

2014-07-08 FormatterClub事例発表会

# DITAとCSS組版で気軽に シングルソースパブリッシング

AH CSS Formatter + DITA Makes  
Single Source Publishing Easier

coolia, Inc.

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- ▶ ドキュメント制作
- ▶ ソフト開発のバックグラウンド
  - ◆ 商品企画
  - ◆ 開発、テスト、デバッグ
  - ◆ ローカライズ
  - ◆ リリース
- ▶ Technical Documentation
- ▶ End-to-end Software Development Expertise

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## Our Current Focus

- ▶ 「情報開発」
  - ▶ テクニカルドキュメント制作
    - ◆ 部品化
    - ◆ タスク指向
    - ◆ トピック指向
  - ▶ シングルソースパブリッシング
  - 👍 DITAを利用
- ▶ Information Development
  - ▶ Modular, task-oriented, topic-based technical documentation
  - ▶ Single source publishing
  - 👍 Using DITA

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## What is DITA?

- ▶ Darwin Information Typing Architectureの略称
  - ▶ XMLベースのフレームワーク
  - ▶ オープンな標準仕様
  - ▶ DITA Open Toolkitが事実上のリファレンス実装
  - ▶ 有力なXML製品でサポート
- ▶ Darwin Information Typing Architecture
  - ▶ XML-based framework
  - ▶ Open standard specification
  - ▶ DITA Open Toolkit serves as a reference implementation. [\*]
  - ▶ Rich support from major XML products

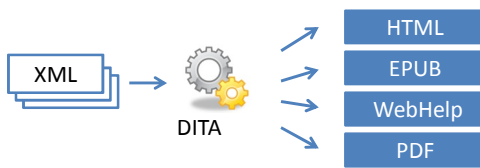
[\*] DITA and DITA Open Toolkit are two different things, but for simplicity we will call them just "DITA".

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## What is DITA? (contd.)

- ▶ 特長
  - ◆ 部品化
  - ◆ 再利用
  - ◆ 情報タイプ
- ▶ シングルソースで複数の出力形式
- ▶ テクニカルドキュメントに最適



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- ▶ Modular, content reuse, information type
- ▶ Single source, multiple outputs
- ▶ Best suited for technical documentation

## Our First Adoption of DITA

- ▶ 出力形式：HTML
- ▶ 所見：DITAは気軽にはじめられる
  - ◆ 導入しやすい
    - ・ 費用面
    - ・ 技術面
  - ◆ 大企業だけではなく、少人数でも有用
  - ◆ 仕様のバランスがよい。きつすぎず、ゆるすぎず

- ▶ Output: HTML
- ▶ Findings: DITA
  - ◆ Is easy to start with. (both cost and learning curve)
  - ◆ Benefits not only large companies but also small business.
  - ◆ Has very good balance. Not too strict, not too loose.

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## Our Next Adoption of DITA

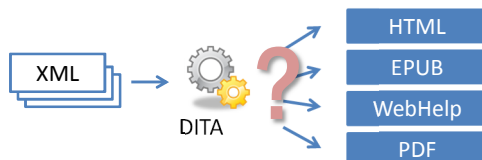
- ▶ ソフトウェア マニュアル
    - ◆ 100ページ弱の和文
  - ▶ 複数の出力形式：
    - ◆ HTML
    - ◆ EPUB
    - ◆ WebHelp
    - ◆ WebHelp Mobile
    - ◆ PDF
  - ▶ スコープ外：
    - ◆ 縦書き
    - ◆ ルビ
    - ◆ 数式
- ▶ Software Manual (Japanese): ~100 pages
  - ▶ Multiple outputs:
    - ◆ HTML
    - ◆ EPUB
    - ◆ WebHelp
    - ◆ WebHelp Mobile
    - ◆ PDF
  - ▶ Our of scope:
    - ◆ Vertical writing
    - ◆ Ruby
    - ◆ Math

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## Problem

- ▶ DITA ≠ 真のシングルソースパブリッシング
  - ☹️ 組版がシングルソースになっていない
- ▶ DITA ≠ True single source publishing
  - ☹️ Lack of single source *formatting*



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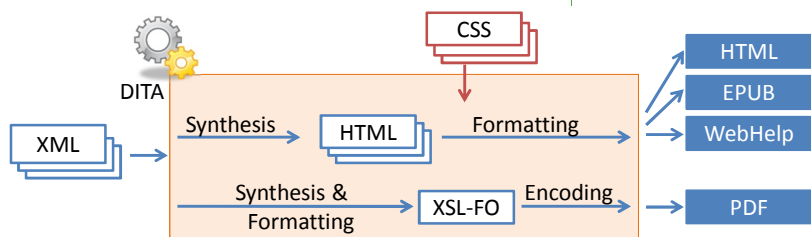
## PDF is the Most Difficult Part

- ▶ PDFは独自の変換経路
  - ◆ 他の対象出力形式はコアのHTML変換を共有
  - ◆ XSL-FOからはPDFしか得られない

👉 手間のわりに、得るものは限定的

- ▶ Uses its own XSLT.
  - ◆ Other outputs share the core HTML transformation.
  - ◆ XSL-FO serves PDF only.

