

DITA and Topic Maps

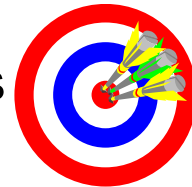
Bringing the Pieces Together

Topic Maps Conference 2008, Oslo

Joe Gelb
President, Suite Solutions



Main Discussion Points



- ❑ Who is this guy?
- ❑ What is information architecture?
Why is it important to technical documents?
- ❑ What is DITA?
- ❑ How can DITA and Topic Maps interoperate?
- ❑ Methodology for developing content using
Topic Maps



Who is this guy?

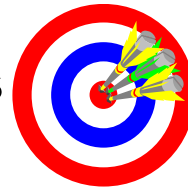
- Background in Engineering and Process Planning
- CTO for a leading techdoc service provider and technology vendor
 - Built and managed professional services group
 - Built CMS with Topic Maps under the hood
- Left to form vendor-independent consulting and implementation group
- Goal: implement creative and pragmatic solutions based on accepted standards and best practices

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What is Information Architecture?

- The science of expressing a model or concept for information
- Used for activities that require expressions of complex systems
- Consists of:
 - Structural design of shared information environments
 - Organizing and labeling information to support usability and findability

From *Wikipedia*

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What is IA for Tech Docs?

- Method for organizing documentation and training resources – text, media – into an overarching knowledge model
- The knowledge model is created and maintained separate from the actual content – like creating a global index
- Allows us to provide access to the information based on the model of the knowledge it contains
Steve Newcombe
- Simple level: Organization of content by hierarchy, relationships
- Next level: Organization of *subjects*, and relating content to those subjects

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Why it is it important for us?

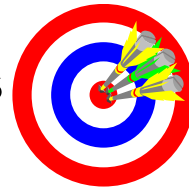
- Best practices for technical content development based on *topic-oriented* content architecture
- Topic-oriented content = modular = component-based documentation
- Instead of creating deliverables, we create discrete topics of information (content resources)
- Standards being adopted:
DITA, S1000D, SCORM
- Need better methodologies to plan, create, classify, manage, localize, publish, deliver and find content

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Overview of DITA

- Darwin Information Typing Architecture
- OASIS standard
- Facility for customization within the standard using inheritance: “specialization” (thus *Darwin*)
- Open Source Toolkit (DITA-OT) for producing outputs
- Active user and development community: reaching critical mass

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Topic-Based Content

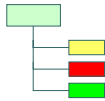
- DITA Topics
 - Each topic answers a single question
 - Only enough information to understand one **concept**, perform one **task** or provide one set of **reference** information
- DITA Maps
 - Assemble topics into deliverables
 - Define relationships between topics
- Classification
 - Assign applicability / effectivity using conditional attributes
 - Product, Audience, Platform, etc.

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DITA Maps: Assembling Topics into Deliverables



- Create different types of maps:
 - **Solution-oriented**
How products and procedures work together
 - **Task-oriented**
How to accomplish a specific goal
 - **Feature-oriented**
What does a product or component do
- Automated Publishing
 - Filter by product, audience, other attributes
 - Publish using Open Source Toolkit to multiple formats or to a website

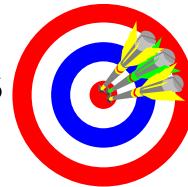


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How can Topic Maps Help?

DITA and Topic Maps: A Natural Match

DITA:

- Topic-oriented
- Content model
- Develop and reuse content
- Combine topics using Maps
- Separates taxonomy and relationships from content
- Robust tools for authoring and publishing

Topic Maps:

- Subject-centric
- Semantic model
- Capture and reuse semantics
- Relate subjects using Maps
- Separates subject definition from the content resources
- Robust tools for ontology design, search and navigation

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How can Topic Maps Help?


- Provide a comprehensive ontology for our products
 - Topics: Defines subjects being expressed in the documentation: text, graphics, other media
 - Occurrences: Content topics that relate to each subject
 - Associations: Relationships between subjects can be used to deliver and link between the content topics

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How can Topic Maps Help?

