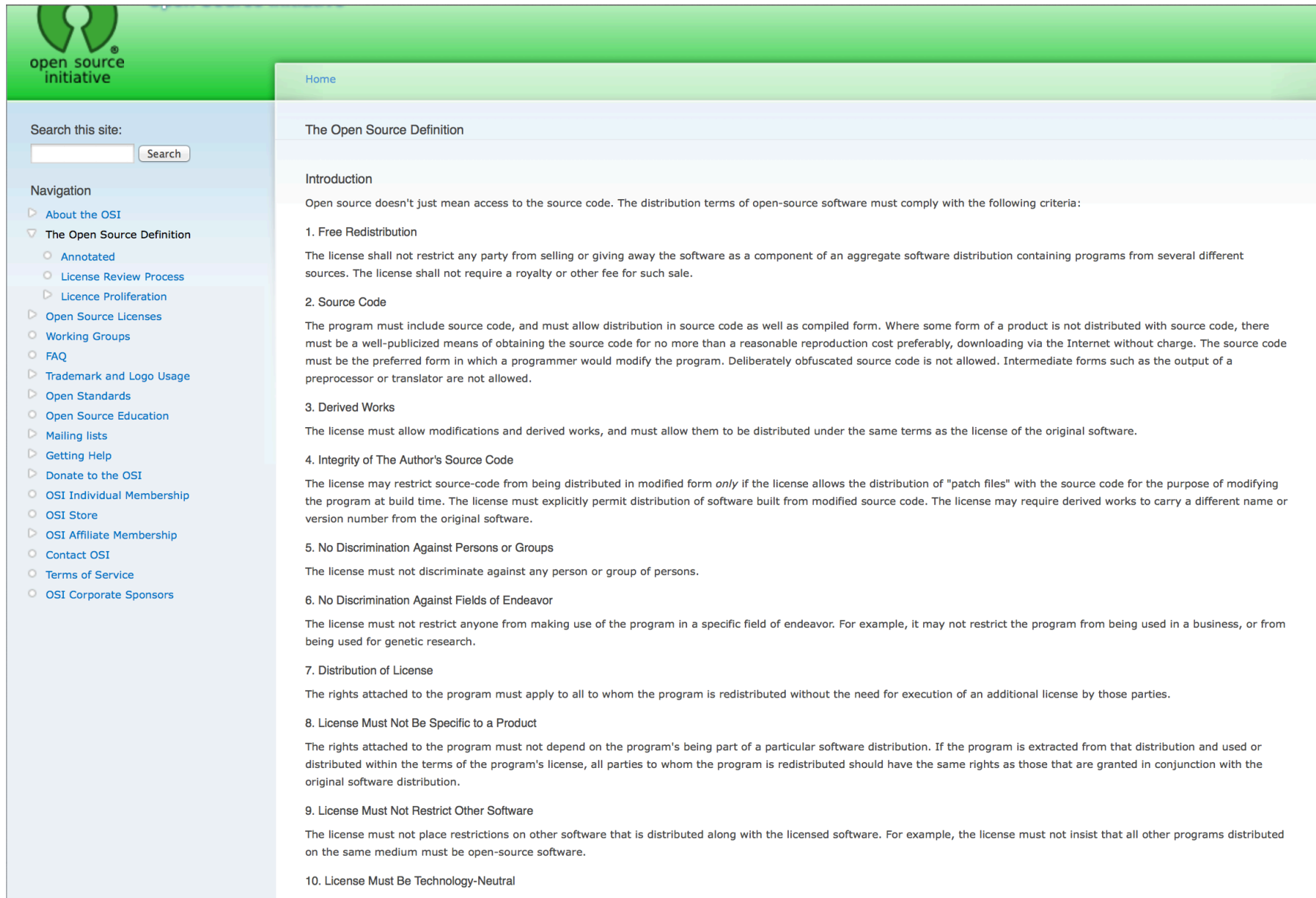


**Open Source for
Publishing
IDPF Digital Book
May 28, 2014**

Sanders Kleinfeld
O'Reilly Media, Inc.

