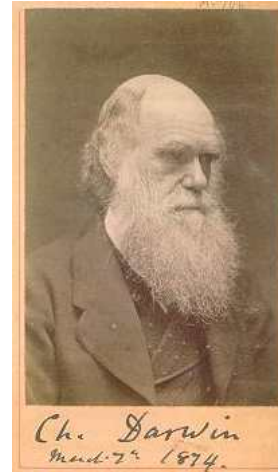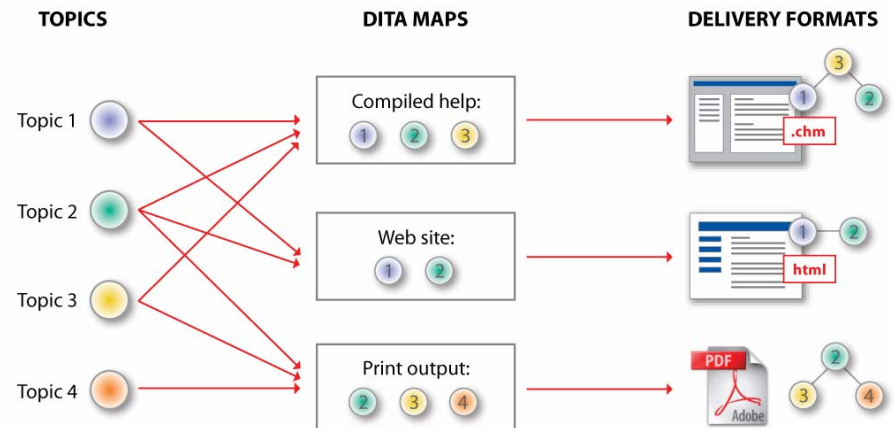# Publishing DITA with the new Adobe Technologies

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: 7 developers

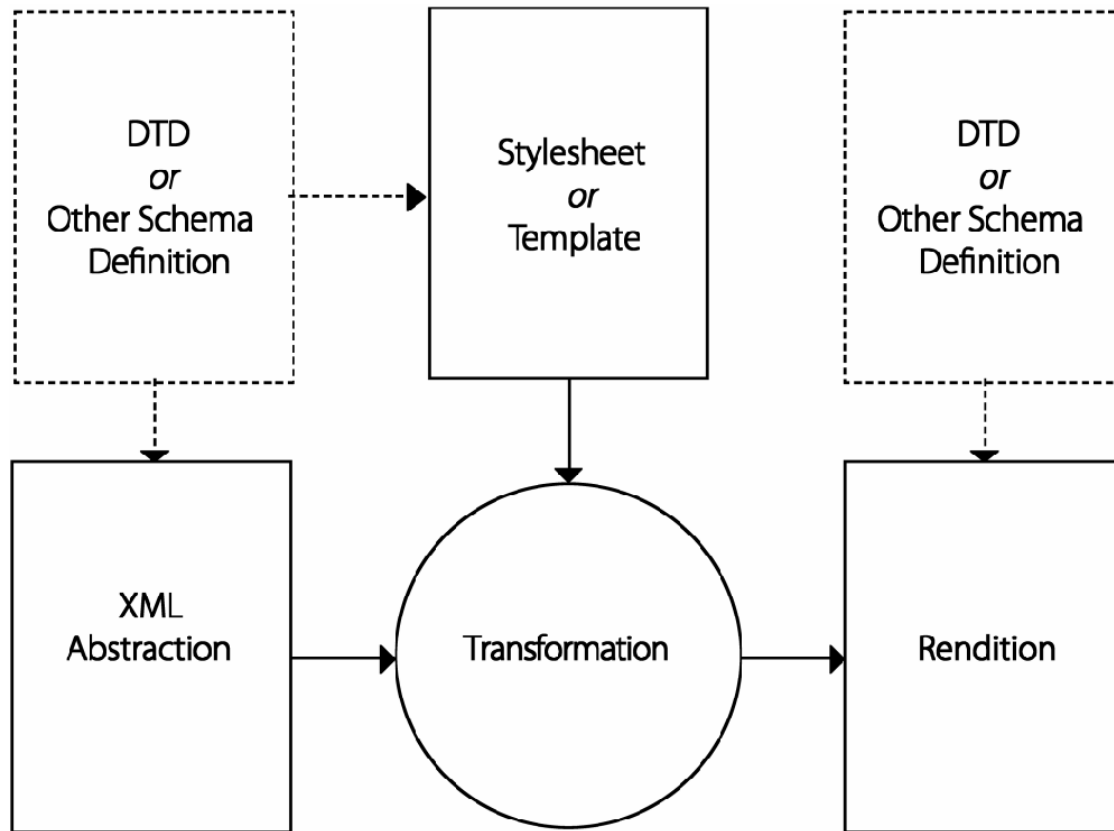- Silicon Publishing specializes in the automation of publishing technology

Agenda

- DITA – evolution of document-centric XML

- Adobe FrameMaker 8

- Adobe InDesign CS3

- Application Pack for DITA

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General XML Publishing Model

- ## 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

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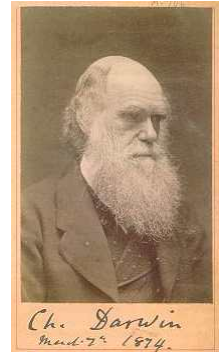PUBLISHING

## XML in the Document and Data Worlds

- **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 DITA

- **DITA solves core document-centric challenges:**

  - Home-built DTDs not required!

