

Balisage 2020 Conference Program

Balisage 2020 Goes Virtual

- Balisage 2020 will be a virtual event for both speakers and attendees. Earlier plans for a hybrid event with an in-person component have been shelved.
- The pre-conference symposium on the role of XML in publishing accessible documents has been folded into the main conference.
- Accessibility is a mainstream issue.

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Balisage 2020: The Markup Conference (BS2020)

Description:

Balisage is an annual conference devoted to the theory and practice of descriptive markup and related technologies for structuring and managing information.

Stakeholder(s):

Markup Geeks :

Balisage: where serious markup practitioners and theoreticians meet every summer. If you are happy to be the person in your project who understands the angle brackets and stuff, then you are a markup geek and Balisage is the place for you. Even if you are NOT a markup geek, if you find it instructive to spend time with them now and then, you will enjoy Balisage.

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Mulberry :

Balisage Conference Producer

Balisage People :

People involved with Balisage — The people making Balisage include markup theoreticians and practitioners, data modelers, designers, architects, and both aficionados and deep thinkers. We work as software developers, system architects, academics, integrators, librarians, data miners, lexicographers, archivists, document managers, standards developers, programmers, and publishers.

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Vision

Good, practical theories

Mission

To document and share the agenda for the Balisage 2020 conference.

7-27-10:00. Welcome

Welcome both old friends as well as newcomers to the Balisage community.

Stakeholder(s)

B. Tommie Usdin :

Mulberry Technologies

Monday 10:00 - 10:30 EDT — Welcome to Balisage 2020 — Balisage 2020 is both totally new and comfortably familiar. Balisage regulars will recognize many of this year's presenters and welcome some new points of view on familiar topics. Logistically, technologically, we are on a new path. As markup designers, theorists, and practitioners, we are used to tiptoeing near the edge from time to time. I was saddened when I had to admit that Balisage-as-usual could not happen in 2020. I was delighted when it became clear that because we were now virtual many old friends will be able to re-join us this year, and hope that this new format will let us welcome some newcomers to the Balisage community.

7-27-11:30. Word Documents

Make Word renditions of XML documents.

Stakeholder(s)

Eliot Kimber :

Contrext, LLC

Monday 11:00 - 11:30 EDT — High-Quality Microsoft Word documents from XML: The Wordinator — Many products make XML from Microsoft Word, but consider the reverse: making Word versions of your XML documents, thus using MS Word as an document composition engine. The Wordinator enables automatic creation of high-quality Word documents from XML source. It uses an extension of the Word2DITA project's SimpleWP (Simple Word Processing markup language) as the input to an Apache POI-based Java application that generates Word documents. XSLT generates the SimpleWP XML, managing the mapping of source XML elements to Word constructs and styles. I consider, in particular, the separation of concerns between the XSLT that generates the SimpleWP XML and the Java code that generates the Word documents.

7-27-12:00. XSLT 3.0

Demonstrate why XSLT 3.0 solutions are better and easier.

Stakeholder(s)

Norman Tovey-Walsh

Monday 12:00 - 12:30 EDT — XSLT 3.0 on ordinary prose — You work with text and documents for a living, and XSLT 3.0 comes out. You hear it's great and really want to try it, so you read about some features (streaming, maps, arrays, higher order functions) and when you look at some applications, you first think "that's for data not text". But maybe 3.0 is for you too, really. Using DocBook as a prototypical text-application, I will demonstrate why XSLT 3.0 solutions are just better and easier than anything that's been possible before. (Examples to include: CALS table processing, image sizing support, callouts, and structuring code for easy extensibility.)

7-27-14:00. Statistical Plotting

Build a function library for statistical plotting with XSLT and SVG.

Stakeholder(s)

David J. Birnbaum :

Department of Slavic Languages and Literatures, University of Pittsburgh

Monday 14:00 - 14:30 EDT — Toward a function Library for statistical plotting with XSLT and SVG — Visualizing quantitative information is not always about economics and finance. Research in computational textual humanities often uses descriptive statistics and graphic visualization to communicate quantitative information about textual objects. There is no standardized function library in XSLT or XQuery comparable to the ones available in JavaScript, Python, and many statistical packages. So here is the beginning of such a library. I describe my assumptions and design principles then illustrate a few functions. (Statistical terms will be explained, at least in brief!)

