

Using Web Standards in Print and Digital Book Workflows



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A Story in Four Chapters

Chapter 1. Escape from FrameMaker

Chapter 2. Down the Cascade

Chapter 3. Dawn of HTMLBook

Chapter 4. Atlas Never Shrugs



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Chapter 1. Escape from FrameMaker



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FrameMaker to DocBook XML



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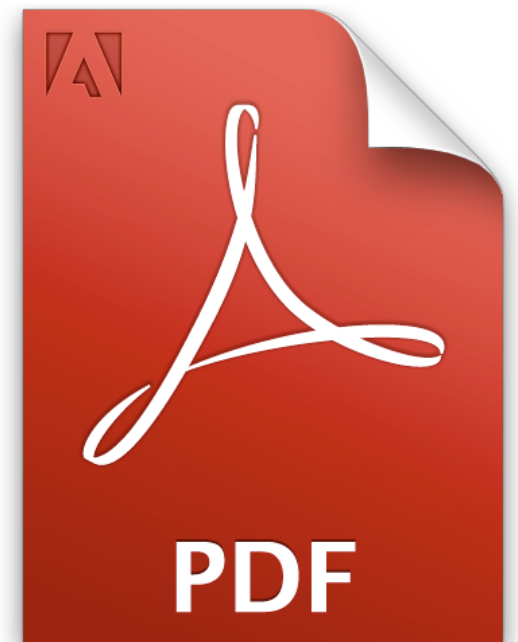
Why?

- **Safari Books Online**
- **Needed Unicode support**
- **Digital books were coming**



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XML ^{**XSLT**} **→** **XSL-FO** ^{**AH**} **→**



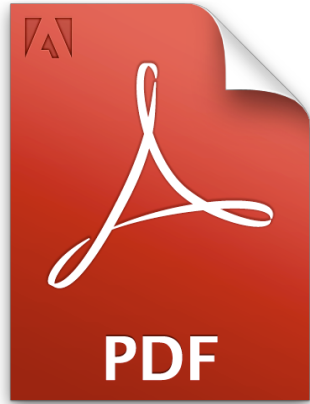
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So What?

Book $\neq$ PDF



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Book



ePUB



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Chapter 2. Down the Cascade



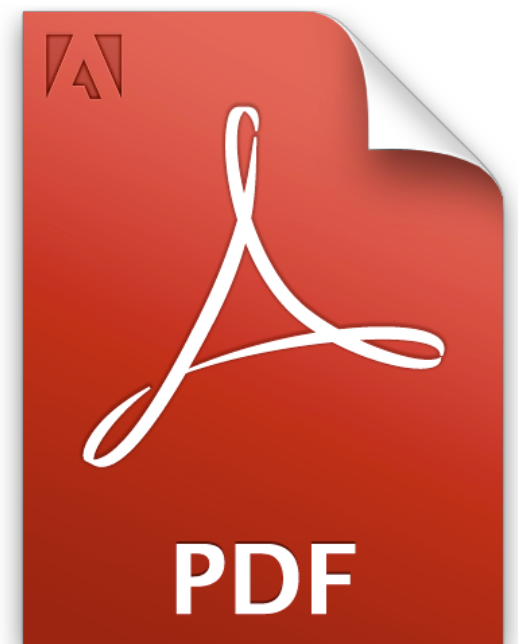
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Culminating Events

- **EPUB 3**
- **O'Reilly loses lead XSL-FO developer**
- **Antenna House 6.0 with CSS support**



XML $\xrightarrow{\text{XSLT}}$ **HTML5**
+ CSS $\xrightarrow{\text{AH}}$



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Building Pages with CSS

- **Key modules: Paged Media, Generated Content, Text, Fonts**
- **A few vendor extensions**

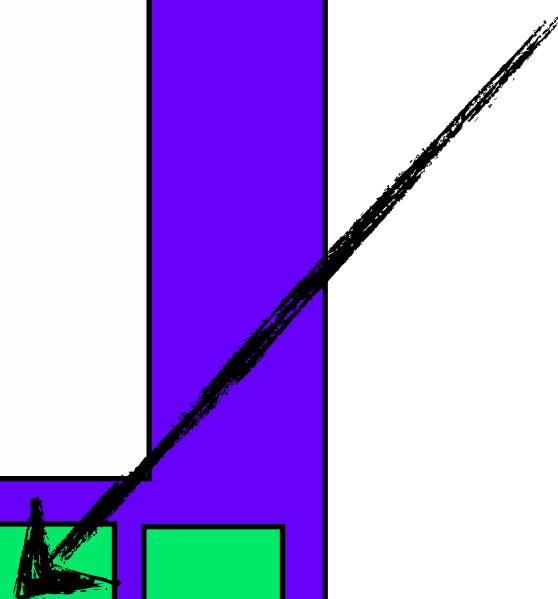


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Paged Media

Lorem ipsum...
Lorem ipsum...
Lorem ipsum...
Lorem...