  - Re-use and cross-referencing mechanisms work!

  - OASIS standards body focused on the needs of those working with documents

  - Specialization offers elegant method of tailoring content…

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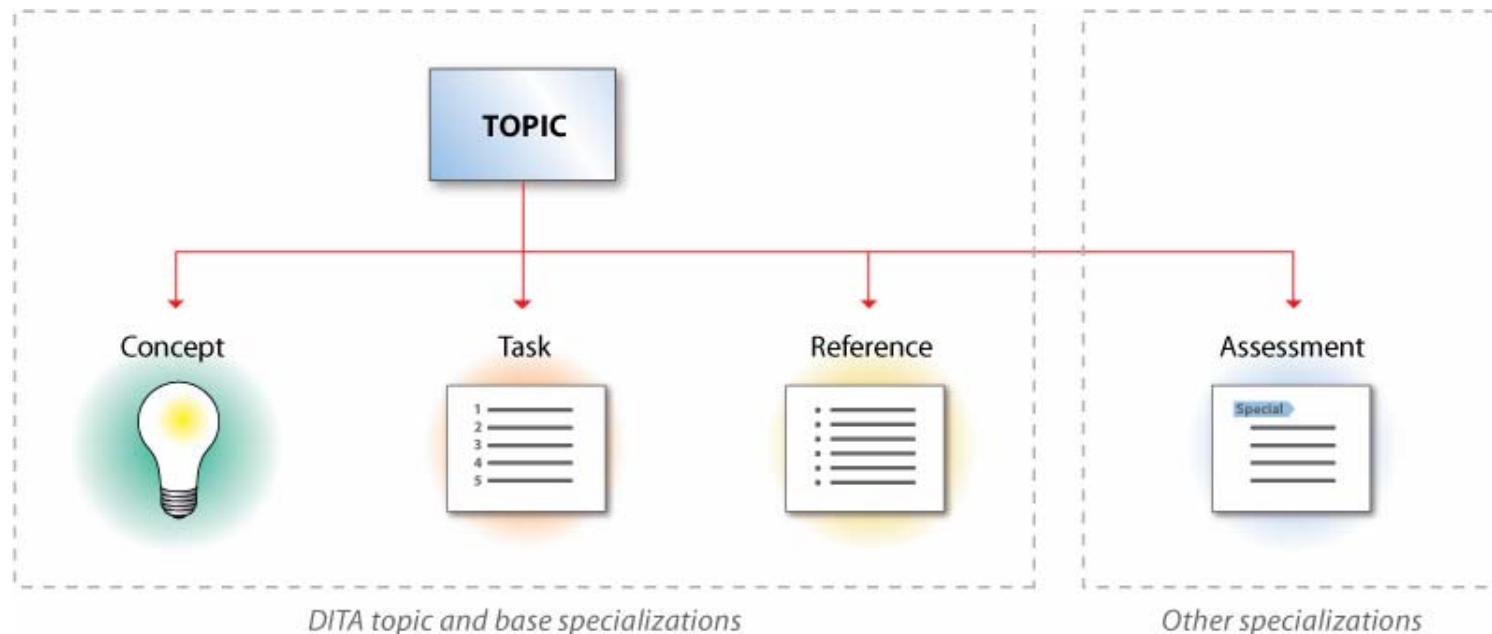# DITA Specialization

