

components. SMS brings to Navy's afloat tactical environment a high-level, high assurance messaging capability while adapting to Joint and Allied/Coalition Interoperability requirements. The system features for the NAVMACS versions up through SMS Phase II are summarized as follows:

- ◆ NAVMACS (V) is UYK 20, 1970s based H/W and S/W with little memory and little capability. NAVMACS II, the replacement for NAVMACS (V), uses Commercial-Off-the-Shelf (COTS) hardware with Government-off-the-Shelf (GOTS) software that adapts functionality into the Graphical User Interface (GUI) environment.

- ◆ NAVMACS II/SMS Phase I, replacement for NAVMACS (V) and DMS ready, has six variants scalable for all platforms, an upgraded legacy functionality in a Pentium-based system and includes system rack upgrades to allow for DMS insertion. This system's scalable hardware allows for DMS hardware and software upgrades and functionality in the coming years.

- ◆ NAVMACS II/SMS Phase II (DMS) provides DMS to Navy and Coast Guard afloat units and has multiple variants (CJTF, Shooter, Non-Shooter and non-deployer). This configuration brings DMS components into the SMS Phase I infrastructure with no modifications to the system electrical interconnections or footprint.

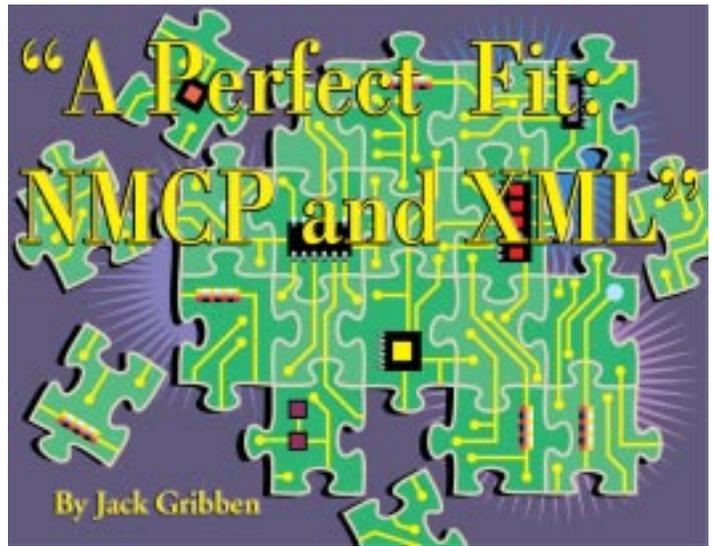
SMS hosts various software applications, such as Microsoft Outlook and Exchange, the Information Screening and Delivery Subsystem (ISDS) used in submarine configurations, TURBOPREP and the Defense Message Dissemination System (DMDS), to ensure maximum space utilization and Pentium processing capability.

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Additionally, SMS provides a variety of messaging services, security, interoperability, directory services and message access controls, all in an automated, user-friendly package requiring minimal watchstander involvement. It is capable of processing between 8,000 to 15,000 messages a day with an average message size of 4,000 characters (4 kilobytes) and can store messages more than 60 days.

SMS Phase II systems are currently scheduled for delivery to USS Tarawa (LHA-1) and USS Harry S. Truman (CVN-75) with follow-on installations planned for USS Enterprise (CVN-65), USS Nimitz (CVN-68), USS Abraham Lincoln (CVN-72), USS Teddy Roosevelt (CVN-71), USS Blue Ridge (LCC-19) and USS Carl Vinson (CVN-70) in FY04.

NAVMACS II/SMS Phase II represents a unique approach to modernizing the Navy's communications infrastructure. And it will provide a means for transitioning legacy communication systems into more capable, speedier, better integrated and fully joint interoperable capabilities to U.S. Navy ships and their embarked warfighting components. □



When Acting Secretary of the Navy, Hansford T. Johnson, issued the policy guidance memorandum for establishing the Navy Marine Corps Portal (NMCP) last February, he further aligned the Department of the Navy (DON) with the growing number of organizations that, since the mid 1990s, have been building enterprise portals to improve access to cumulative organizational knowledge.

Although the types of enterprise portal-building organizations vary — government versus corporate, military versus civilian agency — the obstacles they face are remarkably similar. Non-integrated legacy systems, existing subordinate portals and countless, different data formats are common challenges.

A high degree of consensus has emerged, however, about a solution to many of these problems. Extensible Markup Language (XML) has largely become the “tool-of-choice” for those who are working to piece together the technical architecture behind these portals and is simultaneously helping to usher in a new wave of knowledge-centric organizations.

But understanding how XML can potentially support NMCP technical needs requires a look at recent history to clarify not only the DON's rationale for establishing this enterprise portal, but its vision for the system's ability to integrate information that its Sailor, Marine and civilian employee users will rely on to carry out mission-related and personal tasks.

