HTML5 for Publishing Decision Makers:
The Technology Behind the Scenes of Interactive Books

Question	Answer
Where can a publishing house get information on appropriate business models for starting to distribute their content digitally? Guidance in working contracts with authors, working with previously published books, etc. would be appreciated.	With regard to information for appropriate business models to distribute content, Google is your friend here. The first thing you need to start looking at is information about content strategy in general. Business rules and content strategy drive requirements for creation, production, all the way through distribution. One of the best ways to get an introduction to this aspect of working with eBooks and interactive content is to attend conferences like DBW and TOCC, where things like contacts and working with previously published books are discussed in conference sessions and sometimes during keynote speeches. –JK
What is your opinion on the continued use of Flash for highly interactive content?	If your business requirements and content strategy dictate that you are going to distribute content to the iOS platform, then Flash should not be used. If distribution to mobile platforms is a known future business requirement, then project teams should start investigating whether or not they can implement an HTML5-based solution now in order to create interactive content that will not have to be completely converted or rewritten in the future. Flash is a mature and feature rich platform. It can do things that are still not yet widely supported in HTML5, or which are more graphics processor intensive in the browser window than through a desktop Flash plugin. That said, browser support is rapidly coming online for such HTML5 and CSS3 features as transitions, transformations, and animations. Even Adobe has recognized that Flash is not the way of the future, and have gone out of their way to make sure that Flash developers can still use their experience and skills to create HTML5 out of Flash objects going forward. To this end, Adobe is a sponsor of the Create.JS Javascript library which was specifically designed to create rich and interactive Javascript based HTML5 experiences. The combination of Adobe's Flash development environment with Create.JS means that Flash developers will not be "left in the dust" as the open web community migrates away from the proprietary plugin platform over to the browser-based world of HTML5 interactivity. More information about Create.JS can be found here: *www.createjs.com/#!/CreateJS* –JK
What experience does Aptara have with children's eBooks and eBook apps? What platforms would support them aside from iOS and Android? Can they be published as eBooks? Or, do they need to be made into apps considering they require narration, animation and other interaction?	Aptara has extensive experience working with both children's eBooks and eBook apps. At this time, the main platforms to support continue to be iOS and Android. However, implementing eBooks and apps with HTML5 technologies offers a level of future-proofing not previously available with platform-specific native apps. Depending on the platform and software, some distributors provide tools that allow users to publish their content as an eBook for sale in a proprietary bookstore, or as an app. A good example of a vendor who supports this business model specifically for children's books is *www.demibooks.com*, which is currently supported on the iOS platform. –JK

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Moderator: Jeremy Greenfield, Digital Book World

Question

Answer

Does Aptara do work with children's narrated and animated books?

Aptara does quite a bit of work creating children's narrated and animated books for Apple iBooks. Please contact one of our sales reps or *megan.prosser@aptaracorp.com* for further information regarding our children's book production offerings. As an eBook production provider, Aptara can be brought into a publishing house's workflow before or after business requirements and author contracts are already in place. –JK

A lot of what we are seeing in digital publishing is for higher education. Are publishers in the K–6 arena making the move?

Yes, publishers in the K–6 arena are absolutley making the move to digital. The majority of our K–12 partners have expressed interest in iBooks Author and/or a custom HTML5 solution for interactive eBook content. They see the value in search funtionality, audio and video, sharing annotations, and other interactive activities that enhance the user's learning experience. –MB

Can publishers upload EPUB 3 projects to iTunes?

Yes, publishers can upload EPUB 3 files to iTunes via iTunes Connect. –JK

What is the name of the DRA app and where can I buy it?

The DRA app is an app that Aptara built and white-labeled to Pearson Education. If you'd like to create a similar application for your organization, please contact Maria Bartoszewicki. To learn more about the the Pearson DRA app, Please visit: *www.pearsonschool.com/index.cfm?locator=PSZw5u&PMDbSiteId=2781&PMDb SolutionId=6724&PMDbSubSolutionId=&PMDbCategoryId=3289&PMDbSubCategoryId =28139&PMDbSubjectAreaId=&PMDbProgramId=23661*. –MB

If I make a book in iBooks, can I import it into the Inkling platform and vice versa?

You can use your iBooks file as a source file for Inkling conversion, but not directly. There will still be work (and cost) involved for the digital translation. Currently, you cannot import Inkling titles to the iBooks platform, but this is a service Aptara can provide. We've developed a quick and efficient workflow for this type of conversion. –MB

Do you have a graphic that shows how the Inkling workflow compares to a typical print workflow?

