# _Power_ _Vision_ Solution

# PowerVision Bridges Geographic Barriers with Intranet Groupware



PowerVision needed an internet-enabled tool to connect its distributed staff members to the main office's business processes. Unable to find an off-the-shelf tool, PowerVision turned internally and developed _PowerOps_. Using _PowerOps_, the company's distributed consultants, engineers, and other staff members can now submit and report on project timesheets, track actions to closure, stay abreast of company news, invoice clients, and more, using a web browser from anywhere in the world.

## A Distributed Staff…

PowerVision's on-site partnering with customers presents many operational challenges; from its inception, PowerVision Corporation has envisioned a distributed workforce. According to President Nitin Uplekar, "Our intent from the beginning was to set up infrastructure to support operation on the basis of a virtual corporation and geographically distributed offices. The intranet-based solution was definitely for us."

PowerVision needed tools to automate its business processes. For example, Mr. Uplekar wanted efficient entry and access for employee timesheets. "My experience with timekeeping in other organizations was that managers did not have timely access to the timesheets, which caused delays in submitting status reports and invoices to the customers." Providing a means for employees to submit and review timesheets in real time, wherever their location, would both improve the accuracy of the timesheets and reduce the delays in getting information to PowerVision's clients.

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Traditional tools for these purposes would not work, since most assumed a LAN environment with a shared file server, or required specific types of network connections that could not be established from inside the corporate firewalls of some of PowerVision's clients.

## …That Works as a Team

PowerVision's engineers determined that a web-based solution would be the most effective. A central page for access to all of the company's web-based information and applications would provide a "virtual headquarters" for the distributed team. Applications would reside on the corporate web server, and access a central enterprise database.

**Business Area:**
- Intranet Groupware

**Key Technologies:**
- Netscape Enterprise Server
- Sybase SQL Anywhere
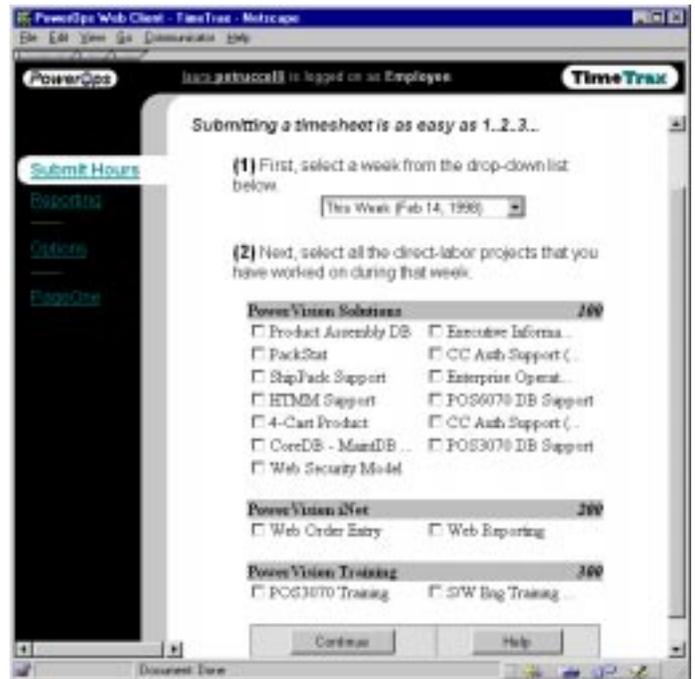- LiveWire
- JavaScript

**PowerVision's Role:**
- Customer
- Full Lifecycle Developer

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For the database server, PowerVision chose Sybase SQL Anywhere, a full-featured, flexible, and easy to administer relational database server that provided excellent performance for this application, while requiring minimal computing resources and almost no administrative overhead. To develop the interactive applications, Netscape's LiveWire technology was used. LiveWire applications are written in JavaScript and run within the web server, with full access to the relational database server. Finally, client-side JavaScript was used to provide immediate response time to operations that do not require server interaction (for example, hours entered in a timesheet are subtotaled and summarized entirely within the client browser, without requiring any network turnaround delays).

*PowerOps* supports the following applications:



- TimeTrax–timesheet entry, editing, reporting, and invoicing.

- InterAction–an action tracking system

- FirstContact–a contact management system

- Status Reporter–a tool for building project status reports

- Timesheet Reporting–a report system for employee hours

- News Room–a company news page

- LetterTrak–a tracking system for official documents

- P.O.Trak–a tracking system for purchase orders

- Invoice Generator–a tool for generating invoices for clients

- OpsCenter–a tool for accessing employee, client and project information stored in the database

Finally, *PowerOps* also serves as a collection point for internal reference documents, including addresses, telephone extensions, software inventories, standard document templates, etc. This is especially important to PowerVision's distributed team, providing a home to information that would traditionally be found pinned to company bulletin boards or available from secretarial staff.

*"It used to take our office manager 16 hours to [do] the invoices…we have cut this time down to less than 5 minutes."*

*PowerOps* has resulted in significant time savings. According to Mr. Uplekar, "Before we added the invoicing module, it used to take our office manager 16 hours to pull together the data for the invoices. By making use of SQL, Excel, and the Internet, we have cut this time down to less than 5 minutes."

Equally important, through **_PowerOps_**, PowerVision's team members have experienced a consistent interface to business operations and have a single point of reference for the latest corporate information. Engineers have been able to handle required administrative tasks with a minimum of overhead, while managers are able to keep a handle on project progress and issues, even when project teams are distributed across multiple locations.

From a technical perspective, the architecture of the system has proven to be quite robust. As **_PowerOps_** has evolved, database and application changes have caused little impact to users, even when the database schema (table and column structure) has changed. In a traditional client/server model, database and application changes typically require updating application software on all client machines, which is a logistical challenge even within a single site, but which would be prohibitive in the company's geographically distributed environment. With the web-based implementation, there have been no issues with mismatched software versions or upgrades, since the only software required on the remote systems is a standard web browser; all of the business and application logic is on the central server, and can be enhanced and maintained with no change to individual users' systems.

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Mr. Uplekar is pleased with the results. "Using **_PowerOps_**, PowerVision has been able to maintain teamwork and efficient operation, so we can better serve our clients. We are now exploring the possibilities of automating expense report approval and improving the hiring and interviewing process."

A demonstration of **_PowerOps_** is available at http://www.powervision.com/demo.

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