**What is
“Open Source”?**

The Open Source Definition



The screenshot shows the Open Source Initiative (OSI) website. The top navigation bar is green with the OSI logo and the text "open source initiative". Below the navigation bar, there is a search box and a "Search" button. A navigation menu on the left lists various categories, including "The Open Source Definition", which is expanded to show sub-items like "Annotated", "License Review Process", and "Licence Proliferation". The main content area is titled "The Open Source Definition" and contains an "Introduction" section. The introduction states that open source doesn't just mean access to the source code and lists ten criteria that must be met for software to be considered open source. The criteria are: 1. Free Redistribution, 2. Source Code, 3. Derived Works, 4. Integrity of The Author's Source Code, 5. No Discrimination Against Persons or Groups, 6. No Discrimination Against Fields of Endeavor, 7. Distribution of License, 8. License Must Not Be Specific to a Product, 9. License Must Not Restrict Other Software, and 10. License Must Be Technology-Neutral.

Home

The Open Source Definition

Introduction

Open source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria:

1. Free Redistribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

2. Source Code

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

3. Derived Works

The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. Integrity of The Author's Source Code

The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

5. No Discrimination Against Persons or Groups

The license must not discriminate against any person or group of persons.

6. No Discrimination Against Fields of Endeavor

The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

7. Distribution of License

The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

8. License Must Not Be Specific to a Product

The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.

9. License Must Not Restrict Other Software

The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.

10. License Must Be Technology-Neutral

(via open source initiative; <http://opensource.org/osd>)

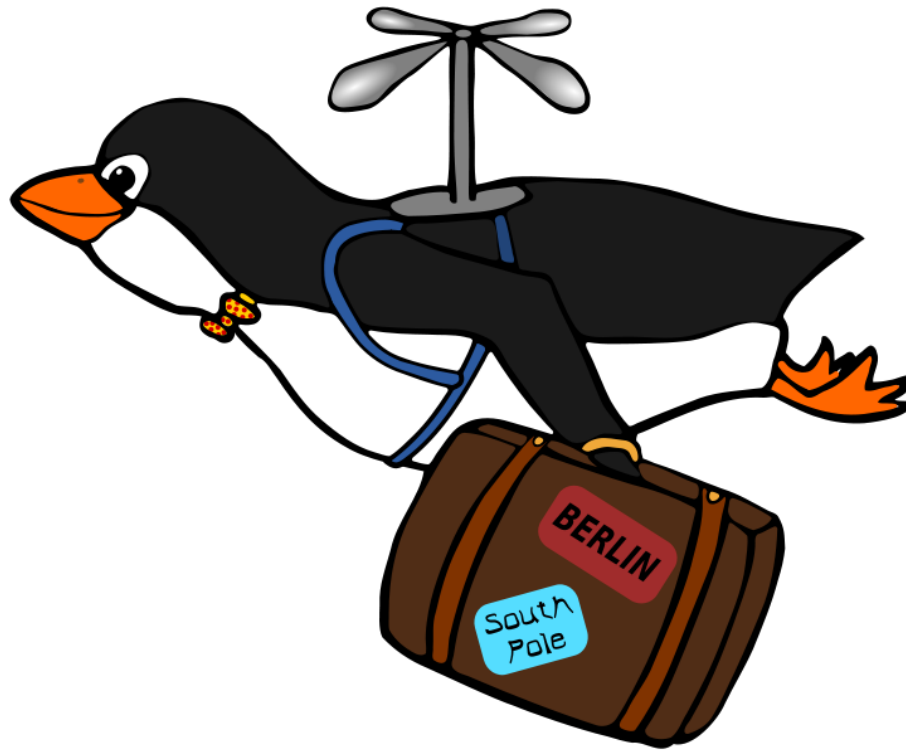
Gross Simplification:*

Open Source = FREE!

