

Single Source Tools and Techniques

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Tools are a key component for the success of single sourcing. Tools should be selected to support the information model and development processes. Selecting the technology first, without a clear understanding of your information needs, may significantly restrict your ability to produce effective single source materials.

This paper reviews the types of single source tools that are available to you today. The session presentation will review the available tools and provide their pros and cons.

SINGLE SOURCING HISTORY

Until recently most companies that did single sourcing did it in the following way:

- Identical content to paper and online (Help)
This approach provides a variety of outputs (paper, WinHelp, HTML Help, HTML); however, this approach does not support the ability to specify content in one output and not another (e.g., address media and user needs).
- Reusable elements of information drawn from an SGML database
This approach provides a very powerful reuse of information and building of virtual documents; however, it involves a long learning curve.

SINGLE SOURCING TODAY

Today there are a number of single source tools that enable us to:

- Produce multiple media outputs with differing content
- Manage the content of information
- Produce XML (the single source format of the future)

UNDERSTANDING THE TOOLS

Single source tools can be grouped into three varieties:

- Multiple media
- Content management
- XML

MULTIPLE MEDIA OUTPUTS

These tools are designed to take source and produce output in a variety of media; they do not manage information.

Criteria for evaluation

These are the criteria we use to evaluate the functionality and appropriateness of multiple media tools.

Ease of use

- Ease to which you can take your source file and convert it to another format

Media outputs

- WinHelp
- Compiled HTML Help
- Microsoft HTML browser-based Help
- Cross browser HTML Help
- Java Help
- Standard HTML
- CE Help
- Paper
- XML

Granularity of reuse

- Degree to which content in a document can be identified for reuse
 - Document
 - Content is identical in all formats
 - Cannot identify differences in reuse
 - Media
 - Differing content based on media
 - Content at the topic or element level can be identified for use in one media format or another
 - Topic
 - Topics can be identified for different media outputs or for specific types of information (e.g., training, user, Help)
 - User definable elements
 - Elements (paragraphs) can be tagged for reuse in different media or different types of information
 - User can define their own tags/conditions for elements

HTML support

- Quality of HTML output
 - Adherence to standards
 - Cross-browser support
- CSS support
Degree to which it supports cascading style sheets

Multi-file support

Ability to compile multiple files into a cohesive whole (e.g., book).

Tools to be reviewed

- BlueSky RoboHelp Office
- ForeFront ForeHelp Premier
- WexTech Doc-to-Help Pro
- Quadralay WebWorks
- HTML Transit

Techniques for multiple media

Consider using the following design techniques to optimize your single source materials and multiple media tools.

Determine:

- How your materials will support the users needs
- What type of information should appear in what output. For example, you may decide that Help should provide a quick-reference while your Web-based user guide should be more comprehensive.
- Which elements of your information are reusable
- How information should appear in each output (inline, pop-up, secondary window, etc.)
- Ensure that you set up your format mappings so that everything is automated. Under no circumstances should the format be “tweaked” in the output.

Educate your writers in:

- In the rigorous use of styles
- Writing for reuse
- Educate your reviewers in:
- Reviewing single source materials

CONTENT MANAGEMENT

In the past documents were smaller and more manageable. Now the requirement for information is growing at a fantastic rate. Our jobs are growing more complex as we:

- Document large complex systems
- Develop materials for multiple platforms
- Develop single source information for the same product/subject (reference, usage, training)
- Integrate materials from many different authors
- Maintain multiple versions of materials
- Secure some documents from certain types of readers
- Manage ever growing web sites (Internet, intranet, extranet)

Content management is becoming a requirement. It is no longer possible to manage these materials manually as we have in the past.

Content management systems manage elements of information not files. This is key to single sourcing. You don't want to have to save all your elements of information as separate files.

