

EDUPUB

*Forging an Open, Agile, Global, Interoperable
Educational Ecosystem for the 21st Century*

Bill McCoy

Executive Director, IDPF

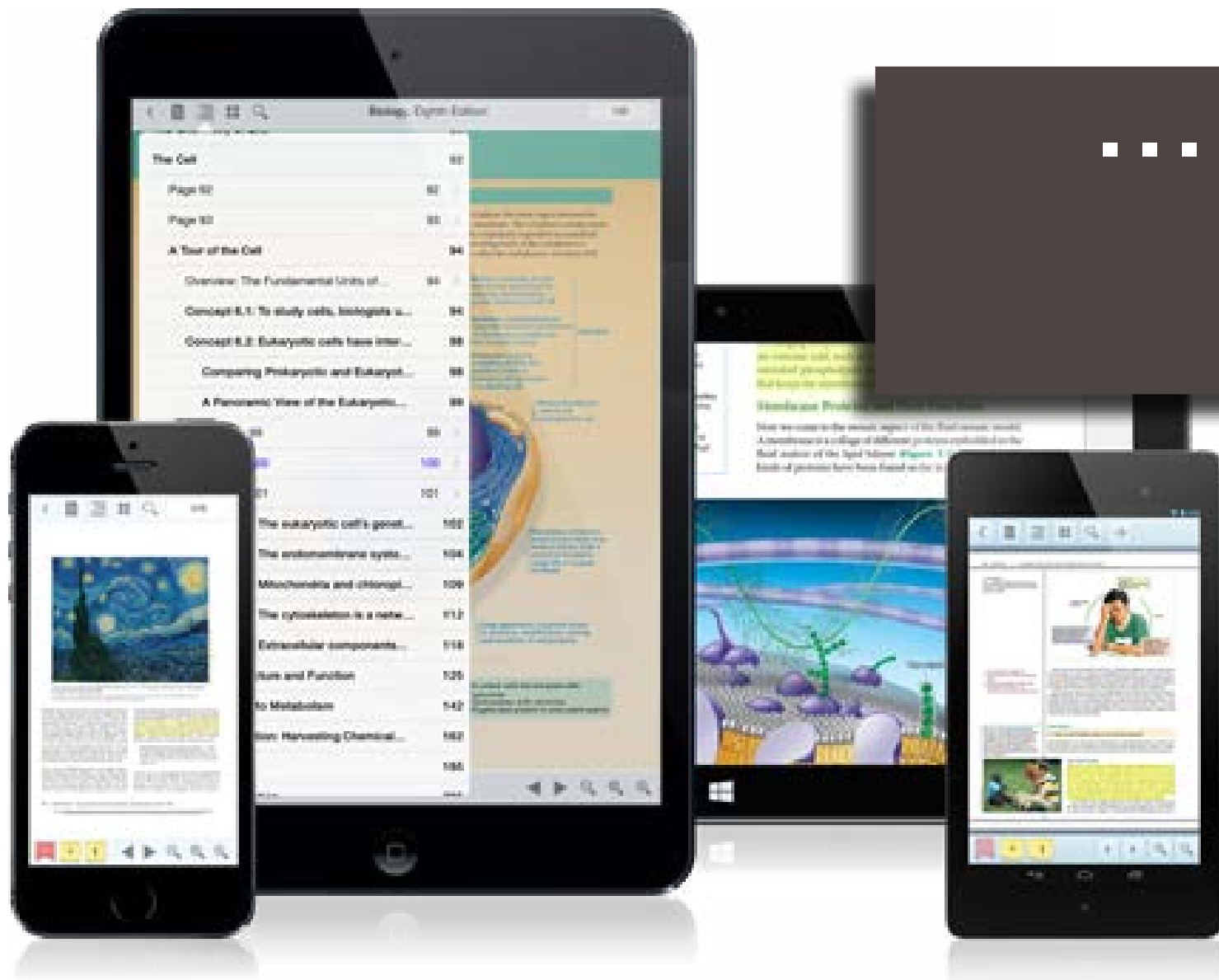
**The educational ecosystem
is in the middle of
a massive transition . . .**

... from this ...





... through this ...



... to this.