*** Sorry Eric Raymond & Richard Stallman!**

Gross Simplification (cont'd)

“Free” as in
“Freedom”



("Penguin flying with a suitcase" by Moini:
<http://openclipart.org/detail/135385/migrating-penguin-by-moini>)

Gross Simplification (cont'd)

**"Free" as in
"Beer"**



("A mug full of cold beer" by nicubunu:
<http://openclipart.org/detail/14854/beer-mug-by-nicubunu>)

Three Myths About Open Source

Myth #1:

**“Open-source code is
bad for business”**

Reality: Public Collaboration Helps Everyone Make / Save

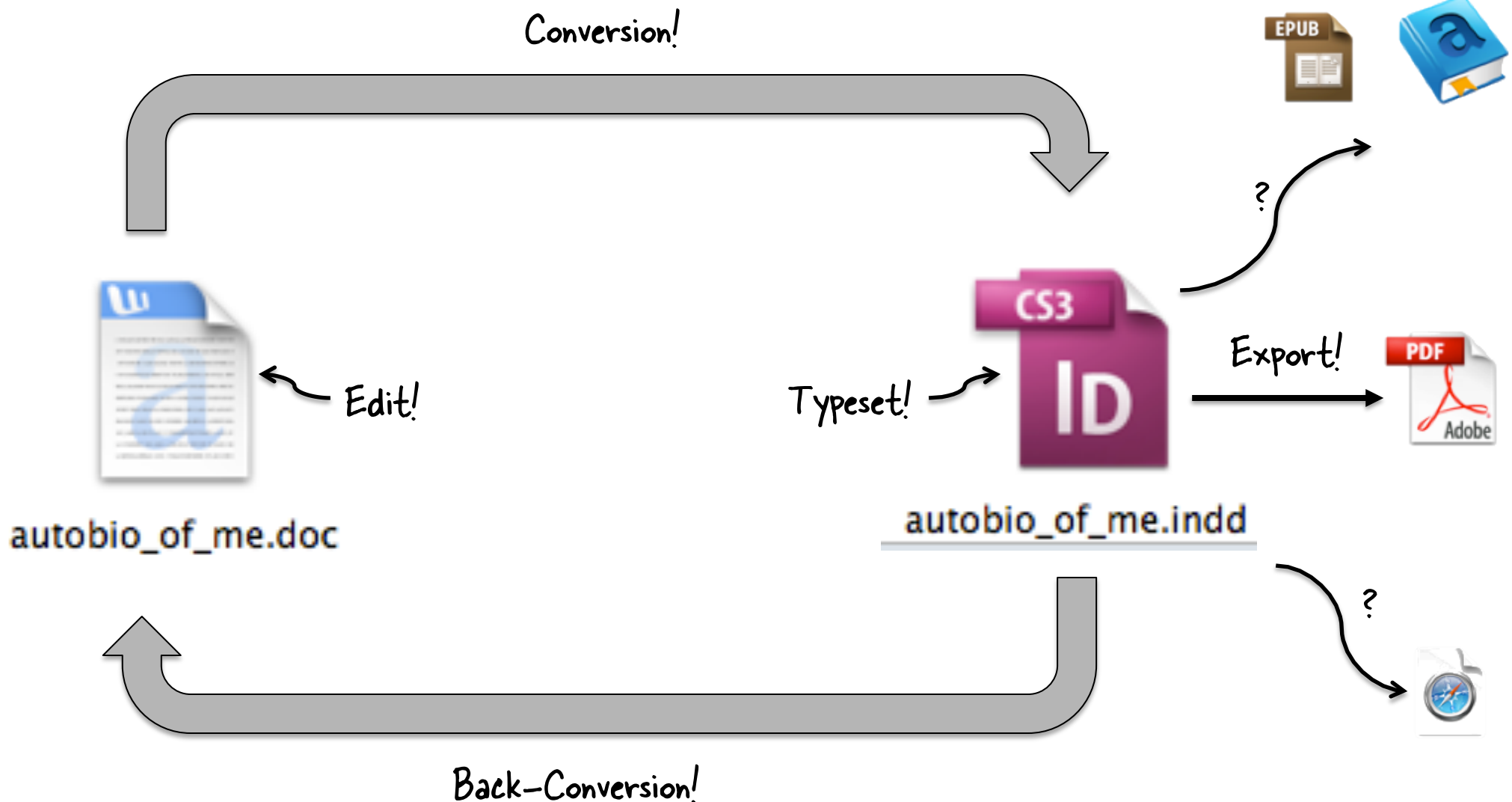


("little cartoon guy carrying big bag of money with dollar sign" by johnny_automatic:
http://openclipart.org/detail/1030/bag-of-money-by-johnny_automatic)