👉 Time-consuming, small gain.



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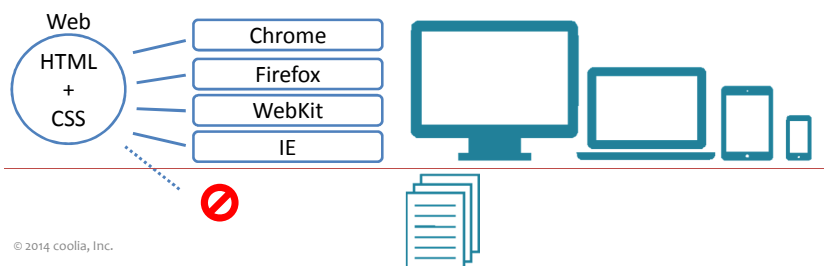
[\*] Images for illustrative purposes only. Not the actual design diagrams.

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## The Kernel of the Issue

- ▶ 今や需要はWebが中心
- ▶ すべてがHTML。多様なデバイスとブラウザがCSSで動的にレンダリングする
- ▶ PDFだけは、XSL-FOなどで組版したものを、限られたデバイスやリーダーで表示する
- ▶ 一方でPDF需要は依然として高い

- ▶ Today's demand is Web-centric.
- ▶ Everything is HTML, formatted with CSS, rendered dynamically on various browsers on various devices.
- ▶ Only PDF is formatted with XSL-FO, displayed on limited readers on limited devices.
- ▶ But the demand for PDF is still high.

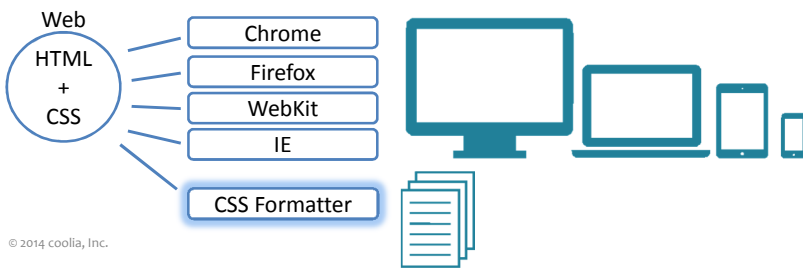


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## CSS Formatter Comes to Rescue

- ▶ CSS Formatter がWebブラウザのようなはたらきをしてくれる
- ☞ あたかもレスポンシブWebデザインの種類のごとくPDFを作成
- ▶ CSS Formatter plays like one of Web browsers.
- ☞ Making PDF is now just another adaptation of RWD.

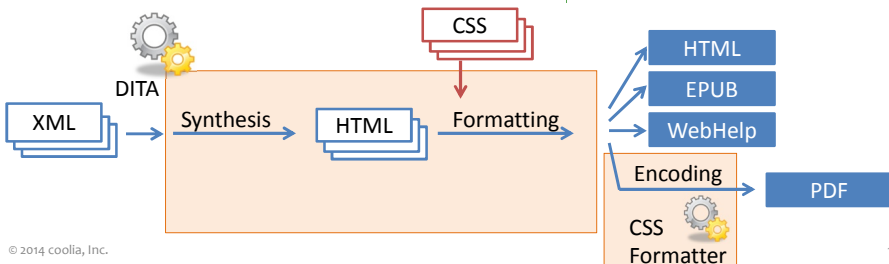


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## DITA with CSS Formatter

- ▶ いったんHTMLに集約してから、PDFに出力
- ☞ 工程が単純化され、真のシングルソース化
  - ◆ 執筆はXMLだけ
  - ◆ 表現はHTMLだけ
  - ◆ 組版はCSSだけ
- ▶ HTML as presentation hub
- ☞ Simplified, true single sourcing
  - ◆ Written only in XML
  - ◆ Presented only in HTML
  - ◆ Formatted only in CSS



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## Develop CSS for Each Output?

