

The IIDBT Meets the Demands of Modern Warfare with Speed and Accuracy



By Lt. Cmdr. Eric Higgins and Jason Hall

Investing in a Winner

The DON eBusiness Operations Office is an innovative ebusiness center that seeds pilot projects focused on improving DON business processes. It evaluates proposals from Navy and Marine Corps customers and funds selected information technology projects with an enterprise-wide view.

In FY 2003, the DON eBusiness Operations Office chose a project from Commander Second Fleet called the Integrated Interactive Data Briefing Tool (IIDBT). This project earned the DON eBusiness Operations Office and the Second Fleet a Microsoft Government Innovation Award, and business partner, the Herres and Lee Corp., a grand prize in the Microsoft System Partner Solution Builder Contest.

Commander Second Fleet Information Needs

Accurate information is the lifeblood of the military. Throughout history, gathering, exploiting and protecting information have been essential in command, control and intelligence operations. Better access to information and improvements in the speed and accuracy of prioritizing and moving data are essential.

The Second Fleet is responsible for Navy operations in the North Atlantic Ocean and for training and certification of East Coast Carrier Strike Groups and Expeditionary Strike Groups. To carry out this mission, timely and accurate information must be available to the commander and his staff. To this end, each morning, the admiral in command of Second Fleet requires an operational brief, known as the Commander's Update. This update provides information about the readiness and operation of assets throughout the fleet.

Traditionally, producing the update was a decentralized, manual process that was

time-consuming; it produced static data that was typically several hours old. Assembling information required 15 to 20 staffers analyzing a variety of data sources (Web sites, databases, text messages, e-mails, etc.) to create a series of Microsoft PowerPoint slides that the Battle Watch Captain (BWC) would later organize into a single presentation for the admiral. This process was not only labor intensive; it also resulted in staff members getting information from different sources or at different times, which resulted in data inconsistencies throughout the brief.

Improve the Process ... Improve the Information

Recognizing that much of the required data was already stored in electronic format throughout various Navy information technology systems, the admiral's staff saw the need for an integrated, Web-enabled solution that could automate the processes required to assemble the update. They realized that they could automate the data gathering process using Web services that could pull data directly from authoritative sources, bringing it into a format that is easy to manipulate and validate.

The Second Fleet staff turned these ideas into a proposal that the DON eBusiness Operations Office selected. The project was completed with exceptional results. This functionality now frees the staff to focus on data analysis rather than the more time-consuming data gathering. By automating these formerly manual processes, the IIDBT is saving some staffers an estimated 3.5 hours per day.

The IIDBT centralizes and streamlines the process of collecting, formatting and preparing the update. The IIDBT allows users to dynamically extract and present data from disparate repositories using XML Web services that do not require modifications to the fleet's existing back-end

legacy systems while allowing information to be seamlessly shared within the Navy's SIPRNET. Using commercial-off-the-shelf (COTS) technology, developers also created applications that consume these Web services to integrate data directly into the update. The presentation is delivered on screen as Web content and allows viewers to drill down into the source data in real time during the brief.

The source data comes from a variety of standard reports generated by ships or other assets throughout the fleet. The fleet already maintains the data across several different systems, such as the TYCOM Readiness Management System, the Innovative Readiness Reporting Initiative, the Ships Operational Readiness Training Status (SORTS), the Conventional Ammunition Integrated Management System (CAIMS), as well as Casualty Reports (CAS-REPs) that document equipment failures.

The IIDBT's Web services automatically extract selected data from these sources and paste them into PowerPoint format. The commander's staff can continue using PowerPoint to customize each day's content, but the IIDBT dynamically converts the final presentation into HTML so that displaying and viewing requires only a Web browser.

Better Information ... Better Decisions

Before the IIDBT was available, Second Fleet staff received data via electronic text messages that duplicated the same data that was already being fed directly into various database systems. Now, instead of having a team of people reviewing messages and manually copying data from them, IIDBT goes directly to the authoritative source for any given piece of data and automatically extracts it via Web services.

Second Fleet can do that as many times a



Left to right: Mike Stateler, technical lead, DON eBusiness Operations Office and Jason Hall, director of Sales and Marketing for Herres & Lee Corp., demonstrating the Integrated Interactive Data Briefing Tool at FOSE 2004.

day as it needs, and the update no longer relies on static information that was potentially out of date as soon as it was presented.

Using Web services also allows users to dynamically access information in response to questions from the admiral or other officers attending the brief. Before, when the admiral had a question, someone would have to find the information and get back to him later. Now, those questions can be answered on the spot because the IIDBT allows users to interactively tap into data sources.

Technical Advantages

By presenting the update in HTML format instead of the large PowerPoint files that were formerly used, the IIDBT also helps reduce the presentation's bandwidth demands. Using HTML format is a major advantage whenever there is a need to share the presentation with ships afloat with low bandwidth data links. The PowerPoint files could grow to 20 megabytes in size, which made downloading very difficult for ships with smaller pipes.

Another critical advantage of the IIDBT's methodology is that using XML Web services does not require special modifications to existing data sources. Regardless of how the IIDBT evolves to meet the admiral's information needs, the fleet's backend data repositories are not affected.

Using XML Web services also simplifies ongoing management of the IIDBT platform by providing a layer of abstraction that allows the fleet to modify and

replace technology within the data management layer without affecting the applications or services that consume the data. In addition, while many of the fleet's data sources run on Microsoft SQL Server, the IIDBT's XML Web services interact just as seamlessly with the fleet's legacy platforms.

Wide-reaching Benefits

The Navy and Marine Corps can apply the savings provided by the IIDBT wherever data must be transformed into knowledge to support critical decisions. Speedy information retrieval and use of state-of-the-art technology tools to empower decision makers are realized on demand.

In the future, instead of relying on massed forces, we will achieve information superiority by leveraging the power of technology. National defense, homeland security and e-government are dependent on information systems. The real payoff of IIDBT comes when data are translated into knowledge superiority used by decision makers to empower the warfighter.



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DON eBusiness Operations Office Solicits Pilot Project Proposals

The Department of the Navy eBusiness Operations Office is now accepting pilot project proposals from Navy and Marine Corps ashore and afloat personnel, both military and civilian. Evaluation of these proposals for funding under the FY 2005 pilot program will be ongoing through July 30, 2004.

The eBusiness pilot program provides seed money for projects that use technology innovation to improve business processes across the entire DON. Successful eBusiness pilot proposals are of limited scope, cost and duration in order to rapidly develop working prototype solutions. Proposals are expected to address improving current DON business processes and to provide a positive return on investment.

The DON eBusiness Operations Office helps solve Navy and Marine Corps process gaps by combining business process reengineering with information technology infusion. Any business process improvement opportunity can be a focus area for a pilot proposal from maintenance or medical to logistics or learning. The proposal submission process is simple. Go to the eBusiness Operations Office Web site at www.don-ebusiness.navy.mil/, click on "Submit a Pilot Project" and complete the online submission form. This Web site also contains valuable information about proposal criteria and the selection process.

Pilot submissions are evaluated in the last quarter of the fiscal year for funding in the following fiscal year.

Phone (717) 605-9359, DSN 430-9359 for assistance. 