EDUPUB Conference Raw Notes

(scribed by Matt Garrish)

Day 1
2013-10-29

NOTE: First names are used throughout - these informal notes are intended only to provide supporting context and record some of the discussion, and should be read in conjunction with the agenda and presentation files.

Theme 1: Educational Interoperability Landscape

09.30-10.15 Panel: The big picture of educational content and data

Rob: At one level we have interop on a myriad of devices to solve, but then how do we improve after that - how to connect to institutional systems used around the world

Larry: looking for individual action plan

David: analytics systems can be used to metabolize data coming from the learners - can be fed back to the institutions to improve the process

Wayne: interoperability is becoming vital in assessments and instruction - style is an important part of assessment - different presentation can affect results across devices

Dr. Tamura: interested in identifying specifications for ebooks, also in interoperability - books should be usable across any system

Rob: looking to move from horizontal model to a more vertical model for standards - looking for convergence of IMS and IDPF efforts - it's not the format but what enables the content that drives value

Q: What do you think your org thinks should be the priority for this gathering?

Larry: In the k12 world it is assessments - also need to standardize across state agencies - they need to take a bigger role in ensuring platform independence and vendor neutrality
From a federal perspective, the pieces are in place to give guidance to states, but components were put in place in the wrong order - states now know what is wanted from the big picture, but are circling the wagon and trying to do it themselves and align to what federal government wants

David: proprietary implementations from partners - looking to simplify data from providers - looking to integrate through LCI

Wayne: federal mandates are a prime mover, but feds didn't specify what they meant by interoperable standard - use QTI for the underlying content
There is a lot of complexity in assessment - some is necessary. in QTI, but some no doubt could be simplified - hoping to look at how this can be done

Tamura: total cost of operation is much higher than if open standards were used - ministry is looking for better solutions to reduce the total cost - epub is a major option for introducing e-textbooks
All material in Japan is controlled through the ministry, so required to find ways to optimize production

Rob: etextbooks are apps that need to connect into the educational enterprise - if it is easy to do that, it improves what those apps can be - LMSes are already being provided for free
Race to the Top has really driven improvement of IMS standards
Federated search is another need in the k12 market - finding the right resource

Q: What are the differences between higher ed and k12?

Larry:87% of the school districts in the US have less than (missed small number) of students - their IT director may be teaching two classes a day - makes it hard to roll out, people have bailed from initiatives when not able to get the support that they need. Rebooting at this level is very hard.
In higher ed this is not a problem. Looking at both together is hard because they have their own unique blinders

David: Higher ed has full staff dedicated to the LMS - but in k12 it really is a side job
K12 is still focussed on classroom-driven learning with some non-standard online - higher ed is more oriented to online learning and hybrid models
K12 is focussed on what the state requires, whereas higher ed is self-contained
K12 you can't reach out to the learners because they are under 18

Wayne: K12 is much more standardized for testing - everyone does the same test on the same day
Higher ed is much more fragmented where each prof may pull together their own tests

Tamura: In japan there is not so much of a difference between the two
Interoperability can be more difficult in k12 because it is more media driven - e.g. flash is used because it is easy

Rob: k12 market is more driven to adopt standards because they need easy plug-and-play

Q: What are you seeing globally in terms of similarities/difference?

Larry: Depends on the leadership - more leadership in the EU, for example
US does not always provide help that the states are asking for

David: We are seeing a lot of domestic players expanding internationally - the US perspective is often different from other jurisdictions, which makes it hard to get adoption
Without the content, the platform has nothing to deliver

Wayne The US relies on multiple choice very heavily - but globally there is more use of open-ended questions

Tamura: sees a major trend in epub for interoperability

10.15 - 10.35 ***Role of open standards in creating personalized adaptive learning environments***

Want to establish a set of protocols that everyone can understand

Q: can you speak about the needs for widgets production and delivery?
We need unique identifiers for these widgets, and how can these be established and transmitted

Q: What would you like to take away from epub - that you think is superfluous?
We typically want more, no to take away
To reduce complexity for the people using the system we need more granular identification
That we need more does not mean we need more complexity
There is a difference between an effortless experience for the user and complexity in terms of building a learning profile
We do not want to throw things away, because eventually you discover why you had what you had

10.35 – 10.55 ***Outcome returns in the context of an electronic textbook***

Have developed standards for how to markup up epub3 content for assessments

Q: If the student did have ownership, they would have ownership over when the event happens - would these events queue up?