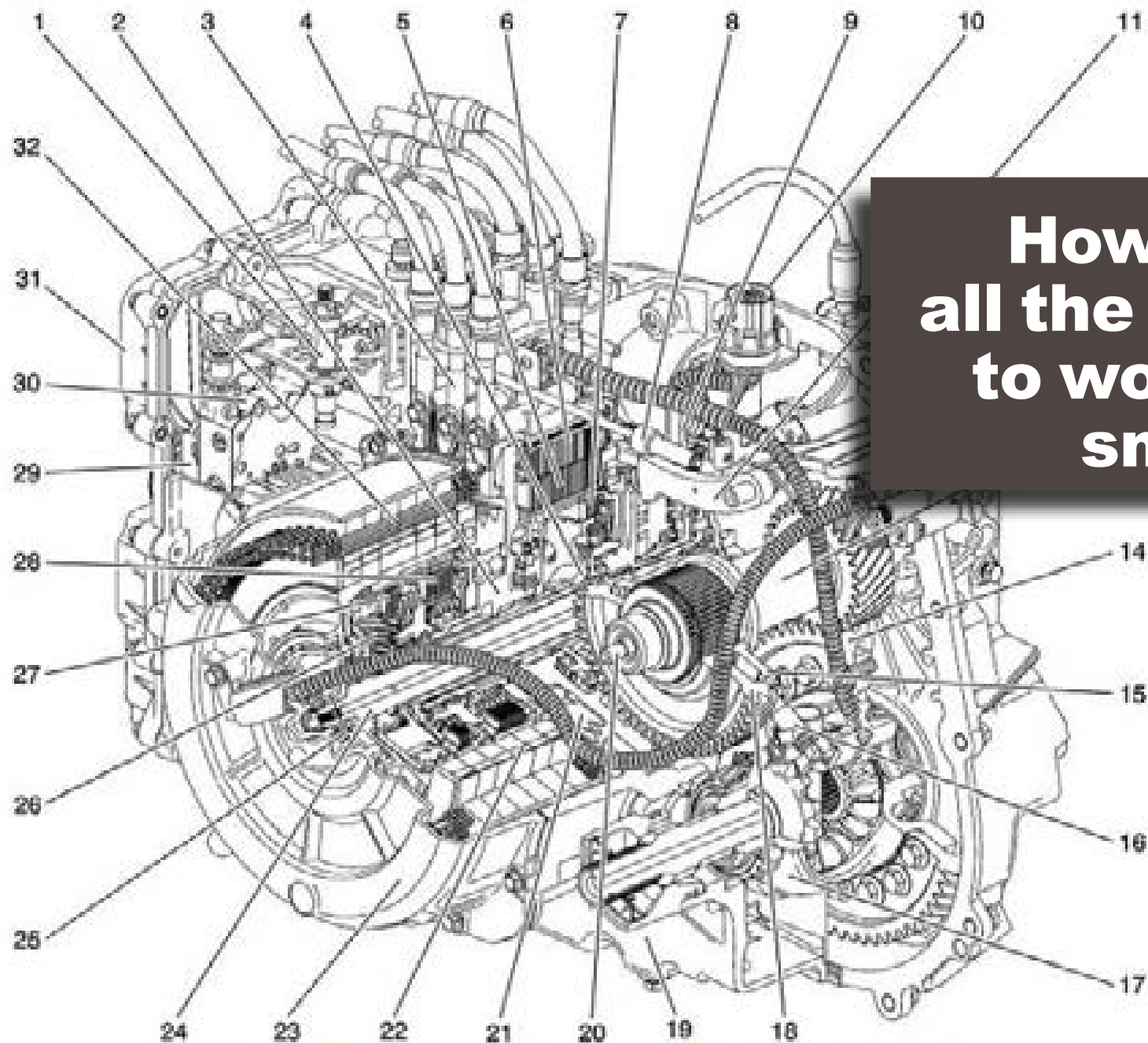
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in textbooks anymore.**

**Students and teachers
need a multitude of resources—
books, chapters, articles, media, quizzes,
exercises, models, data, and more—
and they need to use them
online and offline, alone or collaboratively,
on whatever device they want.**



**How do we get
all the moving parts
to work together
smoothly?**



**By removing
friction through
open, interoperable
standards.**

**Getting that to happen—
starting right now—
is the mission of EDUPUB.**

How Did We Get Here?



**Smart Education Initiative
from 2011**

EDUPUB Boston Summit - Oct 31, 2013

EDUPUB workshops in 2014:

Salt Lake City, Oslo Norway, Tokyo Japan



**So what is EDUPUB,
exactly? I'm confused.**

**Is it an organization?
A standard?
It's for textbooks, right?**

It's not just about textbooks.

It's about all types of educational resources:

Text (books, chapters, articles, chunks,
delivered on any device or platform),

Media (images, video, audio, interactives),

Assessments (quizzes, exercises, etc.),

Metrics (helping students and teachers
gauge effectiveness and progress).

**It's kind of an organization,
and kind of not.**

**It's really a collaboration
among existing organizations:**

THE EDUPUB ALLIANCE

**Currently a joint initiative of
the IDPF (the EPUB family of standards),
IMS Global (educational standards),
the W3C (web standards), and
BISG (Book Industry Study Group).**

It's kind of an organization,
and kind of not.