- Determine valid usage of metadata and applicability / effectivity values (DITA conditional attributes)
- Standardize index and glossary
-  ➤ Results in better planning and content reuse on the authoring side, robust filtering and delivery on the production side

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DITA / TM Interoperability

- Express Topic Maps using DITA Maps via specialization
 - Subjects and their relationships
 - Classification of content resources
 - Prototype built for SKOS can be adapted
- DITA topics can be used to document the ontology
 - Describe each subject: text, images, variants, etc.
 - Publish glossary using the Open Source Toolkit
- Round-trip with XTM, LTM, CTM gives best of both worlds
 - Topic Maps tools for building, checking, navigating, searching, querying, constraining ontologies
 - DITA tools for authoring, managing, publishing, translating

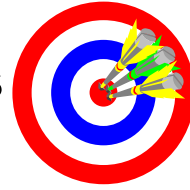


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Methodology for Content Development Using Topic Maps

Solution Oriented Topic Architecture (SOTA)

- Create a knowledge model of subjects encompassing:
 - All products, features, system components
 - All product life-cycle stages
- From that model, compile lists of content to be created to express the knowledge model
- Compile content to form maps representing documentation deliverables
 - DITA Maps
 - SCORM Manifests

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Define Subjects and Types

Type Subjects

Products > Servers: S1, S2, S3
Endpoints: E1, E2, E3
Peripherals: P1, P2, P3

Platforms > Windows, Unix, Linux, Macintosh

Assemblies > Assy1, Assy2, Assy3

Parts > P101, P102, P103

Life Cycle > Design
Sell: Demos, Positioning, Related Products, Related Services,
Implement: Initialize, Install, Configuration, Training
Use: End Use, Administer
Maintain: Troubleshoot, Optimize, Service, Maintenance

Other Types: Features, Tasks, Interfaces, Screens, Use Cases, User Roles, Legal

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Define Associations

- > Define relationships between subjects
 - Solution ⇔ System Component
 - Product ⇔ Platform Supported
 - Product ⇔ Feature
 - Feature ⇔ Task
 - Task ⇔ Interface
 - Task ⇔ Life Cycle
 - Task ⇔ User Role
 - Product ⇔ Assembly
 - Assembly ⇔ Part

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Build Your Own Ontology

- List Solutions your company offers
- For each Solution: list System Components
- For each Product:
 - Associate with System Components
 - Associate with Platforms Supported
 - List Features
- For each Feature:
 - Associate with Platforms Supported
 - Associate with User Roles
 - List Tasks
- For each Task:
 - List Interfaces and Screens
 - Associate with Life Cycle Stage
 - Associate with User Roles

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Content Resources - Occurrences

- Different types of content resources are used to express information about the subjects
 - DITA Task
 - DITA Reference
 - DITA Concept
 - Illustration
 - Drawing
 - Flash
 - Video
 - Presentation

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Generate List of Content to be Created

- Set rules: Occurrence types needed to express each subject

For Each: **Create Content Topic:**

Product ➤ Overview (DITA Concept), Legal license / liability / warrantee

Feature ➤ Description, Use Case

Task ➤ Procedure (DITA Task), safety instruction

Screen ➤ List of buttons and fields (DITA Reference)

Assembly ➤ Installation Task, Maintenance Task, List of Parts

Part ➤ Description, Supplier, Replacement Part, Diagram

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Author Content

- For each content instance, author knows the topic to be described and the characteristics via associations

Example:

Procedure: Configuring Server Ports (DITA Task)

Characteristics / Associations:

- Product: Server S1
- Task: Configure Server Ports
- User Roles: Administrator, Implementer
- Interface: Admin
- Screen: Port Configuration
- Life Cycle Stage: Installation, Configuration
- Platform: Windows, Unix, Linux

Related Content:

- Screen element reference, Screen capture

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Generate Deliverables

- Set rules for each type of deliverable to create maps

Deliverable	Contents
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Installation Guide	➤ Product Overview, Legal References, Installation and Configuration Procedures associated with User Role=Implementer
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Admin Guide	➤ Product Overview, Legal References ➤ For each interface associated with Admin, Implementer, Technician <ul style="list-style-type: none">▪ For each screen, include screen reference ➤ For each Task associated with life cycle stage: Installation, Configuration, Administer, Troubleshoot <ul style="list-style-type: none">▪ Include Procedures (DITA Task)
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Generate Deliverables

- Set rules for each type of deliverable to create maps

Deliverable	Contents
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User Guide	➤ Product Overview, Legal References ➤ Getting Started <ul style="list-style-type: none">▪ For each Task associated with User Role: End User, Life Cycle: Installation, Configuration, include all procedures ➤ Features <ul style="list-style-type: none">For each Feature<ul style="list-style-type: none">▪ Include Feature Description▪ For each Task associated with Life Cycle: Use, User Role: End User include Procedure
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What do you think?

- Which planet is he on?
- Interesting, but is it feasible?
- Interesting; we should consider this approach when evaluating our information architecture
- Cool! I see where this can really help and want to learn more about it

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Be in touch

- Your feedback and ideas are appreciated!
- Our team can help you evaluate your needs and implement the right solution.

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