Outlining the NMCP Vision

In his February 28, 2003 memorandum, Acting Secretary Johnson wrote, “In order to realize the benefits of our significant information technology (IT) infrastructure investment, a framework for organizing, managing and accessing Department information must be established.” That IT infrastructure investment is comprised of several programs, including the Navy Marine Corps Intranet (NMCI), Task Force Web and Information Technology for the 21st Century (IT-21). Together, they provide a foundation for increased knowledge sharing and seamless access to information across the DON. At the same time, they also present the DON an opportunity to build a framework in the form of NMCP, a single integrated enterprise portal structure for use throughout the Department.

The DON's vision for NMCP is multi-faceted. Most significantly,

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Dave Wennergren, DON CIO

April 3, 2003

Testimony before the House Armed Services Committee

it is to provide Sailors, Marines and civilian employees a single Web-based entry point for online access to multiple DON information technology systems and applications (including over 350 subordinate or “constituent” Navy portals) that contain a wide range of tactical, training, human resources and other types of information. For example, a Sailor might log on to NMCP to carry out critical warfighter duties, such as tracking fleet positions and conducting key maintenance tasks like ordering spare parts for Naval aircraft. But he could also use the portal to sign up for a training course, check the balance in his retirement savings account or read the latest headlines on Navy NewsStand.

Flexibility is another key part of the NMCP vision. The portal will be flexible to support individual user or command customization. This will allow users, for instance, to personalize the look and feel of their NMCP home page to feature the areas they visit most often. The DON also anticipates NMCP will play an important role in helping it better manage IT resources. Integrating DON systems and applications through NMCP will enable commands and offices operating their own portals to focus more on content delivery and conserve time, effort and funding currently directed toward developing constituent portal features and functions.

Part of NMCP-related improvements to IT resource management will be improving the reliability of Department information and consolidating older, non-integrated systems, a goal DON Chief Information Officer, Dave Wennergren, outlined in the weeks following the NMCP memorandum signing.

“Our goal is a Web-enabled Navy-Marine Corps team, allowing our mobile workforce to have access to self-service transactions, via the Web, around the world,” said Wennergren, in his April 3, 2003, testimony before the House Armed Services Committee. “Our movement to Web-Services solutions will provide for the establishment of single authoritative data sources and eliminate ‘stand-alone’ and ‘stove-piped’ legacy systems.”

XML: Supporting NMCP’s Technical Architecture

The NMCP program is at a relatively early stage in its overall development. But while many important decisions lie ahead, one thing is certain: XML will play a central role in the portal technical architecture. A key reason for XML’s behind-the-scenes prominence with enterprise portal projects such as NMCP is found in the technology’s special ability to extract and integrate data contained in the many different systems and formats that can reside under a portal’s umbrella-like structure.

“XML is the great translator,” says Bob Green, who chairs the DON’s XML Work Group. “In a portal environment, that’s very important. XML gives us the ability to create a common language for achieving the system-to-system interoperability that is necessary for providing information and responding to user queries through a single interface.”

XML tags enable the DON and other portal-building organizations to bridge the gaps that exist among their non-integrated legacy systems, constituent portals and other applications. Organizations can define the tags to clearly identify the content and meaning of both their structured (e.g., text documents, images, spreadsheets, presentation materials) and unstructured (e.g., relational databases, legacy databases or files) data.

The XML catch, to the extent there is one, is that organizations must agree upon standard meanings, or “metadata,” for the information resources (i.e., tags, namespaces, schema) that make up XML vocabularies to effectively transmit data among systems. But here too, the DON is well prepared. As part of the Department’s work to create an overall XML Governance Structure, DON commands have been logging their XML information resources into the Navy section of the Department of Defense Metadata Registry and Clearinghouse. This will further the goal of ensuring consistent applications of XML with NMCP and other programs.

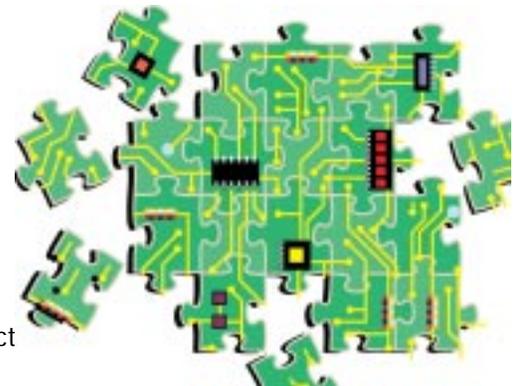
Extensibility is another factor in XML’s popularity with organizations building enterprise portals. In the DON’s case, the NMCP policy guidance memorandum directs that the portal’s technical architecture possesses non-proprietary implementation designed to rapidly respond to technology change. The requirement is tailor-made for XML, according to Green.

“XML’s extensibility allows you to create an infinite number of data types at the programmer level, which is particularly useful for NMCP,” says Green. “It protects portals from becoming snapshots in time and instead enables them to evolve with the organizations they serve. When the goal is to provide the very best and most current information to portal users, that’s a tremendous asset.”

...A portal faced with the challenge of integrating information from multiple sources across a vast and constantly changing enterprise...

...A technology valued for its highly flexible nature and its ability to eliminate barriers to information sharing...

...NMCP and XML. It just might be a perfect fit.



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