

Publishing with DITA and S1000D

Gilbane San Francisco 2007



Max Dunn

About the presenter



- Max Dunn, co-founder
- XSLT, SVG, XSL-FO, Frame, InDesign background
- Project managed Adobe FM 7.2 DITA App Pack
- Silicon Publishing evolved from DEP, a publishing services company dating back to the late 1970s
- Silicon Publishing founded 2000: 10 developers
- Silicon Publishing specializes in the automation of publishing technology



Agenda

- General XML publishing model
- XML, data-centric vs. document-centric
- DITA and S1000D – evolution of document-centric XML
- DITA Specialization example using Adobe FrameMaker
- DITA Publishing Demo



- Abstraction, transformation, rendition

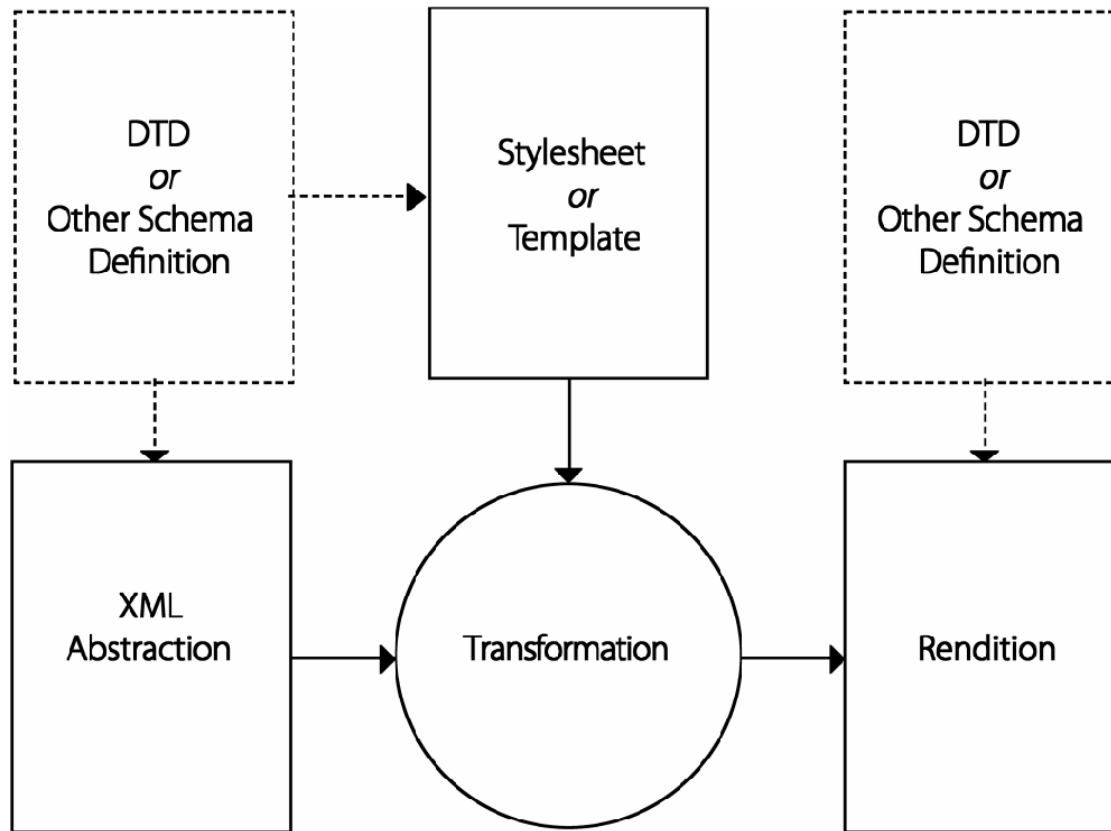


Figure 1-1 Formatting an XML abstraction into a rendition

General XML Publishing Model

- Sometimes the abstraction, transformation, and rendition are all XML, for example XML->XSLT->XHTML
- Possible to process with non-XML-driven methods
- Transformation may or may not be real time
- Post-processing of rendition XML common:
XML->XSLT->XSL-FO->PDF
XML->XSLT->XML->OpenLaszlo->Flash
- Proprietary processing often still based on XML (i.e. FrameMaker EDD)
- Rendition XML increasing (.INX, XAML)

XML in the Document and Data Worlds

- XML came along as “SGML for the Web” around 1996
- 1998 – finalized 1.0 spec
- Data-centric XML took off very rapidly
 - Web Services
 - Database support
 - Ubiquitous as a data wrapper right away

- Document-centric XML didn't go nearly as fast as data-centric XML
 - Home-built DTDs a challenge
 - Re-use and cross-referencing mechanisms incomplete
 - XML standards bodies tended towards data-centric approach
 - Customization a challenge with DTDs such as DocBook