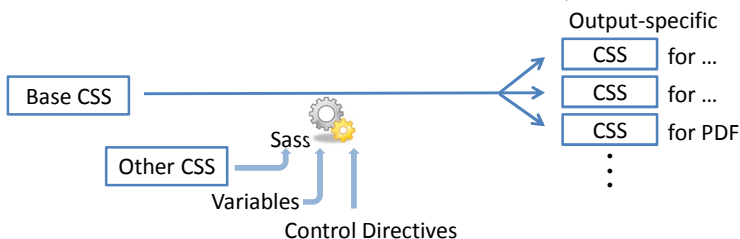
- ▶ Sassでより簡単に
- ▶ Sassとは
  - ◆ CSSプリプロセッサ
  - ◆ フリー
  - ◆ とても簡単
    - 純粋なCSSを拡張していただくではじめられる
- ▶ Sass makes it easier.
- ▶ What's Sass?
  - ◆ CSS preprocessor
  - ◆ Free
  - ◆ Very easy to learn
    - You can start from pure CSS.

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## With Sass, you can

- ▶ スタイルシートをコンポーネント化できる
  - ◆ 共通CSS + 出力形式特有のCSS
- ▶ 変数を使える
- ▶ 条件分岐できる
  - ◆ @if, @for, @while, @each
- ▶ Componentize stylesheets.
  - ◆ Base CSS + output-specific CSS's
- ▶ Use variables.
- ▶ Use control directives.
  - ◆ @if, @for, @while, @each



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## Other Useful Sass Features

- ▶ マスタースタイル的なものを組み合わせられる
    - ◆ @extend, @include, @content
  - ▶ 便利な関数が用意されている
    - ◆ color, opacity, string, number, listなど
  - ▶ 関数を自作できる
  - ▶ それらを詰め合わせたフレームワークもある
    - ◆ Compassなど
- ▶ Master style (kind of)
    - ◆ @extend, @include, @content
  - ▶ Helper functions
    - ◆ color, opacity, string, number, list etc.
  - ▶ Your own functions
  - ▶ Popular frameworks such as Compass

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## Showcase

### XML (DITA)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE task PUBLIC "-//OASIS//DTD DITA Task//EN" "task.dtd">
<task id="task_5tr_3bl_wf" xml:lang="ja-JP">
  <title>SIMカードを挿入する</title>
  <abstract>
    <shortdesc>通信を始める前に、SIMカードを挿入します。</shortdesc>
  </abstract>
  <taskbody>
    <prereq>
      <p>電話の電源を切っておきます。</p>
      <note type="warning">電話を切っておかないと、電話やSMSが正常に動作しない場合があります。</note>
    </prereq>
    <steps>
      <step conref="removingBattery.dita#task_3ml_qm3_rf/"
            conrefend="removingBattery.dita#task_3ml_qm3_rf/">

```

### CSS (Sass)

