



# DITA

## Darwin Information Typing Architecture

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**Scott Wolff**  
**WOLFF & Associates, LLC.**  
XML, CMS, DITA Consultant

**Presented to Snake River STC**  
**Thomas Hammer Coffee House**

# Outline

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- [What is DITA?](#)
- [Getting started with DITA](#)
- [DITA Topics & Types](#)
- [DITA Concepts](#)
- [Getting started with Specialization](#)
- [Practical Design](#)
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## What is DITA?

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# About DITA

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## **D**arwin **I**nformation **T**yping **A**rchitecture

OASIS standard initiated by IBM, Nokia

DITA 1.0 released 2005

DITA 1.1 released August 2007 OT 1.4

DITA 1.2 planned for 2009 in OT 1.5

# What is DITA?

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## DITA is distinguished by...

- 1. XML vocabulary**  
<topic>, (<task>, <concept>, <reference>)
- 2. Topic based architecture**
- 3. Specialization**
- 4. Simple addressing**  
filename.xml#topicid/elementid

# DITA-Open Toolkit

A ready to use, integrated publishing solution for rendering your DITA based content into a variety of formats such as; PDF, XHTML, Java Help, Eclipse Help, Docbook.

- OT includes:**
- ANT Build scripts
  - DITA DTD's
  - DTD XSLT's
  - An integrated set of applications (Saxon, FO, XEP)



DITA Open Toolkit Download Site

[http://sourceforge.net/project/showfiles.php?group\\_id=132728&package\\_id=145774](http://sourceforge.net/project/showfiles.php?group_id=132728&package_id=145774)

# Topic

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*“A **topic** is a unit of information with a title and content, short enough to be specific to a single subject or answer a single question, but long enough to make sense on its own and to be authored as a unit.”*

# DITA Architecture

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- Topic oriented
- “Architected” for extension through refinement. (specialization)
- The physical architecture of the DTD’s are organized to facilitate three types of specialization:
  1. Topic
  2. Domain
  3. Domain Attribute

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## Getting Started with DITA

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## Download the DITA-OT

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1. Download the **DITA-OT** at Sourceforge
2. Download the **Specifications**
3. Download the **DITA-OT User Guide**
4. Download the **Lone DITA GSG**

Links available at:

[www.ScottWolff.com/DITALinks.aspx](http://www.ScottWolff.com/DITALinks.aspx)

## DITA specification:

### **DITA Architectural Specification**

- Background concepts and an overview of the architecture
- Overview of DITA's base document types
- DITA processing specification
- DITA specialization specification

### **DITA Language Specification**

- Language reference with explanations for each element type providing examples, contains, contained by, and attribute definitions

### **DITA Document Type Definition**

- Structure Rules for element types and their attributes

<http://docs.oasis-open.org/dita/v1.1>

## DITA Subcommittees

- **Translation**
- **Learning and Training**
- **Machine Industry**
- **Semiconductor**
- **Enterprise Business Documents**
- **Help**

## Useful Online Resources

- **Yahoo DITA Users**
- **DITA XML.org**
- **DITA Users**
- **DITA World**
- **WOLFF & Associates**

Links available at:

[www.ScottWolff.com/DITAlinks.aspx](http://www.ScottWolff.com/DITAlinks.aspx)

# Applications for DITA

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## Editors

- XMetal
- Arbortext

## CMS

- Vasont
- Contenta
- e:CLS
- Trisoft CMS
- Grips
- ConteX

## SaaS

- DocZone.com
- Astoria

## Publishing

- XSLT
  - Saxon
  - Xalan
- XSL-FO
  - RenderX XEP
  - XSL Formatter

# DITA offers...

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- **Open Source Topic Based Architecture**
- **DITA Specialization**
- **DITA Toolkit**

# Training you may invest in

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- Information Modeling
- XML
- DITA Specialization
- Styling: XSLT, XSL-FO, Styler
- Applications: Editors & CMS

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## DITA Topics & Types

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# (DTD) Document Type Definition

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The **DTD** ensures:

- consistency
- enforcing structure
- defining element names
- attributes and values

The DTD enables **Validation** insuring that downstream processing can be designed to correctly render your documents by applying formatting rules to a known document structure.

## DITA Task DTD (fragment)

```
<!--          LONG NAME: Task          -->
<!ELEMENT task      ((%title;), (%titlealts;)?,
                    (%shortdesc; | %abstract;)?,
                    (%prolog;)?, (%taskbody;)?,
                    (%related-links;)?, (%task-info-types;)* ) >
<!ATTLIST task
  id      ID          #REQUIRED
  conref  CDATA       #IMPLIED
  %select-atts;
  %localization-atts;
  %arch-atts;
  outputclass
          CDATA       #IMPLIED
  domains CDATA       "&included-domains;" >

<!--          LONG NAME: Task Body      -->
<!ELEMENT taskbody  ((%prereq;)?, (%context;)?,
                    (%steps; | %steps-unordered;)?,
                    (%result;)?, (%example;)?, (%postreq;)? ) >
<!ATTLIST taskbody
  %id-atts;
  %localization-atts;
  base    CDATA       #IMPLIED
  %base-attribute-extensions;
  outputclass
          CDATA       #IMPLIED >
```

# DITA Topic Types

topic	Generic topic – from which task, concept and reference topics are specializations.
task	Stepwise instructions, tasks, procedures and process.
concept	definitions, concepts and descriptive information in support of a task.
reference	referential information such as look up tables, data needed to complete a task.
glossentry	definition of a glossary term.

