.

It will be the first XHTML file - without a number.
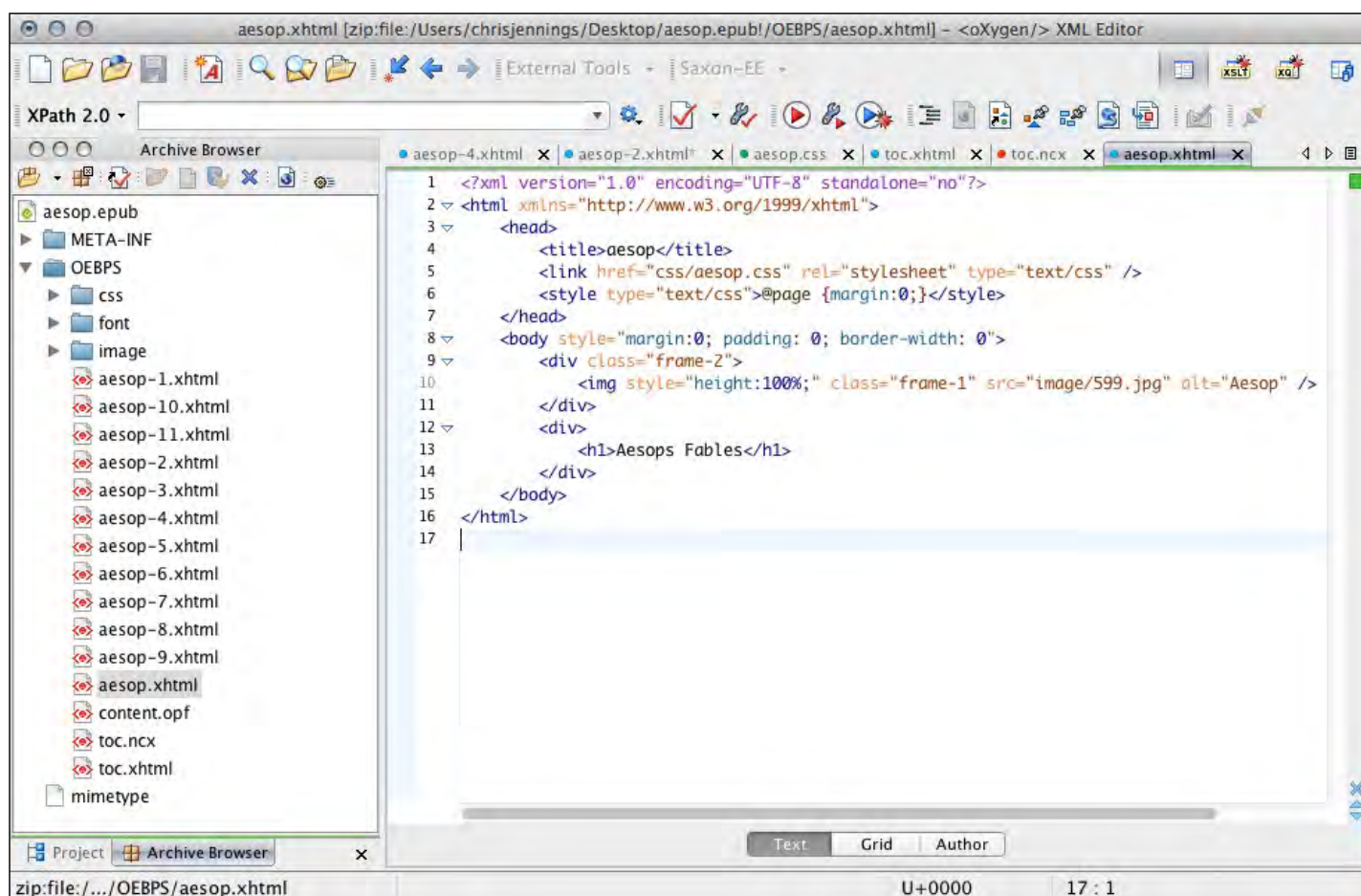
This will be the file that generates the cover. Select this and then where you see the opening tag <img change the first part of the tag attribute like this, but keeping the source image as your own:

```
<img style="height:100%;" src="images/lioncover_opt.jpeg" alt="Aesops Fables"/>
```

Please note that you are nly adding the bold text above. Your code for the source image will be different. The syntax is very strict. Do not miss out spaces or semi-colons!