The advent of S1000D

- S1000D also solves core document-centric challenges:
 - Home-built DTDs not required
 - Data modules within the Common Source Database (CSDB) are designed for re-use and content management
 - Technical Publications Specifications Maintenance Group (TPSMG) is document-centric

The advent of DITA

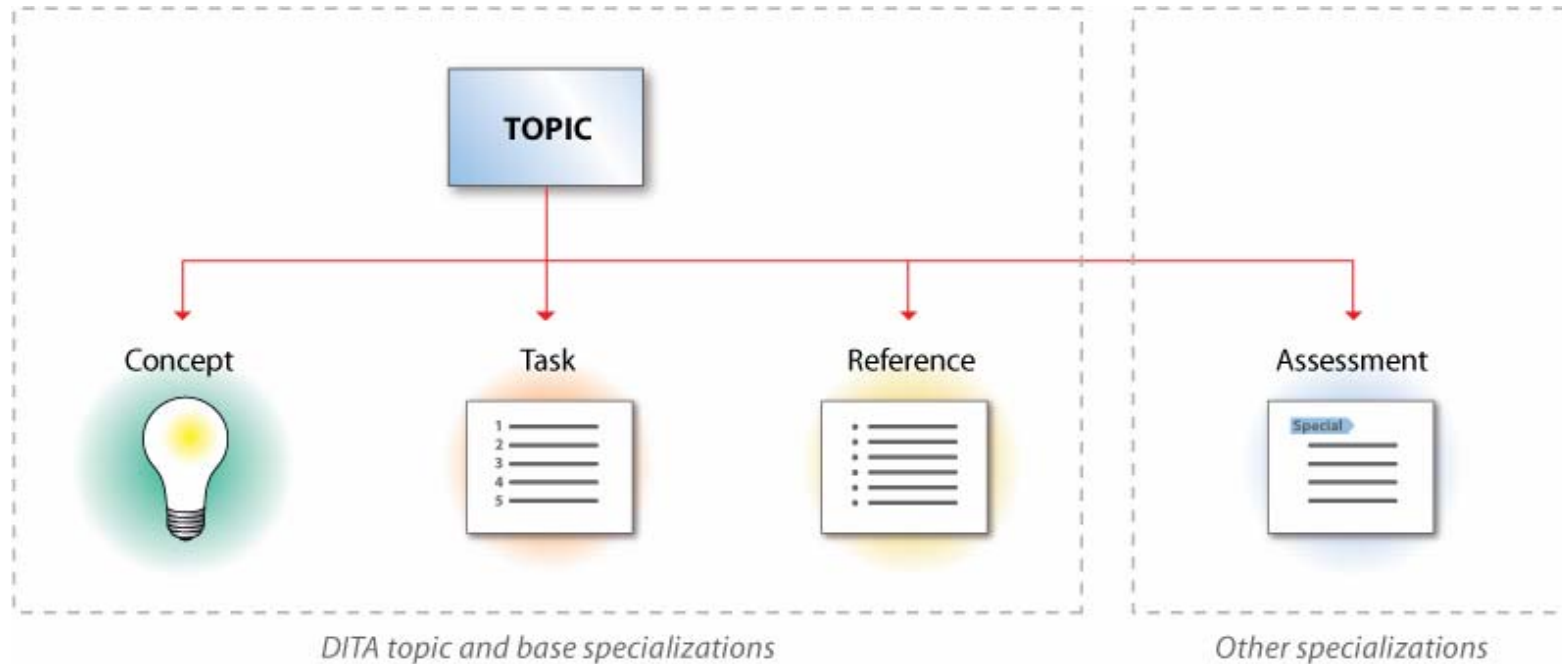
- DITA solves core document-centric challenges:
 - Home-built DTDs not required
 - Re-use and cross-referencing mechanisms such as conrefs
 - OASIS standards body focused on the needs of those working with documents
 - Specialization offers elegant method of tailoring content

A comparison of S1000D and DITA

- **Similar**
 - Re-usable information units (topics and data modules)
 - Specific markup types (Maintenance schedule, Fault isolation... vs. Concept, Task...)
 - Strong metadata support (industry-specific metadata, extensible metadata model)
 - Information unit management (Publication model and DITA map)

- **Different:**
 - DITA tech doc focused, S1000D more manufacturing, etc.
 - DITA specialization mechanism is unique...

