EDUPUB Summit

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Meet the Editors

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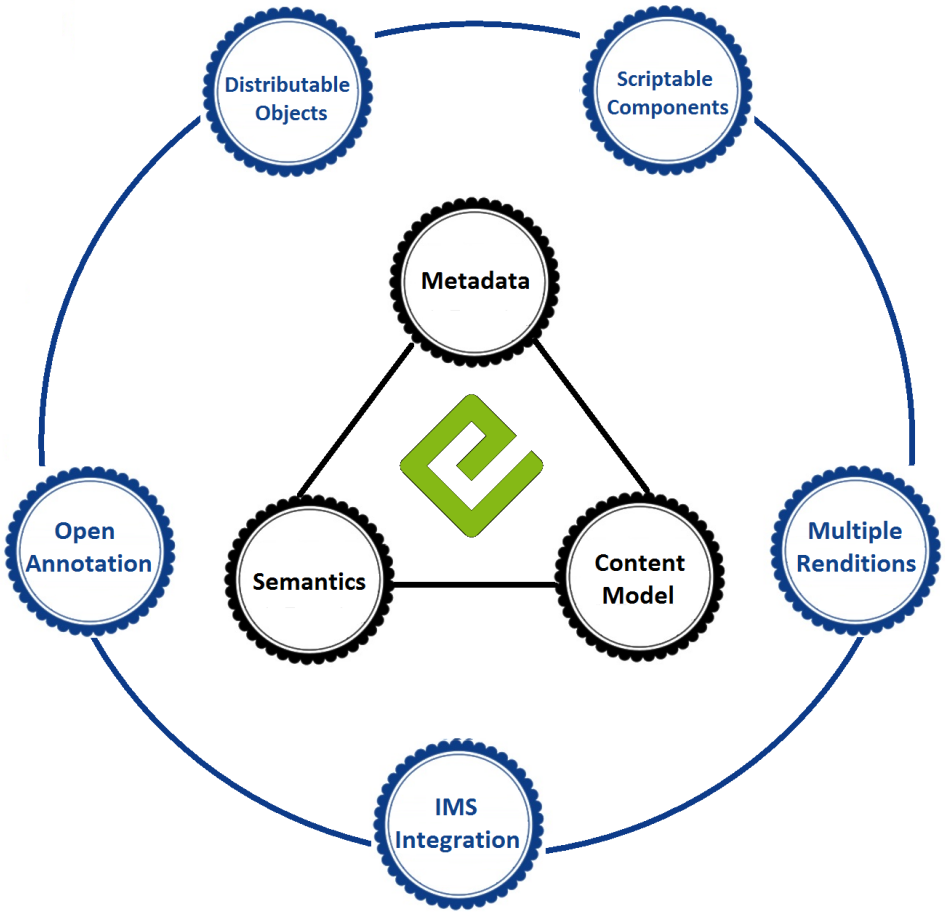
EDUPUB Universe



EDUPUB Profile

Package Level Metadata

- Must specify as “edupub”
- Must identify one or more accessibility feature
- Must specify if teacher-edition or teacher-guide
- Must specify source when print derivative or teacher edition
- Other educational metadata is optional (i.e. "Should")
    - e.g. audience, educational role, alignment, activity type...
    - May be specified by RDFa/Schema.org or other

EDUPUB Profile

Renditions

- Focus is on reflowable accessible content
- Fixed layout best practice is to use semantics and not image
- Must also provide an accessible rendition if image based fixed rendition for accessibility

EDUPUB Profile

Content model

- Focused on reflowable content (for initial draft)
- Enables Accessibility:
  - on multiple platforms/form factors
  - defines reading order
  - define navigation/hierarchy
    - Must include TOC links to the full document heading hierarchy
    - heading ranking (i.e. use of h1-h6)
    - nested sections/asides
    - page-list nav required if page-markers exist
  - Teacher content must be identified with aria-label
- Guidance on image & media spec recommendations

EDUPUB Profile

Semantics

- EPUB 3 core semantics enhanced/extended to support educational content
  - e.g. learning objectives, outcomes and standards and assessment
- Does not currently specify semantics specific for a teachers edition
  - aria-label used to identify teacher content
- Focus on providing examples and best practices on implementation
- Sample CSS styling controlled by epub:type and/or class attribute values

Annotations

http://www.idpf.org/epub/oa/

- EPUB Adaption of W3C Open Annotation (http://www.openannotation.org/spec/core/)
  - Requires XHTML5 for annotation body
  - Requires JSON-LD serialization
  - Uses EPUB CFI for anchoring to target
  - Define specificity levels (release, publication and work).
  - Syntactic restrictions to allow non-RDF-aware processing
  - Allows bundling of collections of annotations (+ zip for transport)
  - … and specifying target audience (teacher, age range, etc)

  - Life: bundled with EPUB, or as separate entities
  - Required features in EDUPUB-compliant RS: import, export

Distributable Objects

http://www.idpf.org/epub/do/

- https://drive.google.com/file/d/0B_r69cPgzjHjeXpibl9pdFBYU2s/view?usp=sharing

EPUB Scriptable Components (aka Widgets)

