

GE Healthcare

Centricity Enterprise Information Model

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imagination at work



Agenda

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Benefits of Information Modeling

Why Model Information?



Modeling information is the best way to ensure you get “bang for your buck” in a content management system.

- Contrary to popular opinion, XML is not a magic bullet
- Poorly implemented XML has little or no substantive benefits over HTML
- Well implemented XML provides substantial benefits to the company and customers

Reuse, Reduce, Recycle

Well-implemented structured content is less wasteful.



- **Reuse.** Content organized into appropriate chunks of data can be reused many times
- **Reduce.** With reusable content in place, we reduce maintenance and associated costs
- **Recycle.** Information from “old” documentation sets can easily be reconfigured into fresh new products

Quality and Consistency

If quality documentation can be defined in a single word, that word is **consistency**.

- Enhances usability and customer satisfaction
- Increases collaboration with other writers and teams
- Ensures “completeness” of content
- Improves flexibility and ability to innovate

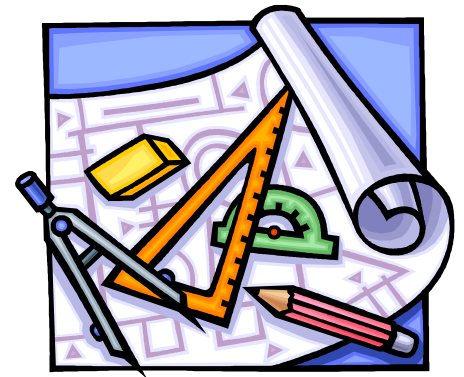
In short, creating an information model is designing for quality documentation

Information Modeling Overview

What Is an Information Model?

An information model

- Classifies content into specific information types
- Defines what data and metadata we collect for each information type
- Describes the relationships between information types
- Defines how information types may (or may not) be used



A High Level Example

An information model could define information types for screens as below:

- Screen might be an information type
- Fields, buttons, audience, and screen ID might be types of data we collect for this information type
- The field or screen flow included in the screen information type may themselves be information types
- Screen reference information may be included in many deliverables including user assistance, implementation assistance, or workbooks

Building Structured Content

Essentially, an information model defines the “structure” in structured content.

Structured content refers to information that has been broken down and classified using semantic tags or metadata, typically in XML.

It enables *systematic content reuse*.

Types of Content Reuse

Content reuse can be opportunistic or systematic.

- Opportunistic reuse is ad-hoc, typically done by a writer as they develop content
- Systematic reuse is defined in the information model and planned in advance

Systematic reuse is critical because the reuse is automatic—it does not rely on manual intervention!

Expected Reuse Types

Identical content, multiple media (Web, print/PDF, spreadsheet, web-based training)

Customized content, multiple audience (end user, technical user, clinical roles)

Customized content, deliverables (workbooks, user assistance, implementation help, release notes, training curriculum)

Customized content, client type (CEUI or LCJ)

Standard boilerplate content (product or module names, common procedures)

Information Modeling Approach and Process

Our Approach

Our information model is roughly equivalent to a conceptual data model

- It defines the information in terms of the needs of the business
- It defines the inputs, outputs, and relationships between information
- It does not define the “logical” or “physical” components like the XML tags, DTDs, schemas, or stylesheets

Broad Participation in Project

To allow a broader participation in this project, the information model will be created by one team and translated to a logical/physical model by another

- Content team, with deep expertise in content, will create conceptual model
- Authoring team, with more technical expertise, will translate the model into DTDs, stylesheets, and maps
- Teams will work together to improve and refine the model

Content Audit

Our first step was to determine our high-level information types

- Reviewed 17 different types of documents from Tech Comm and Services groups
- Determined what kinds of content is collected in each document type
- Identified likely areas of reuse/overlap

Categories and Priorities

The next step was to analyze the results of the content audit

- Refine the results—combine or remove content types that were too granular
- Develop small group of high-level information types
- Develop relative priority for each category of information types
- Start “deep dive” into highest priority category

Example: Text-based Model

<Company confidential content removed>

Example: Graphical Model

<Company confidential content removed>

Preliminary Timeline

<Company confidential content removed>

Risks

Lack of Broad Technical Expertise

Our team has deep content expertise but relatively little technical expertise.

Mitigation:

- Separation of modeling from development of DTDs and stylesheets
- Using DITA, which reduces work on DTDs, stylesheets, and build tools
- Possible use of web-based forms to reduce entry errors
- Introduction of code reviews for content

Excessive Complexity

Due to the size and complexity of our documentation set, there is risk our model will be overly complex.

Mitigation:

- Implement specialized DTDs and different information types only where it provides a specific benefit
- Consider using forms instead of specialization in some cases
- Use conditions and stylesheets on larger topics instead of creating separate ones
- Focus on maintainability as we design

Unusable Information Model

Since we are solving a complex problem and we have not done this before, there is a risk that the design we create won't work well.

Mitigation:

- Use of DITA provides good base infrastructure
- Creation of prototypes as model and information types are developed
- Tracking information on best practices in industry (Ann Rockley, Joann Hackos)
- Weekly reading and discussion assignments

Information Modeling Too Slow

Since this is new ground for our team, the process may take longer than we have to develop it.

Mitigation:

- Base DITA 1.1 as fallback—less reuse but faster implementation
- Incremental approach to ensure work can be done as the model is still under development
- Focus on biggest payback areas first
- Investigating conversion services

Summary

Key Takeaways

The Centricity Enterprise information model:

- Increases quality and consistency in our content, leading to better customer satisfaction
- Reduces waste and inessential maintenance
- Encourages opportunistic reuse and plans for systematic reuse
- Enables collaboration across teams within Centricity Enterprise and (in time) across Enterprise Solutions
- Will be delivered incrementally, with the first piece being delivered by end of 2007

Questions and Answers