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The Effects of Single Sourcing in Technical Communication: Has it Really Made Documentation Easier?

Single sourcing is, "using a single document source to generate multiple types of document outputs; workflows for creating multiple outputs from a document or database" (Williams 321). This has become a major tool in the field of technical communication. It has also changed the way that documents are created. Single sourcing, with the help of tools such as Extensible Markup Language (XML), Content Management Systems (CMS), and Darwin Information Typing Architecture (DITA), has made work easier for technical communicators through information collaboration and reuse.

WHAT IS SINGLE SOURCING?

To reiterate, single sourcing is creating multiple outputs of a document from a single source. "The source can be a single file or multiple files residing in a repository or database" (Williams 321). An example of single sourcing could be using on set of information to create a printed manual, a PDF, and a page on a website. It could also be creating different versions of

a document based on the audience's level of understanding (i.e. novice, proficient, or expert).

Single sourcing has become a popular way for technical communicators to utilize information collaboration and reuse in the creation of documents. This helps save time and redundancy which makes information easy to access and publish (Giammona 358). It requires," writers working together and separately on components, documents, and document sets" (Williams 322). This is usually accomplished through using tools.

WHAT TOOLS MAKE SINGLE SOURCING POSSIBLE?

Single sourcing can be accomplished by using tools such as Extensible Markup Language (XML), Content Management Systems (CMS), and Darwin Information Typing Architecture (DITA). "XML was developed and endorsed by the World Wide Web Consortium (W3C) in February 1998" (Sapienza 400). It was originally mainly used for e-commerce and in business sectors but use by technical communicators increased with the invention of DocBook, an XML grammar for technical writers (Sapienza 400). XML is a way to mark-up or format information. It utilizes Document Type Declaration (DTD) and style sheets to create different outputs. XML is often used in conjunction with CMS. It is a way to help organize XML content and aide in the reuse of information.

Somewhere along the line, DITA was introduced as a version of XML that handled some of the tradeoffs of using XML. "The Darwin Information Typing Architecture (DITA) is a technical documentation authoring and publishing architecture that is based on principles of modular reuse and extensibility" (Priestley, et al 352). Instead of creating documents in a linear fashion, documents consist of multiple topics or chunks. These topics can be ordered in anyway and used in multiple documents. Therefore, "you can have a single collection of topics with two different sets of selection criteria" (Priestley, et al 356). There are other tools used for single sourcing but these are the most notable.

WHAT DOES THIS MEAN FOR DOCUMENT CREATION?

All of these tools help create a modular and dynamic document. This is also known as structured writing. "Modularity ensures usability by allowing individual text fragments to be queried and reused as needed by different media, purposes, and audiences. These fragments are not cut-and-pasted but rather re-sourced from a central repository" (Sapienza 401). With the emergence of so called structured writing, which is a product of single sourcing, the idea of craftsman-constructed documents is becoming obsolete.

The work of a technical communicator has traditionally followed the craftsman model. "Each work has an individual stamp, no matter how hard

companies try to ensure consistency through the use of style guides. Under the craftsman model, each document gets written by a single writer who not only writes it in his or her style using his or her own approach or methodology, but also individually optimizes the presentation of the information" (Albers 336). Technical communicators were the "jack of all trades" when it came to creating documents.

With structured writing, technical communicators become more of a team. They can combine their chunks of writing with another technical writer's chunk. They can reuse data from one document in another, without having to copy-and-paste it, and know that the data will be consistent. "More significantly, quality control is ensured because the modules are stored once in a central repository and then reused or 'single sourced'" (Sapienza 401). Structured writing and single sourcing changed the outlook of document creation as a whole.

WHAT ARE THE DOWNSIDES OF SINGLE SOURCING?

The Document Creation

With every technology that exists, there are of course downsides. Single sourcing can cause inconsistencies with tone, writing styles, and many other little things. "As Rockley observes, structure 'unifies content regardless of who is writing it. When content is structured consistently, the

fact that a number of different authors may have worked on it is transparent.' (2003b, p.350)" (Sapienza 401).