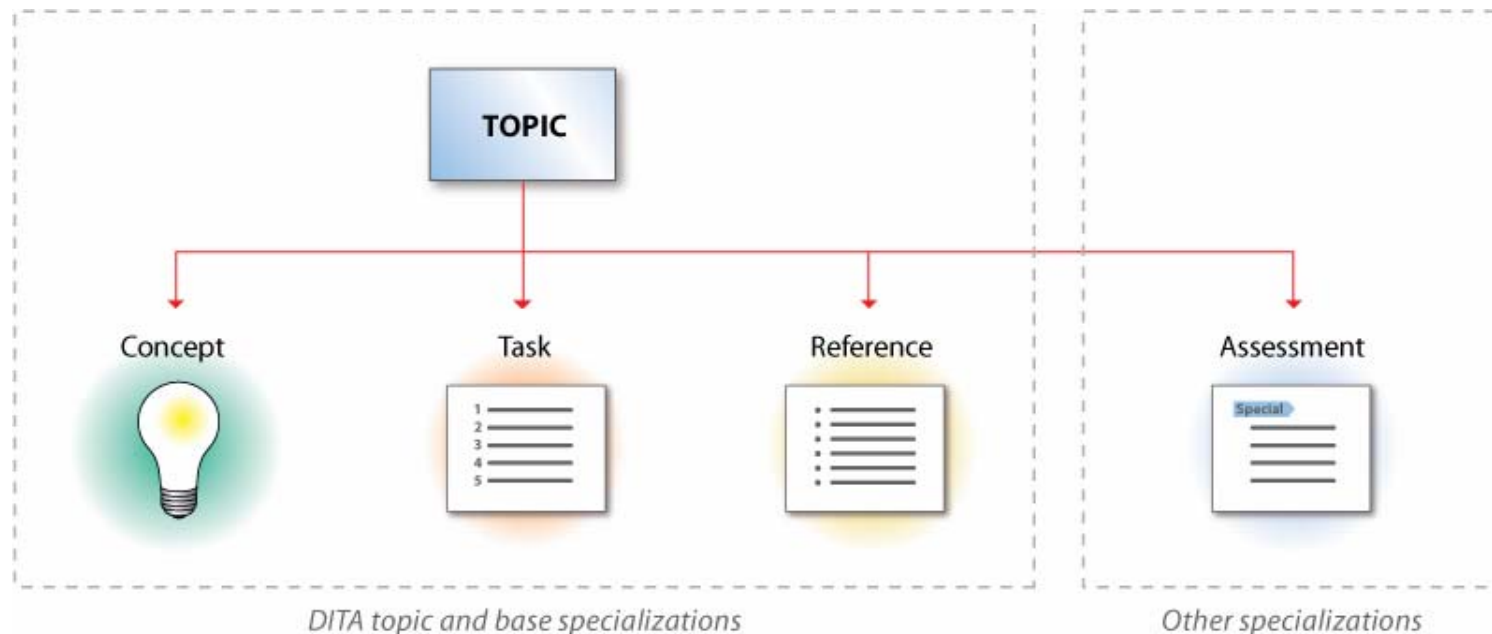
DITA Specialization



- Inheritance means that new document structures don't break publishing toolchains
- Specialization can occur in topics, maps, or domains

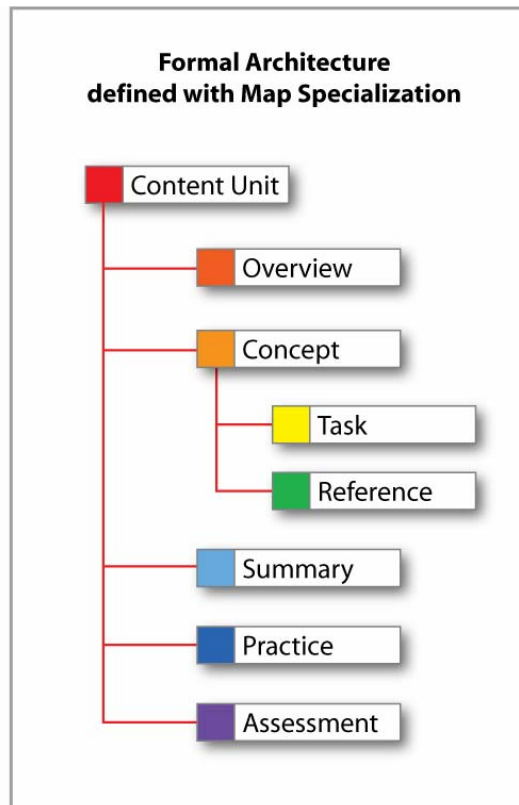
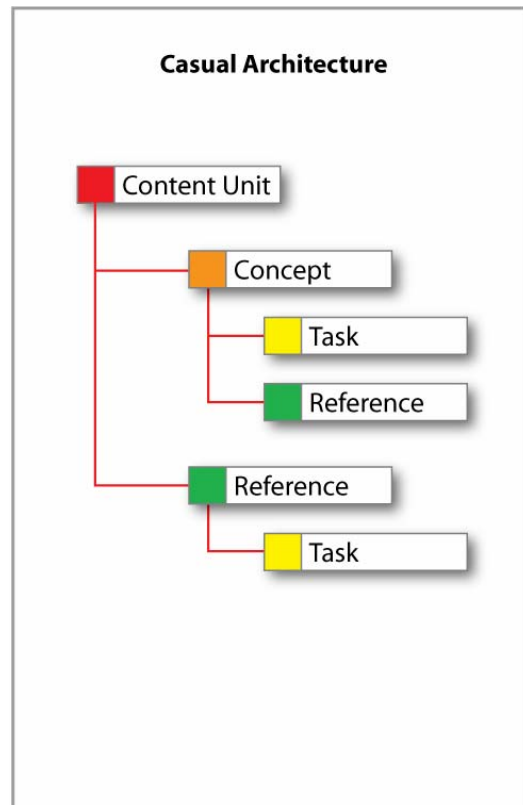
DITA Specialization: specializing topics