This will make sure that the cover will be as large as possible.

You can also change the body tag to the following:

```
<body style="margin:0; padding: 0; border-width: 0">
```

This will remove the border from the thumbnail.

You will also need to add a style in the 'head; of that file:

```
<style type="text/css">@page {margin:0;}</style>
```

The style information is held in the CSS file template.css. In here you can change the styles for various aspects of the book including the the picture and the caption to make them appear centre aligned. You will need to investigate the HTML markup on a page with an image. It may look a bit like this:

```
<div class="pictureblock">
<div class="pictureblock frame-2">
<img class="frame-5" src="image/foxandthegrapes.png" alt="thefoxandthegrapes.jpg" />
</div>
<div class="pictureblock">
<p class="caption">The Fox and the Grapes</p>
<p class="caption">Phryx Aesopus Habitu Poetico, by Hieronymus Osius, 1574</p>
</div>
</div>
```
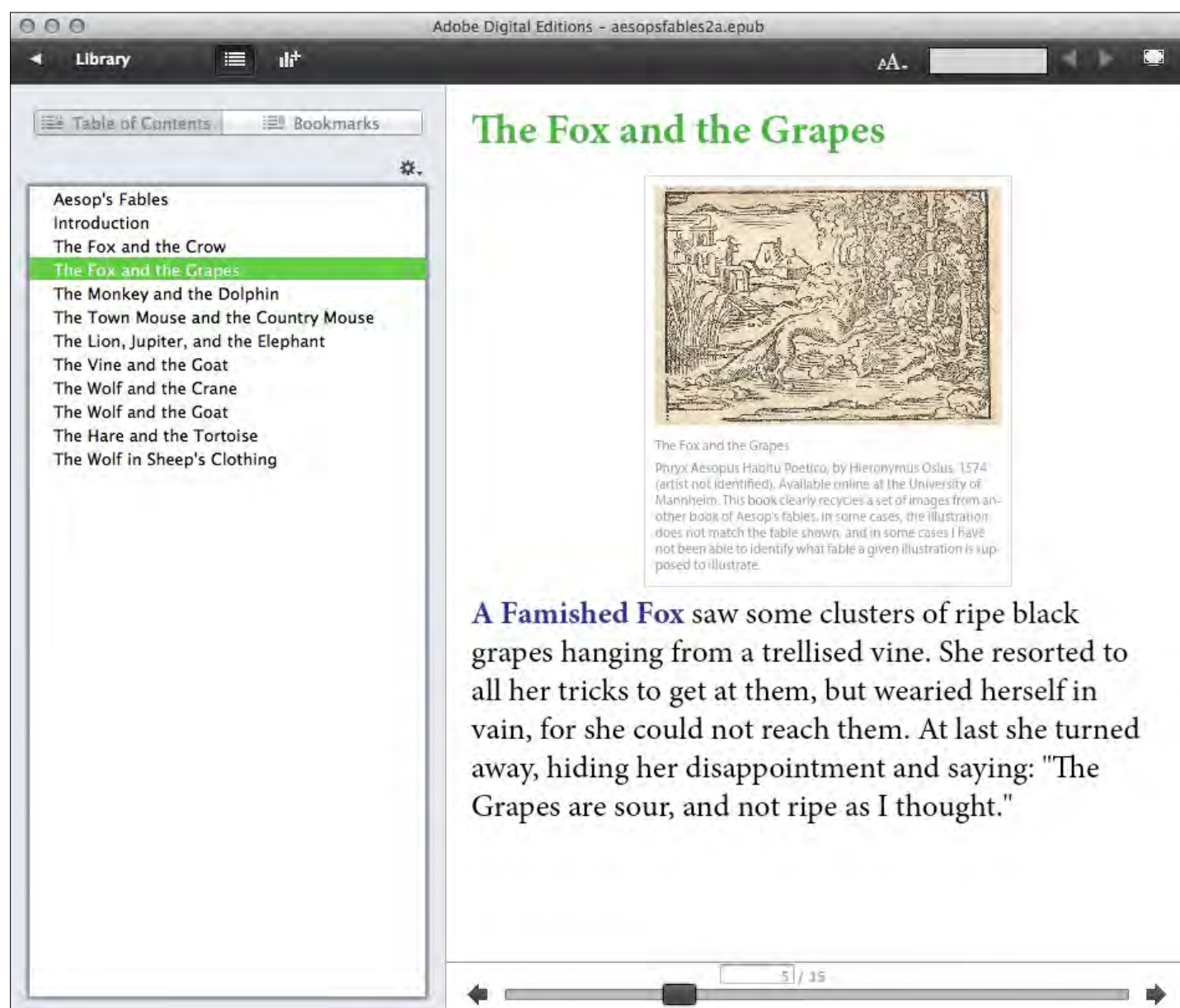
InDesign does tend to make this more complex than needed and we can edit some of the HTML markup or adapt our CSS to accommodate.

