

Talking with Captain Mark Greer, USN Director of the Office of Naval Intelligence IT Directorate

Capt. Mark Greer is the 2003 recipient of the Award for Meritorious Service to the Intelligence Community by the Armed Forces Communications and Electronics Association (AFCEA). The award recognizes Greer's accomplishments in the discovery and application of creative technical solutions to complex information management challenges. His achievements include the introduction of an XML-based Digital Intelligence Environment, the goal of which is to improve intelligence support to end-users by fundamentally changing the way analysts produce and disseminate intelligence to warfighters at sea and ashore.

CHIPS: Can you talk about the technology for the XML-based Digital Intelligence Environment in relation to disseminating intelligence to warfighters at sea and ashore? How it was developed and how it is used?

Capt. Greer: The XML-based Digital Intelligence Environment at the Office of Naval Intelligence (ONI) has three principal components: a Maritime Intelligence Portal, a Topic Map-enabled Knowledge Base, and an XML authoring environment. The Portal is the only component most people will see and it directly supports warfighters both at sea and ashore. The Portal provides a single interface to every bit of intelligence data at ONI. It enables the precise retrieval of data from multiple databases and its display in a manner chosen by the warfighter. It is sort of analogous to creating your own homepage on AOL. Precise retrieval of data from standard relational databases is pretty straightforward. However, as anyone who has ever used a commercial search engine can tell you, precise retrieval of unstructured text is a far different matter. That's where XML comes in.

Extensible Markup Language (XML) is a standard means of "tagging" or describing text in such a way as to permit an automated understanding of its underlying structure and content. It is sometimes useful to think of XML "metadata" as being akin to the Dewey Decimal System we have all used in the library. The Dewey Decimal System is a standardized mathematically-based way of categorizing the subject matter of books. In much the same way, XML data tags categorize the content and structure of the text they are associated with. We use an XML-based authoring environment (built to very closely resemble Microsoft Word) so that XML tags are applied as each analyst creates text. This XML-tagged text is then stored in a Topic Map-enabled Knowledge Base. A Topic Map is a really neat way of organizing data, which allows for each data element to have multiple associations or relationships to other data elements. So now we have a way for a warfighter to log into our Portal and precisely retrieve any data he needs, whether it is in a traditional structured relational database (for example, Order-of-Battle data) or textual analytical reports.

CHIPS: I see that the directorate built the Digital Intelligence Envi-



The IT Directorate Watch Floor

ronment using commercial-off-the-shelf (COTS) products. Did you use COTS because it was less expensive — you could deploy your products more quickly, what were your reasons?

Capt. Greer: When there exists commercial technology or COTS that meets your operational requirements, you are almost always much better off using it than government designed and built software or GOTS. Because it already exists you can deploy it much more quickly and the government has found that over the entire life cycle of a system or application, the costs are much lower when using COTS technology.

CHIPS: What has the directorate's participation been in meeting the demands of assisting in the Global War on Terrorism, Operation Iraqi Freedom and global maritime intercept operations?

Capt. Greer: ONI's IT Directorate has been extensively involved in supporting the Global War on Terrorism, Operation Iraqi Freedom and global mari-

time intercept operations. First and foremost, we are responsible for providing the entire IT infrastructure at ONI regardless of which classification level or security domain is being used. We provide about 3,000 desktops for approximately 1,500 users operating at three principal classification levels — Unclassified, Secret, and Top Secret/Sensitive Compartmented Information (TS/SCI). Each of these security domains is supported by its own unique Local and Wide Area Network (LAN and WAN). We also provide video teleconferencing (VTC) capabilities on all three networks. The directorate maintains all the associated storage, application, e-mail and various other servers.

We also have a department, which maintains any GOTS applications developed by ONI and integrates new COTS software products into our environment. We have been actively engaged in searching for new technology to meet the increased demands placed on ONI in these new mission areas. There is an increased emphasis on data mining and link analysis software to make sense of the volumes of data we are receiving and we have introduced some promising software in support of these needs.

ONI's support to the Global War on Terrorism and global maritime intercept operations has required a significant expansion of our 24X7 intelligence watch. In support of this effort, the IT Directorate recently finished a complete redesign and renovation



The Office of Naval Intelligence

of our watch floor [shown on previous page]. This state of the art watch floor now supports 35 analysts on a 24X7 basis and all the accompanying IT infrastructure including a Knowledge Wall composed of 10 (75-inch by 48-inch) monitors capable of displaying multiple video feeds for enhanced situational awareness.

