

Organizing Mountains of Information into Actionable Data

INNODATA ISOGEN CASE STUDY

Agency Deploys Knowledge Management Solution to Improve Search Capabilities

CHALLENGE

Every day, analysts from the Office of Naval Intelligence (ONI) pore through thousands of separate pieces of data, from intercepted phone calls to cryptic messages on web sites.

Intelligence analysts must piece that information together into timely, effective intelligence, a task compounded by data streams that may contain different spellings, meanings and associations. For instance, the Library of Congress has detected 32 different ways to spell the name of Muammar Khaddafi.

This one example illustrates the massive challenge facing ONI analysts. How do they sort through multiple threads of data to identify potentially ominous trends and create plausible, cohesive analysts that will provide actionable intelligence to the appropriate law enforcement or military units?

ONI chose to deploy topic maps to help them organize snippets of information semantically to find multiple associations or relationships among sets of data. These topic maps can help ONI analysts retrieve the precise information they are seeking, and thus prepare more timely, detailed and effectual reports.

SOLUTION

Few organizations have the internal expertise and experience to build the information architecture required to support dynamic, flexible topic maps. For that reason, ONI turned to Innodata Isogen, which has used its extensive information sciences expertise to create customized topic maps for a diverse set of clients.

Innodata Isogen's depth of experience with sophisticated information management and classification tools such as XML mark-up languages played a key role helping the project team set up a structured approach for ONI. Ultimately, the team will show ONI analysts how to use the customized topic map tools themselves to organize their data into the taxonomies, ontologies and schemas that will help them link and retrieve relevant information.



CHALLENGE

Organize and classify mountains of disparate data from myriad sources of information into actionable intelligence

SOLUTION

Topic maps that compile data in ways that ease the retrieval of more accurate, time-sensitive information

BENEFITS

Analysts will retrieve data more efficiently and prepare timely and specific reports in response to emerging threats

IMPLEMENTATION

Designing topic maps for an entity that processes millions of bits of data per day is hardly an easy task. Adding to the complexity was the sensitive nature of the content. Because Innodata Isogen consultants have extensive clearance to access the data, the team was able to teach ONI analysts how to create their own taxonomies, so they could continue to populate the topic maps with the correct terms, phrases and associations.

As a first step, the project team began building an interim authoring solution tool that would allow the ONI analysts to create the categories that would eventually be used to build the topic maps and ontologies. At the same time, ONI began developing business process and use-case examples to provide the parameters Innodata Isogen would use to decide how information would be gathered and assembled. Innodata Isogen next built mock-ups of the user interface, which were shared with ONI analysts in multiple demonstrations to give them an opportunity to suggest revisions. This ongoing dialogue served as a critical checkpoint to ensure that the solution met the clients' needs.

IMPACT

One of the most frustrating revelations from the 9/11 investigations was that various law enforcement agencies had obtained information about one or more Al Qaeda terrorists, but were unable to use it effectively or share it with other agencies in time to respond. If they had been using more effective search technologies, however, the intelligence analysts would have had the opportunity to search through multiple databases and find new associations in the data. When the ONI project is finished, analysts will be able to aggregate information from the various databases, retrieve data more efficiently and provide more relevant information to other agencies.

Innodata Isogen is now working with the ONI to ensure that the relationships between the various classifications of data are accurate. They are also building subject-based classification systems to look at research requests in context and leave analysts additional room for interpretation.

Ultimately, ONI analysts will be able to read the summary of a document and then decide whether to read more or move on to another, saving them the step of actually opening the file. This more precise search feature will also allow them to exclude an entire range of topics and focus on the exact associations that they are looking for in a particular subject. This will help them analyze more information at a faster rate and deliver better intelligence.



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The new search technologies will help analysts analyze more information at a faster rate, deliver better intelligence and help the nation respond to emerging threats

FIND OUT MORE

Learn how our solutions can help your company achieve success, talk to an Innodata Isogen representative

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