It's really a collaboration

*Enabling educational content of all types
to be reliably distributed and interchanged
between a wide variety of devices and platforms.*

the **IDPF** (the EPUB family of standards),
IMS Global (educational standards),
the W3C (web standards), and
BISG (Book Industry Study Group).

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***Connecting the ecosystem via standards like
QTI (Question and Test Interoperability),
LTI (Learning Tools Interoperability),
and the Caliper Analytics Framework.***

IMS Global (educational standards),
the W3C (web standards), and
BISG (Book Industry Study Group).

**It's kind of an organization,
and kind of not.**

**It's really a collaboration
among existing organizations:**

***Providing the Open Web Platform standards—
XML, HTML, HTTP, CSS, and many others—
that form the foundation for today's technology
for communication and interchange.***

the **W3C (web standards), and
BISG (Book Industry Study Group).**

**It's kind of an organization,
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**It's really a collaboration
among existing organizations:**

THE EDUPUB ALLIANCE

***Spreading the word about EDUPUB
and educating all its stakeholders
on how and why to use it.***

BISG (Book Industry Study Group).



**And who exactly
are those stakeholders?**

**What would EDUPUB
do for them?**



Publishers

Economies of scale.

**Flexible sourcing
and staffing.**

**Consistent presentation
across devices.**

**Eliminate variant
products for different
platforms.**

**Real innovation, not
reinventing wheels.**



Educators

Easy LMS integration.

**Assessments,
outcomes, & analytics.**

**Content is easily
repurposable.**

**Facilitates adaptive
learning.**

**Easy to retrieve and
deploy content from
multiple sources.**



Learners

Richer learning experiences.

Responsive to learning style & preferences.

Accessibility.

Online or offline, laptop, tablet, phone.

Improved learning outcomes.

Affordability.

Platform Providers

**Faster development
based on known,
consistent format.**

Easier to support.

**Increased volume from
publishers.**

**Easier integration of
content.**

Device independence.

Expanded market.



**It's not as much a standard
as a confederation of standards,
with specifications to enable them
to work together well.**

**The first, most concrete example:
THE EDUPUB PROFILE OF EPUB 3.**

**Specs for how to create an EPUB 3
that is optimized for education
and interoperability in the
educational ecosystem.**

OWP: The Open Web Platform

HTML5
XML
CSS
SVG
MathML
ARIA
and
many
others

EPUB 3

Container
Package
Metadata
Content Docs
Resources
(images, fonts,
scripts, media)
Media Overlays
Structural Semantics
etc.

EDUPUB

**A profile of
EPUB 3
optimized for
education.
It IS an EPUB.**



**So how is an EDUPUB
different from a
plain-vanilla EPUB 3?**

An EDUPUB conforms to certain specifications for document structure, vocabulary, and metadata that optimize it for education.

And the EDUPUB initiative has prompted or accelerated new aspects of the EPUB 3 spec that are useful in lots of contexts, not just education.

Features of EDUPUB Documents

Defines a **teacher edition**, a superset of the student edition with teacher-specific content, and a **teacher guide** that is supplemental.

Requires use of **<section>** for structure, with **strictly ranked <h1>-<h6> headings**.

Recommends **page break markers** when there is a corresponding print or paginated rendition.

Defines **Distributable Educational Objects**.

Requires **full, linked toc nav** document.

EDUPUB Structural Semantics

Expands **EPUB Structural Semantics** to provide values of @epub:type for educational content and **recommends their use** in EDUPUBs.

Examples include expanded terms for frontmatter, bodymatter, and backmatter sections;
for **<asides>** like case study, help, notice, pullquote;
many terms for **Testing** (e.g. types of problems, assessments, practice sections, etc.);
and terms for **Learning Objectives**.

Metadata in EDUPUB

Requires `<dc:type>`**edupub**`</dc:type>`.

Uses **schema.org** properties for **accessibility** and **educational metadata**.

Recommends, but does not require, use of these properties and associated vocabularies:
EDUPUB **accommodates differences** between regions and contexts (school, higher ed, prof/tech).

Exception: EDUPUB requires identification of **all accessibility features**.

Additions to EPUB 3 Spec

Need for Interactive Widgets accelerated development of **EPUB Widget** spec.

Need for Distributable Educational Objects prompted **EPUB Distributable Objects** spec.

IMS Global published Best Practices for using **Caliper Analytics**, **QTI**, and **LTI** with EPUB 3.

Need for educational vocabulary prompted **expanded EPUB Structural Semantics**.

EDUPUB Status

Currently in **public Editors Draft 2**.

Work is, and will be, **ongoing**.

Complete **implementable spec** by end of year.

EPUB **Structural Semantics** includes the current EDUPUB terms, but more will be added.

EPUB **Distributable Objects** spec will include packaging and integration specifications.

Widgets, Annotations, & Multiple Renditions specs are in the final draft stages.

Thanks!

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