Not necessarily, they have policies on when these events can happen

If you have a work that is used in more than one course, and the user has purchased the ebook, how does it get used in courses potentially at different institutions - don't have an answer yet for that question
The ownership problem is different depending on how is looking at it - students need a persistent store that transcends classes - vendor needs permission to look at that store and be able to provide personalized resources, so classes don't matter
CourseSmart provides an independent place to look at the book
Persistence means bigger than the book and bigger than the course
Only person who can own that is the guardian for children under 18
Need for a broker and a persistent store

10.55 – 11.15 Inkling *Structured Content and Metadata*

Q: Did you find schema.org vocabs to be extensive enough?
There are many gaps - schema.org gives breadth but not depth
There are many niche subjects that are going to require taxonomies beyond what schema.org is designed for
RDFa Lite allows other taxonomies to to be included for these purposes

Q: Do we need to add another term with "card", is the spec missing this?
The point is that the information is broken into semantically meaningful segments
Every logical notion should be in its own document
A card it a type of html document, but not every document is a card
We have an opportunity to look at new ways of restructuring content beyond per-chapter files

Q: How does a card compare to a learning object?
A learning object is like a grouping of cards

11.35 – 11.55 *EPUB 3 fixed layout ebook*

Lack of external communication across platforms is a major stumbling block
Publishers are worried about who owns tin can and what the implications are of using it

11.55 – 12.15 Blackboard *Standardized set of metrics to be used as analytics for textbooks*

Q: What about publisher or teacher perspective - is the textbook meeting their needs?

Instructor fits best under institution - want to create success of their learnings - at the smaller scale than the institution, but both want to retain students

Q: What metrics are necessary for each of the three branches/audience?

A lot of the metrics are driven by the educational profile - don't know all the pieces
Page views and media usage drive publisher
Notes and annotations can help professor determine where interaction is occurring
Notes also help future reuse

Q: Issues about analytics?

From Blackboard's perspective all information that is retrieved is information from the institution
Difficult when tools are brought in, as user may not be aware what information is being pulled in

12.15 – 13.00 Theme discussion & summary led by Rob Abel

Questions about learning object earlier - does the theme boil to these two words
Can we somehow move the dialog on structuring information to be more modular
A card is a discrete bit of information, but may not meet the exact definition of a learning object - a set of cards could be required to create the learning object
BillK: Cards don't nest - so a structural issue inherent in them
MichaelJ: What we are discussing are objects, not so much learning objects
There is an ability to nest cards in the inkling model
BillM: the collection element in epub 3.0.1 allows creation of discrete objects

Q: Is there a firm dividing line between content and semantic of the card?

An open issue - sometimes functionality can be separated from the content, but other times it is required to be inline
Questions about how you serve up different resolutions and qualities that exist for media within the card
Need to look at what the functionality is in EPUB3 when looking at these issues, not working concepts into the framework

Summary:

Learner profile or individual learning plan
Assessment driving interoperability standards - need to leverage what is going on
Cost of textbooks is a big-picture driver
A lot of differences between k12 and higher ed - diversity of systems in these arenas
A lot of systems in k12 but much fewer in higher ed
Capture and store results, usage and learning patterns - need a widget spec for EPUB3
Broker of content - push/pull

Can we come to an agreement on how a learning object can be structured
schema.org is useful for discovery of content in web search
Greater EPUB 3 consistency in terms of rendering
Need to be able to do communications from RSes
Accessibility of direct to consumer searching
Standardized metrics
Need data plus context
Need for push/pull and structured data

Q: Who owns "data plus context" - if you are attached to a widget with a specific pedagogical use how do you get that data back to the professor?