7-27-15:00. XPath & Unicode

Extend XPath regular expressions for Unicode.

Stakeholder(s)

Joel Kalvesmaki

Monday 15:00 - 15:30 EDT — A new `\u`: Extending XPath regular expressions for Unicode — XPath regular expressions are richly equipped to handle Unicode, from specific code points (e.g., for a tab) to blocks (e.g., `\p{IsArrows}` for all arrows U+2190...21FF) to entire classes (e.g., `\p{L}+` for one or more letters, from any alphabet). But why stop there? What if you want all variations on the letter b, or any character that has a tilde? For that, you need a new `\u`!

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7-27-16:00. Ontologies

Use ontologies to abstract data collections.

Stakeholder(s)

Kurt Cagle :

Semantical LLC

Monday 16:00 - 16:30 EDT — Ontologies as Filters: Utilizing ontologies as a mechanism for abstracting data collection during a crisis (LB) — The Covid-19 pandemic, in addition to affecting public health, has highlighted the challenges involved in attempting to collect, curate, and disseminate data sets throughout the US, the EU, and the UK. Wildly divergent datasets require an incredible amount of effort both to harmonize the contents and to comply with privacy legislation such as the GDPR. A potential federated solution might be built around knowledge graphs that could act as both data catalogs and harmonizing proxies. Such an application could be launched quickly and could work across multiple open source and commercial platforms. This talk is intended to discuss that process and to illustrate how it applies to the markup world as well when dealing with narrative information.

7-28-10:00. XML Schemas

Discuss a more formal approach to determine whether choice of XML schema pattern affects the languages that can be defined.

Stakeholder(s)

Anne Brüggemann-Klein :

Technical University of Munich (TUM)

Tuesday 10:00 - 10:30 EDT — Four basic building principles (patterns) for XML schemas — Practitioners have long identified four distinct patterns for construction of XSD schemas, known by the picturesque names “Salami Slice”, “Venetian Blind”, “Russian Doll”, and “Garden of Eden”, and based on two binary choices: are all the element declarations global? or (apart from the intended document root) local? Are all the type definitions global? Or (apart from the built-in types) local? Informal discussions often focus on the effect of pattern choice for schema re-use, encapsulation, coupling, and cohesion. But a more formal approach is needed to determine whether choice of pattern affects the languages we can define with the schemas we can write. Do all four patterns have the same expressive power? Or are some capable of defining things not expressible in the others?

7-28-11:00. Accessibility

Encourage more accessible content creation from markup.

Stakeholder(s)

Bethan Tovey-Walsh

Tuesday 11:00 - 11:30 EDT — Disabled by default — Accessibility is not a single, straightforward concept. For a particular user, the accessibility of any resource is determined by a web of factors, first by the nature and severity of the disability (cognitive, physical, or mental), then influenced by poverty, tech access, language, and many other factors. Designing content to take account of accessibility on this wide scale is a daunting task. Markup is well placed to address accessibility, because markup is optimized to encourage choice. It allows us to say what things are, and choose later (or, better, allow the user to choose) what that means for how content is displayed, printed, spoken, or otherwise manifested in the output. It also allows us to say how things relate to each other, so that we can easily offer choices of the same content in different formats. Concrete examples of what this means in some common markup outputs will highlight things we could be doing in our own practice to encourage more accessible content creation from markup.

7-28-12:00. Website Accessibility

Demonstrate Balisage website accessibility.

Stakeholder(s)

Liam Quin :

Delightful Computing

Tuesday 12:00 - 12:30 EDT — Balisage website accessibility demonstration — Making your website more accessible does not need to be a huge, production-altering migration. Even if your site is old and crufty, and you cannot completely kill that 1980's web design, there are minor changes and accessibility-friendly tweaks that can make a major accessibility difference. On a page-by-page, feature-by-feature basis, we will take a look at part of the previous Balisage Proceedings website, then look at the new, improved website for the same page/feature/function, and discuss how they differ, why the new site is improved, and how we got there (including some of the dead-ends and trade-offs made along the way).