Yes, please email Maria Bartoszewicki at *maria.bartoszewicki@aptaracorp.com*, and she will share the interactive workflow with you. –MB

How, if possible, can you sell a book made in Inkling on Amazon?

Currently, Inkling titles are not sold on Amazon. However, Inkling will be available for Android by the end of 2013, so soon you will be able to download your Inkling content to your Android devices. –MB

If you start creating your eBooks with HTML5, will they work anywhere because it's backwards compatible, or will you run into problems?

If you start creating your eBooks with HTML5, you will create future-proof content that will be easily updated and published going forward. By definition, EPUB 3 books must be backward compatible with EPUB 2 reading apps. The potential for problems is always a risk, whether you are thinking backward compatibility or considering what you want to do with your content in the future. Much of your approach is dependent on your business requirements and defined content strategy. –JK

Is it possible to update an eBook once it has been released?

Yes. Support for eBook updates is currently available in Apple iBooks, and can be configured through iTunesConnect. Amazon also provides functionality to create eBook updates, as documented here: *https://kdp.amazon.com/self- publishing/help?topicId=A1RGGPBKDR1BPZ*. –JK

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Question

Answer

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If producing an interactive eBook for iPad, what are the benefits of publishing through the Inkling platform vs. the iBookstore?	The primary differences are platform and distribution. The iBooks platform is very different from the Inking platform. Download both and you will see. The frameworks deal with standard platform features differently. For example, the design and layout for the table of contents is very different, and the design for inter-title navigation is different. The iBookstore is an iOS app which is only available for the iPad, whereas the Inkling app is available for the iPad, iPhone, and iPod Touch, as well as web browsers for Mac and PC. –MB
Which software is used for programming XHTML for EPUB 3?	You can use any ASCII editor or web development IDE (integrated development environment) to develop XHTML/HTML5 for EPUB 3. I personally switch around between Sublime Text 2 (*sublimetext.com*), Espresso (*macrabbit.com/espresso*), Dreamweaver (*adobe.com/products/dreamweaver.html*), and various other packages. Which package you use depends on personal workflow preferences. –JK
What does Aptara mean by a "custom eReader"?	We mean an eReading app. Aptara has developed custom eReading apps for customers to distribute their content through their own eCommerce platform. In addition to developing native platform eReading apps (for iOS and Android), we have also developed frameworks and prototype HTML5 eReading apps for customers who want a browser-based reading app with features and functionality comparable to apps such as the Chrome IDPF Readium EPUB 3 reference implementation app (*http://readium.org*). –JK
When testing HTML/XHTML, is the markup different? Is it best to use Chrome? I ran a test and came back with a score of 463.	At *http://html5test.com* you can test how much HTML5 your web browser will support. This website is an online tool to test how well the browser you are using supports the HTML5 standard. It uses a point scoring system and compares browers with each other. The fact that your Chrome browser scored 463 means that you are probably using Mac 0S X 10.7 or later, and that Chrome offers high HTML5 standard support. This means that almost all HTML5 interactivitiy in custom HTML5 interactive eBooks would work in this browser. –MB
Publishers tell us they do not want to provide us with EPUB 3 (we want it very much) because of piracy worries. What can be done to add DRM?	EPUB 3 and DRM are separate issues. Some people in the industry are of the opinion that piracy worries apply to any eBook format not locked down with DRM. That said, studies have been done to show that piracy and DRM are not necessarily related, either. Some studies say that no application of DRM has any direct effect on controlling piracy; other studies say the exact opposite. In most cases, DRM is added onto books by distributors and retailers, not book producers. However, new vendors are starting to come online who offer specific DRM solutions for companies who wish to distribute their content through their own eCommerce platform rather than through one of the major retailers. –JK
We produce accessible textbooks in HTML with MathML and links to video and other media. Can you suggest an editing tool for creating EPUB 3?	Support for MathML is pretty sketchy in many eReading apps at this time, especially accessible MathML. A couple of tools do exist for creating EPUBs with rich media and MathML. Due to the complexity of working with MathML in general, it may be in your best interest to consult with a company that works with this type of content on a regular basis rather than try to go it alone. Please contact *megan.prosser@aptaracorp.com* if you are interested in talking to one of our representatives about creating accessible textbooks. In the meantime, here are some tools you can experiment