Data about a person being unsuccessful means vastly different things depending on what other data surrounds that result - financial context, mother tongue, etc.
Placing the context on the analytics falls on the vendor of the system/analytics
If there is a way of coordinating the identifier that goes into the epub, there is a solution there
edupub model is to be as semantically rich as possible in the content stream - the RS then have the hooks in the data

Q: Is the app/ebook issue settled?

The market is rallying around HTML5
Moving beyond the confined view of the zip file of epub to look at how the information is provided in a consistent and well-documented way
It is also an open web issue
How to deliver the HTML5 experience - do you need the hybrid model that hosts the HTML

Need to be aware of UI model and best practices for the user model beyond just the content mdoel.

Content can be treated as code but code must not be treated as content

Does EPUB 3 need to standardize the scripting model to enable the requirements that are coming out of this initiative

Embrace and extend or embrace and cripple - EPUB looks at the various dimensions and push and pull between publisher, vendor and user - it is a negotiation
Similar to the issue with CSS - where user thought they won but the browser never exposed the capability to easily modify the styles
Have to beware of trying to lock the user into a single experience
Need to be able to fall back gracefully

Theme 2: Rich and Interactive Content

14.20 – 14.40 *Collection of User Requirements and Linkage to Standard Specifications*

Q: edupub-specific additions, what type were you thinking?

User notes was one example
See the slides for the list

Q: The list is not instructional in nature - supports usage but not pedagogy

Some educational activities will affect the format
The list covers most of educational activities

14.40 – 15.00 *Automating Workflows for Mathematical Equation Processing and Rendering*

Q: Are you applying web-developer thinking (browser sniffing)? Is that a fair way of thinking about it?

Yes, we tried epub:switch but it doesn't have wide enough support
EPUB support keeps changing, so content will render better in time

Q: What is the proportion of math? What have you built into your new interface

Most authors prefer latex because it is simpler to write than mathml - technical authors who are already proficient with latex
API is a secondary component that was built into the workflow - didn't have to rewrite the tool chain

Q: Is the API available?

The pieces are all open source but they are evaluating

Q: Built workarounds to the current limitations, but what do you do when the support materializes and the data is not optimal?

We need greater pressure on the developers to support MathML so that the workarounds are not necessary
O'Reilly are able to regenerate their content as the situation changes

Q: There is difficulty in retaining semantics when moving from latext to mathml

O'Reilly are always looking at how they can improve
Raman: MathML is not an end-all solution

15.00 - 15.20 *WebGL API*

Q: Have you use at 3d printing for these models?

Yes, we are producing 3d objects and looking at how to print

15.50- 16.10 *The Need for a Library of Open Source Accessible Interactive EPUB 3 Widgets*

Q: Where do you see conformance fitting in?

You first have to innovate to find out how to handle new content - one way or multiple ways - if there are multiple ways then you need to standardize - you have to build test suites to ensure conformance
Innovation, standards then interoperability

Q: What do you mean by commercially friendly?

Licenses that don't compel you to reveal your own source code

Q: Need trial and error to work with these tools - what function is needed to make sonification more generally usable?

There are other controls, but additional development is needed

16.10- 16.30 *"Super Widgets"*

Q: How will these widgets work in offline mode? How well will standards like html5 handle these widgets?

Local storage is a good bandaid - store results in offline mode
Build in fallbacks into the spec to gracefully handle them
Crippled reading systems are an issue

16.30 – 16.50 ***Embedding QTI assessment in EPUB 3; balancing effectiveness with robustness***

Need standardization on what javascript is supported

Q: Can you cache the first example?

Not sure how it could be done

Q: Is it opening an external web site from the epub?

Yes, it doesn't care if you've come from an LMS or an EPUB book

16.50 - 17.30 Theme Discussion & Summary led by Bill McCoy

Q: Why is it so important to keep idpf in the middle?