7-28-14:00. Text Encoding & Processing

Discuss text encoding and processing as an intensive writing course.

Stakeholder(s)

Elisa E. Beshero-Bondar :

Penn State Erie, the Behrend College

Universities

Writing Students

Tuesday 14:00 - 14:30 EDT — Text encoding and processing as a university writing intensive course — Why should writing and coding be seen as opposing activities? Both depend foundationally on analytical processes, and learning to code is akin to learning a foreign language. Whether students of coding or literature are applying an existing system such as TEI or developing their own tools, they must think intensively about their corpus of data, and that analysis should be reflected back into their own writing, as well as their understanding of literature. Tagging poetry, for example, requires decisions about different kinds of information like names, dates, people, and places, as well as patterns such as images, motifs, and rhyme. For the students engaged in the process, not only is writing intensive in the moment of application, but it intensifies over time with learning new ways of doing things and building on the model of previous projects.

7-28-15:00. Saxon-JS & XSpec

Create high-quality web apps.

Stakeholder(s)

Amanda Galtman :

MathWorks

Tuesday 15:00 - 15:30 EDT — Saxon-JS meets XSpec Unit Testing: Building high quality into your web app — With Saxon-JS, you can create web applications that run XSLT code in a web browser. With unit testing, you can develop and maintain high quality software. And the XSpec tool provides unit testing for XSLT transforms. What could be a better match! Well, yes, there are some challenges: XSpec running with Saxon-EE cannot access the web browser, the DOM, or the JavaScript processor that influences your web application. Nor does XSpec natively understand the interactive XSLT features of Saxon-JS. We found two ways of bridging these gaps: we can mock up the parts of the Saxon-JS operation that XSpec cannot natively access, or we can run XSpec tests directly in the browser using Saxon-JS. Each approach has pros and cons; we discuss how we chose between them in a specific project involving user documentation for a software API.

7-28-16:00. Spell Checking

Spell check XML documents with custom dictionaries.

Stakeholder(s)

C. M. Sperberg-McQueen :
Black Mesa Technologies LLC

Tuesday 16:00 - 16:30 EDT — An XML infrastructure for spell checking with custom dictionaries — Spell checking has been available in desktop tools for a long time, but dealing with checking in XML documents presents problems that are less likely to be found in conventional text editors, beginning with the presence of markup interleaved with the text to be checked. Many XML sources present additional problems because they are transcriptions of documents with multiple or archaic languages. Nonetheless, with an appropriate theory of language, it is possible to build a simple tool, perhaps with an XForm interface, for interactive checking of XML documents, even outside the scope of other XML processing.

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7-29-10:00. XML & XSLT

Avoid common errors and publish consistent recipes.

Stakeholder(s)

Peter Flynn

Wednesday 10:00 - 10:30 EDT — Cooking up something new: An XML and XSLT experiment with recipe data — Everyone who cooks knows the recipe for a recipe: title, list of ingredients, method of preparation. While the pattern may be common knowledge, published recipes are often full of errors. Could XML help the cook or the cookbook writer? Armed with analysis (and a resulting schema), a creator of recipes could avoid numerous common errors and publish consistent recipes. What is needed, then, is tools that don't require the creator to learn XML. Both the analysis and suggestions for tools are available for those who knead them.

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7-29-11:00. HTML Accessibility

Improve the accessibility of HTML.

