



## To Solve Problems, Look at Whole Supply Chain

By **GEORGE KONDRACH**

What do a loaf of bread and a single-spaced memo have in common? A supply chain.

Regardless of the service they provide, many agencies are realizing they have one product in common: content. Reports, timesheets and parts manuals, for example, that once wound their way through disparate, fragmented systems are being centralized by government leaders into a single production line, or a content supply chain.

In an economic era where agencies rely on their information products as much as their own products and services, government has put content in the context of the bottom line. Drawing on the 20th-century concept of a manufacturer's supply chain, agencies are producing internal and external content like hotcakes.

The sense that content creation is just an information technology thing — let the programmers handle it — is gone. While most agencies are not in the business of selling content like books or magazines, all government organizations produce, use and distribute content of some kind, for both internal and external use.

A content supply chain is the sequence of activities necessary to create, use and distribute content. Many government decision-makers now think of their agency's content supply chain as the information-age version of an industrial-age supply chain. Taking the example of the loaf of bread, the supply chain starts with grain farmers and ends with the consumer. Content follows a similar path, from the mission's requirement to the accomplishment of the mission.

Further, the efficiency and effectiveness of an organization's content supply chain can make or break its budget. It is estimated that a large government agency spends between 5 percent

and 9 percent of its budget on public documents alone, such as brochures and newsletters. For the largest agencies, that can work out to billions of dollars. Added to production and management of all the internal documents — analyses, memos, status reports, timesheets, and others — and the true magnitude of an inefficient or ineffective content supply chain becomes clear.

Whether that content is a data set from an intelligence source or a page in a parts manual, it must be optimized for the demands made on content today, not least of which is reliable search and retrieval, information sharing and collaboration.

For example, since the terrorist attacks of 2001, information sharing among intelligence and law enforcement agencies has not improved dramatically, even though many of the problems hampering the war on terror are basic content supply chain issues — glitches that private-sector companies confront and overcome every day.

Homeland Security Department agencies continue to hunt for terrorists, but incompatible databases and communication networks rife with secrecy barriers and territorial walls often frustrate their best efforts.

Viewed as a whole, the information-management challenge seems massive and hopelessly complicated, but many of these problems result from fundamental breakdowns in these agencies' content supply chains. For example, one intelligence agency spells Osama bin Laden's name "Osama" and another calls him "Usama." Consequently, a collective search of their databases turns up incomplete results unless you set up translation registries, which they have not.

There are dozens of semantic traps to avoid or overcome. All of the pitfalls require a deliberate decision to map and manage meaning in the content supply chain. It's not just about information technology but about information science — their integration into a single effective approach.

In my experience, this kind of problem has been tackled successfully in the private sector. For example, my company works with an international shipping company that calls a truck a “truck” in the United States but a “lorrie” in the United Kingdom. For that company's workers to communicate effectively on one database, they built a translation registry that ties equivalent terms together, allowing for an unimpeded flow of information back and forth across the Atlantic.

While there are technologies and processes available to approach the steps of a content

supply chain individually, the greatest obstacle to overcoming problems is a fragmented awareness of their nature and import. Many information-intensive organizations in industries like publishing, defense, aeronautics, pharmaceuticals and libraries have learned this the hard way.

The first step is understanding that you have a content supply chain. Once you are aware of it and can see the whole thing, you can go beyond short-term, a-la-carte fixes to systemwide problem solving.

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