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Question	Answer
We produce accessible textbooks in HTML with MathML and links to video and other media. Can you suggest an editing tool for creating EPUB 3? (cont'd)	with: Design Science has a product called MathType which creates MathML. MathType can be used to create equations in lots of different editing packages including Sigil (*https://code.google.com/p/sigil/*), an open source EPUB editor. Another option is the BlueGriffon EPUB Edition (*bluegriffon.org*, *bluegriffon-epubedition.com/BGEE.html*), which includes a MathML editor. –JK
How do you get a book off Amazon from EPUB 3 to KF8 format? Does the current Kindle Previewer do that? Also, only Amazon's Kindle Fire supports an HTML5 book, correct?	Amazon provides tools to convert EPUB files to the KF8 format. You can access the tools at *amazon.com/kindleformat*. Both Kindlegen and Kindle Previewer accept EPUB 3 as an input for creating KF8 files. The KF8 format actually supports quite a bit of HTML5 semantic markup (*http://www.amazon.com/gp/feature.html/ref=amb_link_357613502_6?ie=UTF8&docId=1000729901&pf_rd_m=ATVPDKIKX0DER&pf_rd_s=right-4&pf_rd_r=0QDVHJC371B3DDKTXVZZ&pf_rd_t=1401&pf_rd_p=1343256942&pf_rd_i=1000729511*). Therefore, it is not as "cut and dried" to say that HTML5 is only supported on Kindle Fire devices. In reality, any Kindle device with support for KF8 supports HTML5 to some degree. –JK
How do you work with a publisher to add interactivity to a title? Does the publisher ask for specific interactive functionality, or do you analyze their content and suggest appropriate interactive points?	The way Aptara works with publishers to add interactivity depends on the publisher's preferences. If the publisher has resources and specifically Authors, that they want to work with, we're happy to accomodate that. If not, we actually prefer to do it ourselves, internally, and only ask for approval and sign-off. We have a team of highly-skilled resources in our eBook Design and Build Center who are trained to scope and zone content for interactivity, including over 200 Content Architects, Instructional Designers, Visual Interactive Designers, CSS Experts and HTML5 Experts. The first phase is to complete what we call a core conversion of the content, wherein we transfor the print product to a digital product. We then go in and "enhance" the digital product by adding interactive elements such as, audio/video, animations, interactive assessments, and other HTML5 interactive activities –MB
Are there third-party, off-the-shelf solutions that make some of the interactivity easier to program and structure?	Third-party, off-the-shelf solutions do exist to create interactive HTML5 features. A good example is Tumult's Hype product (*http://tumult.com/hype*). Hype is the recommended product for creating custom HTML5 widgets for use in Apple's multi-touch books created with iBooks Author. Hype supports creating HTML5 timelines, animations, actions, and scenes. –JK
Is there a conversion utility to convert EPUB 2 to EPUB 3?	Not at this time. However, EPUB 3 compliant reading apps are required to be backward compatible to support EPUB 2 books. The decision to convert EPUB 2 to EPUB 3 is a business decision, and not necessarily a technical requirement for moving forward or future-proofing your EPUB investment. –JK
I am currently using InDesign to create interactive eBooks. Is there better software available which I can use to create EPUBs in HTML5 without thorough knowledge of the code?	Here are some resources that will be particularly helpful to InDesign experts for creating eBooks: *www.digitalbookworld.com/resources-going-from-indesign-to-eBook*. –JK
If the eBook meets EPUB 3 specs, will it be able to be seen/read on older tablets and eReading devices?	By definition, EPUB 3 books are supposed to be backward compatible with EPUB 2 reading apps. However, this does not necessarily mean that the book will display with all EPUB 3 features enabled. –JK