- Status
  - Scripted components team
    - Led by Will Manis, ex of B&N College, now living the life of leisure!
    - Participants from Nook, Google, Pearson, Inkling, Imagineering, Metrodigi, plus invited experts
  - Worked over the last year to develop two specifications
  - Draft specifications
    - Packaging of components
      - http://www.idpf.org/epub/sc/pkg/
    - Component communication protocol
      - http://www.idpf.org/epub/sc/api/

EPUB Scriptable Components

- ESC Packaging Details
  - ECS's are packaged as EPUBs
    - No new XML vocabularies are required.
    - The epubcheck validation tool can be used to ensure validity of the Scriptable Components, and that all necessary resources are present.
    - The Package Document can be used to store Scriptable Component metadata.
    - Fixed-layout metadata can be used to communicate the desired aspect ratio.
    - Standalone debugging of Scriptable Components is possible, as the Scriptable Components can be ingested into any Reading System with scripting support (a component is simply a "page" with spine-level scripting).

EPUB Scriptable Components

- ESC Packaging Details
  - A Scriptable Component must:
    - Be a Packaged Object from DistributableObjects, except:
      - Its Base Document must be a valid XHTML Content Document (no fragments)
      - Its resources must be structured as spec-ed
      - It must have required metadata (epubsc:version)
      - Single Base Document in the spine
      - Have a dc:type of “scriptable-component”
  - An embedded Scriptable Component must:
    - Incorporate Scriptable Component resources as spec-ed
    - It must include a scriptable-component <collection>

EPUB Scriptable Components

- ESC Packaging Details
  - Embedding an ESC
    - Migrate Resources as is DistributableObjects, except:
      - The Base Document must be referenced from at least one <iframe> element
      - Any obfuscated fonts , the fonts must be de-/re-obfuscated
  - When an ESC is embedded
    - The creation of an Embedded Component from DistributableObjects is required.
    - An Embedded Object is created per DistributableObjects Collection, except:
      - The Embedded Component <collection> must have the role attribute identifier "scriptable-component"
      - The collection must not include the following metadata from the Packaged Component:
        - Primary dc:identifier elements
        - The last modified date (dcterms:modified)

EPUB Scriptable Components

Embedded ESC Example

```
<collection role="scriptable-component">
        <metadata>
                <dc:type>scriptable-component</dc:type>
                <dc:title>Gallery</dc:title>
                <dc:creator>DynamicInc</dc:creator>
                <dc:language>en</dc:language>
                <meta property="epubsc:version">1.0</meta>
                …
        </metadata>
        <collection role="manifest">
                <link href="../components/DynamicInc/Gallery/gallery.html"/>
                <link href="../components/DynamicInc/Gallery/css/common.sample.css"/>
                <link href="../components/DynamicInc/Gallery/css/gallery.css"/>
                …
                <link href="../components/DynamicInc/shared/js/external/captionator-min.js"/>
                …
        </collection>
        <link href="../components/DynamicInc/Gallery/gallery.html"/>
</collection>
```

EPUB Scriptable Components

- Components API
    - Purpose: provide interoperable mechanism for widget communication and interaction
    - Augments, does not replace EPUB 3.0.1 scripting
    - Designed to work in RS that support spine level scripting with no effort
    - Not addressed: Security and Privacy

EPUB Scriptable Components

- Architecture
  - All components must be in an <iframe>
  - Must assume it is in a separate domain (that is, no direct scripting access across the iframe boundary)
  - All communication done with postMessage
  - Messaging implementation included in the spine
    - Enables drop-in support if spine level scripting is supported

EPUB Scriptable Components

- Init
  - Initialize postMessage mechanism
  - Optional custom steps
  - post ready message
- Messages
  - Well defined structure
  - Identifies that it is an EPUB SC message
  - Other useful metadata (id, timestamp, etc)
  - Various reserved topics (ready, pause, resume, etc)
  - Components communicate with each other using the epubsc_publish method with a custom topic and topic data
  - Message go from child to parent, and parent to child when the child is subscribed

EPUB Scriptable Components

- Events
  - Components report events (mouse/touch, keyboard, etc) to their parent and whether they were handled
  - Uses the postMessage mechanism
  - Intended for Reading System UI (for instance, page turning)
  - Events only go from child to parent
- Code
  - The working group will provide code that can be used to implement the messaging API, both for widgets and the spine
  - The code is not normative, the spec is
  - Code is on github: https://github.com/IDPF/widgets

EPUB Scriptable Components

- Going Forward
  - Scriptable component samples
    - Prototype code for packaging and protocol lives on github
      - Packaging - https://github.com/IDPF/componentUtility
      - Protocol - https://github.com/IDPF/componentProtocol
  - Code will be brought into alignment with the specs and productized/hardened
    - The team will be working on this over the next few months

EPUB Scriptable Components

- Community Asks
  - Expect the specifications to mature based on feedback and experiences with sample code
  - The team encourages active review of the specifications
  - File comments/bugs using the issue tracker
    - https://code.google.com/p/epub-revision/issues/list
  - Please explore the sample code
  - Please integrate specifications into your work products

Q&A