# Topic in Information Design

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- User goals
- Task focused information
- Task driven design
- Task sequencing and hierarchies

# Minimalism

1. **Document tasks**, not tools
2. **Use imperative, action oriented** communication
3. Help readers **anticipate** and **avoid errors**
4. Help readers **identify** and **recover** from errors
5. **Provide the smallest amount of instruction** needed for the user to be successful
6. Encourage **hands-on** exploration



# Why write using topics?

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## Topics:

1. Encourage consistent document structure
2. Facilitate solutions-oriented information design
3. Translate well contextually
4. Enable cross-organizational publishing
5. Support task based information design

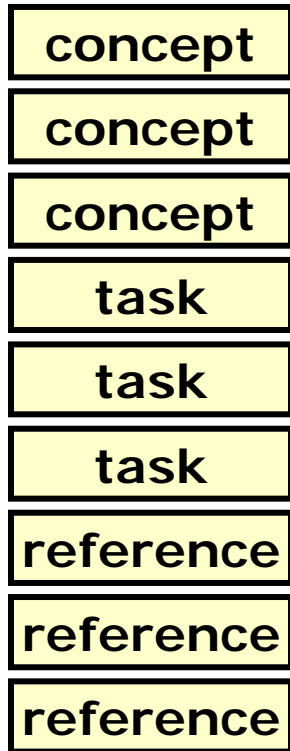
# Why write using topics?

- Topics are the ideal size for reusability.  
(Typically 1 page or less per topic)
- The same topics can be organized in multiple ways, allowing different audiences and different publication formats to be generated from the same content