The IT Directorate is home to the Joint Deployable Intelligence Support Systems (JDISS) Joint Program Office (JPO). The Navy is the Executive Agent for this joint program which provides a variety of intelligence support systems to joint warfighters, including the Global Command and Control System-Integrated Imagery and Intelligence (GCCS-I3); which is the joint counterpart to the Navy's Global Command and Control System-Maritime (GCCS-M) system, the Collection Management Workstation (CMWS), which provides support to Intelligence, Surveillance, Reconnaissance (ISR) managers, and several systems which support intelligence sharing with coalition partners. It is no exaggeration to say that virtually every command center (both joint and Service specific) in the U.S. Central Command's forward theater of operations supporting Operation Iraqi Freedom used at least some of the systems built and maintained by the JDISS JPO.

CHIPS: I can't imagine the level of security required in the Office of Naval Intelligence. Can you talk a bit about this?

Capt. Greer: As I mentioned earlier, we support IT operations at three principal security levels. Security requires us to keep these domains separate, so we have three parallel cabling and switch infrastructures. Care must be taken to ensure that the physical separation of these networks prevents inadvertent data exchange. We have a very robust Information Assurance posture (firewalls, intrusion detection systems, filters, etc.) supporting our operations at each of these security levels. In addition, individual systems and applications are subject to extensive security testing prior to being allowed to operate in this environment. Intentional movement of data between these networks is very carefully controlled to prevent the introduction of more highly classified data on a network or system operating at a lower classification level.

Capt. Greer reported to ONI in 1998, as program manager for the JDISS. In June 2000, he assumed his current post as Chief Information Officer. Under Greer's leadership, the IT Directorate carried out the infrastructure work to relocate the Chief of Naval Operations Intelligence Plot and the entire staff of the Director of Naval Intelligence several times following the September 11 terrorist attack on the Pentagon. The IT Directorate has also created new, and tailored existing systems and databases to meet the demands of the Global War on Terrorism, Operation Enduring Freedom, Operation Iraqi Freedom, and global maritime intercept operations. □

Announcing New Contracts under the DON IT Umbrella Program



PeopleSoft Enterprise Agreement Established

On behalf of the Department of Defense Enterprise Software Initiative, the Department of the Navy IT Umbrella Program and the Navy Inventory Control Point, Mechanicsburg, Pa., have established an Enterprise Agreement for PeopleSoft enterprise resource planning software and services. The agreement provides software license, maintenance, training, installation and implementation technical support.

PeopleSoft USA, Inc. (N00104-03-A-ZE89)
(800) 380-SOFT (7638)

Enterprise Agreements Established for IBM/Informix Database Products and Popkin Enterprise Architecture Tools

On behalf of the DoD ESI, the Army Small Computer Program has established an Enterprise Agreement for IBM/Informix database software licenses and maintenance support at prices discounted 2 to 27 percent off GSA Schedule prices. The products include IBM Informix Dynamic Server Enterprise Edition (version 9), IBM Informix SQL Development, IBM Informix SQL Runtime, IBM Informix ESQL/C Development, IBM Informix ESQL/C Runtime, IBM Informix 4GL Interactive Debugger Development, IBM Informix 4GL Compiler Development, IBM Informix 4GL Compiler Runtime, IBM Informix 4GL RDS Development, IBM Informix 4GL RDS Runtime, IBM Informix Client SDK, IBM Informix Dynamic Server Enterprise Edition (versions 7 and 9), and IBM Informix D.M. Gold Transaction Processing Bundle.

IBM Global Services (DABL01-03-A-0002)

On behalf of the DoD ESI, the U. S. Army Small Computer Program and Popkin Software have entered into a Department of Defense (DoD)-wide Enterprise Software Agreement for Popkin enterprise architecture and modeling tools, also known as Architecture Modeling Solution - Popkin, or AMS-P. Available products and services include the System Architect enterprise architecture and modeling tool set, and add-on options such as the C4ISR Extension, SA Simulator, XML Architect and DOORS Interface.

The U.S. Army Enterprise Software Initiative
Popkin Software & Systems Inc. (BPA DABL01-03-A-0001)

For more information go to the
DON IT Umbrella Web site at
www.it-umbrella.navy.mil or
ITEC-Direct at
www.itec-direct.navy.mil. □