Introduction to **EDUPUB**

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Getting Started With EDUPUB

A guide for understanding the EDUPUB
Profile of EPUB 3

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https://www.bisg.org/publications/getting-started-edupub

Available in EDUPUB format! (and PDF)

1. EDUPUB is a replacement for EPUB

- **<u>False.</u>** EDUPUB files are 100% valid EPUB files. EDUPUB is a *specialization of EPUB* for use in education.

2. EDUPUB is only for US publishers

- **<u>False.</u>** EDUPUB is a global initiative, intended to be useful across educational contexts in any locale.

3. Full compliance is required by all

- **<u>False.</u>** The EDUPUB profile can be seen as a "toolkit", from which the provider may choose to use only some parts.

The main features of EDUPUB

1. Metadata
2. Structure of content, including "remixability"
3. Scriptable components
4. Open Annotations
5. LMS integration

1. Metadata

Educational metadata

- Based on schema.org educational properties
- Examples:
  - **audienceType:** corporate, higher-ed, professional, schools
  - **learningResourceType:** activity, assessment, discussion…
  - **typicalAgeRange:** 5-8, 8-10, 10-12…

```
<dc:type>edupub</dc:type>
<meta property="schema:learningResourceType">activity</meta>
<meta property="schema:timeRequired">P90M</meta>
```

1. Metadata

Accessibility metadata
- Based on schema.org accessibility properties
- Examples:
  - **accessibilityFeature:** alternativeText, printPageNumbers
  - **accessibilityControl:** fullKeyboardControl, fullVoiceControl

```
<dc:type>edupub</dc:type>
<meta property="schema:typicalAgeRange">18+</meta
<meta property="schema:accessibilityFeature">alternativeText</meta>
<meta property="schema:accessibilityFeature">printPageNumbers</meta>
<meta property="schema:accessibilityFeature">readingOrder</meta>
<meta property="schema:accessibilityFeature">structuralNavigation</meta>
<meta property="schema:accessibilityFeature">tableOfContents</meta>
```

1. Metadata

Teacher editions and guides

- Ability to identify that an EDUPUB e-book is
    - **a teacher's edition** (represents a superset of the work the students are using)
    - **a teacher's guide** (provides general instruction and guidance on the curriculum (i.e., there is no student edition).

```
<dc:type>edupub</dc:type>
<dc:type>teacher-edition</dc:type>
<dc:source>urn:isbn:9780000000001</dc:source>
```

2. Structure and "remixability"

Structure and semantics of HTML content

- For reflowable EPUB, enforce well-structured content (section, heading elements)
- Encourage use of structural semantics (epub:type)
  - Examples: assessment, footnote, bibliography, qna

```
<section epub:type="glossary">
<h1>Glossary of Key Terms and Acronyms</h1>
<dl>
<dt><dfn>ADA</dfn></dt>
<dd>Americans with Disabilities Act.</dd>
<dt><dfn>Affirm</dfn></dt>
<dd>When a higher court upholds the opinion [...] </dd>
...
```

2. Structure and "remixability"

Why well-structured and semantically rich content?

- Creates predictability for both machines and humans
- Enables remixability/repurposability