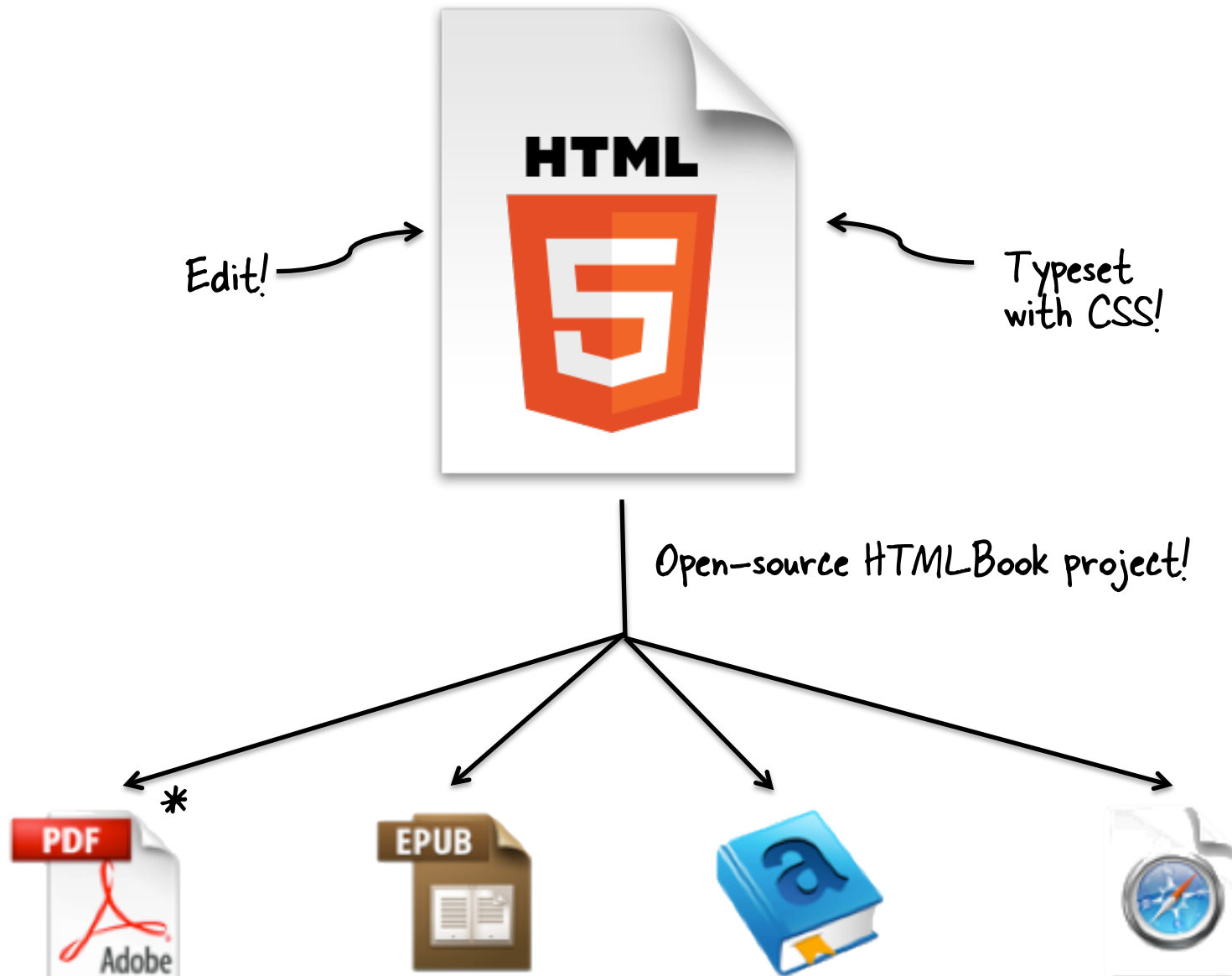
Case Study #1

The O'Reilly Media Toolchain

Eschew the proprietary Word<->InDesign roundtrip infinite loop of ☹️



Instead, build a SINGLE SOURCE workflow based on OPEN SOURCE!