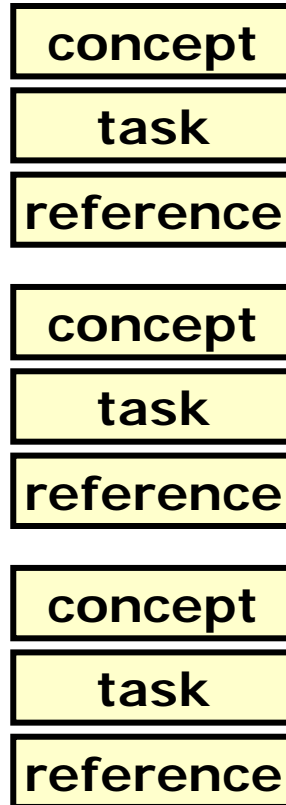
# Repurposing

## Single Document



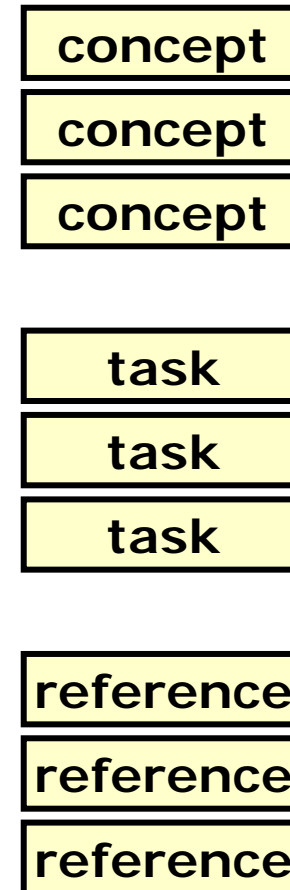
and

## Web



and

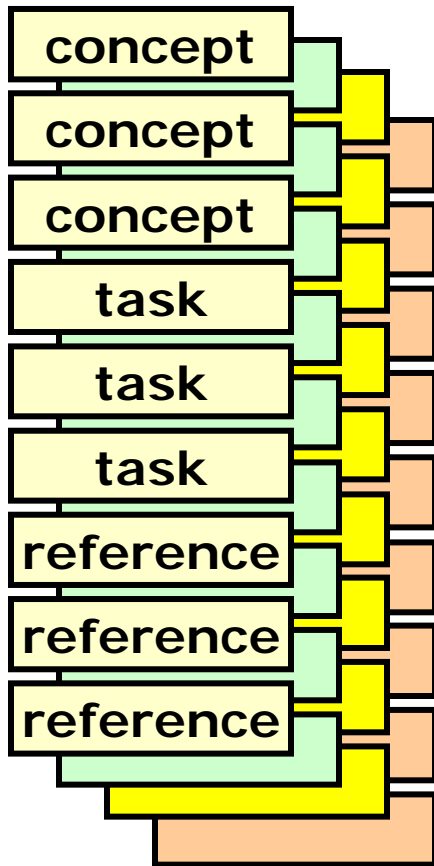
## Multiple Documents



en fr de es

# Translation Reuse

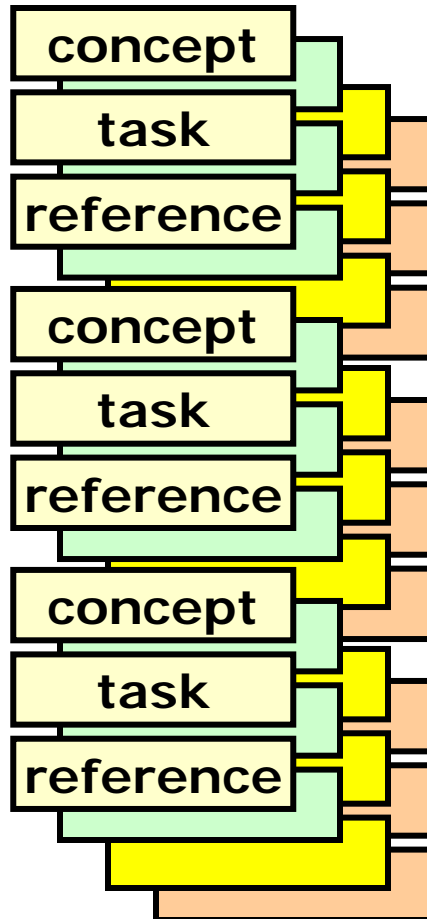
## Single Document



en fr de es

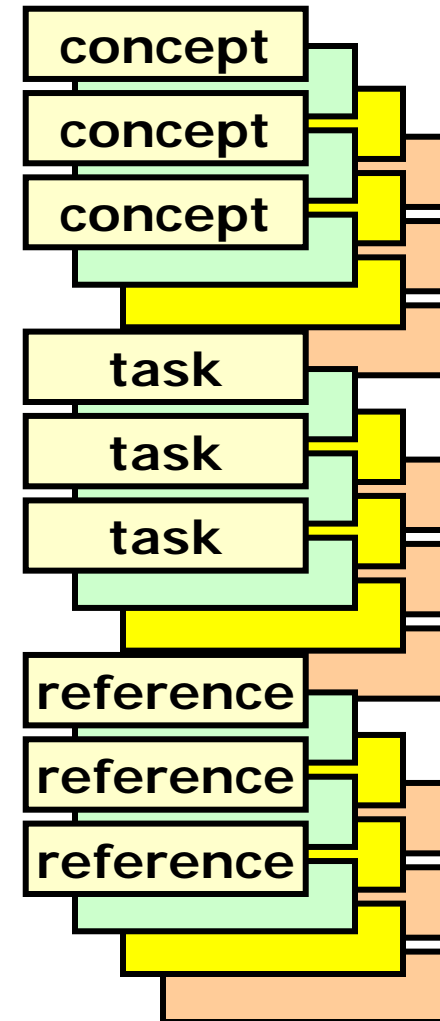
and

## Web



and

## Multiple Documents



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# DITA Concepts