@bottom-right



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Generated Content

```
@page chaptermaster:right { /* right page setup */  
  @bottom-right { /* recto run foot */  
    content: string(Section)"\2003\007C\2003"counter(page);  
    font-family: "MyriadPro";  
    font-size: 9pt;  
    vertical-align: top;  
    padding-top: 0.05in;  
    font-weight: 600;  
    color: cmyk(0%,0%,0%,100%);  
  }  
}
```



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Result

Lambda Functions Are Powerful | 9



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Vendor Extensions?

Typography	Image Placement
-ah-hyphenate-hyphenated-word	-ah-float: auto-next top wrap page;
-ah-kerning-mode: pair;	-ah-float-margin-y: 0 12pt;
-ah-overflow-condense: font-size;	-ah-float-float-margin-y: 0 8pt;
-ah-ignore-leading-newline	
-ah-avoid-widow-words	
-ah-suppress-duplicate-page-number	



Benefits of CSS over XSL-FO

- **“Democratization” of style sheet development**
- **Removes programmer from between designer and page**
- **Faster development**



Benefits of CSS over Traditional Page Layout

- **Flexibility**
- **Separates content from
presentation**



2/Write How You Want

When you are using Atlas to write your book, you have the option of writing in the wiki interface or locally on your own computer. This chapter covers each of those scenarios. As you write your book, you can jump back and forth between the two writing environments. As long as you are saving in the web interface or using git to push and pull from your local machine, you'll always be in sync.



Get Your Gravatar

You may notice that some users have personal icons in the Changes and Collaborators sections of Atlas. Those image icons are pulled in from [Gravatar](#), based on the user's email address. Set up your Gravatar to get a more personalized icon.

Working in the Atlas Wiki

If you've used a wiki before, you will find the Atlas interface to be very familiar. In the following sections, you'll learn how to create and edit new files in the wiki interface.

Invite Some Collaborators

Once you are working on a project in Atlas, you can invite additional collaborators at any time. First, create your project. Then, click on the Collaborators tab. Enter the mail address of anyone you'd like to collaborate with on your project. If you choose a permission type of Collaborator, the invited author will have full read and write access to your project, via the wiki interface and the git repository.

You can also remove collaborators using the same Collaborators tab.

Creating New Files

When you create your book in Atlas, it will have no files, as shown in Figure 2-1.

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CHAPTER 2

Write How You Want



Get Your Gravatar

ice that some users have pe
s sections of Atlas. Those
ed on the user's email add
nalized icon.

Atlas Wiki

re, you will find the Atl
learn how to create and

Invite Some Colla

a project in Atlas, you ca
ject. Then, click on the C
llaborate with on your p
ed author will have full re
e git repository.

laborators using the same

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O'Reilly “Animal” Book Template

3,251 lines of CSS

- Tables
- Figures
- Sidebars
- Notes
- Code examples
- Index
- Glossary
- Bibliography
- MathML
- Table of Contents
- Front matter



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jumper

3

A jumper may also be referred to as a *jumper socket* or a *shunt*. A jumper should not be confused with *jumper wires*, which are not considered components for the purposes of this encyclopedia.

OTHER RELATED COMPONENTS

- **switch** (See [Chapter 6](#))

What It Does

A jumper is a low-cost substitute for a **switch**, where a connection has to be made (or unmade) only a few times during the lifetime of a product. Typically it allows a function or feature on a circuit board to be set on a semipermanent basis, often at the time of manufacture. A *DIP switch* performs the same function more conveniently. See “[DIP](#)” ([page 43](#)).

There is no standardized schematic symbol to represent a jumper.

enough to enclose the pins completely. The red one contains two sockets spaced 2mm and may allow the tips of the pins to emerge from its opposite end. The black one contains four sockets, each pair spaced 0.1” apart.





Parallelograms

Prerequisites

Basic usage of CSS transforms.

