

## A Practical Application of XML and DITA

WR 410/510: Trends in Technical Communication, hybrid classroom/online  
Winter 2016, Tuesdays, 5:30-9:10, Neuberger Hall 446  
Instructor Bryan Schnabel, [bryanschnabel@pdx.edu](mailto:bryanschnabel@pdx.edu), office hours by arrangement

### About the Course

Regarding Technical Communications, Information Technology, Content Management Systems, and Technical Publication, XML is the de facto underlying structure. While many XML formats have become mainstream, like Docbook, XHTML, and SVG, DITA distinguishes itself as a structure that enables information to be created, managed, compiled, single-sourced, reused and published to enable all aspects of a professional industry throughput.

Regarding the approach to this class, this is an advanced class. The instructor is from professional industry. The class will prepare the student for professional industry, and will be conducted from a professional industry perspective, more than from an academic perspective. If one were to think of technical writing as a continuum, with “writing” on one end, and “technical” on the other end; this class is weighted heavily toward the “technical” end of the continuum. Why? In professional industry the fact that perspective technical writers are proficient at writing is expected and a given. The degree to which they are technically proficient distinguishes them.

To state this as plainly as possible, this technical course may take some writers and technical communicators a bit outside their comfort zone. But it will prepare the student to proficiently use XML and DITA in the professional workplace in a way that will set them ahead of most candidates competing for the elusive, but rewarding place in the technical communication field.

Upon successfully completing this class students will

- Have an understanding of XML syntax and be able to demonstrate the ability to construct, process, and troubleshoot XML (including XSLT, XPath, and XML validation)
- Be familiar with the XML sister-standards of DITA, like Docbook, XHTML, and SVG
- Understand and be able to articulate the principles, benefits, and processes of topic-based authoring and publishing
- Be familiar with, and equipped to cope with the pitfalls and challenges to deploying a DITA workflow, like translation, reuse, and CMS
- Have entry-level professional proficiency in DITA

Grades will be determined using the following scale

Quizzes	10
Midterm Exam	20
Midterm Deliverables	20
Final Exam	30
Final Project (Final Deliverable)	20

\* Additional requirements for graduate students will be communicated in class

## Course Materials

### Software

- easyDITA <http://easydita.com/> (cloud CMS; nothing to buy or install, URL and login credentials will be provided)
- Saxon 9.1.0.8 <http://sourceforge.net/projects/saxon/files/Saxon-B/9.1.0.8/saxonb9-1-0-8j.zip/download>
- DITA Open Toolkit 1.8.5 <http://sourceforge.net/projects/dita-ot/>
- DITA Open Toolkit 2.2 <https://github.com/dita-ot/dita-ot/releases/download/2.2.1/dita-ot-2.2.1.tar.gz>
- DITA-XLIFF Roundtrip plugin <http://sourceforge.net/projects/ditaxliff/>
- Software-developer-grade text editor
  - Notepad ++ for Windows <http://notepad-plus-plus.org/> , or
  - Sublime Text for Mac <http://www.sublimetext.com/>
- Firefox

### Text

- *Introduction to DITA 2nd Edition* by JoAnn Hackos ISBN-13: 9780977863433
- *Beginning XML 5<sup>th</sup> Edition* by Joe Fawcett, Danny Ayers, Liam R. E. Quin ISBN-13: 9781118162132
- *A Practical Guide To XLIFF 2.0* by Schnabel, Hackos, Raya ISBN-13 9781937434144

## Provisional Syllabus

Session	Date	Topic	To be completed before this session
1 class	5 Jan	Introductions Demonstrations <ul style="list-style-type: none"> <li>• XML/XSL</li> <li>• DITA/DITA OT</li> <li>• CMS/easyDITA</li> <li>• Your easyDITA account</li> </ul>	
2 online	12 Jan	<a href="https://www.youtube.com/watch?v=EdF3JZrMcWc">https://www.youtube.com/watch?v=EdF3JZrMcWc</a>  XML fundamentals <ul style="list-style-type: none"> <li>• What is XML?</li> <li>• Why do we care?</li> <li>• Elements/Attributes</li> <li>• Well-formed vs. valid</li> <li>• XSLT</li> </ul>	Read <i>Beginning XML</i> Chapter 1, 2, 3 (through page 62), and 8 (through page 284)
3 *online	19 Jan	<a href="https://youtu.be/kxPTtScTzn4">https://youtu.be/kxPTtScTzn4</a>  DITA fundamentals <ul style="list-style-type: none"> <li>• DITA Topics</li> <li>• DITA Maps</li> <li>• Images</li> <li>• Command-line interface</li> <li>• Install DITA OT</li> <li>• Exploring easyDITA</li> </ul>	Read <i>Introduction to DITA</i> Part 1, Part 2 (Section A), Part 3 (Section D, Section E), Part 6 (Section K, Section L )