* PDF generated from HTML+CSS with Antennahouse Formatter (<http://www.antennahouse.com>)



This repository

Search or type a command

Explore Gist Blog Help

sandersk



oreillymedia / HTMLBook

Unwatch 15

Star 9

Fork 5

Let's write books in HTML! — Edit

429 commits

12 branches

0 releases

4 contributors



branch: master

HTMLBook

Merge pull request #60 from oreillymedia/HTMLBook

sandersk authored 5 hours ago

htmlbook-xsl Actually generation order does not matter here, as logic is now written. 5 hours ago

samples Updated files for HTML5. 23 days ago

schema Tweaked schema implementation for XHTML. Resolved issue to make only happen. 3 months ago

stylesheets a base stylesheet 3 months ago

LICENSE adding MIT license 4 months ago

README.asciidoc Update README.asciidoc 3 months ago

poster.png Added poster.png 23 days ago

specification.asciidoc Updated specification to reflect the use of @data-type for formal sem... a month ago

README.asciidoc

HTMLBook

Let's write books in HTML! HTMLBook is an open, HTML5-based standard for the authoring and production of both print and digital books. HTMLBook is built on the following premises:

Code

Issues 3

Pull Requests 0

Wiki

Pulse

Graphs

Network

Settings

SSH clone URL

git@github.com:or

You can clone with HTTPS, SSH, Subversion, and other methods.

Clone in Desktop

Download ZIP

Introducing HTMLBook (github.com/oreillymedia/htmlbook)

Open-Source Benefits:

- **No vendor lock-in**
- **No dependency on commercial software-release cycles**
- **Let others in the general public help you improve your codebase**
- **Build community collaboration around the same aims**

**Myth #2:
“I have to open-
source ALL MY
CODE?!”**

Reality:

**Open-source only
what furthers your
business goals, and
helps the industry!**

Case Study #2

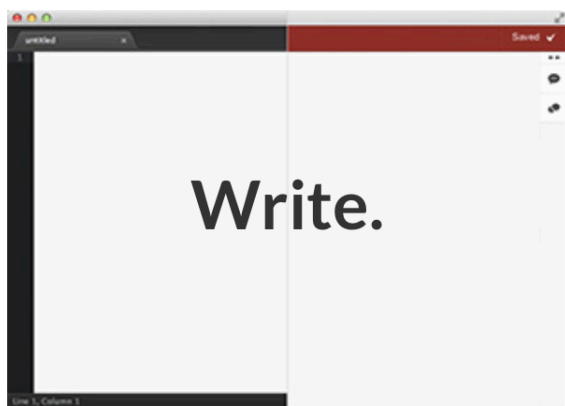
O'Reilly Atlas

Welcome to Atlas

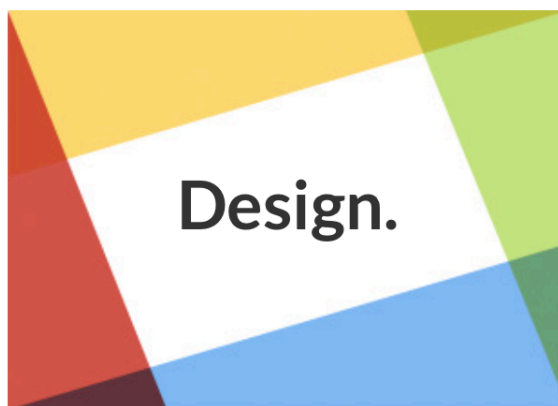
A powerful authoring platform built on *Git*.

Start your 30 day free trial

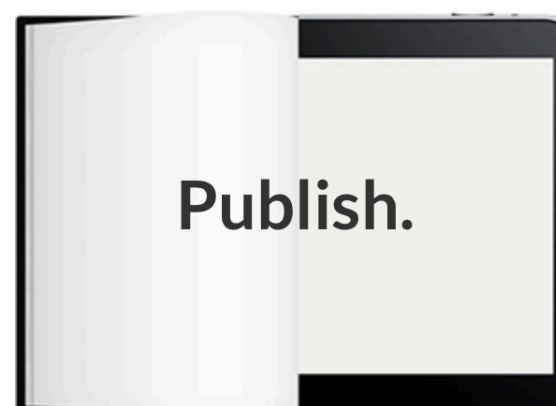
We are currently in public beta. For questions around pricing or continued usage after the trial period, [email us](#).