- Concept, Task, and Reference are considered **base specializations**, built in to the DITA architecture, but you can create your own...
- Class attribute relates inherited structure to know structure
class = - *topic/topic assessment/assessment*



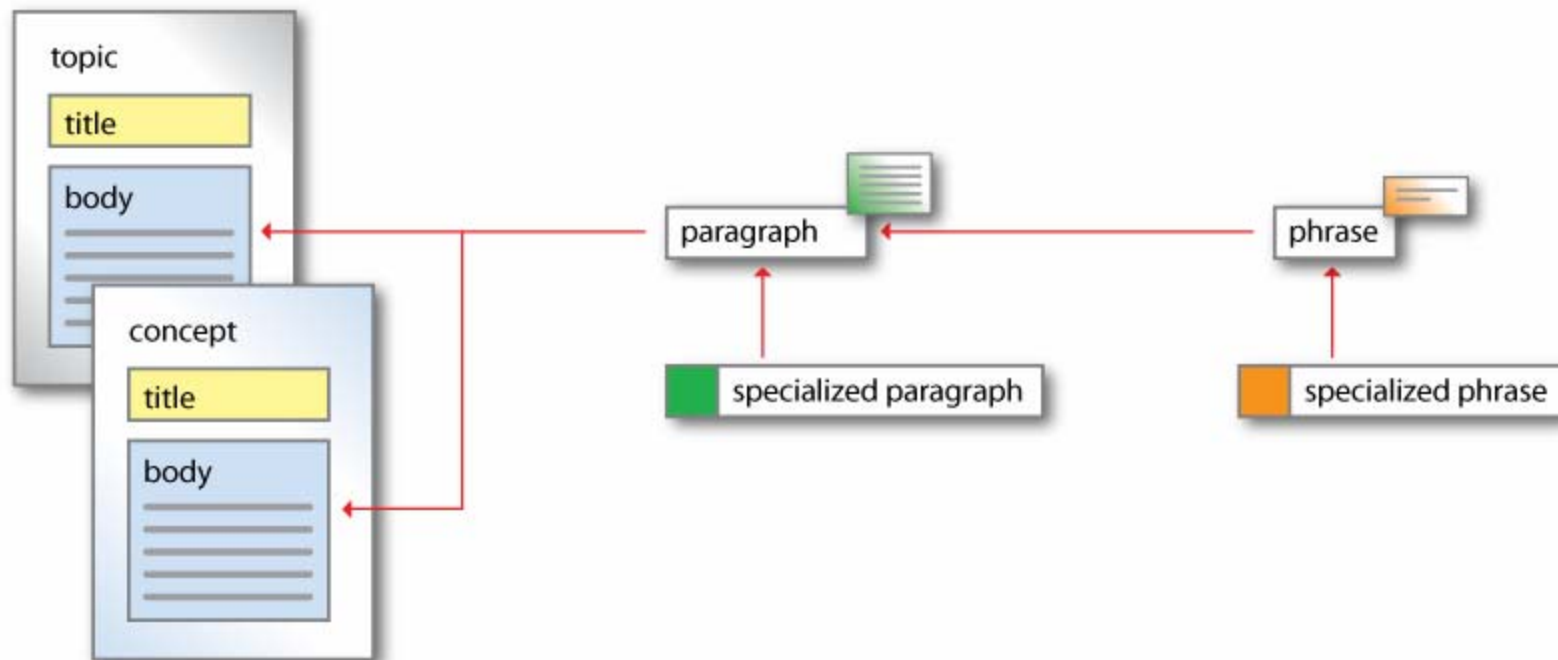
Specialization: specializing DITA maps

- While DITA maps are flexible by default, you can use map specialization to define or enforce a particular type of sequence