Stakeholder(s)

Vincenzo Rubano :

Department of Computer Science and Engineering, University of Bologna

Fabio Vitali :

Department of Computer Science and Engineering, University of Bologna

Website Developers

Content Creators

People with Disabilities

Wednesday 11:00 - 11:30 EDT — Experiences from declarative markup to improve the accessibility of HTML — Producing accessible content for the Web is largely (if we go by the focus of most existing recommendations) a matter of adding reasonably simple markup with a clear declarative meaning to documents. How then can it be that producing really accessible content happens so rarely? One reason is that normally-abled designers have serious difficulty perceiving the difference between correct and incorrect assistive markup, and existing tools do little to reduce this handicap. We believe that better results can be achieved by using a framework of accessible web components capable of enforcing best practices, automated tools for checking accessibility, and a new approach to manual tools to let developers and content creators examine visually the accessibility markup so that they can make sense of their impact on people with disabilities.

7-29-12:00. XSLT & Class Attributes

Discuss the implications of stylesheets for JATS, TEI, and DocBook.

Stakeholder(s)

Gerrit Imsieke :

le-tex

Wednesday 12:00 - 12:30 EDT — Creating class attributes with XSLT? (LB) — When going from one XML application, such as JATS, to another, perhaps HTML, the stylesheet author may not be able to follow any simple pattern of translation. Attributes that may be useful in the target may not be present in the source, or what is an attribute in the target may be an element in the source. That which is represented as a class attribute in the source might become a style attribute or even a wrapper element in the target. What conventions should the writer employ to ensure consistency, especially when the stylesheet may be combined with others, particularly in a layered application? This presentation looks at the implications of stylesheets not only for JATS but also for TEI and DocBook.

7-29-14:00. Accessibility & Metadata

Enable publishers to describe the accessibility features of their publications and make conformance claims.

Stakeholder(s)

Madeleine Rothberg :

The National Center for Accessible Media at WGBH

Wednesday 14:00 - 14:30 EDT — Accessibility metadata statements — Accessibility metadata statements let publishers describe the accessibility features of their publications and make conformance claims. Metadata properties listed in Schema.org enable accessibility statements on a Web page that describes a publication. They also allow statements to be embedded in a packaged publication (such as an EPUB). Accessibility statements can describe, for example: what kinds of media are used; which accessibility features are included (image descriptions, math markup, video captions, etc.) and more. Hazards (flashing images that could cause seizures) can be noted or the absence of hazards confirmed. EPUB has some additional metadata terms important to publications, including conformance statements with credentials (as defined in “EPUB Accessibility 1.0” [<https://www.w3.org/Submission/epub-a11y/>]). I will examine both basic and complex accessibility metadata statements and offer resources for learning how to implement them.

7-29-15:00. Risk Management

Outline a document-based view of the Risk Management Framework.

Stakeholder(s)

Joshua Lubell :
NIST

Wednesday 15:00 - 15:30 EDT — A Document-based view of the Risk Management Framework — Cybersecurity professionals know the Risk Management Framework as a rigorous yet flexible process for managing security risk. But the RMF lacks a document focus, even though much of the process requires authoring, reviewing, revising, and accessing plans and reports. It is possible to build such a focus by looking more closely at these documents, starting with the System Security Plan and the roles of key participants responsible for it. Such a document- and role-centric view of the RMF process can lead the way toward more efficient and less error-prone security assurance.

7-29-16:00. Typesetting Codes

Convert into XML typesetting instructions for US government bills, laws, and statutes.

Stakeholder(s)

Patrick Andries :

XCential Corporation

Lauren Wood :

XCential Corporation and Textuality Services

United States Government Printing Office (GPO)

Congress

Wednesday 16:00 - 16:30 EDT — Converting typesetting codes to structured XML — Before XML, the United States Government Printing Office (GPO) created complex typography using non-hierarchical, line-based typesetting systems characterized by “locator” files which contain lines of typesetting instructions. Our mission is to convert years of locator files that describe US government bills, laws, and statutes (etc.) into structural XML, valid to the United States Legislative Markup (USLM) XML Schema. This was and is complicated, as locator files, in addition to being completely presentation-focused, use stylistic differences to communicate semantic significance. Our iterative analysis grew the mapping specification in stages. The conversion is in two parts. First Java converts the locator files into hierarchical XML (the JAVA lexical, syntactical, decomposition, and generational phases are the focus of this paper). Then XSLT improves the resulting XML. Quality control and testing required additional programming and the creation and maintenance of a large set of reference samples.