Write offline in your favorite text editor or our beautiful online writing environment. It's up to you.



Choose from a range of built-in templates to style your content for all the export formats, or design your own template using CSS.



Publish your content to a variety of formats for print, web, tablets, and e-readers with the press of a button.

Built on Git

Atlas is based on Git, the powerful version

Collaborative

Tired of pushing MS Word files back and forth?

HTMLBook

If you know HTML, you know our [HTMLBook](#)

Atlas API:

Trigger automated EPUB/Mobi/PDF builds

- Using and Adding Sections
- Adding Images
 - Supported File Types
- Cross-References and Internal Links
- 6. Building Your Project
 - Output Formats
 - PDF
 - EPUB
 - MOBI
 - HTML
 - Shared Options
 - Table of Contents
 - Index
- 7. Styling and Theming
 - Themes
 - Creating a New Theme
 - Styling for PDF Output
 - Styling for EPUB Output (iPad, Nook, etc.)
 - Styling for MOBI Output (Kindle)
 - Styling for HTML Output
 - Customizing Your Project Styles
 - How to Do It
 - Advanced Styling for HTML Output
- 8. atlas.json
- 9. O'Reilly Atlas API
 - Authentication
 - Builds
 - Create
 - Atlas API Ruby Gem
 - Installing
 - Command Line Script
- 10. Markdown
 - Syntax
 - Headings
 - Text Formatting
 - Code
 - Links and Images

`POST /api/builds`

Create a new build for a specific Atlas project. This will only succeed if the authenticated user is allowed to clone the repository from Atlas, and the project has an `atlas.json` file with at least a list of files to build in order.

Input Parameters

project: Full name of the Atlas repo to build (e.g., `runemadsen/Hello-World`)

formats: Comma-separated list of formats to build. Possible options are `pdf`, `epub`, `mobi`, `html` and `atlas`.

branch: Name of the branch to build. If there is no space, `master` will be used. This is useful for building older versions, or managing multiple concurrent versions of a project.

A **successful** response does not mean that the build finished. You will need to manually check the `build_url` to know when each of the formats in the build succeeded. There are 4 different states that a build format can return.

A **queued** response means that the build is waiting in the queue to be performed.

Response: Queued

```
{
  "build_url" : "https://atlas.oreilly.com/api/builds/1",
  "status" : [
    {
      "format" : "pdf",
      "status" : "queued"
    }
  ]
}
```

<http://atlasdocs.oreilly.com>

Other open-sourced Atlas components:

- **HTMLBook project**

(<https://github.com/oreillymedia/HTMLBook>)

- **Markdown to HTMLBook**

(<https://github.com/oreillymedia/htmlbook.js>)

- **AsciiDoc to HTMLBook (via AsciiDoctor)**

(<https://github.com/oreillymedia/asciidoctor-htmlbook/>)

- **Backbone.js wrapper for GitLab API:**

(<https://github.com/oreillymedia/backbone-gitlab>)

Myth #3:

**“Open Source is just
about software”**

Reality:

**Open Source is about
BOOK CONTENT,
too!**



(fair use, via <http://ecx.images-amazon.com/images/I/41B6T0ZP7VL.jpg>)

(or, just buy it at <http://www.amazon.com/Steal-This-Book-Abbie-Hoffman/dp/156858217X/>)

Case Study #3

The Nature of Code
by Daniel Shiffman

What if you promise to put your textbook online for free...?

THE **NATURE** OF CODE by Daniel Shiffman [Buy this book as PDF](#) [Buy this book in print](#)

- WELCOME
- ACKNOWLEDGMENTS
- DEDICATION
- PREFACE
- INTRODUCTION
- 1. VECTORS
- 2. FORCES
- 3. OSCILLATION
- 4. PARTICLE SYSTEMS
- 5. PHYSICS LIBRARIES
- 6. AUTONOMOUS AGENTS
- 7. CELLULAR AUTOMATA
- 8. FRACTALS
- 9. THE EVOLUTION OF CODE
- 10. NEURAL NETWORKS
- FURTHER READING
- INDEX

```
while (it.hasNext()) {  
    Particle p = it.next();  
    p.run();  
}
```

An Iterator object doing the iterating for you

[Show Raw](#)

And if you call the `remove()` function on the `Iterator` object during the loop, it will delete the current `Particle` object (and not skip ahead past the next one, as we saw with counting forward through the `ArrayList`).