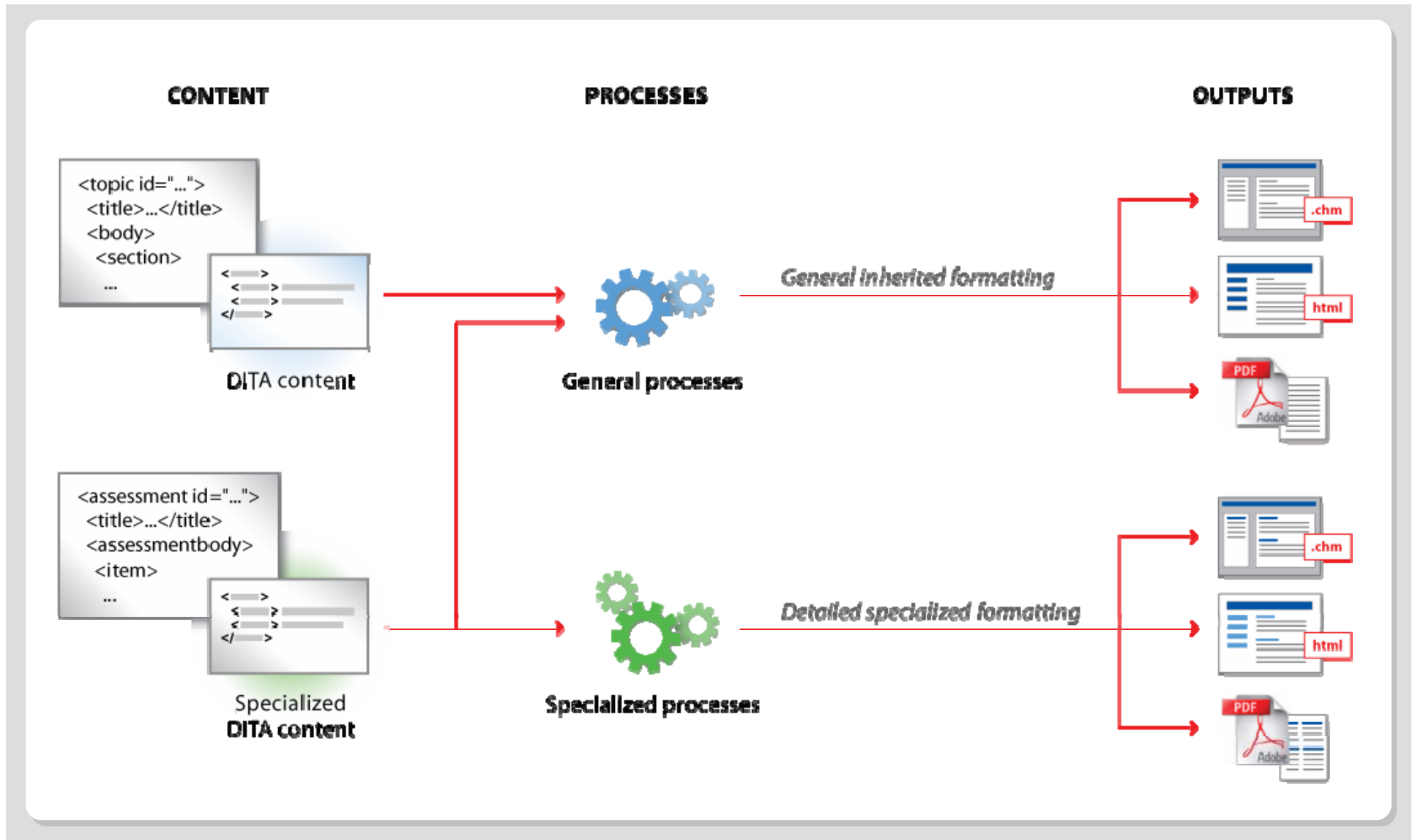


Specialization: specializing domains

- DITA domains extend DITA with a set of elements whose names and content models are unique to an organization or field of knowledge. For example, you may have elements specific to documenting software.
- Specialization lets domain-specific elements inherit from existing elements.



