



Developers Meet a Variety of Complex Information and Data Sharing Needs



This month's *CrossTalk* theme is centered on information sharing and data management. The relationship between data contained in a database and informational needs for today's complex computer-driven systems is the subject of our lead article from John Wunder and Dr. Will Tracz. In *An Information Architecture Strategy*, these authors explain how information architecture is a hierarchy of products and services organized to assure the timely and accurate delivery and storage of data and information across an entire enterprise. The article describes the components of an information architecture strategy using examples from the Global Combat Support System-Air Force's Enterprise Architecture, currently under development.

A system that is used heavily in the war against terrorism is described in the article *Warfighter's Access to Geospatial Intelligence*. Author Peter Winter explains the use of the Information Access Services tool developed by the Harris Corporation to provide timely, relevant, and accurate imagery, imagery intelligence, and geospatial information to our warfighters. Although the National Imagery and Mapping Agency has terabytes of imagery and intelligence information available, getting the right data, at the right time, to the right user is the challenge described in this article.

In his article *Effective Collaboration: People Augmented by Technology*, Richard L. Conn delves into the world of collaboration for development in today's world of increasingly complex software-intensive, mission-critical systems. He mentions how the development of the Joint Strike Fighter F-35 uses a Web-based information portal server as an example requiring collaboration of major contractors with subcontractors distributed across several countries. He goes into explicit detail with another example using classroom education of 100 students from 24 different countries to describe some of the current capabilities available for collaboration.

The article *Serialized Maintenance Data Collection Using DRILS* by Capt. Greg Lindsey and Kevin Berk describes a specialized Web-based application that has been successfully used to dramatically reduce the sustainment costs of the Air Force F-16 fighter. They explain that the key to successful cost reduction sustainment programs is to have a user-friendly, data-gathering capability that provides the supply chain manager with dependable part consumption data, as well as the information needed to identify and correct troublesome components in any complex weapon system.

Have you ever worked on a project where the document requirements did not make sense and seemed to be irrelevant, non-productive paper stacks? In *The Documentation Diet*, authors Neil Potter and Mary Sakry give an analysis of how inappropriate documentation can creep into and strangle a project. They elaborate on a list of several viable techniques for making your documentation strictly practical. If you hate project and process documentation, then read this and review how to put your documentation requirements on a diet.

In our supporting article, *Software Architecture as a Combination of Patterns*, authors Kent Petersson, Tobias Persson, and Dr. Bo I. Sanden recount their efforts in the creation of a unique software architecture to solve the requirement for a highly adaptable radar system. The radar had to handle the needs of different customer requirements in an environment of hardware and operating system replacement.

Lastly we bring you two online articles this month. Author Don O'Neill outlines a vision to achieve global competitiveness in *Introducing Global Software Competitiveness*. He explains that software competitiveness revolves around how the software work force is used to achieve customer satisfaction, how innovation is essential to delivering customer value, and how strategic software management guards against event threats. In *Data Warehouse: Your Gateway to the Information Age*, Kelly L. Smith gives new hope to those searching for a simple data storage solution, and describes the challenge of integrating today's data storage systems with those from the '70s and '80s.

We hope this selection of articles provides you with a new perspective on the management of increasing amounts of data in today's complex computer-driven enterprises. Our goal is that perhaps one or two good ideas on how to solve a current data dilemma are found in this issue.

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