Session	Date	Topic	To be completed before this session
4 *class	26 Jan	<b>Quiz on XML</b> Discuss deliverable requirements <ul style="list-style-type: none"> <li>• [D1] easyDITA Datasheet</li> <li>• [D2] DITA OT .html, .pdf, .chm</li> <li>• [X1] XLIFF-DITA OT plugin</li> <li>• [D3] "How To Use easyDITA" tutorial, manual, or help system</li> </ul>	Read easyDITA Tutorial
5 class	2 Feb	<b>Quiz on DITA fundamentals</b> Advanced DITA <ul style="list-style-type: none"> <li>• Content reuse</li> <li>• Specialization</li> <li>• SVG</li> <li>• Translation</li> </ul> What's new in DITA 1.3	Read <i>Introduction to DITA</i> Part 4, Part 5 Read <i>Beginning XML</i> Chapter 4, 17, and 18 Read <i>DITA 1.3 from A-Z</i> article Read Information_architect- BP05-12JHackos.pdf
6 online	9 Feb	<b>Midterm Exam</b> <ul style="list-style-type: none"> <li>• Test (60 minutes)</li> <li>• Create specified, well-formed XML document in text editor (60 minutes)</li> <li>• Create and run specified XSLT transformation (60 minutes)</li> </ul>	
7 class	16 Feb	<b>Midterm Projects due</b> First two deliverables <ul style="list-style-type: none"> <li>• [D1] easyDITA Datasheet</li> <li>• [D2] DITA OT .htm, .pdf, .chm</li> </ul> Review Midterm Exam questions	Prepare to give a 15-minute presentation to the class on your datasheet. Prepare to participate in code review of presented datasheets.
8 online	23 Feb	<a href="https://www.youtube.com/watch?v=5_p6SxhJVQ">https://www.youtube.com/watch?v=5_p6SxhJVQ</a>  DITA Translation <ul style="list-style-type: none"> <li>• Translating DITA best practices</li> <li>• XLIFF</li> <li>• Translation Memory and TMX</li> <li>• Term Base and TBX</li> </ul>	Read <i>A Practical Guide to XLIFF 2.0</i> Getting Started, and Chapters 1, 2, 3, and 4 Read <i>Reuse translations with TM and TMX</i> ( <a href="http://www.maxprograms.com/articles/tmx.html">http://www.maxprograms.com/articles/tmx.html</a> ) Read <i>Introduction to TermBase eXchange (TBX)</i> ( <a href="http://www.tbxinfo.net/">http://www.tbxinfo.net/</a> )
9 class	1 Mar	Demonstration: DITA-XLIFF OT plugin DITA Tools Review DITA Concepts Review	Come prepared with questions on whatever concepts or tools you may need help with.
10 online	8 Mar	<b>Final Project due</b> <ul style="list-style-type: none"> <li>• [D3] "How To Use easyDITA" tutorial, manual, or help system</li> </ul>	
Final online	15 Mar	<b>Final Exam</b> <ul style="list-style-type: none"> <li>• Test (60 minutes)</li> </ul> XLIFF deliverable <ul style="list-style-type: none"> <li>• [X1] XLIFF-DITA Roundtrip plugin (90 minutes):                (1) Transform guitars project to XLIFF; (2) Pseudo-translate XLIFF; (3) Transform XLIFF back to DITA</li> </ul>	

## Deliverables (projects)

The following is a preliminary description.

Requirements:

1. **[D1]** In easyDITA

- a. Create a new product datasheet

Use this as an example:

<http://www.tek.com/datasheet/current-probe/p6021a-p6022>

or the pdf version

[http://www.tek.com/sites/tek.com/files/media/media/resources/P6021A-Current-Probe-Datasheet-60W-06647-3\\_1.pdf](http://www.tek.com/sites/tek.com/files/media/media/resources/P6021A-Current-Probe-Datasheet-60W-06647-3_1.pdf)

- b. Grad students extra requirement: export data sheet DITA project and compile it in DITA OT (see requirement 2 for information on the DITA OT)

2. **[D2]** Install, configure the DITA OT 2.2 <https://github.com/dita-ot/dita-ot/releases/download/2.2.1/dita-ot-2.2.1.tar.gz>

Note: running the OT in Windows, double-click startcmd.bat

running the OT on Mac, from command line, sh startcmd.sh

Hint: using command-line with Mac <http://stackoverflow.com/questions/733824/how-to-run-a-sh-script-in-an-unix-console-mac-terminal>

- a. Compile an HTML project; a PDF project; an Online Help project

Note: you will be required to add at least one topic (concept, reference, or task) to an existing sample in the OT and link to it in a map.

3. **[X1]** Install XLIFF DITA Roundtrip plugin <http://sourceforge.net/projects/ditaxliff/>

- a. Translate the Guitars project

a.1 Transform it to XLIFF

a.2 Pseudo translate it (we will cover this in class)

a.3 Transform it back to DITA

a.4 Compile the translated DITA to PDF

4. **[D3]** Create a tutorial, user manual, or online help system on “How To Use easyDITA”