Content management aids authors by:

- Making components reusable
- Identifying changed components
- Saving on translation costs (reusable components are only translated once)
- Identifying to authors/users what has changed

Components of CMS

Content management systems typically consist of:

Version control

Version control is key if there are multiple authors of information or multiple versions of information to control. Version control can also enable you to save a copy of information as it exists at a particular time. This is particularly important for information/product/services that are government regulated, as it is possible to go back to a saved version to "resurrect" the information, as it existed on that day.

Access control

Access control or check in/check out of information ensures that only one person has a file open at any one time. Additionally it ensures that only the author has permission to change an element of information.

Retrieval

All CMS include a searching tool. These search engines enable the author to use rules of Boolean logic to search for information. Every unique word in the document suite is indexed. The search indicates where the word or phrase is found. The title of the file or document enables the user to determine if the file is appropriate for their needs.

Standard searching can be enhanced through the use of categorization. Categorization of information (elements) is similar to indexing a document. Categorization allows you to show the user groupings of information, relationships between information and hierarchy of information.

Categorization greatly increases the probability of an author retrieving the correct element of information quickly and easily. Categorization can also be used to assemble a "virtual" document based on specific categorizations (e.g., a particular user group, a particular version).

Categorization is accomplished through the use of Meta tags or attributes. Each element of information should be tagged to aid in retrieval.

Workflow

You can use workflow to assist you in routing the documents to the appropriate reviewers throughout the process. Workflow also ensures that documents go through a similar process and are therefore more likely to be consistent, and to ensure that documents that have not been approved do not make it to release.

Criteria for evaluation

These are the criteria we use to evaluate the functionality and appropriateness of content management tools.

- Input
Type of files it will accept (e.g., MS-Word, FrameMaker)
- Type of files it will provide content management capabilities for
Some tools only manage one type of file at the element level, but many types at the file level
- Multiple media output
- Standard DMS features
Access, workflow, etc.
- Element management
- Where used
Ability to determine where a particular element of information is being reused.
- Update
 - Automatic
Automatically updates reused elements of information when the source is updated.
 - Notification
Notifies the authors who have reused an element when the source element is

updated. This gives the author reusing the element the option of updating their “document” or severing the link so that theirs remains unchanged.

- Severed
Enables the author to reuse an element by copying it and severing the link to the original element. This means that this element is now an element on its own; it will not be updated when the element is updated.
- Translation support
How well are the translated components of information linked to the original “English” versions to manage automatic update of information.

Tools to be reviewed

- Chrystal Software Canterbury (FrameMaker), Astoria (SGML/XML)
- HyNet Directive (FrameMaker and MS-Word)
- IntraNet Solutions product suite

Techniques for content management

Consider using the following design techniques to optimize your single source materials and content management tools.

Follow the same process as for multiple media tools and determine the following:

- Access permissions
- Design, development, review, and production processes (workflow)
- Information models
- Categorization scheme

XML

A number of tools are now working with XML. They support XML either in the format in which they store information or in their output. There are good indications that XML will be the most flexible single sourcing format of the future. XML supports single sourcing in the following ways:

- separates the format of information from its content

- supports structured documentation
- provides dynamic linking functionality
- can produce compound/virtual documents
- supports multiple media output through enhanced stylesheets (XSL) that enable you to define the format for multiple outputs (online, paper, any other output you define)
- supports database access

Criteria for evaluation

These are the criteria we use to evaluate the functionality and appropriateness of XML tools.

- Input (type of file accepted)
- Multiple media output
- CMS
- Ease of use
- Single sourcing
- Translation support

Techniques for XML

Consider using the following design techniques to optimize your single source materials and XML tools. Follow the same process as for multiple media tools and content management tools, and determine the following:

- Well-formed XML vs. DTD use
- Information models
- DTD (if appropriate)
- Structured writing processes

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President of The Rockley Group, Inc., and Partner in SingleSource Associates (with JoAnn Hackos), Ann Rockley has an international reputation in the field of online documentation. She has 18 years' experience developing all types of online documentation. She has been doing ground-breaking work in the field of single sourcing. Ann has presented papers and workshops around the world on the topic of online documentation, instructional design, and content management. Ann is an Associate Fellow of the Society for Technical Communication.