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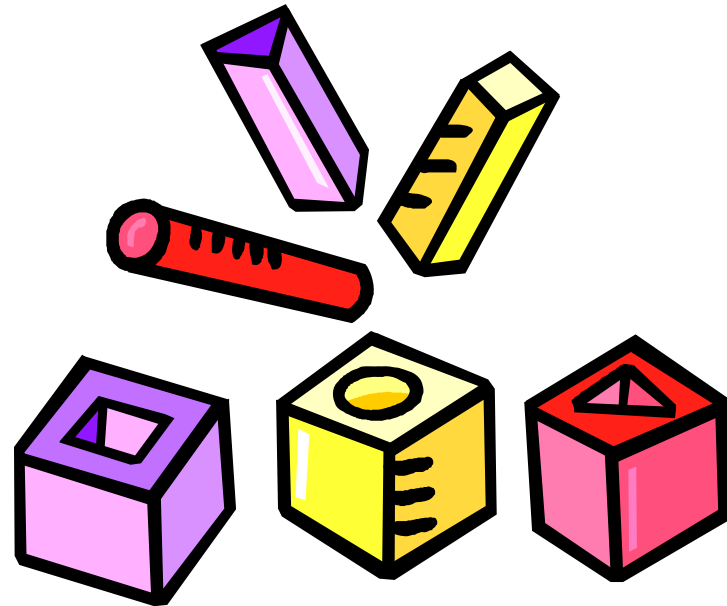
# DITA is about Assembly

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- (bookmap) Books are maps
- (maps) Maps are collections of topics
- (topics) Topics are typed information components created for a purpose
- (blocks) Topics contain blocks
- (inline) Blocks contain inline elements such as phrases

# DITA is about Reuse

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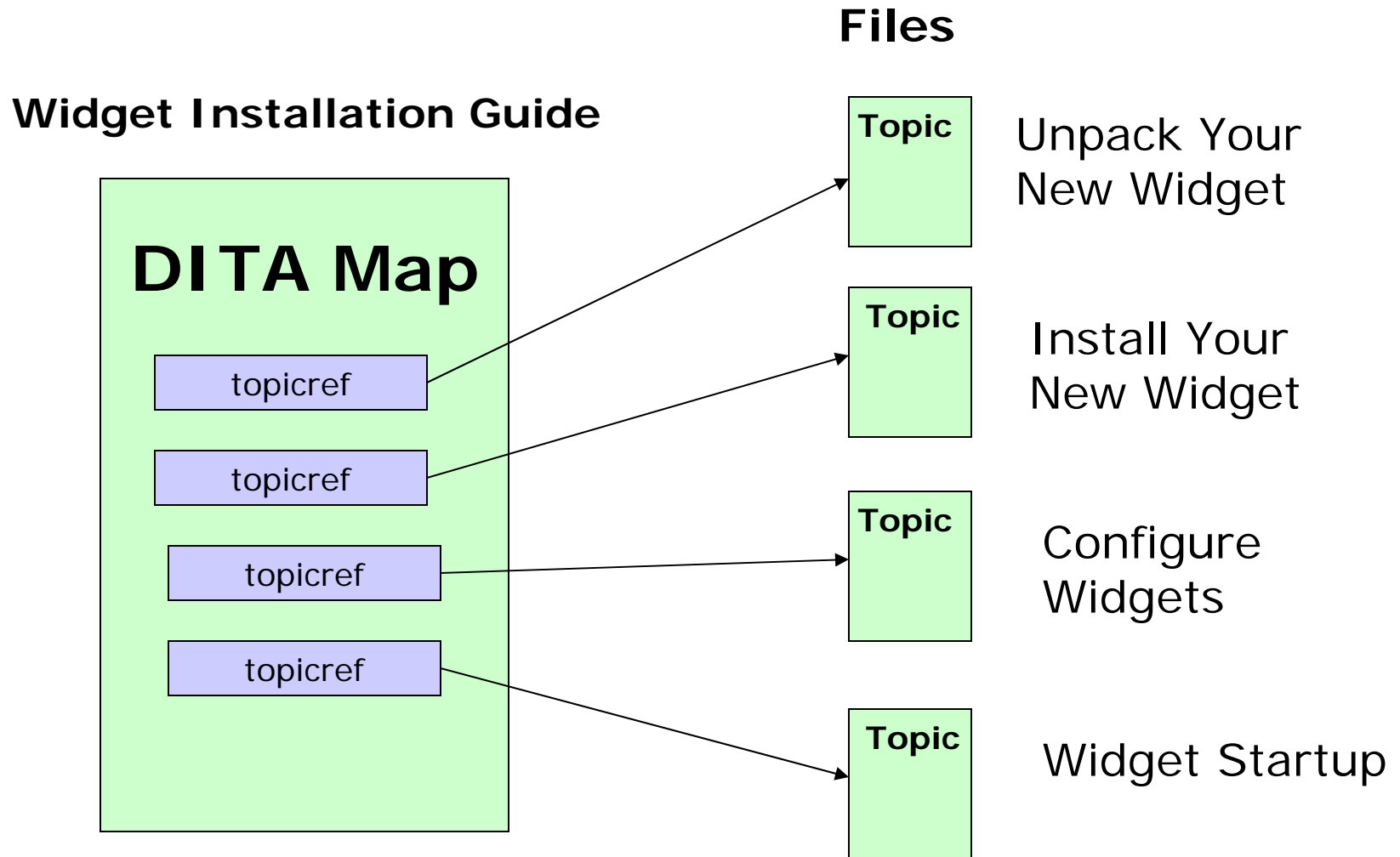
In DITA, all content is a reusable!