There is also an issue with those who have been technical communicators for a long time not accepting the idea of single sourcing. "First, although technical communicators, a majority of whom still view themselves as independent craftspeople, have tended to resist adherence to rules, this resistance in a manufacturing model of TC can cause inconsistences in how topics are written and compromise the quality of any information products that might be assembled from those topics. Standards compliance becomes even more critical when topics are written by different people—who may be subject-matter experts, marketing or training specialists, contractors, or other professional writers—at different times in different places" (Andersen 121). Most people are skeptical of new technologies but this can cause issues with the work that they are doing.

Some people also believe that single sourcing takes away from the technical communicators focus on the user. "Clark (2002) discusses potential shortcomings with single sourcing as a rhetorical tool: that single sourcing can place organizational needs ahead of user needs, limit the potential and negatively affect the perceptions of technical communicators, and contribute to less theorizing in the field of technical communication" (Williams 325). The worry is that with the focus how to format documents using single

sourcing will not leave time for technical communicators to focus on the needs of the audience who is using the document.

The Business Side

When CMS really began to hit the scene in technical communication it caused an uproar. "The bottom line for technical communicators is that business leaders are not turning to technical communicators for input on how or whether the ECM technology they plan to purchase will meet goals for technical communication work, and they are not seeking the expertise of technical communicators in the planning of ECM initiatives and implementation processes" (Andersen 68). Vendors of Enterprise Content Management (ECM) systems focused too heavily on the business needs and not so much on if the systems were useful to the technical communicators who would have to use them. In the end, the success or failure of CMS's would depend on how it was perceived by the technical communicators using it (Andersen 67).

Single sourcing has also created concern in what technical writing work actually is. "Technical communicators whose primary job is to produce content, then, are often relegated to working within the confines of CM systems that, in most cases, other have designed. These writers are not tasked with making situated rhetorical decisions; rather they are tasked with writing and editing content topics according to the schemas and standards

embedded in their XML authoring tools" (Andersen 120). It also created issues with jobs. "Technical communicators whose primary job is to produce content, then, are seeing fewer full-time, in-house positions because more of these jobs are being outsourced to contract workers or offshored to writers who produce content at a fraction of the cost" (Andersen 121).

WHAT MAKES SINGLE SOURCING USEFUL?

Now that the downfalls of single sourcing have been discussed, the benefits can be addressed. Some benefits were mentioned earlier, such as structured writing and the tools that have been created to aide in single sourcing, like DITA. Another benefit is that single sourcing can allow technical communicators to focus on content on a granular level. "The topic-based approach focuses on the processes (e.g., content strategy, business analysis, work flow), methodologies (e.g., structured authoring, minimalism, single sourcing), and technologies (e.g., XML, XQuery, content management systems) that enable content to be manipulated at a granular or topic level" (Andersen 116).

It also brings the focus from form to content. "Topics free you from having to concentrate on the output or the medium as you write" (Priestley, et al 356). Single sourcing can also help with the usability testing of a document. "Traditionally, documents have been created at a separate stage from usability testing. In recent years, there has been a movement toward

iterative usability testing that involves incremental development and smaller tests (Fraser 2002, p.29). Small XML templates can facilitate this usability testing" (Sapienza 403). Overall, single sourcing allows the technical communicator to focus on the communication itself.

CONCLUSION

Single sourcing allows for technical save time and prevent redundancies through reuse and information collaboration granted by the use of tools such as Extensible Markup Language (XML), Content Management Systems (CMS), and Darwin Information Typing Architecture (DITA). Structured writing creates more of a team writing aspect for technical communicators which can make their jobs simpler thanks to the reuse strategies afforded by single sourcing. Although single sourcing can cause issues with consistency, user advocacy, and job definition, single sourcing takes the focus away from form and onto content which can allow the technical communicator to fix issues with consistency and user needs. As a technical communicator myself, I believe that there are a lot of benefits to utilizing single sourcing. Do the pros of single sourcing outweigh the cons? Is single sourcing going to become the norm in all facets of technical communication? Will single sourcing continue to change the way that technical communication is viewed and defined? Only the future will tell.

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