DITA topic and base specializations   Other specializations
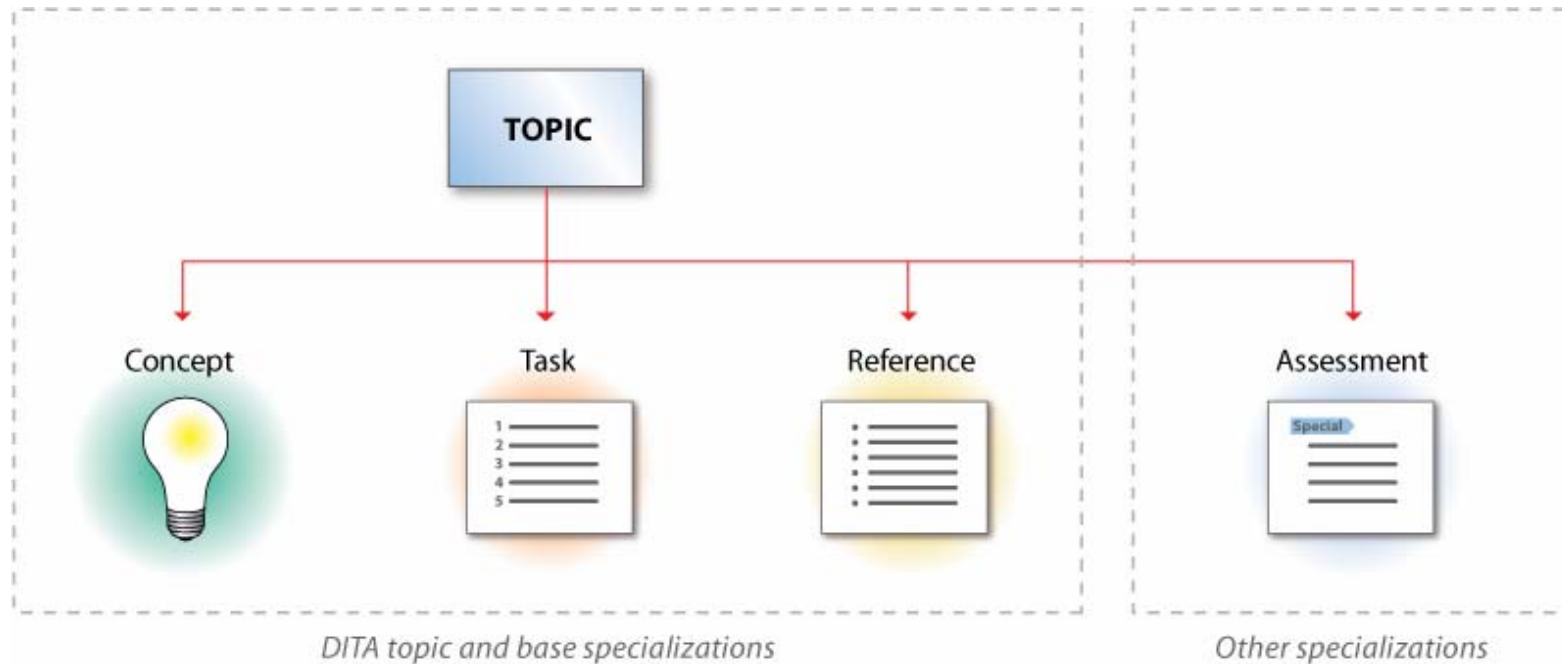
- Inheritance means that new document structures don't break publishing toolchains

- 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*

DITA topic and base specializations   Other specializations

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
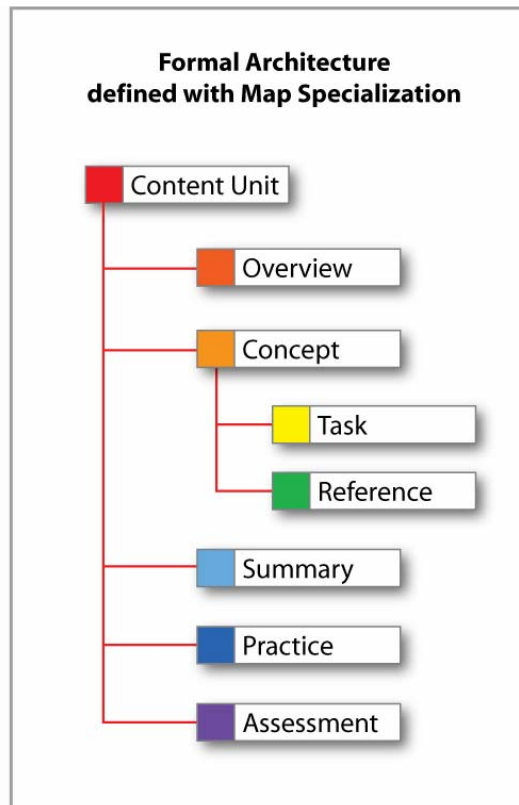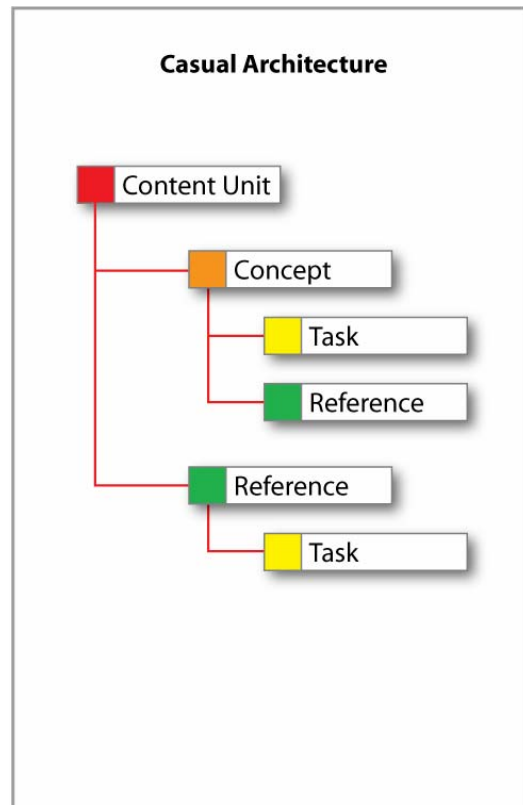
Specialization: specializing domains