# Types of Reuse in DITA

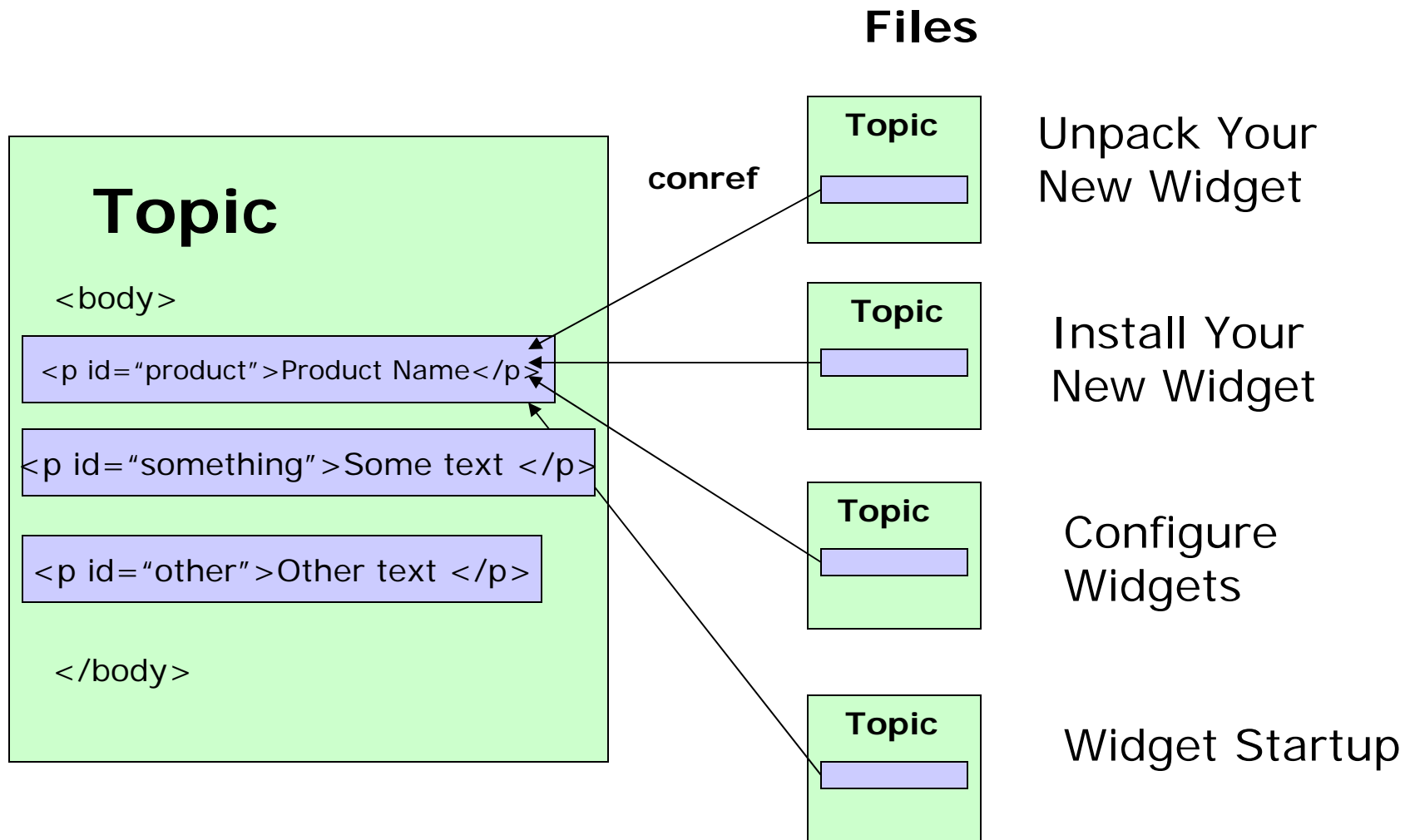
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- Reuse of DITA maps
  - (topicref) map references
- Reuse of topics
  - (topicref) topic references
  - (ditaval) conditional publishing
- Reuse of block & inline elements
  - (conref) content references