Diamonds

You might have tried to rotate a square element:

```
width: 10em;  
height: 10em;  
transform: rotate(45deg);
```

Limitations

- **Dependency on commercial PDF processors for professional-quality books**
- **Complex layouts and two-page spreads can be difficult**
- **Limited ability to style right and left pages distinctly**



Left Page

```
@page :left {  
  aside {  
    border-radius: 10pt 0 0 10pt;  
  }  
}
```

Right Page

```
@page :right {  
  aside {  
    border-radius: 0 10pt 10pt 0;  
  }  
}
```



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Moving Ahead

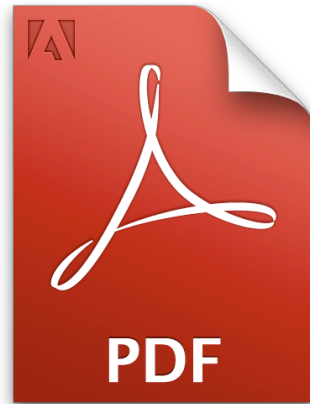
- **Publishers need to use CSS and provide feedback**
- **Support for newer modules:
Exclusions, Regions, Grid Layout**



Chapter 3. Dawn of HTMLBook



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DocBook



ePUB



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HTML

Safari[®]
Books Online
HTML

DocBook



ePUB
HTML



O'REILLY[®]

Why Do We Need DocBook?



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Benefits of Using HTML “Natively”

- **Simplifies or outright eliminates the document transformation layers**
- **Potentially aligns our toolset with other things happening on the Web**

Lessons of DocBook

- **Most authors want nothing to do with XML**
- **DocBook had a valuable community**
- **A single-source content model is incredibly valuable**
 - **Able to regenerate digital books of entire corpus in hours**
 - **Able to easily adapt to new digital book formats**

HTMLBook

<http://github.com/oreillymedia/HTMLBook>



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What Is HTMLBook?

- **HTMLBook is a subset of XHTML5.
All HTMLBook is HTML5, but not all HTML5 is HTMLBook.**
- **HTMLBook is semantically tailored to the structure of a book.**
- **HTMLBook is defined with and can be validated against an XML schema.**



Do Publishers Really Need a Schema?



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How Do You Describe the Parts of the Book?



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class vs. data-*

```
<section class="chapter">  
  <h1>Rise of HTMLBook</h1>  
  ....
```

```
<section data-*="chapter">  
  <h1>Rise of HTMLBook</h1>  
  ....
```



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W3C on Custom Data Attribute

A **custom data attribute** is an attribute in no namespace whose name starts with the string "**data-**", has at least one character after the hyphen, is [XML-compatible](#), and contains no [uppercase ASCII letters](#).

...

[Custom data attributes](#) are intended to store custom data private to the page or application, for which there are no more appropriate attributes or elements.

These attributes are not intended for use by software that is independent of the site that uses the attributes.

<http://www.w3.org/html/wg/drafts/html/master/dom.html#custom-data-attribute>



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The Problem with `@class`

```
<section class="chapter green-border">  
  <h1>Rise of HTMLBook</h1>
```

....

```
<section class="chapter afterword">  
  <h1>Rise of HTMLBook</h1>
```

....



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data-type
(following epub:type)



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```
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
<title>Getting Started with Atlas</title>
```

```
<meta charset="utf-8" />
```

```
</head>
```

```
<body data-type="book">|
```

```
<section data-type="titlepage" id="idm28176">
```

```
<h1>Getting Started with Atlas</h1>
```

```
<h2 data-type="author">by O'Reilly Media </h2>
```

```
</section>
```

```
<section data-type="copyright-page" id="idp1571">
```

```
<h1>Getting Started with Atlas</h1>
```

```
<p class="author">by O'Reilly Media </p>
```

```
</section>
```

```
<nav data-type="toc" id="idp158752">
```

```
<h1 class="toc">Table of Contents</h1>
```

Ongoing Work

- **Scripting to optimize output for PDF, EPUB 2.1 and 3.0, and Mobi (much of which will be available in GitHub)**
- **Porting PDF, EPUB, and Mobi stylesheets to HTMLBook**
- **Markdown/AsciiDoc to HTMLBook transformation tools**



Use It! Fork It!



This repository ▾

Search or type a command



Explore

Gist

Blog

Help



oreillymedia / **HTMLBook**

Unwatch ▾

23

Let's write books in HTML! — Edit

493 commits

12 branches

0 releases

4 contributors



branch: master ▾

HTMLBook /

Merge pull request #86 from oreillymedia/xmlschema ...



sandersk authored 2 days ago

latest commit fa2bf1ad8a



htmlbook-xsl

The "title" in the <head> is now the canonical location where the boo...

2 days ago



samples

Fixing some hrefs and ids in sample doc.

25 days ago



schema

The "title" in the <head> is now the canonical location where the boo...

2 days ago



stylesheets

a base stylesheet

4 months ago

Chapter 4. Atlas Never Shrugs



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Using Git with Atlas

- 1. Author clones down book project to local writing environment**
- 2. Author writes in HTML, Markdown, or AsciiDoc and pushes files back to Atlas**
- 3. Atlas transforms files to HTMLBook and builds book formats**



Changes



jhosman@oreilly.com Made changes to ch04.asciidoc

September 13, 2013, 05:09PM

File Changed: ch04.asciidoc

For inlines, you can indicate a passthrough at any time by adding this passthrough markup within the text paragraph:

+

```
.... pass:[inline DocBook markup here].
```

```
here]
```

```
....
```

+

See <> for examples of inline passthroughs.



Jessica Hosman Fixing inline passthrough instructions to include visible example of markup

September 13, 2013, 05:03PM

File Changed: ch04.asciidoc

<> makes several references to ``passthroughs.'' You can use a DocBook passthrough when you've got an especially complex piece of markup or you're trying to do something that AsciiDoc doesn't support. AsciiDoc supports two types of passthroughs:

Inline passthroughs::

For inlines, you can indicate a passthrough at any time by like this: ++pass:[passthrough goes here]++. See <> for examples of inline passthroughs.

Block passthroughs:: ~~You~~ For inlines, you can ~~also pass though~~ indicate a ~~block of DocBook XML. Here's~~ passthrough at any time by adding this passthrough markup ~~that we used in~~

~~<<intro_to_asc>>, passed through as DocBook:~~

within the ~~image~~ text paragraph:

++

Interactivity with Fallbacks



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Try It Now!

Try changing the values in dataset and see how this affects the rendering of the pie chart.

Open in new window

JS Bin

Save

HTML

CSS

JavaScript

Console

Output

Help

```
<body>
  <script type="text/javascript">

    //Width and height
    var w = 300;
    var h = 300;

    var dataset = [ 5, 10, 20, 45,
6, 25 ];

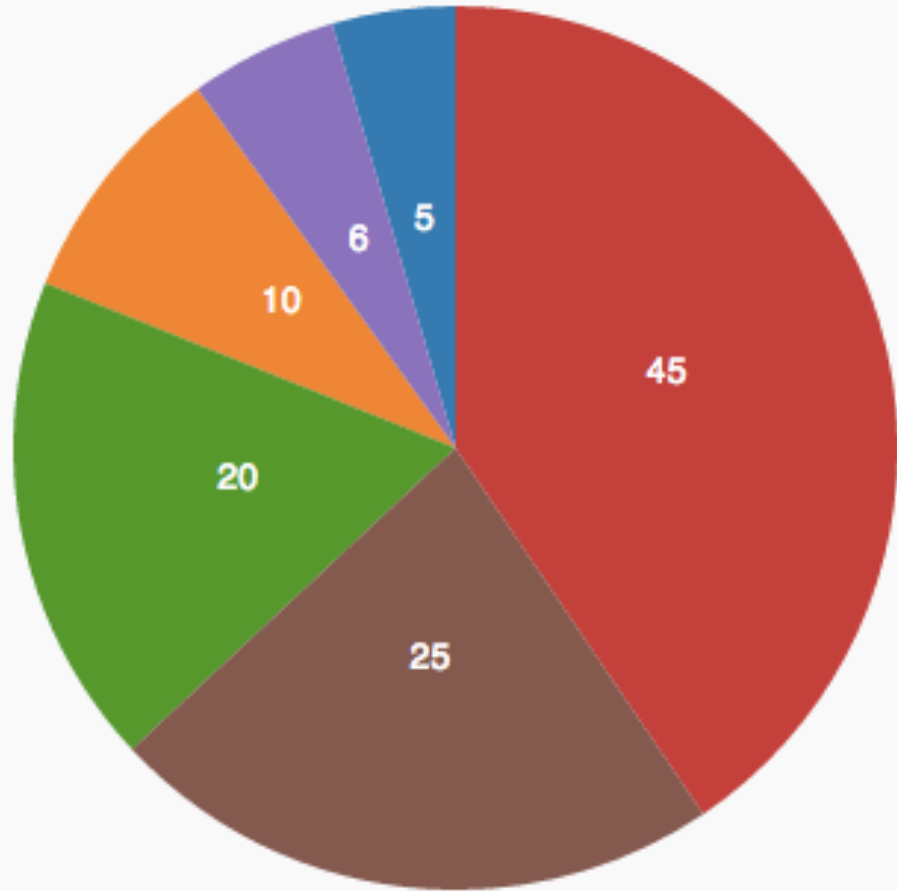
    var outerRadius = w / 2;
    var innerRadius = 0;
    var arc = d3.svg.arc()

    .innerRadius(innerRadius)

    .outerRadius(outerRadius);

    var pie = d3.layout.pie();

    //Easy colors accessible via a
    10-step ordinal scale
```



Segment Color	Value
Red	45
Brown	25
Green	20
Orange	10
Purple	6
Blue	5



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Le Fin



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