- 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

CONTENT

```
<topic id="...">
 <title>...</title>
 <body>
  <section>
   ...
```
DITA content

```
<assessment id="...">
 <title>...</title>
 <assessmentbody>
  <item>
   ...
```
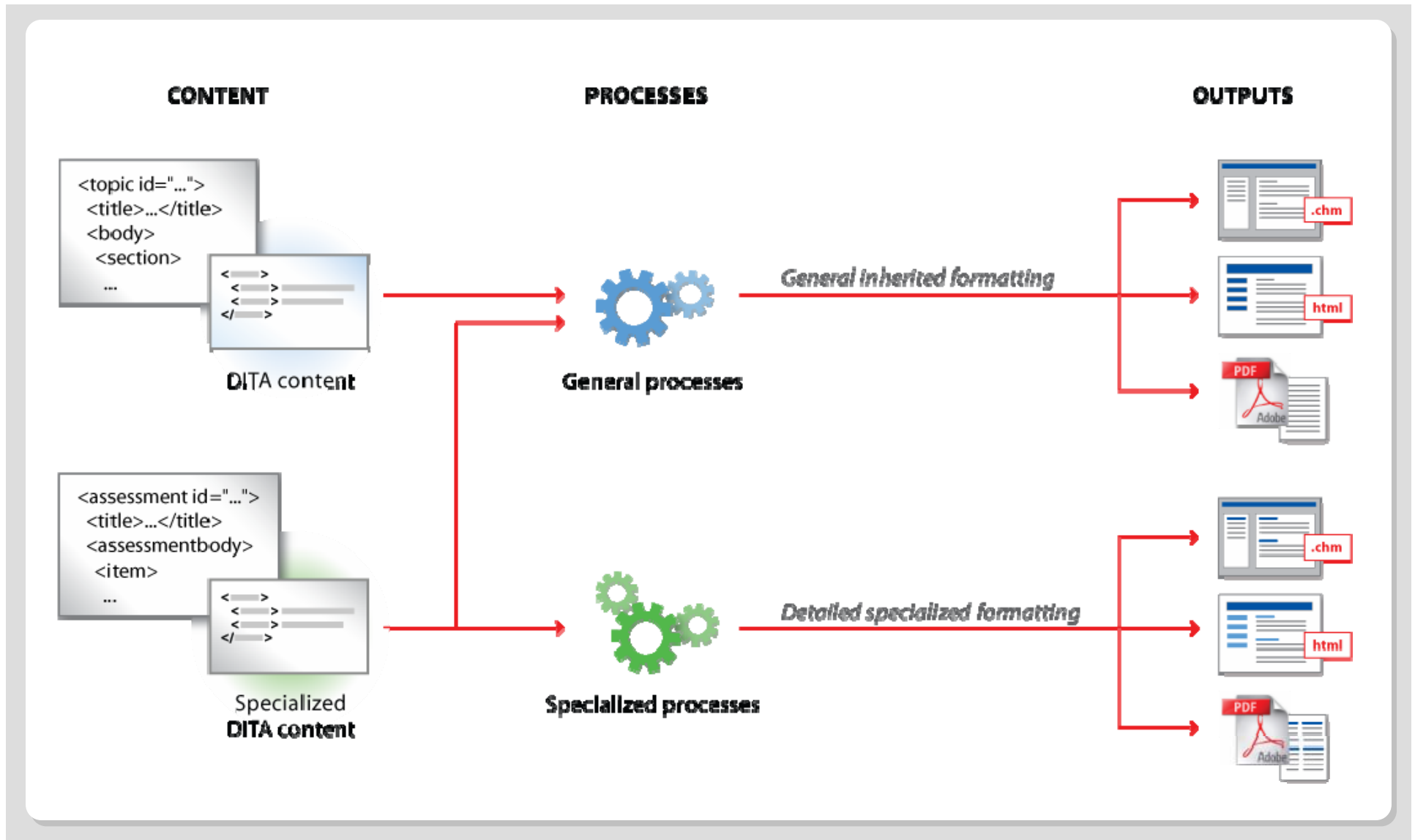Specialized
DITA content