# DITA Map's & topicref's

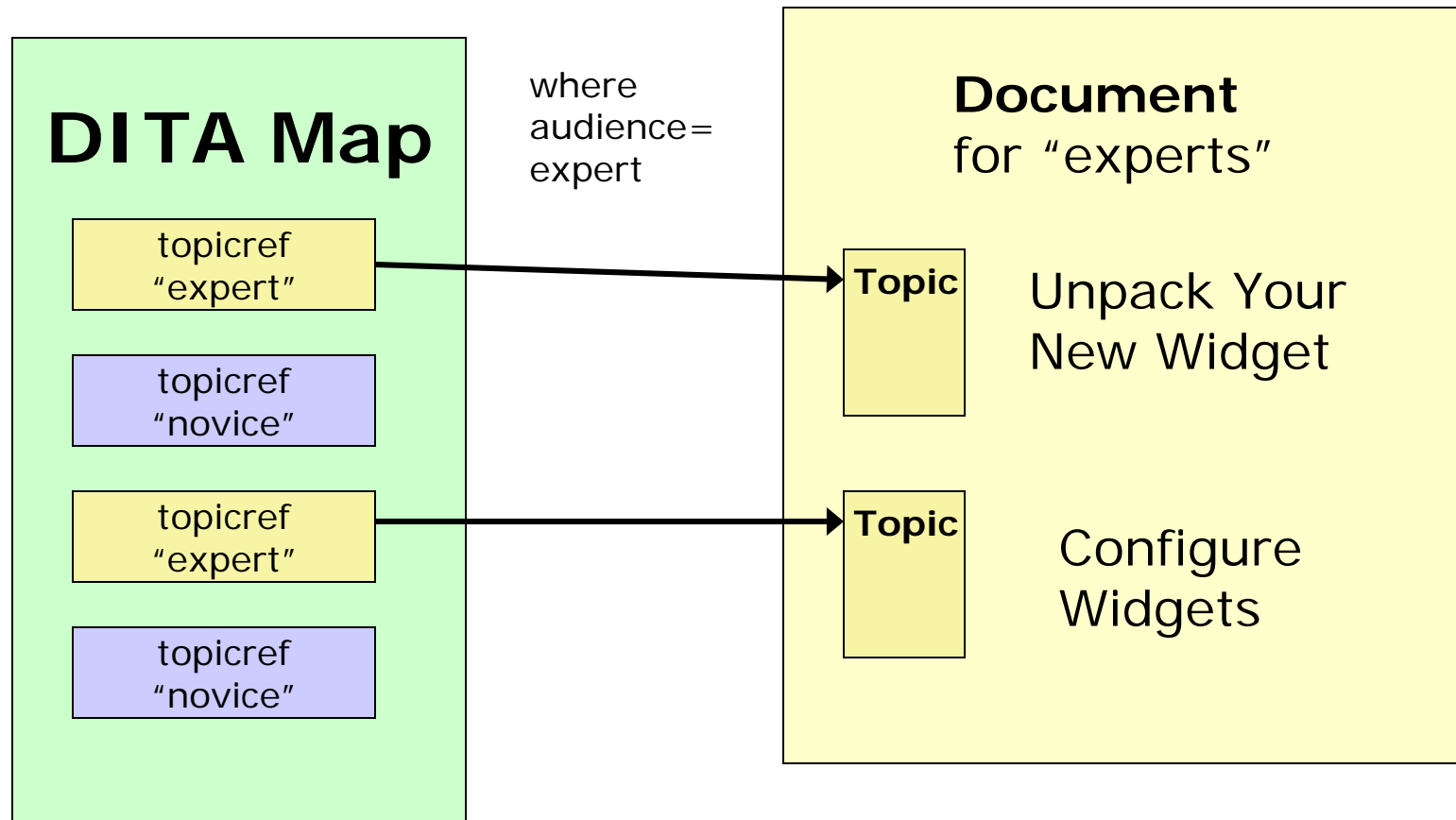


# Content References



# Conditional Publishing

## Widget Installation Guide



# Conditional Publishing

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## Target Publications based upon:

- By audience expertise or group
- By product, service or bundle
- By customer role
- By region and/or language
- By industry
- By delivery requirements such as device constraints

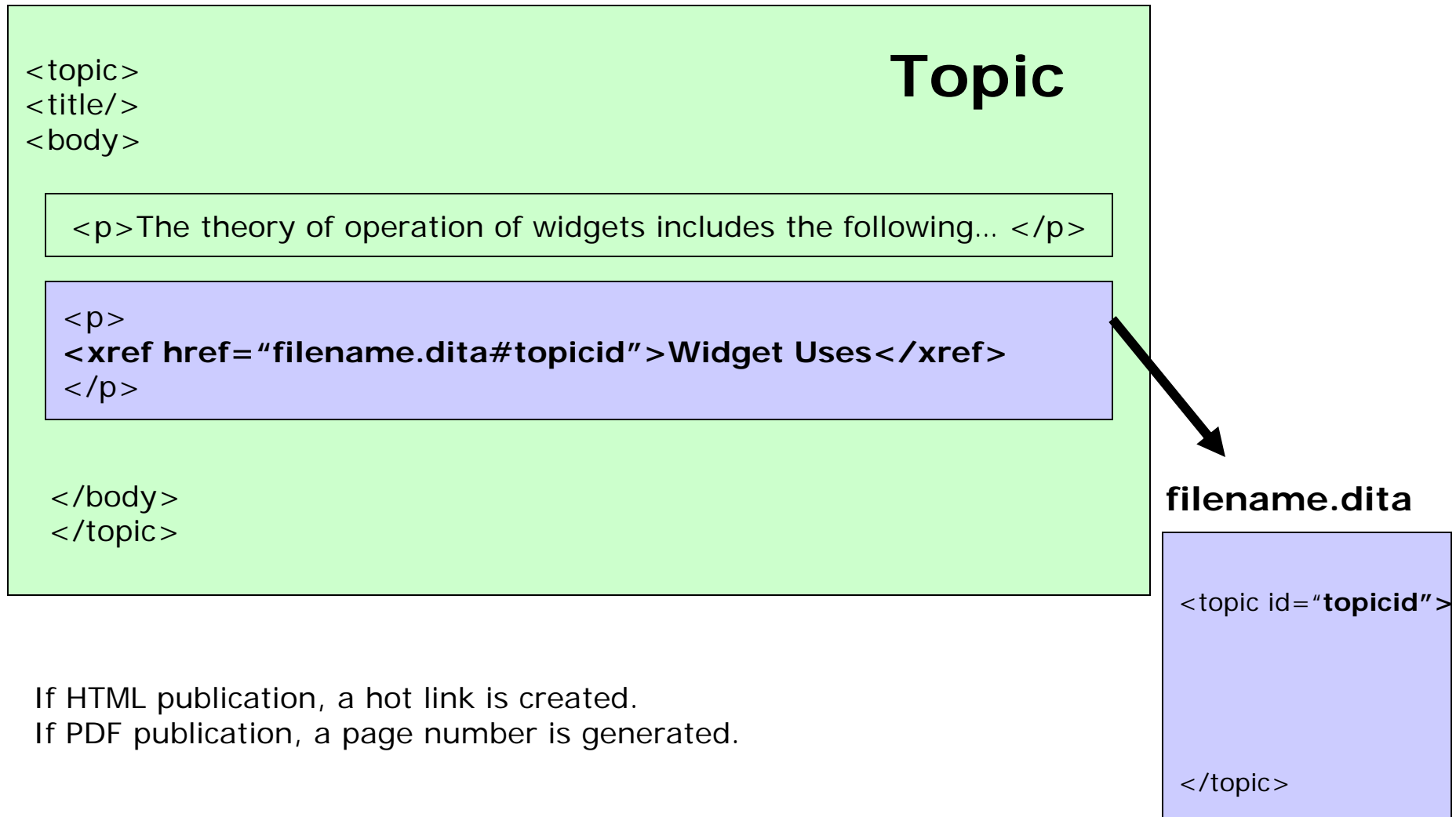
# Conditional Publishing

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**DITA defines these conditional attributes:**

- audience
- platform
- product
- otherprops

# Cross Reference



If HTML publication, a hot link is created.  
If PDF publication, a page number is generated.