DITA Publishing Overview



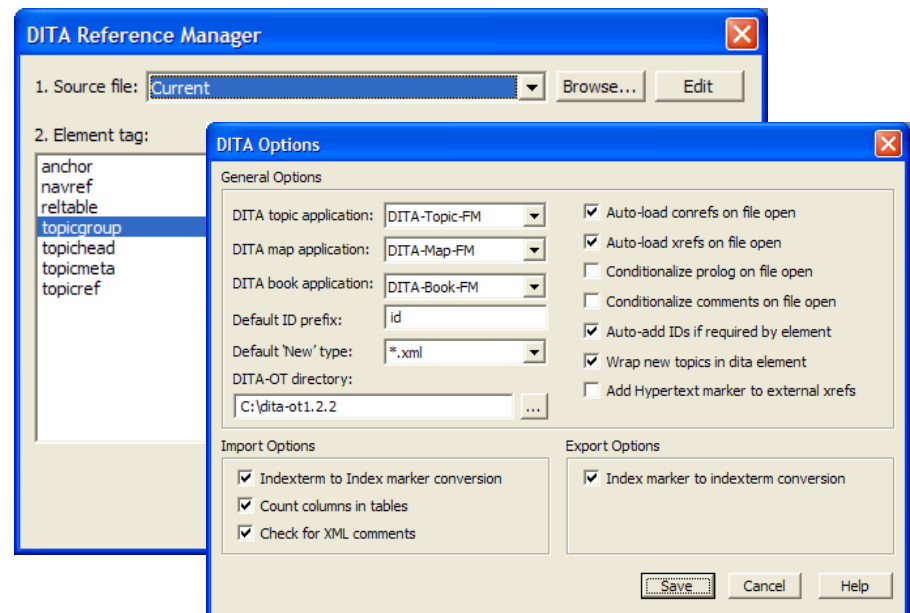
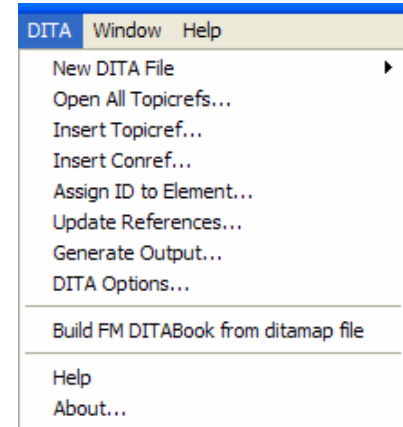
DITA Publishing Overview

- The DITA Open Toolkit offers a tool chain to produce a wide range of output formats
- Advantages: open source technology, updated in synchronization with DITA
- Disadvantages: requires programming skill to customize, quality of PDF output not always optimal
- There is no reason the OT can't be combined with other technologies...

- Document Type Definitions (DTD)
- Structured templates
- Read/write rules
- Element Definition Documents (EDD)
- Application Programming Interface (API) Clients
- FrameMaker Application File ties together all other “parts” of a project

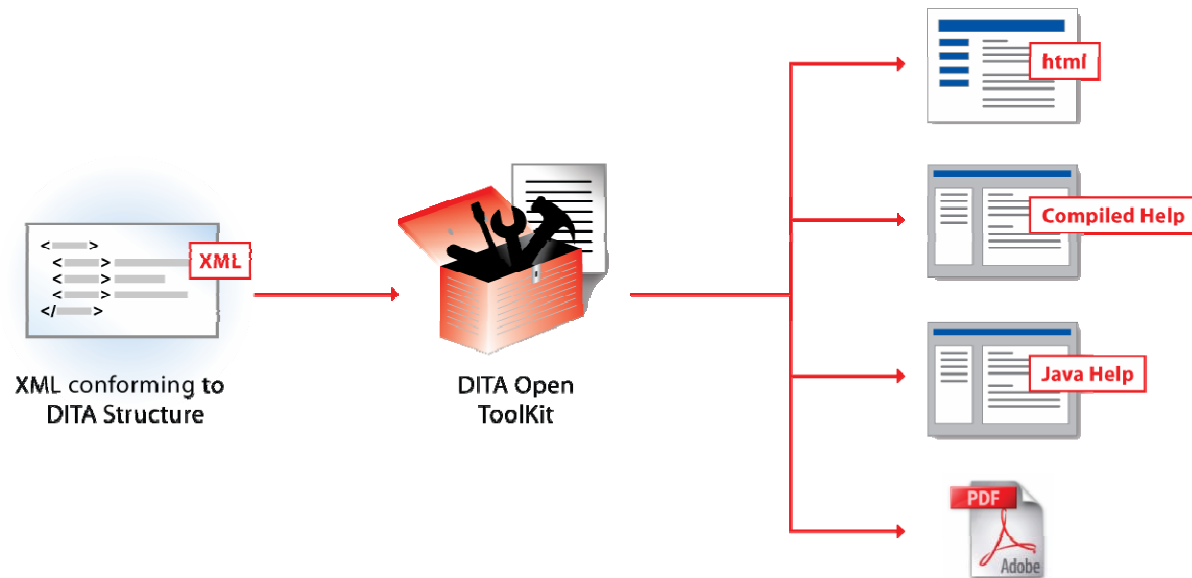
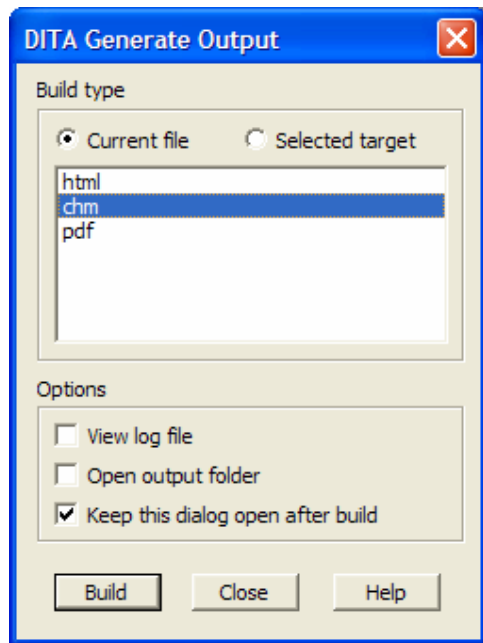
Adobe FrameMaker 7.2 Application Pack for DITA