IDPF should only be involved where something is specific to publishing and not handled in wider web platform or needed faster than the web moves
When is it time to standardize and who is going to do it
Annotations are an example where the technology is mature but no one has standardized
Need to ensure that standardization does not occur around a single vendor technology

17.30-17.45 Summary of the day

Need to consider APIP + QTI for accessibility
QTI -how do you report the details in the markup - is a standard needed
LTI group has been reviewing proposals for outcome types - once there is some consensus it needs to be brought back here and aligned - make easy for both communities

Need industry standard taxonomies
LRMI has done a lot of work in schema.org that can be leveraged
MBS possibly already defines
Standardized Metrics for Analytics vocab
Need a formal statement of how groups (IDPF/IMS) are going to cooperate
Need to move quickly around high value initiatives - what are concerns
Could take the form of best practices - ensuring technologies are optimally used

Need a set of standard fallbacks for things that aren't available now
Bill: So long as it doesn't devolve into lowest common denominator support

We need terminology standardized so that we can all agree what we're talking about

Day 2

2013-10-30

08.40-09.00 Keynote Dr Jeff Jaffe, CEO W3C

Trying to bring together the technologies of the open web and educational publishing
Web brought mass publishing, but lacked the quality of traditional publishing
Publishing alone is not just impacted by these changes
Impact on publishing has been greater
Web's impact on publishing is intricately tied to the nature of publishing - publishing equals the web - unlike other industries where it is a secondary part of the core business
web technology is becoming the most interoperable standard ever - television set tops, automotive interfaces, etc.
open web platform is changing the way that authors are preparing their content
web excels at service models around publishing - annotations

Theme 3: Accessibility

9.00 – 9.20 ***Creating accessible fixed layout EPUB 3 for schools and colleges***

No time for Q/A

9.20 – 9.40 ***Ensuring Accessible Multimedia in EPUB Documents***

Popcorn is another library that could be included in an open source gallery

9.40 – 10.00 ***LRMI and Accessibility Metadata for Discovery of Accessible Ed Resources***

No time for Q/A

10.00 – 10.20 ***Accessibility as the Key to Etextbook Integration***

No time for Q/A

10.20 – 10.40 ***Standardizing Textual Descriptions of Interactive Graphics***

No time for Q/A

11.00-11.40 Panel: Essential issues for accessible e-learning

Q: Assuming the ebook content that is being fed through channels is fundamentally accessible already - using reasonably accessible markup with reasonable navigation - what would be the most critical next step - what do we need to get moving on?

Judy: In the area of graphics, there is work needed to describe the complexity - 2d and 3d - the work needs to proceed in the most coordinated way possible to have the greatest impact
Great support for captioning - the track element - the foundation is there, but can be improved - how to describe where you are paused
STEM end-to-end support across browsers - has been taken out of a browser, not expanded
Need the whole ecosystem supported
Interactive assessments need to be expanded

George: reading systems need to provide the user interface supports to enable reading
DAISY has reading system evaluation - IDPF test suite
Crowdsourcing the evaluation of reading interfaces - that they work with eyes, ears and fingers
Ornamental graphics still need to be identified as such - that there is no information there
There are best practices for doing this, but need to be followed
We need to be assured that alt text is good and decorative images identified, then access improves - but alt are not easy to write - long descriptions also need to be addressed
summary: reading systems working correctly and images properly handled

Madeleine: ebooks have to be accessible even in pilot stages of university adoption - fed requirements are being enforced and warning letters are having effect
We need to build in metadata systems that help with discovery, describing the resource, what is lacking
What kinds of best practices and guidelines are we lacking - ncam has guidelines on handling various media types

George: the best practices are available on the IDPF site, the O'Reilly books - the free accessibility work - checklist on the IDPF site to check
We need a preflight tool to assist publishers and with verifying their content

