

DITA and Topic Maps

Bringing the Pieces Together

Topic Maps Conference 2008, Oslo

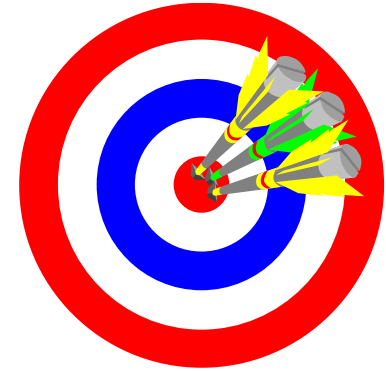
Joe Gelb

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

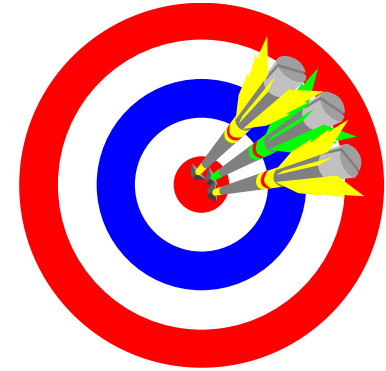


Who is this guy?

- 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



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

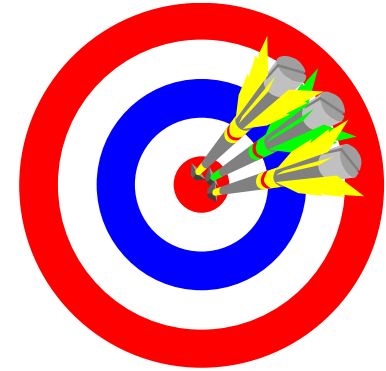


Why it is it important for us?

- 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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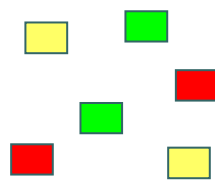
Overview of DITA

- 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



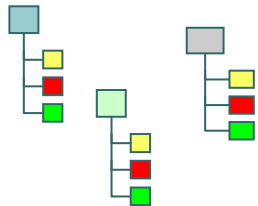
Topic-Based Content

➤ 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



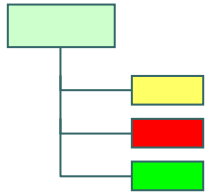
- Assemble topics into deliverables
- Define relationships between topics

➤ Classification

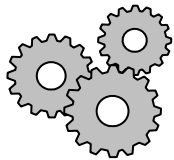
- Assign applicability / effectivity using conditional attributes
- Product, Audience, Platform, etc.



DITA Maps: Assembling Topics into Deliverables

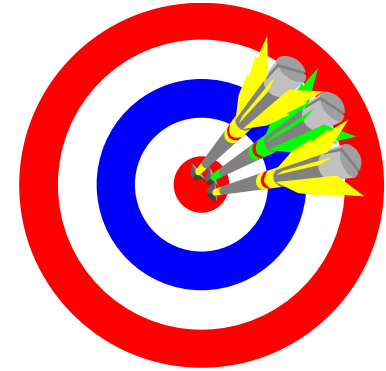


- Create different types of maps:
 - **Solution-oriented**
How products and procedures work together
 - **Task-oriented**
How to accomplish a specific goal
 - **Feature-oriented**
What does a product or component do
- Automated Publishing
 - Filter by product, audience, other attributes
 - Publish using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




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



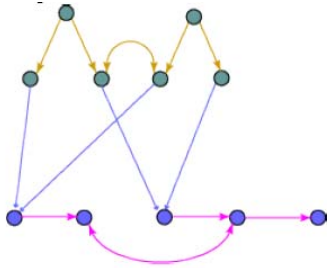
How can Topic Maps Help?

- 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



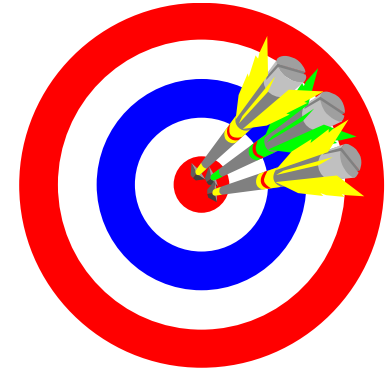
DITA / TM Interoperability

- 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



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



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



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



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



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



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



Generate Deliverables

- Set rules for each type of deliverable to create maps

Deliverable	Contents
Installation Guide	<ul style="list-style-type: none">➤ Product Overview, Legal References, Installation and Configuration Procedures associated with User Role=Implementer
Admin Guide	<ul style="list-style-type: none">➤ 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)



Generate Deliverables

- Set rules for each type of deliverable to create maps

Deliverable	Contents
--------------------	-----------------

- | | |
|-------------------|---|
| User Guide | <ul style="list-style-type: none">➤ 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



Be in touch

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

Joe Gelb
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