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Do you produce magazines in Inkling or OmniWeb 258?	We have produced many different types of content for Inkling. You can visit *https://www.inkling.com* to see the different types of content we've produced. In addition to what you find the Inkling Store, we produce content that is not sold to the public. For example, we've developed hundreds of case studes for Harvard University which are distributed directly through Harvard University. For interactive magazine content, you may want to consider Adobe DPS (Digital Publishing Suite) or a custom HTML5 solution. –MB
How does HTML5 facilitate the development/delivery of reading guides? What is meant by a "reading guide" in this context?	We can develop and facilitate the delivery of a reading guide with a custom eReading app through your own eCommerce platform, or we can develop a native eReading app for iOS and/or Android. –MB
Was that custom solution you showed on the web or on a device?	The custom HTML5 app which we demonstrated during the webinar was specifically on the web. However, we also develop native eReading apps for iOS and Android. The custom solution is completely based on the client's requirements, so if you need the content available on the web, and on iOS and Android, we can accomodate that. –MB
I am using Habitat; must I know HTML5 or is it built into the platform?	No, you do not need to know HTML5 to use Inkling Habitat. It is a user-friendly platform that does not require extensive knowledge of HTML5 or CSS. –MB
Are Section 508 (accessibility features) addressed in HTML 5?	Accessibility is an ongoing challenge across the open web platform. The issue is not so much "does HTML 5 have accessibility features" as it is a matter of browser support. Frankly, browser support for HTML5 accessibility features is inconsistent. More information can be found at *http://html5accessibility.com*. –JK
Can caveats for HTML5 apps be built into the HTML5 code?	Caveats in the form of CSS media queries and browser vendor prefixes can be built into CSS used to style HTML5 markup browser displays. However, browser-sniffing (determining whether a client is using Firefox or Chrome or IE) is not considered a best practice, since there are many ways this can go wrong. For example, some browsers allow the user to specify what browser brand and version they want the server to "see", and this may not accurately reflect actual browser capabilities. The modern best practice is to use a combination of CSS media queries and browser prefixes—though browser prefixes are controversial in the CSS community—and libraries such as Modernizr (*http://modernizr.com*) to detect the HTML5/CSS capabilities of the browser in front of the user. –JK
The Inkling proprietary markup (S9ML) seems to be an integral part of the presented examples. Can you describe how much of this would be possible without S9ML?	Inkling is primarily HTML5, which means most of your content is future-proofed. The only content that is S9ML (Standard 9 Markup Language) is the code behind the blueprints, including slideshows, test-yourselves, guided tours, hotspots, etc. –JK
On the HTML5 test website, what sorts of scores are currently standard and represent "top of the line" current displays?	The best way to get this information is to visit *http://html5test.com/results/desktop.html* and compare the results. The support score is based on 500 total possible points. The closer the score to 500, the better the support for HTML5. What's considered "top of the line" changes on an almost weekly basis, as browser developers push regular updates to users. –JK

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Question

Answer

Does Aptara provide an Open Toolkit plugin to produce HTML5 output?

At this time, we have not provided any DITA Open Toolkit plug-ins for HTML5 output. If you are interested in discussing the development of an HTML5 plug-in that is specific to your content, we would be happy to talk with you about this. –JK

When will Firefox be able to play videos in HTML5? Is there a workaround?

Firefox already supports HTML5 video. It's the file format that is at issue here. Firefox does not support the same file formats as Apple Safari and Chrome. The workaround is to include fallback processing in the HTML5 markup. Fallback processing requires that each video be available as both MPEG 4 H.264, MP3/AAC, and at least one of the Firefox supported WebM, VP8, Ogg, Theora, or Vorbis formats. HTML5 markup is structured such that Firefox can immediately find the right format, and that other browsers will skip over the Firefox fallback and play the file format appropriate to the browser. –JK

If all of those devices are supportive of HTML5, do more devices than the iPad support EPUB 3?

Yes. Any device that supports an EPUB 3 reading app has HTML5 support. EPUB 3 is not limited to the iPad. Further, EPUB 3 books can be read on any desktop through the Chrome Readium app, and AZARDI (*www.infogridpacific.com/AZARDI.html*). –JK

What tools do you recommend to make EPUB 3, and what production tools are available to make HTML5 content?

You can use any ASCII editor or web development IDE (integrated development environment) you wish to develop XHTML/HTML5 for EPUB 3. I personally switch around between Sublime Text 2 (*sublimetext.com*), Espresso (*macrabbit.com/espresso*), Dreamweaver (*adobe.com/products/dreamweaver.html*), and various other packages. Which package you use depends on personal workflow preference. Many people use Adobe Indesign to export EPUB 3 directly from Indesign source files. This is not a one step solution, however. Once exported, developers still need to go through the EPUB 3 package and tweak as they test the file on various devices. Additional EPUB 3 editing tools include Sigil (*https://code.google.com/p/sigil*), an open source EPUB editor, and the BlueGriffon EPUB Edition (*bluegriffon.org, http://www.bluegriffon-epubedition.com/BGEE.html*). All of the tools I've mentioned are useful for learning how HTML5 and EPUB 3 work. The quality of the underlying code will vary from tool to tool, however, and most developers spend quite a bit of time "under the hood" tweaking EPUB 3 files to get desired results on target devices and apps.

You may want to consider working with a production company that works with EPUB and HTML5 on a regular basis if you are new to the technology. Collaborating with a production company, such as Aptara, provides you with the benefit of a trusted source to help you learn about EPUB 3 and HTML5. Further, your project's end product will reflect implementation best practices, which you can follow going forward. –JK

What are the best books and/or websites for learning HTML5?