PROCESSES

General processes

Specialized processes

OUTPUTS

.chm

html

PDF
Adobe

.chm

html

PDF
Adobe

General inherited formatting

Detailed specialized formatting

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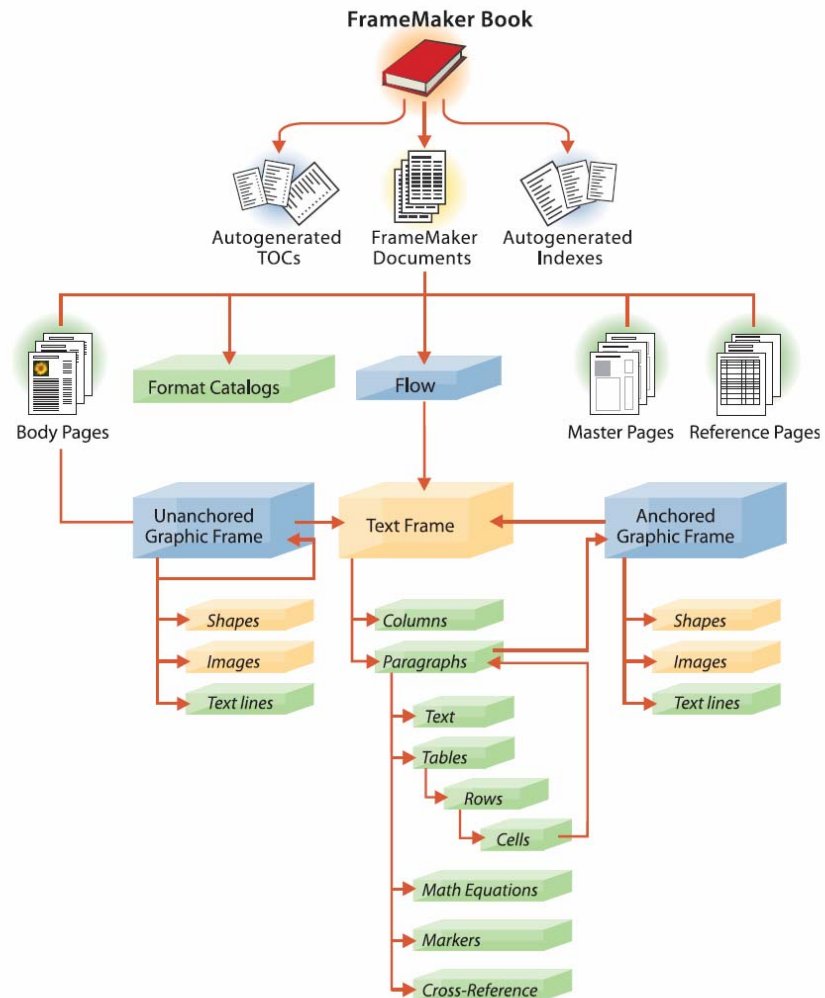PUBLISHING
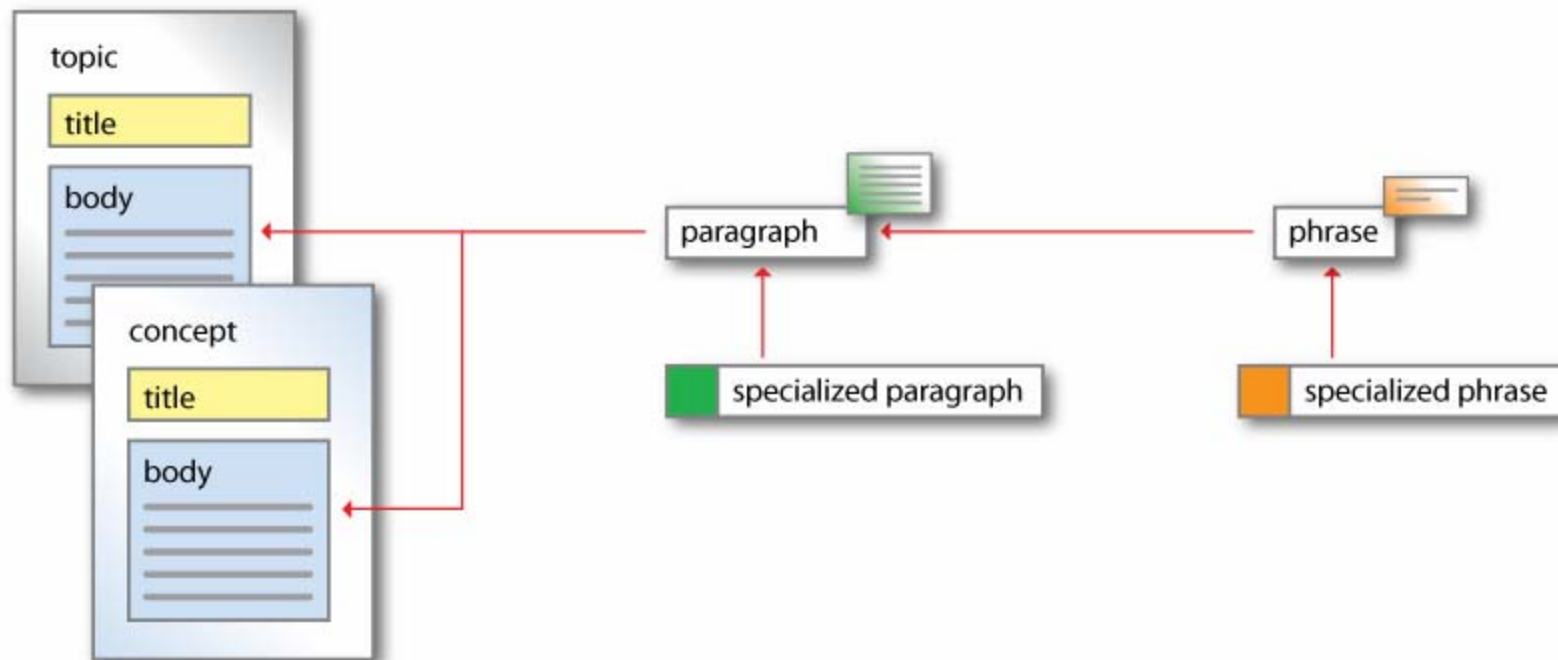
DITA Publishing Overview