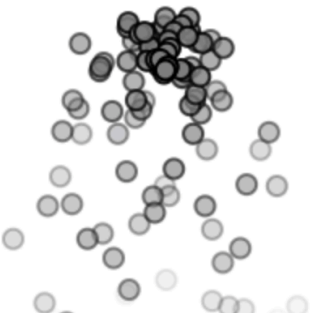
```
if (p.isDead()) {  
    it.remove();  
}
```

An Iterator object doing the deleting for you

[Show Raw](#)

(natureofcode.com)

Putting it all together, we have:



RESET PAUSE

Example 4.2: ArrayList of particles with Iterator

...And also post the manuscript source files on GitHub so anyone can “share and remix”?

The screenshot shows the GitHub interface for the repository 'shiffman / The-Nature-of-Code'. At the top, there are navigation links for 'Explore', 'Gist', 'Blog', and 'Help', along with a search bar and a user profile for 'sandersk'. The repository name is 'shiffman / The-Nature-of-Code', with 90 watchers, 854 stars, and 149 forks. Below this, a description reads: 'Raw source of The Nature of Code book as well as Processing examples. <http://natureofcode.com>'. Statistics show 1,219 commits, 11 branches, 0 releases, and 20 contributors. A yellow progress bar is visible. The main content area shows a file tree with folders like 'code', 'cover', 'illustrations', 'parsing', 'raw' and files like '.gitignore', 'README.md', and 'todo.10.4.12.md'. A large blue text overlay reads: '(https://github.com/shiffman/The-Nature-of-Code/)'. On the right sidebar, there are links for 'Code', 'Issues' (76), 'Pull Requests' (6), 'Wiki', 'Pulse', 'Graphs', and 'Network'. At the bottom right, there are buttons for 'Clone in Desktop' and 'Download ZIP', and an SSH clone URL: 'git@github.com:shif'.

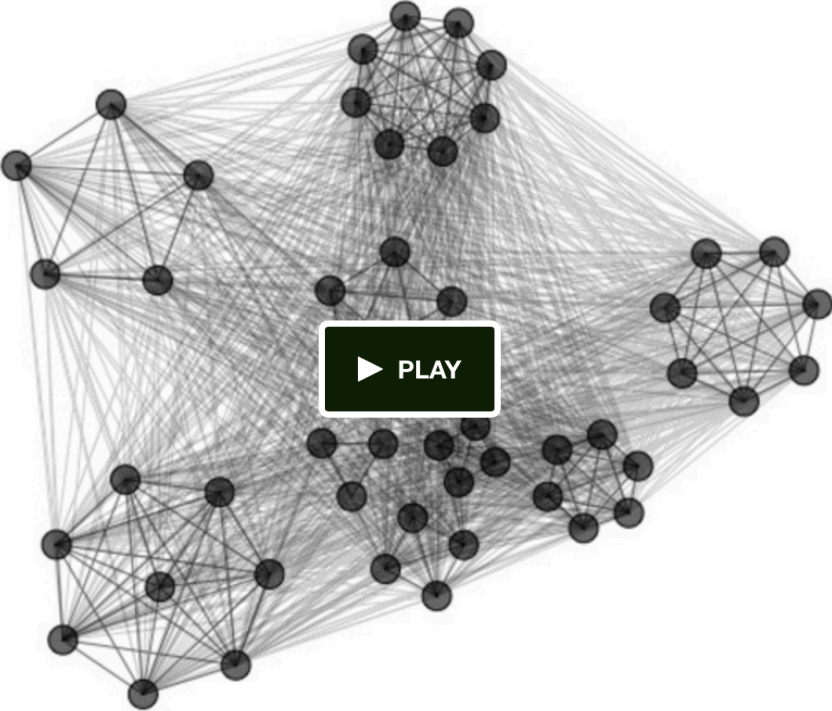
You receive pledges of >\$30,000...