```
@charset "UTF-8";
@import "compass";
%section {
  &:not(:empty) {
    position: relative;
    @include rhythm-borders;
    @include border-radius( 0.5em );
    border-color: $colorSectionBorder;
    @include single-box-shadow(
      $colorSectionBorderShadow,
      1px,
      2px,

```

### Clean, structured presentation in XHTML



! Based on a sample DITA project bundled with <code>xYgen</code>.

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# Showcase: EPUB



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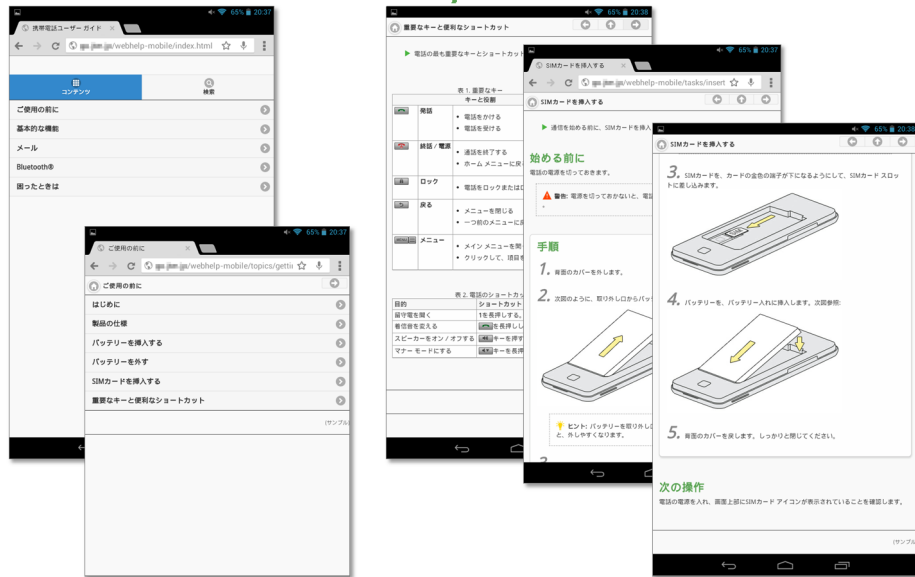
# Showcase: WebHelp



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# Showcase: WebHelp Mobile



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# Showcase: PDF



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## DITA + CSS Formatter: Pros

- ▶ 約50%の納期短縮
  - ▶ CSS Formatter出力は上出来
    - ◆ InDesignやWordでのマニュアル制作をリプレース可能
  - ▶ 豊富なCSS例を参考にできる
  - ▶ スタイル作成の高速化
  - ▶ 組版でもCSSのデバッグは簡単（ブラウザでF12キー）
  - ▶ CSS専用ライセンスのおかげで費用対効果さらにアップ
- ▶ Delivery time reduced by approx. 50%
  - ▶ CSS Formatter does an excellent job.
    - ◆ Competitive with or even better than the legacy works of InDesign and Word
  - ▶ Can exploit the power of many CSS examples out there.
  - ▶ Style development gets faster.
  - ▶ Debugging CSS is still easy. (F12 on modern browsers)
  - ▶ Even more cost-effective with CSS-only Formatter license

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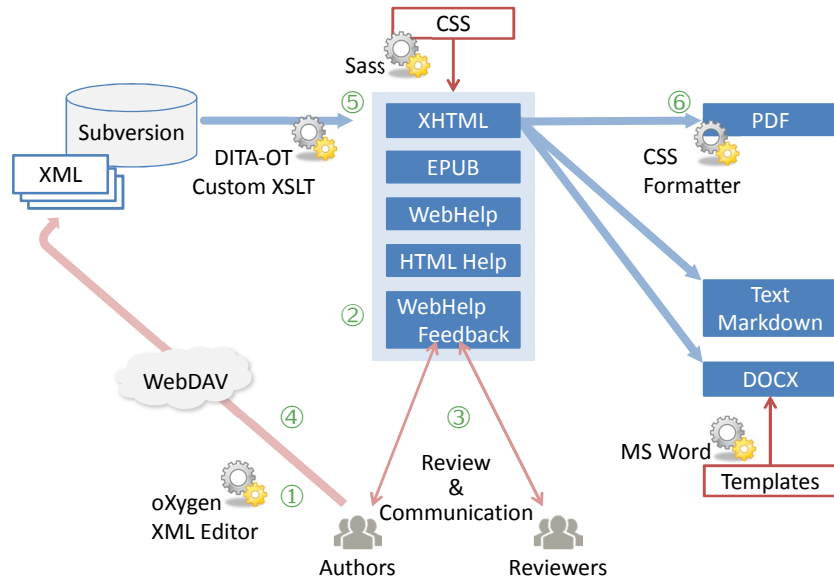
## DITA + CSS Formatter: Cons

- ▶ CSS Formatterのバグ
    - ◆ すぐ修正！
  - ▶ oXygen XML Editorのバグ
    - ◆ すぐ修正！
  - ▶ ページメディア用のCSS応用例がほとんどない
  - ▶ CSS Formatter向けの些細なCSS変更が、他のブラウザに影響することがある
  - ▶ コンテンツ変更をとまなうCSSに依存しがち
  - ▶ 索引はめんどろ
  - ▶ 標準化とその実装が普及していない
- ▶ Encountered several bugs of CSS Formatter. (And fixed quickly!)
  - ▶ The same can be said for oXygen. (Also fixed quickly!)
  - ▶ Virtually no samples of paged media CSS.
  - ▶ A trivial change for CSS Formatter can affect another browser, and vice versa.
  - ▶ Dependency on content manipulation in CSS.
  - ▶ Indexing is a tedious task.
  - ▶ Standards and its implementations not widely accepted yet.

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## Our Current Workflow



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## Summary

- ▶ DITAはシングルソース化に適している
- ▶ DITAは気軽にはじめられる
  - ◆ 費用：DITAはフリー
  - ◆ 規模：少人数チームでも有用
- ▶ DITA ≠ 真のシングルソースパブリッシング
  - ◆ PDFは他のHTML系出力形式と違いすぎるし、難しい
- ☞ DITA + CSS Formatter ≒ 真のシングルソースパブリッシング
- ▶ DITA facilitates single sourcing.
- ▶ You can start DITA small.
  - ◆ Cost: DITA is completely free.
  - ◆ Scale: Even a small team will find DITA beneficial.
- ▶ DITA ≠ True single source publishing
  - ◆ PDF is too much different and more difficult than HTML-variant outputs.
- ☞ DITA + CSS Formatter ≒ True single source publishing

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