- 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…

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Adobe FrameMaker

- Revolutionary approach to authoring, managing and publishing technical content

- FrameMaker was a pioneer

  - First WYSIWYG XML tool

  - DTD & XML Schema

  - Conditional text handling

  - Conversion features

  - In-line XSLT

- Emerging & established standards

Adobe FrameMaker

- **Highly evolved rich document object model**

- **GUI to define styles**

- **Structured and unstructured modes in a single FrameMaker product**

FrameMaker Book

Autogenerated TOCs — FrameMaker Documents — Autogenerated Indexes

Body Pages — Format Catalogs — Flow — Master Pages — Reference Pages

Unanchored Graphic Frame — Text Frame — Anchored Graphic Frame

- Shapes
- Images
- Text lines

- Columns
- Paragraphs
  - Text
  - Tables
    - Rows
      - Cells
  - Math Equations
  - Markers
  - Cross-Reference

- Shapes
- Images
- Text lines

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Adobe FrameMaker

- 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

- ## File > Structure Tools > Edit Application Definitions

- ## Contains a collection of 'paths' to files and instructions

- ## References to DTD, Template, Rules, etc.

- ## Instructions regarding conditions, API client, DOCTYPE, etc.

XML Application
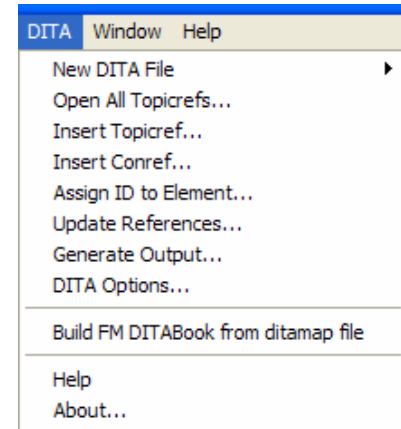
- ApplicationName
- DTD
- Template
- ReadWriteRules
- ConditionalText
- UseAPIClient
- DOCTYPE
- DOCTYPE
- DOCTYPE
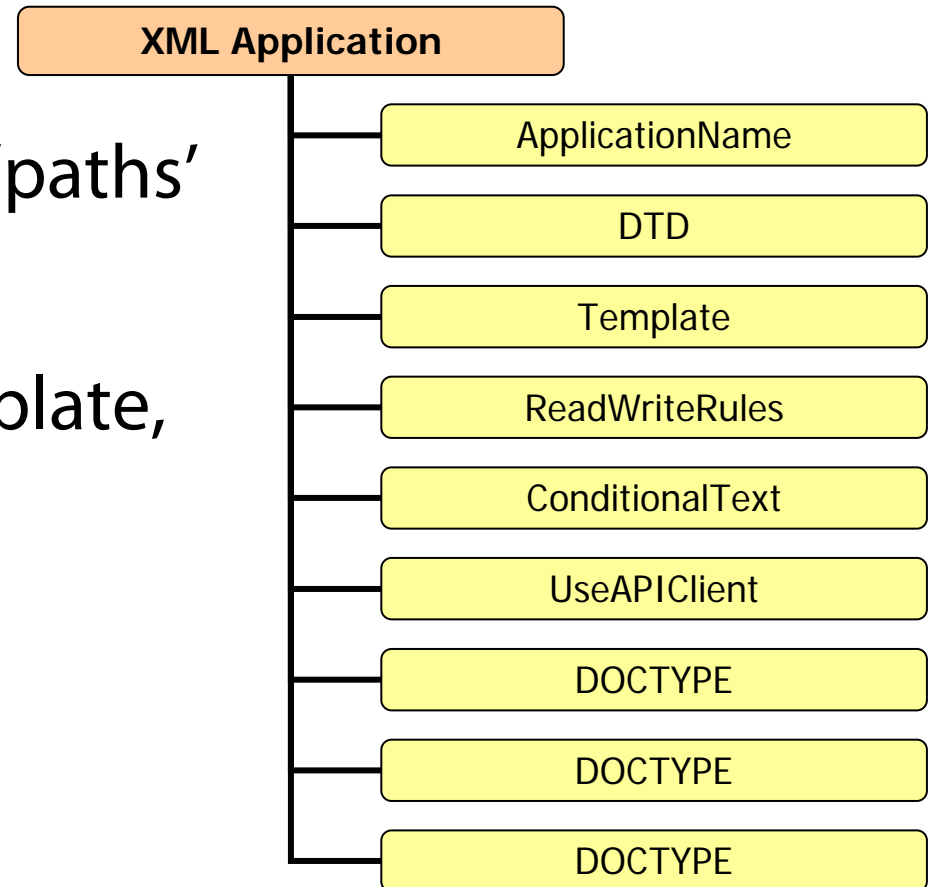
Adobe FrameMaker