# Relationship Tables

task	concept	reference
Install Rotor	Theory of Lift	Rotor Lubrication
	←→	←→
Mount Motor Mount Housing	Torque and HP	Bolt specifications
	←→	←→

Relationship tables are used to create relationships between topics. They are typically ignored for Hardcopy, and rendered as links at the bottom of each topic for web pages.

Relationship tables improve content reuse by defining relationships at the document level rather than embedding them in to the topics.

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## Getting Started with Specialization

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# What is Specialization?

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## Specialization:

The process of defining new information types based on existing information types.

The new information type **MUST** be “valid” within the constraints of the parent information type in order for the new type to be architecturally consistent with the overall DITA specification.

## Specialize When...

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Use specialization when:

- Greater control over structure
- Improved usability  
by creating meaningful names
- Refine processing and formatting

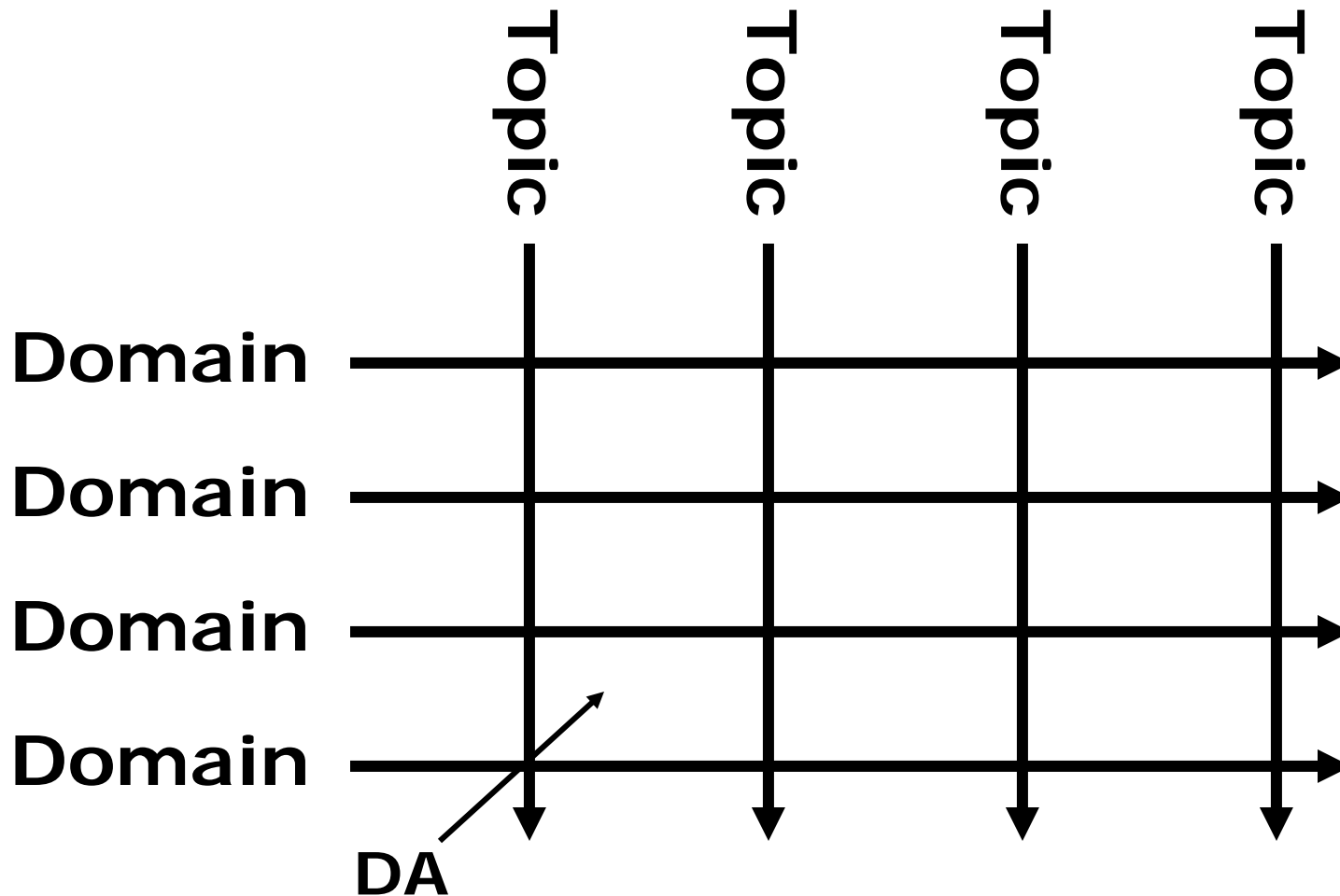
# Three Types of Specialization

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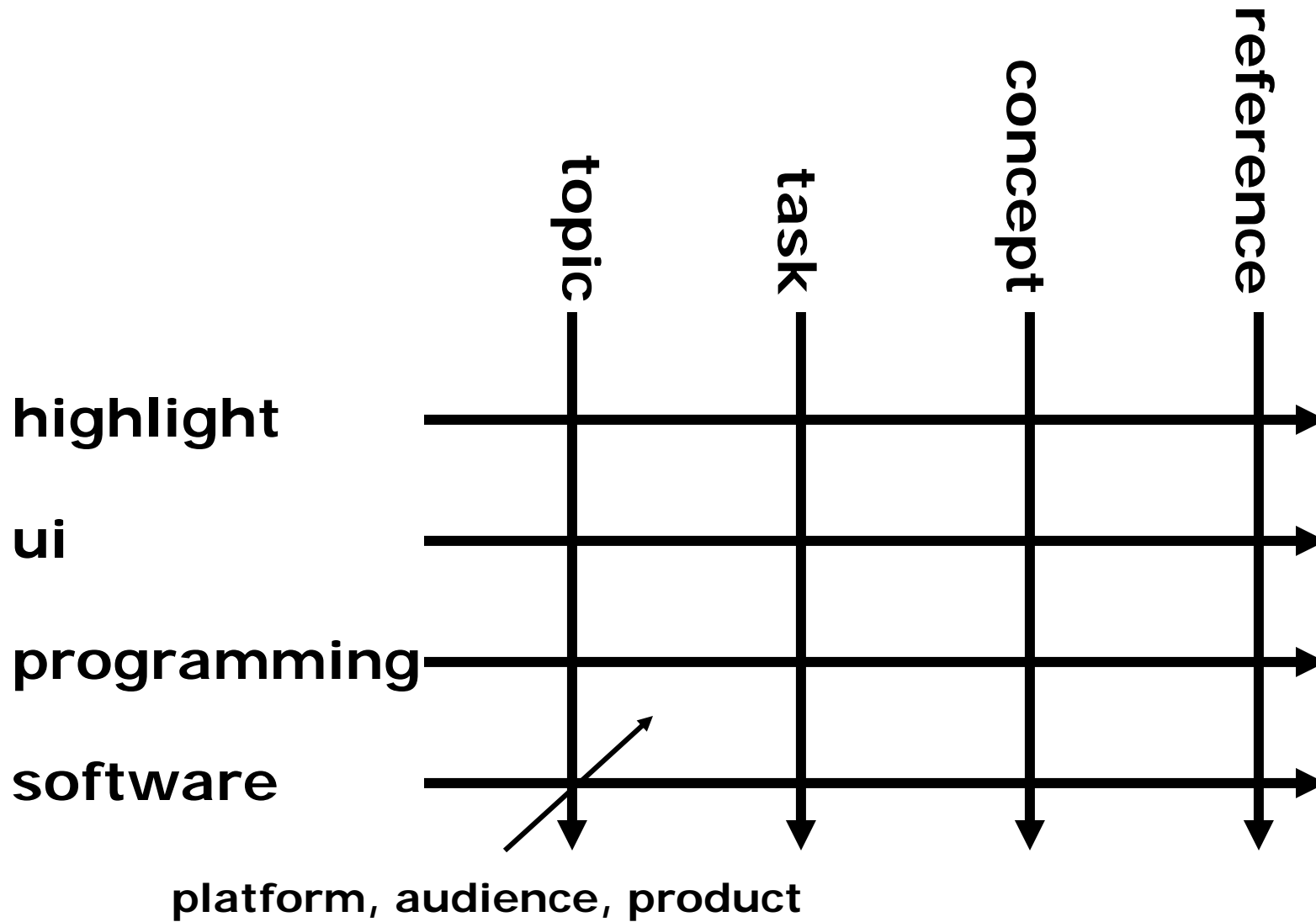
## Three types of Specialization

