



Knowledge Management Center



Creating and Storing Information



Indexing Information



Accessing Information



Analyzing And Acting Upon Information

About BCL Technologies

BCL Technologies has considerable experience in conducting government-sponsored research and has been active in various research programs since the early '90s. BCL Technologies is partially sponsored by federal research contracts under the Small Business Innovation Research Program (SBIR) and the Advanced Technology Program (ATP). BCL Technologies has received 10 SBIR contracts (Phase I and II) in the area of document management and natural language communication from DARPA, Army and the US Air Force and 1 ATP contract in spoken natural language systems. BCL has a number of patents issued or pending. Its proprietary document management technology now assists in commercializing digital library information for NASA, NSF and DARPA.



How Does Work?

For more information, visit us at www.bcltechnologies.com/kmc/index.htm

Creating and Storing Information



Documents are created using templates in an XML editor (Microsoft Word, an online editor, etc.). As blocks of information are written or inserted into the document, they are tagged and saved in the database as the Smallest Content Units (SCUs). These are actually individual XML documents that are brought together to form a complete document through templates and style sheets. To keep track of how complete documents are formed, the KMC records all of the relationships between templates and SCUs in the database. If an SCU is edited, the KMC tracks which version belongs to which document.

The KMC introduces a new way of representing information in a document. Using XML transformation, content that was once embedded and locked inside a document can now be indexed, re-used, and manipulated. As new documents are created and saved in the KMC, sections of text, graphics, tables, video, sound, or any other type of content becomes available to the entire system. Furthermore, raw data (individual pieces of information) can be entered into the system without belonging to a document, allowing the system to grow as a central repository of information. This network of documents and shared content makes the KMC a powerful resource.

Indexing Information

Breaking up the content in a document and indexing it separately allows users to find the information they are looking for much faster.



The content is automatically classified and added to the topic tree depending on the information it contains. XML tags allow the author to specify even more details of the content, making the SCU easier to find.

Users looking for specific information can navigate the topic tree, narrowing their search until they find the appropriate SCU. The document that contains the content can be accessed instantly. If more than one document uses the SCU, for example a common diagram or cross-referenced material, users can view a list of documents, complete with a brief summary of each one.

Accessing Information

Users can log onto the KMC from many different devices (PC, hand-held devices, web-enabled cell phones, etc.). The system automatically detects the device type and connection speeds so that it can send the appropriate information to the user. There are several advantages to this. For example, if there is a high resolution image in a document, it may be tagged for displaying only over fast network connections. If there is a lengthy text description, perhaps only the summary will be displayed on devices with small screens.



There are several levels of security in the KMC. The information in the XML database can be encrypted, and access to the information is dictated by the user's privileges. Documents that require higher clearance to view can be further protected. Furthermore, individual SCUs in a document can be tagged for tighter security.

Analyzing and Acting Upon Information

The KMC has an interface that allows users to analyze the content in documents in the system. Depending on a user's security clearance, they can post comments, copy, email, or contact the author. The KMC becomes a hub for communications, centralizing discussion and analysis of data.

The KMC facilitates instant access to new and existing data, offering the highest level of "knowledge transfer." Data can be added to the system quickly, and it can be accessed quickly. In the case of the Center of Army Lessons Learned (CALL), documented events can be referenced, and learned from, on-the-fly.