- **Highly evolved formatting capability**

- **WYSIWYG XML authoring environment**

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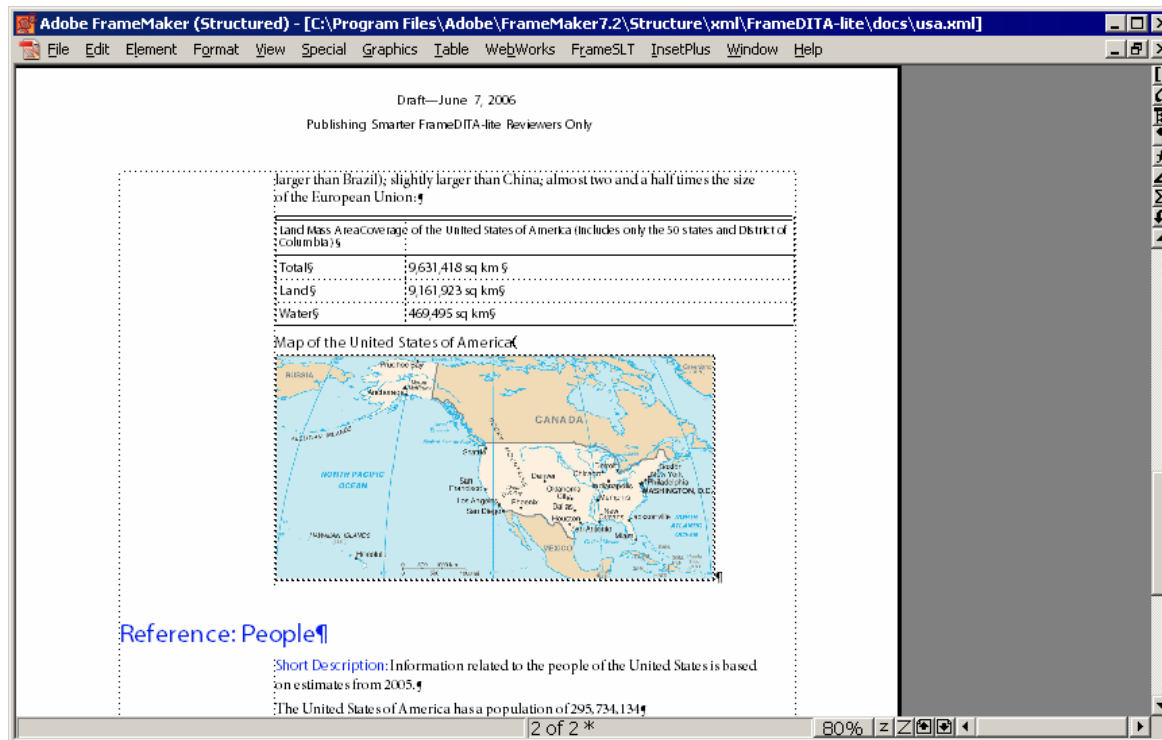
Adobe FrameMaker 7.2 Application Pack for DITA

- 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)

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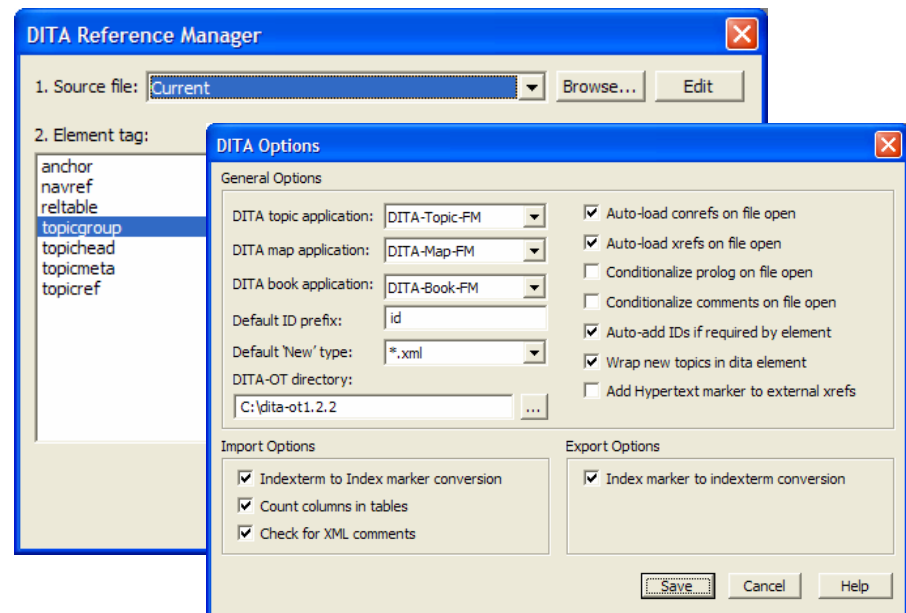
Adobe FrameMaker 7.2 Application Pack for DITA – DITA OT