1. Topic Specialization
2. Domain Specialization
3. Domain Attribute Specialization

# DITA's Orthogonal Architecture

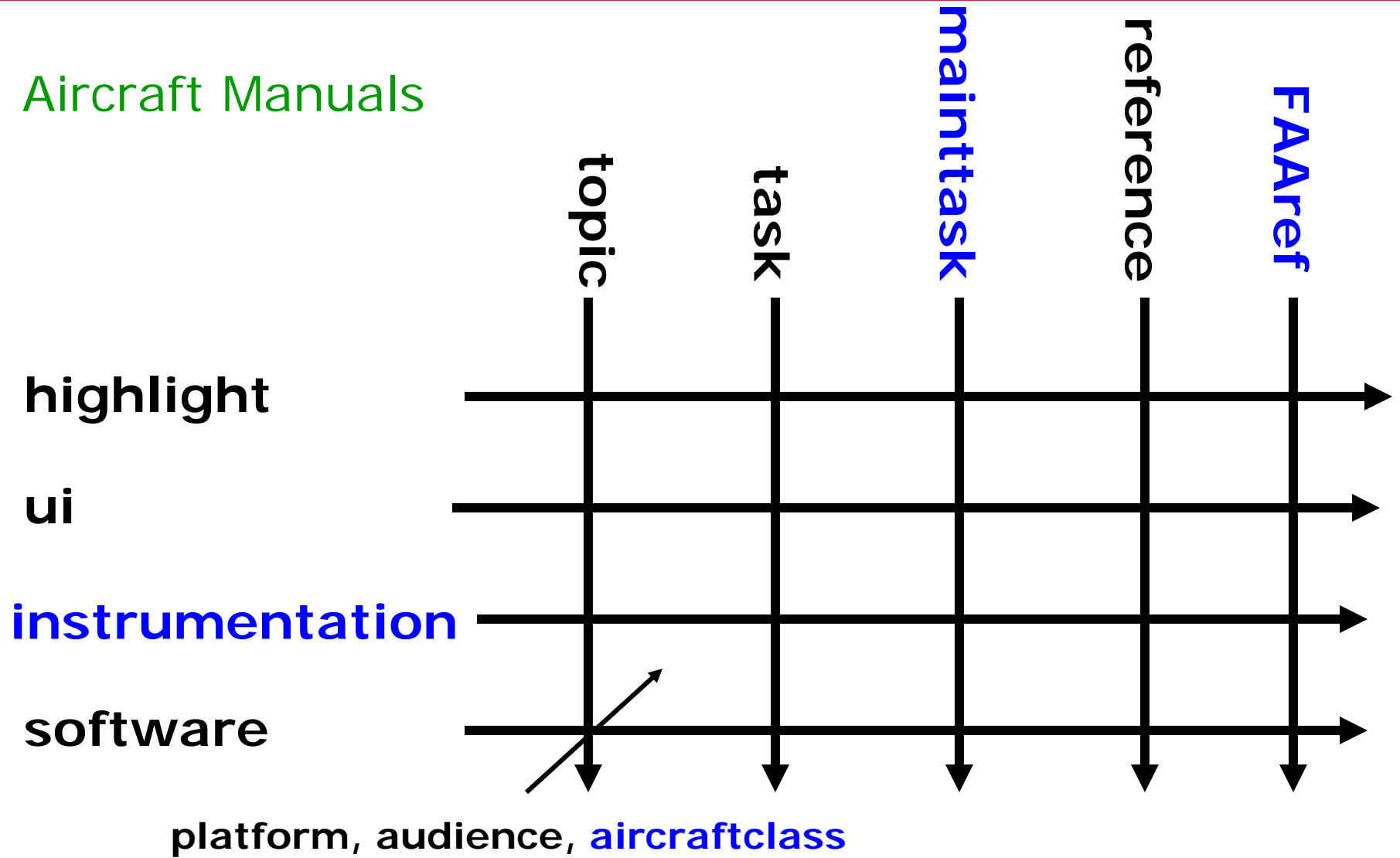


# DITA's Orthogonal Architecture



# DITA's Orthogonal Architecture

Aircraft Manuals



# Generalization is

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## Generalization

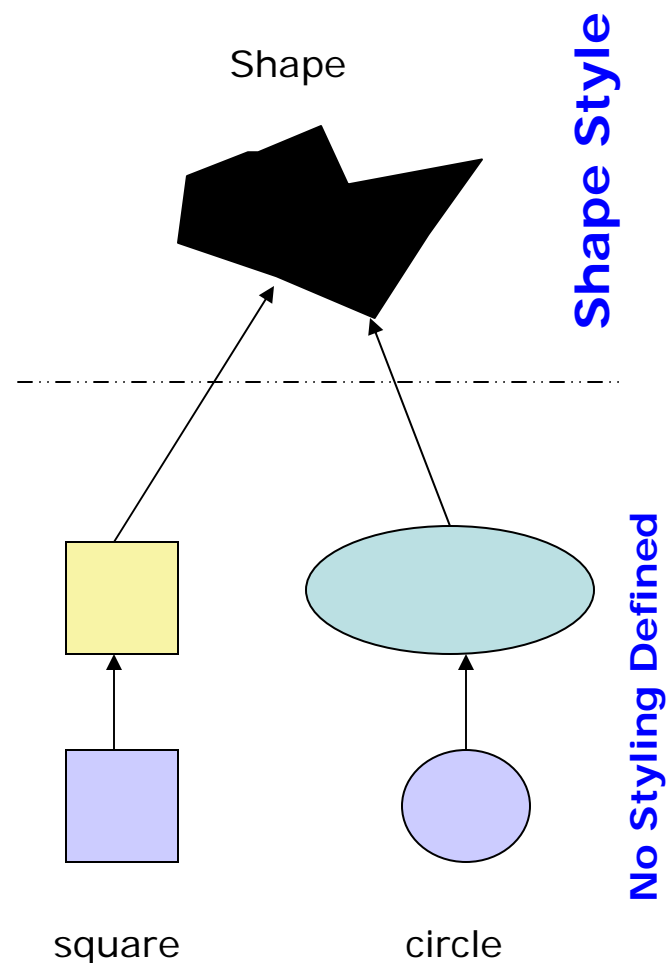
Is used during processing of DITA information types in order to apply default styling or behavior based on parent information types.

# DITA Generalization

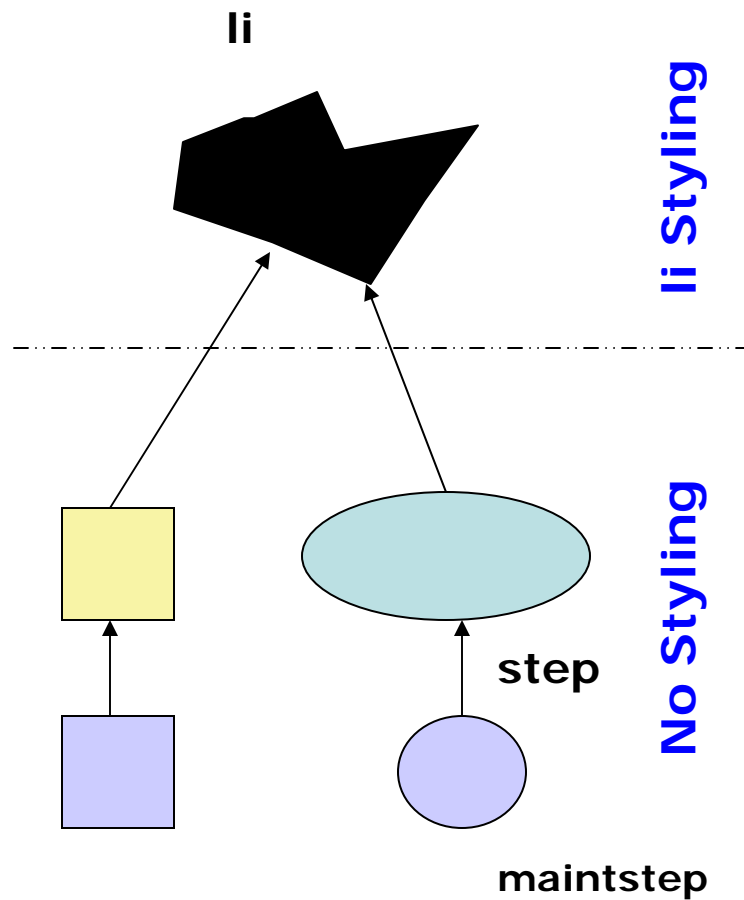
## Generalization

Generalization – The DITA architecture is designed to allow processing to occur on a specialized type using the rules defined for the base type whenever the specialized type has not been defined.

In effect, specialized types have default processing.



# DITA Generalization



topic/li

task/step

maintask/maintstep

<xsl:template match="mainstep">

VS.

<xsl:template match="\*[contains(@class,' maintask/maintstep ')]">

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# Summary

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# Summary

- DITA – is a topic based XML vocabulary
- The architecture consists of Topics and Domains
- DITA topics facilitates reusability
- DITA specialization facilitates
  - consistency & ease of use
  - special processing and formatting
  - control
- Specialization creates new information types based on existing information types
- Specialization facilitates content typing, and tightens the model for authors
- Generalization enables the creation of a centralized, shared infrastructure
- Specialize after creating your 1<sup>st</sup> document in DITA

# Questions & Answers



CMS  
XML  
DITA

Consulting



208.939.0975  
info@scottwolff.com