

Successful Single Sourcing

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Single-Sourcing Solutions



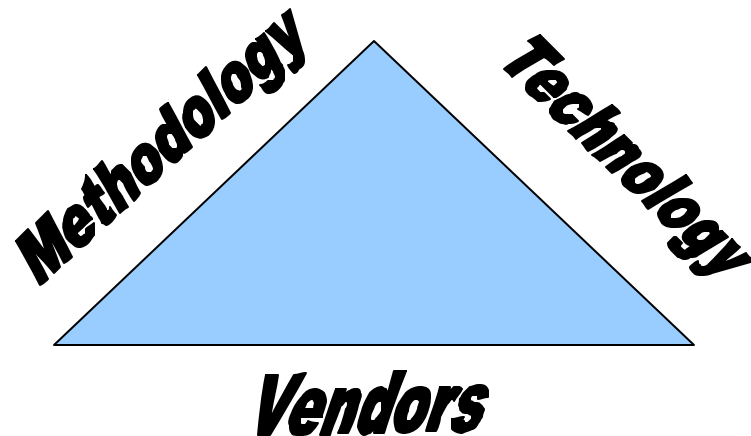
The Goal of Single Sourcing

The goal of any single-sourcing project always the same:

To increase the efficiency of the entire staff as the demand for documentation increases while staffing and resources do not.

The Single-Sourcing Triangle

- Single sourcing is a simple idea that requires a very complex implementation:
 - Single sourcing is a *methodology*, not a *technology*.
 - XML is a *technology*, not a *methodology*.
 - No vendor provides every piece of the puzzle.



Benefits of Single Sourcing

- Accuracy and consistency
- Information scaling
- Automated production to increasingly more formats
- Changes populated across documents, document versions, and into the product
- Separation of content from look and feel
- Automated editing tasks and content error detection

Successful Single-Sourcing

- Design with single-sourcing in mind
- Design the project to work
- Let the technology do it's job
- Minimize customization
- Promote a single, overall, guiding vision
- Design for extensibility
- Watch for places where application-specific tools can make a difference

Design with Single Sourcing in Mind

- Design rules for authoring to promote multiple output formats
- Analyze information dimensions
 - Product-by-product
 - Document-by-document
 - Release-by-release
- Modularize information
 - How much is similar?
 - How much is different?
 - Where can you share?
 - Where can't you share?

Let the Technology Do Its Job

- Require that tagging will determine style
- Make entities out of chunks
 - Not every thing is a chunk, but everything is a potential chunk.
- Create entities for shared content
- Create entities for unique content
- Create entities from generated content
- Create multiple single-purpose content libraries

Minimize Customization

- Use standards where appropriate, and where support is available
 - Docbook, DITA
 - CALS tables, OASIS tables
 - XSLT, XSL-FO, FOSI
- Try to do as little customization as possible.
 - In the early days, use training to cover customization; this may not be desirable but may be tolerable
 - Customizations can improve in the user experience in the future, but may not be deliverable early on

Promote a Single, Overall, Guiding Vision

- Employ a Control Board to make decisions
- Establish clear, well-defined style guide and writing guidelines
- Enforce decisions
 - “Company Structure”
 - “Company Look and Feel”
- Use restrictive templates, DTDs and stylesheets
- Train team members to think about information and organization in new ways

Design the Project to Work

- **Make Decisions**
 - A “Company Structure” and a “Company Look and Feel”
- **Make Compromises**
 - Choose a Look and Feel that fits the tools and their capabilities
 - Change existing templates to fit future output
- **Take Small Steps**
 - Start with books that don’t have tight time requirements
 - Conversion and tool work are not parallel processes
- **Use a Staged Delivery Method**
 - Do not try to plan and deliver the entire, “finished” project all at once

Design for extensibility

- Minimize information's dimensions
 - Two dimensions are easy to visualize, but three is difficult and four near impossible.
- Existing resources can determine an initial implementation; plan for second and third generation implementations.
- Revisit the data analysis as you integrate new books and new types.
- Remember that no analysis is never stable.
 - There will always be new deliverables and new document types coming down the road.

Application-Specific XML Tool Development

- Simplify reviews, improve turn-around
 - Diffs, isolated-changes, change history
- Auto-generate information to put into documentation
- Auto-generate information from documentation to put into product help
- Reduce time requirements
- Improve searching – in repository, within a document, across documents, on web

Original Juniper Technical Publications Department

- Project started in August 2001
- Active documentation:
 - 100 software documents
 - 36 hardware documents
 - 8 edit passes for 100 software documents
 - 4 edit passes for 36 hardware documents
- Team:
 - 14 writers
 - 3 editors

Juniper Technical Publications Department

Since Then..

- 3 integrations of new companies
- 505 software documents
- 224 hardware documents
- 32 products
 - 7 old products (2 sw, 5 hw)
 - 25 new products (15 sw, 10 hw)
- Team:
 - 39 Writers
 - 4 Editors

Implementation Success

- 2003:
 - PIC books delivered to print, web and CD
 - M-Series hardware Books delivered 06/15/2003
- 2004:
 - New EOL PIC books
 - All T-Series hardware documentation
 - All new hardware documentation for M7i, M10i, M320
 - Hardware release notes, all platforms
 - FRU documents for all existing hardware platforms converted

Implementation Success

- PIC books all updated together
 - Most information is shared
 - Two PIC books per platform
 - Any (or all) PIC books may need updating each release
- With Frame, 6 books released 4 times a year and took 3 months to update and produce
- With XML, 20 of these books take only 2 weeks to update and publish 8 times per year

Implementation Success

- Create release notes directly in XML
 - Scripts search the bug tracking system for release note fields
 - Information dumped directly into XML
 - Editing in Epic takes less than 1 hour
- Syslog, JUNOScript books: whole chapters generated from the build
- Auto-generated XML information takes less time to edit and convert to required output formats than traditional methods.

Single-Sourcing Metrics

	Dec-03	Mar-03	Jun-03	Sep-03	Dec-03
Converted/New Documents	7	1	17	17	11
Updated Documents	0	6	6	26	30
Total Documents through Production	7	7	23	43	41
Total Converted/New to Date	7	8	25	42	53
Total Updated to Date	0	6	12	38	68
Cumulative Times Through Production	7	14	37	80	121
Retired Per Month	0	0	0	10	6
Total Retired	0	0	0	10	16
Total Books	66	66	84	99	97

10/2003: only the hardware books have been fully converted

Management Requirements for Success

- Make a decision and agree stick with it
- Design realistic schedules
- Use your budget to your benefit
 - Hire one or more experts in the beginning
 - Train team members to partner with and learn from the experts
 - Realize that limited staffing and resources will extend your timeline, but with a staged delivery you can get there
 - Encourage opportunities for automation
- Re-sell upwards whenever possible