The Nature of Code Book Project

by Daniel Shiffman

Home Updates **26** Backers **1,189** Comments **90** New York, NY Nonfiction

Funded! This project was successfully funded on Apr 3, 2011.



1,189
backers

\$31,575
pledged of \$5,000 goal

0
seconds to go

Project by
Daniel Shiffman
New York, NY

K First created · **38 backed**

f **Daniel Shiffman** 1267 friends

learningprocessing.com

<https://www.kickstarter.com/projects/shiffman/the-nature-of-code-book-project>

...And receive hundreds of submissions from people who want to help enhance your book

The screenshot shows the GitHub Issues interface for the repository 'shiffman/The-Nature-of-Code'. The page is titled 'Everyone's Issues' with a total of 288 issues. The issues are sorted by 'Newest' and are displayed in a list. The left sidebar shows a 'Labels' section with various categories and their counts. The main content area lists 12 issues, each with a title, the user who opened it, the time since it was opened, the number of comments, and an issue ID.

Label	Count
PDF	25
code	5
cover	1
css	23
edits	87
illustration	11
index	5
magicbook	2
math notation	4
need for print release	42
javascript	0

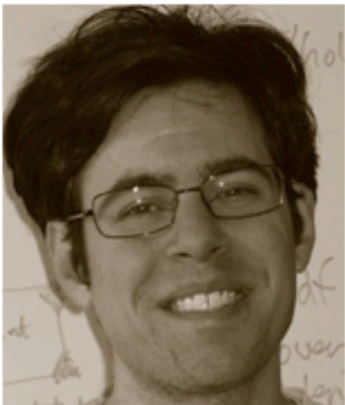
Issue Title	Opened by	Time Ago	Comments	Issue ID
chapter 1, in "More Number Properties with Vectors" distributive of scale is wrong	luxuia	a month ago	2	#364
Update 02_forces.asc	pascalculator	a month ago	1	#362
liquid	pamelafox	3 months ago	1	#356
Changed "brightest" to "darkest", to sync with Example I.4	alignedleft	4 months ago	1	#352
Small fix to code to match its description.	namin	5 months ago	1	#349
Fix .pde link (Kochline -> KochLine -- CameCase was missing).	namin	5 months ago	1	#348
fixed an typo	origamike	5 months ago	1	#346
Update 03_oscillation.asc	kabatwa	7 months ago	1	#344
wrong variable name in code sample	noxoc	7 months ago	1	#342
Update 09_ga.asc	runemadsen	8 months ago	2	#340
Changed two typos regarding 'convex' and 'concave'.	jschulenklopper	8 months ago	1	#339

<https://github.com/shiffman/The-Nature-of-Code/issues>

Contact Me!

Email: sanders@oreilly.com

Twitter: [@sandersk](https://twitter.com/sandersk)



Sanders Kleinfeld

sanders@oreilly.com

<http://twitter.com/sandersk>

Cambridge, Massachusetts

Ebook Alchemist

Areas of Expertise:

- DocBook XML
- XSLT
- XPath
- XQuery
- RDF
- SPARQL
- EPUB
- Mobi
- HTML5
- speaking
- writing

Biography

Books

Blog

Multimedia

Sanders Kleinfeld has been employed at O'Reilly Media since 2004 and has held a variety of positions, including roles on O'Reilly's Production, Editorial, and Tools teams. Currently, he works as a Publishing Technologies Specialist, maintaining O'Reilly's XML-based toolchain for generating EPUB and Mobi formats of both frontlist and backlist titles. He also helps coordinate O'Reilly's digital distribution efforts to electronic sales channels, and is currently assisting in R&D efforts surrounding HTML5

Hire Sanders Kleinfeld

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Consultants

Also find Sanders on:



Recent Twitter posts:

- [@nbousquet](#) Most EPUBs out now use XHTML 1.1, so EPUB is already pretty Web-compliant. Maybe HTML5 ebooks will be more attractive to pirates? [2 days ago](#)

Author Events

Webcast: HTML5 for Publishers