Mark: many different products by many different groups - need standardizing there and also need to ensure that the user has consistency in moving from the material to the testing
How do we ensure that speech presentation is accurate - ssml, css3 speech and pls lexicons
Proposing that APIP look at incorporating these in to make them standard across testing
How to effectively synchronize text and audio in testing - not have to relearn interfaces
Innovative images in testing - how do we describe these in a meaningful way
How do we implement a number line - how to make accessible
Identifying issues in aria and in guidelines
How to get producers to implement
Feeding gaps back into w3c and idpf to get solutions

Open widgets effort is also important - need data to show that these solutions work not just that they are "cool"
How to embed haptic feedback into images
How to embed 3d models
MathML - need consistent rendering and voicing

Gerardo: how do we lower the cost of image descriptions so that more of it happens
DIAGRAM center is looking at two approaches: crowdsourding through the poet tool - volunteer days, college students community service, etc. - also ensure moderation of content for quality - second is how to reuse
Looking at registry of reusable images - could be open or paid
Solves the need a way to find descriptions that have already been written rather than rewriting
Paradata describes how the resource has been used - are students finding the descriptions as useful as you think they are - feedback to the publisher on use of their content
Bookshare addresses the 1-3% of the most disabled - but there is a much higher percentage of students who can benefit from this content but don't have access to it.
Synchronized math speaking can help readers with dyslexia - showing symbols with audio description
The economic disadvantage keeps the latest and greatest technology from many users so need to ensure quality of fallbacks

Q: The number of reading systems to browsers is disproportionately large, even if using similar engines. Is there use in reading system guidelines - top 10 things you must do?

George: the screening criteria lay out 8 different areas
Want to seed the evaluations, but it is impossible to keep up without crowdsourcing
It is difficult to determine how and to whom any given device is accessible
Short term is to get the site up and begin using the evaluations

Judy: UAAG - are not just for browsers - if there are things missing for reading systems it would be good to get them in
W3C would develop a test suite for verification

Gerardo: more we can to provide an advanced test suite to test against
There is a lot more we could be doing with readium - mathml support through chromevox - word-level highlighting developed at Benetech
TTS can be built into the reading system to reduce cost of human narration

Q: Need for aria to cover assessments and stem space. Should this be a first-class citizen in aria 1.1?

Judy: ARIA 1.1 has already started - it is fast-tracked to cover describedat and a few issues
Unless it is clear and easy to implement this should go into 2.0

Mark: need people with assessment and technical expertise
ARIA may not be the best way - widgets could be able to address the semantics issue

Theme 4: Production Workflows

11.50 – 12.30 Pearson, Inkling, Nook Media

No time for Q/A

13.30 – 13.50 ***Digital Workflows with 'killer features'***

No time for Q/A

13.50- 14.10 ***Making edits to an existing book***

No time for Q/A

14.10 – 14.30 ***Collaborative Media Platform***

Q: Compare this with (play?) books?
Anyone can create a cmp book - including 3rd party content is only ever on client side

Q: Do you foresee an easy interface to add content?
Not in the business of including 3rd party content
The original content is never removed even if it is hidden - does not affect bookmarks, etc.
Working to enable content creation and content curation

Q: How does this affect intellectual rights?
They sell the individual pieces and allow the user to combine the pieces as they see fit

Q: What about embedded fonts and including content not in the set?
Mixing and matching has some difficulties but are not seen as insurmountable

14.30 -14.50 ***Challenges in EPUB Production***

Q: Have you checked the accessibility?
Not currently checking beyond iBooks, but do have fallback documents for students who need them

Q: Are you doing any svg for charts?
Not at this time

14.50- 15.10 ***Converting Static Textbooks to Interactive***

15.10- 15.30 Theme Discussion & Summary led by Paul Belfanti

Q: Is the edupub spec inherently flowing and not fixed, or both?
There is a spec in development for fixed layout

Q: What about accessibility of the tools themselves - not just what they can output - is this ebook world focussing on this issue at all?
Accessiblity of end user is of prime importance - authoring has takena back seat
As you see the tools used more and in classrooms the situation should start to improve and become more important
If the tools are based on HTML5 there is an opportunity for them to leverage the same accessibility features as epub itself