The **EPUB Distributable Objects** specification defines how a publisher can identify reusable objects in the EPUB   http://www.idpf.org/epub/do/
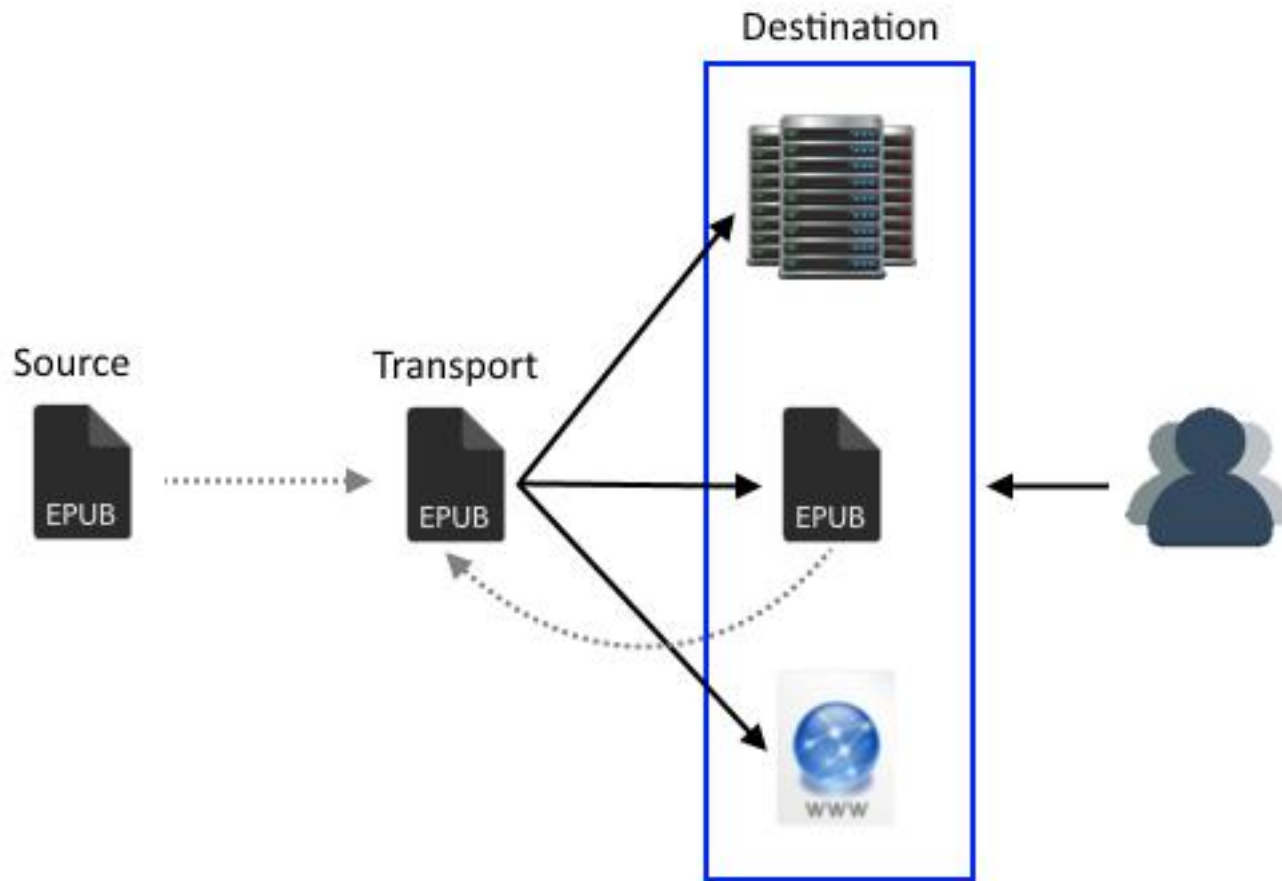
```
<collection role="distributable-object">
  <metadata>
    <dc:title>Phantom Textbook - Chapter 1</dc:title>
    [...]
  <link href="xhtml/chapter01.xhtml"/>
</collection>
```

2. Structure and "remixability"

EPUB Distributable Objects – the idea

3. Scriptable Components

- Communication API and packaging for interactive components in EPUB
- Attempt to make life easier for publishers and reading systems
  - Integration of 3d party components
  - Improves security, performance (reflowable)

4. Open Annotations

personal | student ↔ student | student ↔ teacher | parent ↔ teacher…

- Core missing piece: format for interchange
- EPUB Adaption of W3C Open Annotation (http://www.openannotation.org/spec/core/)
- W3C Recommendation Track work is ongoing
- The EPUB adaption also allows bundling of collections of annotations
- … and specifying target audience (teacher, age range, etc)

5. LMS integration

IMS Learning Tools Interoperability (LTI) and Outcomes

- EDUPUB currently defines content and Reading System Conformance requirements for LTI 1.2/2.0
- Support for Caliper and QTI at higher conformance levels (TBD)

6. Utilize other EPUB features

- **Navigation**

EPUB Navigation document utilized in EDUPUB for rich & efficient navigation for all users

- **EPUB Multiple Renditions**

Allows bundling multiple versions of the content
Examples: reflowable/fixed, multiple languages

Validation and Samples

- EPUBCheck 4.0 supports EDUPUB content
- Support for LTI testing of Reading Systems upcoming
- EDUPUB sample files available at IDPF GitHub repo

Links

- All specifications mentioned
  http://idpf.org/ongoing
- BISG Getting Started with EDUPUB Guide
  https://www.bisg.org/publications/getting-started-edupub
- EPUBCheck 4.0
  https://github.com/IDPF/epubcheck/releases
- EDUPUB samples
  https://github.com/IDPF/edupub/tree/master/samples

Thank You

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