By styling the 'pictureblock' class to have a percentage width, we can contain the caption and provide a border like this:

```
.pictureblock {
width:50%;
border:1px solid silver;
margin:0px 25% 0px 25%;
padding:12px;
}

.pictureblock img {
width:100%;
}
```

Note: I have simplified the HTML markup by removing the parent 'pictureblock' div. Also note, that Adobe Digital editions does not support margin:auto, thus, I am using the 25% value for left and right;

Validation

ePub eBooks should be correctly formed with all of the required files and syntax within the various XML components. If the ePUB is not valid then it won't display properly, if at all. Also, distributors such as the Apple iBooks store will reject invalid ePUB files.

There are a variety of ways to validate the ePUB file; you will get warnings within the OxygenXML editor, if you have used that to edit the file. You can also use some free open source applications. My preference is to use the online resource hosted by the IDPF (International Digital Publishers Forum) at http://validator.idpf.org/.

Trouble-shooting

If you have used *InDesign* to create the ePUB file and have not made any changes to it with an editor such as Oxygen, then you shouldn't have any serious problems, however, you may get warnings about spaces in the file names and this needs explaining.

When you save your *InDesign* document and subsequently export to ePUB, the XHTML files that are created to represent the chapters in the book will be named the same as the *InDesign* filename but with an added number. If your *InDesign* file name has spaces; for example - *the merry men version 3.indd* then the HTML files will have spaces in their file names (eg.*the merry men version 3-1.xhtml*). The hyperlinks to these files from the TOC and each other, will need to resolve these spaces by using the character entity %20. The links will work, but it is not good practice to use such methods. The same issue exists for the images. These should be saved without spaces in their file names.

Errors in the TOC

Some errors may occur if you have not correctly formed your heading hierarchy. Be sure to make heading level 3 follow 2 which should follow heading level 1. If you jump a level, then errors will occur. Also, be careful not to have empty headings.

The End

Well not really, because there is masses that you can do to improve things. Try getting you eBook onto you iPad or iPhone. Try grabbing a copy of the Firefox ePub reader extension to check out the ePub.

The file that *InDesign* creates has a number of problems and this is not the place to discuss, however, it seems that this is a good starting point, but remember, getting good results in the end does involve some hand crafting of the XHTML, XML and stylesheet files that are inside the ePUB file.

Adobe Digital Editions has a number of problems in rendering the layout properly, and changing the CSS inside the ePUB does not always behave as expected. If your objective is to create an ePUB for the iPad, then breaking the ePUB file apart and viewing the individual XHTML file with Safari will give you a good idea of how the iPad will render the eBook.