- Released September 2006
- Freely available from <http://www.adobe.com/go/DITA>
- Core DITA features implemented:
 - Conrefs
 - Maps
 - Reltables
 - DITA OT integration
 - Book generation from DITA map
- Documentation (at above link)



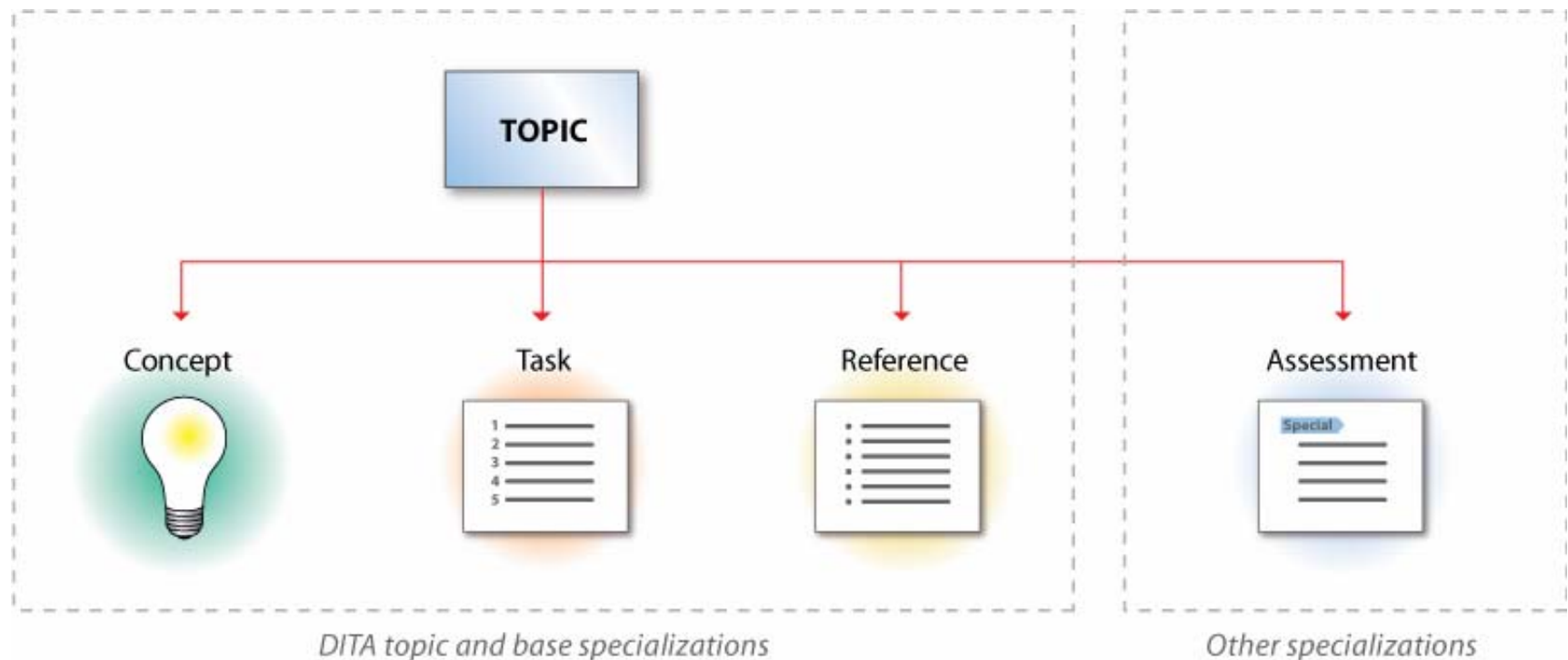
Adobe FrameMaker 7.2 Application Pack for DITA – DITA OT