Sites that I often refer to include: *alistapart.com*, *smashingmagazine.com*, *oreilly.com/css-html/index.html*, *sitepoint.com*, *net.tutsplus.com*, and *manning.com/catalog/by/subject*. –JK

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As a traditional print graphic designer who is using Adobe CS 5.5, how would you recommend we begin retraining our skill set to be ready for this new way of building interactive books and content?	A good place to start is *university.digitalbookworld.com/digital-publishing-courses/straight-text-epub*. Other sources for learning about EPUB 3 include *digitalbookworld.com/how-to-publish-eBook* and *digitalbookworld.com/resources-going-from-indesign-to-eBook*. Another really good resource is *www.lynda.com*, which includes training videos that help users match their current skills with new technologies. –JK
How do you convert XML to HTML5?	The quickest way to convert XML to HTML5 is XSLT and, if necessary for complex business logic, Schematron. There are some people who are proponents of using scripting language such as Python for conversion, but XSLT is really a better option since you are not actually converting a file format, but transforming markup from one markup specification (XML, DITA, Docbook, NLM) to another markup specification (HTML5). XSLT is all about transformation. –JK
What do you think about Adobe's strategy with DPS vs. EPUB 3?	Adobe's DPS strategy is targeted primarily toward periodical publishing and apps. Getting DPS books approved for distribution in Apple's iBookstore has been hit-or-miss to date (*http://tinahenderson.com/2013/01/26/no-longer-fired-up-about-dps-for-book-apps*). Adobe DPS is a walled garden approach to distributing content and includes a financial overhead for using the system. EPUB 3 is an open source solution that will be more widely supported across the open web platform going forward. –JK
Does the eBook file look the same in a web-based reading app as it does on a an eReading device (e.g., the Kindle Reader app vs. the Kindle Fire device)?	eBooks will not necessarily provide pixel-for-pixel fidelity in a web-based app vs. a device app, or a dedicated device. This is by design. User interfaces dictate much of the look and "feel" of content, and since user interfaces vary from the desktop to Android devices to iOS devices, it is unreasonable to expect the same results on all platforms. This is where the concept of Responsive Web Design becomes relevant. Responsive Web Design is an approach to designing content that will provide users with the best experience on the device they are currently using. This means that content may reflow and display differently on an Android mobile phone than on a 4th generation iPad—and this is okay. The user interfaces are so different between these two devices that it is unreasonable to expect the exact same user experience. –JK
Can you compare the various eBook production tools from a developer standpoint? Which are the easiest to use and are the most robust in terms of collaborative features, version control, ease of updating etc.?	Developer tools are a matter of personal workflow preference. Preference depends on the developer's level of experience, and preferred feature set. I personally switch around between Sublime Text 2 (*sublimetext.com*), Espresso (*macrabbit.com/espresso*), Dreamweaver (*adobe.com/products/dreamweaver.html*), oXygen XML (*oxygenxml.com*) , and various other editing tools. I've even been known to lapse into the *vi* text editor from time to time. The choice depends on what I'm trying to do at any given time. All of the software packages I use update automatically. I don't do a lot of collaborative programming myself, but I have been exploring *http://codepen.io* in the last few weeks. I also spend some time over on *https://github.com* and *https://code.google.com* to keep up with what other people are doing. –JK
On one of the slides I saw Flash to HTML5 converters, but do you have other converters as well? I'm interested in a PDF to HTML5 converter.	Aptara is a service provider. We provide services to convert from virtually any format to any other format. We do a lot conversion projects from PDF to HTML5, and we have developed some conversion tools to help with this process. However, these tools are for internal use only, to support our conversion services for clients. –JK

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Question

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Is HTML5 still important for eBooks that do not have complicated layouts or interactivity?

Complicated layouts and interactivity in HTML5 are controlled via CSS and Javascript. The advantage of using HTML5 markup for eBooks enables more out-of-the-box browser functionality that works in tandem with the corresponding CSS and Javascript. –JK

When do you recommend switching to EPUB 3?

The decision to produce EPUB 3 eBooks is a business requirement and content strategy decision. That said, there's no reason to not create EPUB 3 files right now, if you have a compelling business reason to do so. –JK

Is there training available for EPUB 3?

Google is your best friend here. That said, Digital Book World has just announced the following training opportunity: *university.digitalbookworld.com/digital-publishing-courses/straight-text-epub*. Other sources for learning about EPUB 3 include *digitalbookworld.com/how-to-publish-eBook*, and *digitalbookworld.com/resources-going-from-indesign-to-eBook*. –JK

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