- ▪ **Integration with the DITA Open Toolkit – simple but powerful**

DITA Generate Output

Build type

○ Current file   ○ Selected target

html
chm
pdf

Options

☐ View log file
☐ Open output folder
☑ Keep this dialog open after build

[Build]   [Close]   [Help]

XML conforming to
DITA Structure

XML

DITA Open
ToolKit

html
Compiled Help
Java Help
PDF Adobe

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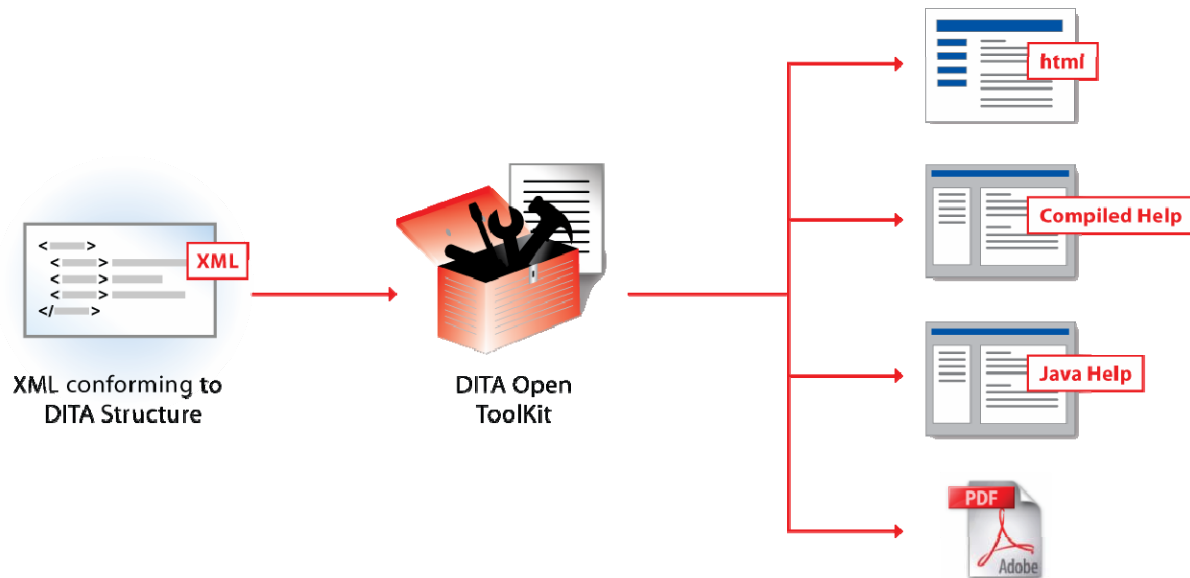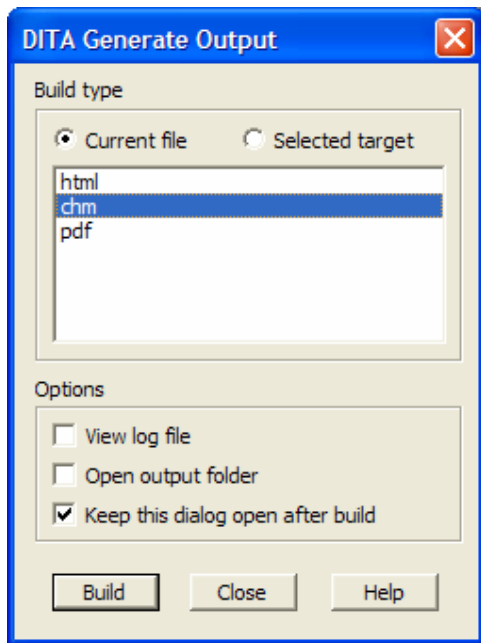
Adobe FrameMaker 8 – Built-in DITA support!

New Features

- Unicode

- WebDAV

- Rich Media – U3D

- DITA

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- ## 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  }
```

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Other Adobe Technologies for publishing DITA

- ## 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

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Other Adobe Technologies for publishing DITA

- ## Adobe InDesign CS3, New Features

  - New transparency features

  - Multi-file place

  - Table and cell styles

  - Long document support

    - Bullets and numbering

    - Running headers/footers

    - Synchronized master pages

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Resources

- FrameMaker
  http://www.adobe.com/products/framemaker/

- InDesign CS3
  http://www.adobe.com/products/indesign/

- Adobe Solutions Network:
  http://partners.adobe.com/

- Silicon Publishing:
  http://www.siliconpublishing.com
  maxdunn@siliconpublishing.com
  haydenjones@siliconpublishing.com

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