7-30-10:00. Microrevisions

Discuss how micro-level textual variation can be expressed idiomatically in markup and how the markup can be used by digital collations tools to achieve a more refined analysis of the textual variation.

Stakeholder(s)

Elli Bleeker :

Research and Development Group, Royal Dutch Academy of Arts and Sciences

Bram Buitendijk :

Research and Development Group, Royal Dutch Academy of Arts and Sciences

Ronald Haentjens Dekker :

Research and Development Group, Royal Dutch Academy of Arts and Sciences

Thursday 10:00 - 10:30 EDT — Marking up microrevisions with major implications: Textual genetic editing in TAG — Micro-level textual variation is an important fact of life for textual critics; we discuss how it can be expressed idiomatically in markup and how the markup can be used by digital collations tools to achieve a more refined analysis of the textual variation than is possible when the collation tool ignores the markup. Using Virginia Woolf's manuscript drafts of *To the Lighthouse* (1927) as a case study, we show that the deletions, insertions, and rewritings which express the author's struggle with her materials constitute non-linear, discontinuous, and often multi-hierarchical information structures which are easily represented in the "Text As Graph" (TAG) hypergraph data structure, readily expressed using the markup of TAGML, and usefully exploited by the TAG-aware collation tool Hypercollate. Micro-level revisions do not need to be a special case handled with ad-hoc extensions to our markup infrastructure: we can have an infrastructure that handles them naturally and allows us to use them comfortably to improve our understanding of authors, and their works, and their textual revisions.

7-30-11:00. XForms

Test XForm features by introspection, without user intervention.

Stakeholder(s)

Steven Pemberton :

CWI

Thursday 11:00 - 11:30 EDT — How Suite it is: Declarative XForms Submission Testing (LB) — The original test suite for XForms 1.1 required considerable manual intervention to run. As a part of the XForms 2.0 effort, a new test suite is being designed and built that tests features by introspection, without user intervention, so that the XForm itself can report if it has passed or not. This talk will give an overview of how the test suite works and in particular discuss the issues involved with submission to the server, how to deal with aspects of the HTTP protocol that were designed before XML and XForms were created, and how you go about introspecting something that has left the client before you can cast your eyes on it.

7-30-12:00. Document Similarity

Consider differences in the richer structure of marked-up documents.

Stakeholder(s)

Claus Huitfeldt :

University of Bergen

C. M. Sperberg-McQueen :

Black Mesa Technologies LLC

Thursday 12:00 - 12:30 EDT — Document similarity: Transcription, edit distances, vocabulary overlap, and the metaphysics of documents — There are many contexts in which the similarity of documents is a critical point of concern. In textual criticism, for example, understanding the faithfulness of a transcription to the exact text of a particular document is key. Or, in a more mundane example, a user may wish to understand the similarities of doc.docx, doc_final.docx, doc_final_v2.docx, and doc.html! There are many measures of the “distance” between sets of documents, but a woeful absence of such measures that consider the richer structure of marked-up documents. Could we do better?

7-30-12:50. Literary Creativity

Exercise literary creativity with original poems, short stories, jokes, songs, and other masterpieces.

Stakeholder(s)

Lynne Price :
Gamemaster

Thursday 12:50 - 14:00 EDT — Balisage Bard — Once again, Balisage Bard gives you the opportunity to exercise your literary creativity with original poems, short stories, jokes, songs, and other masterpieces. Subject matter must be related to Balisage (markup, papers presented this or previous years, virtual conferences, and so forth). Read your effort or play it on video during the game session. Translations of works in languages other than English are not required but will be appreciated. There is a two-minute time limit per presentation. Sign up by entering your name in the Bard chat room. Presentation sequence at that gamemaster's discretion. One submission per person/team unless there is time for more at the end. And listen closely. Vote for your favorite three works after the last presentation. Who will be the 2020 Balisage Poet Laureate?

7-30-14:00. Diagrams

Consider the inner nature of diagrams.

