

# Hewlett-Packard Company

## Delivering the On-Demand Financial Dashboard

### Inventing Innovative Solutions

HP provides technology solutions to consumers, businesses and institutions globally. The company has a stated commitment to “invent” ways to enhance the way people live and use technology. This is demonstrated not only through its broad range of innovative products, technologies and solutions for customers, but also by its own internal IT initiatives.

### Internal IT Gets Inventive

Jerry Lettow, an IT architect for HP’s Enterprise Financial Planning and Reporting Team illustrates the inventive spirit that is at the core of HP. The Enterprise Financial Planning and Reporting Team worked with HP corporate finance to create an intranet portal application called *My Dashboard* that is used to share sensitive financial information with key HP personnel. This internal financial dashboard provides a ‘one-stop shop’ where users can access the most up-to-date financial information about HP, such as order, shipment, and revenue data, expense data, financial projections and goals for upcoming quarters. *My Dashboard* is used worldwide by more

than 15,000 HP employees, from senior executives to operation managers and company financial analysts. Using *My Dashboard* allows HP executives at the highest levels to make daily decisions based on the most current financial information.

“*My Dashboard* encompasses a set of processes and technologies that enable the creation and packaging of financial information in the form of subject-specific portal views,” explained Mr. Lettow. “Information presented by the dashboard is secured and personalized so that each user has the option of selecting the financial content they are most interested in,” Mr. Lettow said.

### Limitations of Initial System

The first version of *My Dashboard* was well received, but the data available on the dashboard was limited and users quickly started asking for more. “The first version was a file-based architecture. Evolving this system to accommodate requirements for new content, formats, security filtering, and demands for different types of portlet personalization was becoming increasingly difficult,” stated Mr. Lettow.

“The first version of *My Dashboard* targeted a small user base of about 400. Through a process of managed growth, the popularity of *My Dashboard* increased to a supported user base of 2000. Less than 1 year later, we were supporting a user base of 15,000, and looking at the goal of potentially supporting a user base of 25,000 by mid-2004. Clearly our file-based architecture needed to evolve into something that was less support intensive, more conducive to change, and that would provide quicker turnaround development times,” explained Mr. Lettow.



**Company:** Hewlett-Packard Company

**Business:** Global provider of information technology infrastructure, personal computing and access devices, global services and imaging and printing products

**Challenges:**

- Securing and publishing highly sensitive complex multi-source financial data
- Rapidly changing requirements to serve dynamic business environment
- 25,000+ users with unique implicit and explicit content filtering and personalization needs

**Results:**

- Near real-time access to information for financial executives and analysts
- Flexibility to add new data streams—without programming
- Rapid deployment, with scalability to accommodate growing business areas

“Having the ability to quickly create a new type of dashboard view to accommodate the publication of key current financial information in near real-time is a huge competitive advantage,”

Jerry Lettow, IT Architect for HP

**A New Approach Needed**

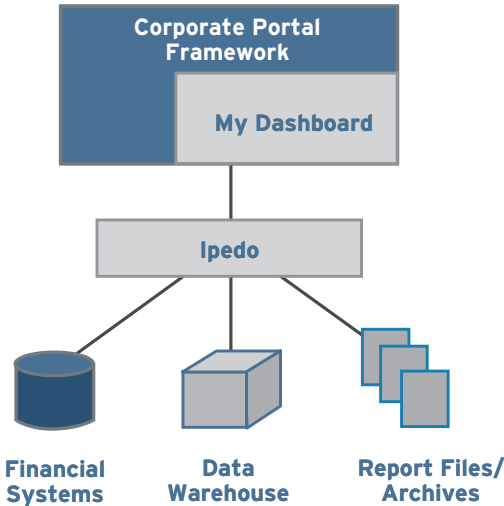
After evaluating the existing system and future needs, the team determined that it needed to take a new approach. “After trying to work out a schema using a relational database, we found that it was too complex. Our data is hierarchically organized and parent-child relationships are hard to develop in the relational paradigm,” explained Mr. Lettow.

“We needed a system that could easily distribute information across multiple machines. We decided to move to XML because it gave us the flexibility to structure data and use content any way we want,” said Mr. Lettow. XML has three critical properties that made it a logical choice for the next release of *My Dashboard* – the ability to map to any kind of data (integration and flexibility), the ability to find what you need (for custom views), and the ability to be easily formatted for presentation (as in custom HTML for a portal dashboard view).

**Powering the New XML-Based System**

When the team decided to rearchitect *My Dashboard* around XML, they needed to find a software infrastructure to support this new system. After evaluating the top five XML server vendors, Lettow’s team selected Ipedo’s XML Intelligence Platform. “Ipedo was the clear leader. Some vendors we looked at just weren’t far along enough in terms of XML support tools. Other products looked more like XML was an afterthought. Ipedo’s native XML platform has the comprehensive set of tools that we needed if we were going accomplish our goals.

“With the initial prototype, we saw results right away. We created a completely functional portlet template in less than four hours without knowing anything about the product — relying only on their documentation and code examples. We then implemented this template and were able to create seven different types of portlets within a single day. In fact,



**Ipedo plays a key role in consolidating financial content for My Dashboard**

1. Integrate and convert to XML
2. Search and compose user view based on preferences and security
3. Prepare dashboard view for presentation in portal

in our current production environment, we can create and deploy an existing template-based portlet in less than 10 minutes.” Mr. Lettow said.

**Managing and Combining Disparate Information**

The information delivered through *My Dashboard* comes from a wide variety of production systems, including relational stores and data marts, and in a number of different formats: spreadsheets, flat-files, PDF files and Microsoft Word documents. This information must then be transformed into XML whereupon it is then pulled into various subject-specific portlets before being presented to a user based on content security and user personalization specifications.

“Using XML and Ipedo, we avoid redundancy, are able to securely publish content with any number of attributes and at any hierarchy level, and we can publish content the way our users want – in a format or behavior that best suits their needs,” said Mr. Lettow.

“Ipedo makes short delivery times possible by providing us with the framework to house content, security, and user information in a flexible, easy-to-access XML format. For example, using XML we can customize security requirements for content or some user very easily. Ipedo’s tools allow us to

then manage this change and deploy it very quickly,” Mr. Lettow said.

**Fast Return on Investment**

The new Ipedo-powered version of *My Dashboard* not only allowed the HP team to realize the real power of financial portals, but also provided a leg up on the competition. “Having the ability to quickly create a new type of dashboard view to accommodate the publication of key current financial information in near real-time is a huge competitive advantage,” said Mr. Lettow.

Ipedo bridges the gap between structured and unstructured content by providing intelligence and context for information in real time. “During our proof-of-concept phase, we found that conventional systems couldn’t match our needs for content retrieval and updates. Using Ipedo we were able to get the functionality and speed we wanted with a very low-cost investment,” stated Lettow.

“Now that the new XML version of My Dashboard is live, our requests for published content and enhanced personalization have increased, but our cycle time to respond has decreased, enabling us to meet the growing demands of the customer.”