- Integration with the DITA Open Toolkit – simple but powerful



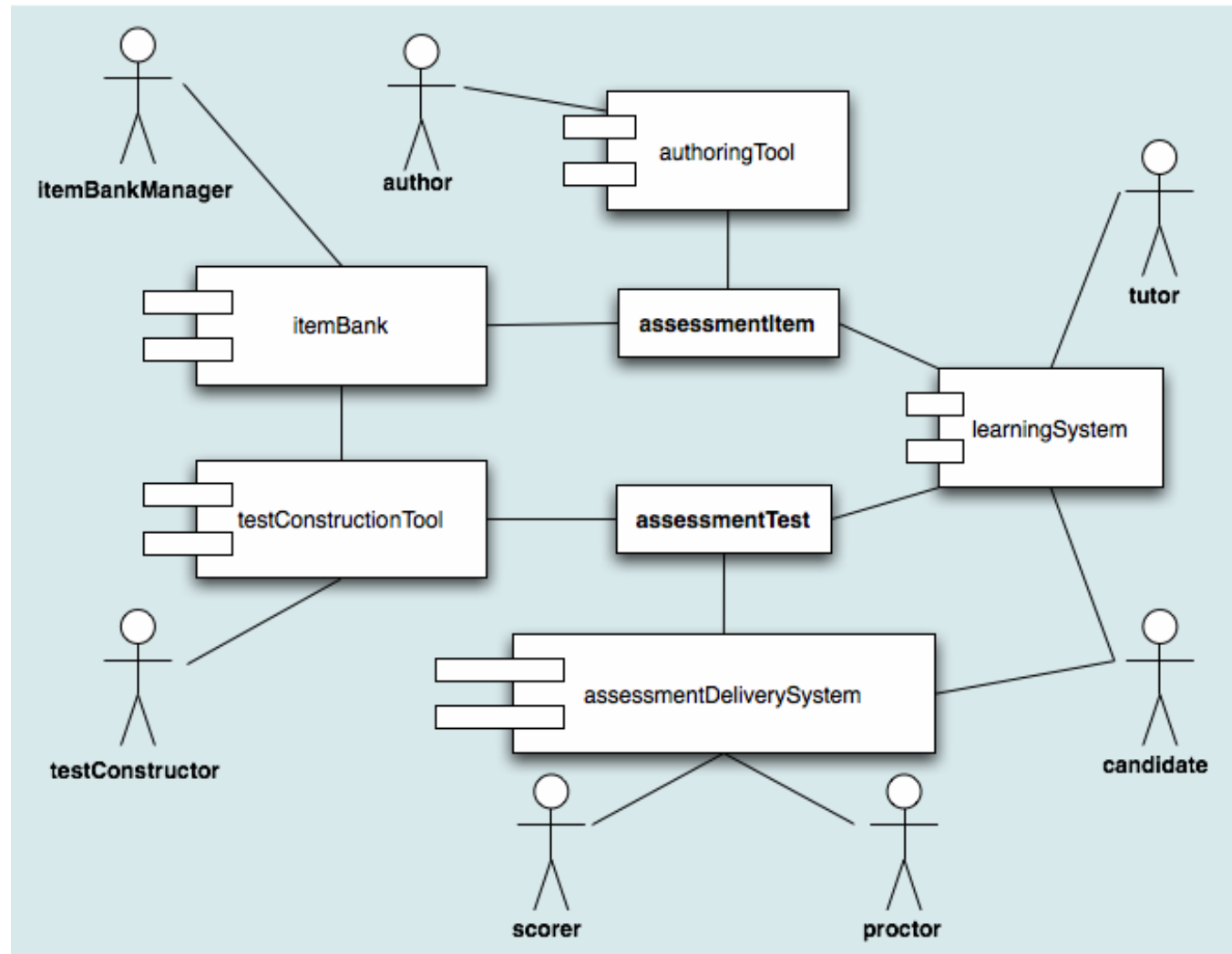
Adobe FrameMaker 7.2 Application Pack for DITA – Specialization

- Example specialization on Labs.adobe.com
- Simple eLearning specialization
- OASIS sub-committee on eLearning formulating a real one...



Demo: eLearning Specialization

- The world of QTI



- Adobe Flash – high-quality interactive content

- Increasing XML support
- Probably ideal to process XML outside of Flash
- Open laszlo one way to generate Flash from intermediate XML file

```
14 function xmlInitialize(XMLloaded){
15     if (XMLloaded == true)
16     {
17         xmlString = xmlObj.toString();
18         var quizNode=this.firstChild;
19         var itemsNode:Array = quizNode.childNodes[1].childNodes;
20         totalQuestions = itemsNode.length;
21         quizTitle = quizNode.firstChild.firstChild;
22         setStimulus();
23         firstTime++;
24     }else{
25         trace ("XML not loaded");
26     }
27 }
```

- Adobe InDesign – high-quality print output

- High-end design capability, Postscript level 3 features
- Increasing XML support, primarily for publishing not authoring
- Still probably ideal to process XML outside of InDesign

- FrameMaker App Pack/whitepapers:
<http://labs.adobe.com>
<http://www.adobe.com/go/dita/>
- Adobe Solutions Network:
<http://partners.adobe.com/>
- Silicon Publishing:
<http://www.siliconpublishing.com>
maxdunn@siliconpublishing.com
haydenjones@siliconpublishing.com