Stakeholder(s)

Steven DeRose :

Docugami

Thursday 14:00 - 14:30 EDT — What is a diagram, really? — One rationale sometimes offered for the use of XML to represent text documents is that text documents consist by nature of ordered hierarchies of content objects (OHCO). But XML is used with success for much more than text documents: math, music, vector graphics, and more. When XML is used for diagrams, does it fit their inner nature? What is the inner nature of a diagram? Could it be that it consists of objects whose type is determined by their content? Could it be that those objects can have a hierarchical organization? Could it be that even in a two-dimensional space they are ordered? Could diagrams be...ordered hierarchies of content objects?

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7-30-15:00. IDE Code

Build syntax descriptions from language documentation.

Stakeholder(s)

C. Edward Porter :
SAS

Thursday 15:00 - 15:30 EDT — Syntax-From-Doc: A case study of powering IDE code completion From XML documentation — Syntax highlighting is a profoundly useful feature for developers. To make it work, you must produce a concise and accurate description of the syntax of your language. For a rich language with a long, organic history, this can be a significant challenge. SAS engaged in a multi-year project using multiple markup languages to produce a scalable, automated solution: building the syntax descriptions directly from the language documentation.

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7-30-16:00. Systems Security

Mark up systems descriptions and assessments for security assurance.

Stakeholder(s)

Wendell Piez

Thursday 16:00 - 16:30 EDT — Systems security assurance as (micro) publishing: declarative markup for systems description and assessment — Declarative markup (not just XML but also its predecessors and near neighbors) has succeeded in many kinds of information management tasks. Most especially, it has proven to be broadly applicable in technical publishing. The needs of the Open Security Controls Assessment Language (OSCAL) do not appear, on the surface at least, to be similar to publishing. And yet, below the surface we find striking similarity. Declarative markup, perhaps, can get the job done by doing the job.

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7-31-11:00. Art

Discuss a case study on the use of XML for art.

Stakeholder(s)

Mary Holstege

Friday 11:00 - 11:30 EDT — XML for art: A case study — Art, it has been argued, lives where there is complexity: between the boundaries of pure order and pure chaos. Generative art applies judicious amounts of randomness to the pure order of algorithmic logic to produce candidate works of art, which the artist selects from. The XML stack forms a palette for these works. Algorithms can be expressed in XSLT and XQuery, randomness can be introduced through simple and higher-order functions, and SVG can be the canvas. Along the way, common problems of annotation, knowledge management, and searching arise. Surprisingly, perhaps, so does issue of the separation of form and content.

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7-31-12:00. XSLT Transformations

Break processes into steps and bind them together with XProc.

Stakeholder(s)

Ari Nordström

Friday 12:00 - 2:30 EDT — Pipelined XSLT transformations — Sure, you can do almost anything in a monster, monolithic XSLT program. But you can make life much easier for yourself, and produce code that's easier to maintain as well, if you break your process into steps and bind them together with XProc. Pipelining not only speeds and simplifies coding, it also aids debugging, testing, and even documentation. Even if you're an experienced XSLT coder, it's worth considering.

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7-31-14:00. XSLT & Javascript

Come up with ideas for a more ambitious solution to deal with asynchrony on both the server and the client

Stakeholder(s)

Michael Kay :
Saxonica

Friday 14:00 - 14:30 EDT — Asynchronous XSLT (LB) — Javascript, with its dependence on asynchronous interactions, would seem to be intrinsically in conflict with XSLT and its expectations, like reading in whole documents. Saxon-JS 1.0 attempted to work around this conflict with a specialized scheduling instruction added to XSLT. Saxon-JS 2.0 attempts to deal with asynchrony on both the server and the client and has gone further than 1.0. But the work on 2.0 development has given the developers a good opportunity to come up with ideas for a more ambitious solution in the future.

7-31-15:00. Tolerance

React appropriately to the unexpected.

Stakeholder(s)

C. M. Sperberg-McQueen :
Black Mesa Technologies LLC

Friday 15:00 - 15:30 EDT — Fault tolerance, error tolerance, diversity tolerance — How to react when things are not as we expect them to be.

Administrative Information

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