

## Partnership Real-time Information, Management and Exchange System (PRIME)

### Client Needs



As part of its peace-keeping mission, NATO Partnership for Peace (PfP) oversees an elaborate system of events, called cooperation programs, and follows a well-established workflow of organizing them: NATO PfP members (countries and organizations) suggest programs, have them approved, and send invitations to other members; participants register for the program; at the end of the program, feedback reports are collected from participants and provided to PfP members. Organizing over 10,000 cooperation events, to which 158 PfP members send over 45,000 participants, presents several challenges.

First, the information about the cooperation programs, albeit non-classified, is naturally sensitive, so sharing it among PfP members requires establishing and controlling various levels of access rights.

The second challenge is that each NATO PfP member has its own legacy system of storing information about its programs, which makes exchanging this information difficult, error-prone, and, sometimes, impossible. For instance, before PRIME, each member had to extract the relevant information from its proprietary system and have it manually copied into a Microsoft Excel spreadsheet for exchange, thus obviously wasting labor and creating high probability for errors.

### Product Overview and Benefits

PRIME is the official NATO system for development, management, and review of PfP cooperation programs. It implements a fully electronic workflow in accordance with the principles of self-differentiation and confidentiality. PRIME streamlines the cycle of contributing a cooperation program and having it approved, inviting and registering participants, and gathering and distributing follow-up reports.

Since the PfP members are geographically separated, all of the information about the cooperation programs is exchanged over the Internet. Of course, PRIME ensures that the exchange is secure and that members have access only to information intended for them.

Even though users interact with PRIME through a standard web browser, they enjoy a comfortable working environment, which enables them to bookmark frequently-used items, maintain personalized views and calendars of events, organize event information, and communicate via a secured messaging system.

Since NATO PfP members don't have to mail diskettes with MS Excel spreadsheets by courier anymore, organizing cooperation programs is cheaper, faster, more secure, and more stable, as members don't waste resources entering the same information more than once.

### Implementation Overview and Technical Details

PRIME is a database-driven web application for collaboration and document exchange, built on the classic three-tier (data, business, and presentation) architecture. It comprises a central database, an access control and authentication module, an internal messaging system, import and export wizards, and system management tools -- all wrapped in a comprehensive and intuitive graphical user interface (GUI), which "feels like a desktop," although it is delivered in a standard web browser.

Access to PRIME over the Internet is based on SSL and is controlled via digital certificates and passwords, providing a reasonable level of data security (its centralized database is housed in a secured MS SQL Server 2000).

Even though PRIME is a classical web application, its implementation confirms the old adage that the devil is in the details. For instance, because of the geographical diversity of NATO PfP members, the HTML generated by the web application was meticulously streamlined for slow connections (using tricks such as two-letter CSS style names). Yet, the GUI has a distinctive "desktop feel," achieved with many lines of virtuoso JavaScript.

Providing lots of information on a single screen presented another challenge and called for a multi-resolution approach to displaying content, with its own "bag of tricks": display-on-demand (on mouse hover), visual cues to information structure, and carefully chosen successive levels of presentation detail.

Technology summary: ASP.NET, MS SQL Server 2000, MS Access, Java applets, DHTML (JavaScript, HTC), CSS, XML, WordprocessingML, XSL.

### Outsourcing Partners

PRIME is more a collaborative than an outsourced project: the whole system was designed and developed, from start to finish, in a distributed working environment by Tetracom and IPH (Winterthur, Switzerland), with customer care provided entirely by IPH.