



KnowledgeWare®

# APPLICATION PROFILE

*Washington Natural Gas Company*

## Washington Natural Gas Uses the RAD Workstation to Develop Rapid Application Prototypes



*Frank Couch (L), business project manager, and John Rowlands, vice president of Information Systems, found the RAD Workstation greatly enhanced communications between business users and system developers.*

What do you do when you're adding customers at a dizzying rate, you desperately need new software to manage the growth, and you have to slash your usual development time — not by a mere 10 to 15 percent, but by an imposing magnitude?

Faced with these challenges, the innovative Information Systems group at Washington Natural Gas Company turned to KnowledgeWare's Application Development Workbench® I-CASE technology. Using the RAD Workstation they were able to speed the transition from business analysis to screen design. And, according to Kevin Morris, applications supervisor, they succeeded in record time, cutting business area analysis by 35 percent.

When the RAD Workstation entered the scene at the utility's headquarters in Seattle, a tremendous surge in new customers was putting pressure on the entire management structure. In an industry with an average annual growth rate of two to three percent, Washington Natural Gas was topping seven percent. The number of new customers was soaring. Growth skyrocketed from a range of 3,000 to 6,000 new customers per year to a whopping 20,000 to 25,000. In addition to a huge backlog of customer demand, the utility was facing \$60 to \$70 million in new construction requirements and a greatly increased work force swelling with subcontractors.

Washington Natural Gas wanted to maintain its traditional high standards of service in the Puget Sound area (a region that includes more than half of the state's citizens and the majority of its commerce). But growth had to come at a targeted price. Management badly needed accurate cost and customer information, by work area, to appropriately allocate financial resources.

### **A Comprehensive System for Managing New Business**

This was the impetus for the utility's new Work Order Resource Management System (WORMS), a joint effort of Information Systems and representatives from marketing, accounting, distribution, operations, and engineering business areas.



*Kevin Morris (L), applications supervisor, and John Wolf, manager of applications, said the RAD Workstation smoothed the transition between analysis and design.*

The WORMS project was divided into five sequential partitions. In the first two partitions, developers translated business analyses and user needs onto paper screens, which were then used to design the online applications. The team achieved high quality, but business area analysis in the initial two partitions took seven and five months, respectively. Turnaround had to be improved. The team needed a way to speed consensus between the business community and IS.

Their solution? The RAD Workstation, a product that provides a rapid, iterative and interactive method of prototyping online applications. With the RAD Workstation, developers quickly built and animated application prototypes that could be changed again and again.

Using the product allowed programmers to verify end-user requirements earlier in the development life cycle. Plus, information gathered during the analysis and prototyping phases could be used to automatically generate detailed design constructs. There's no "throw-away" prototyping within the integrated CASE environment. Prototypes are stored in the ADW encyclopedia and are later evolved and expanded.

The third business area analysis took only two-and-a-half months — cutting the time of the previous phase in half. "Thirty-five percent of the time savings is directly attributable to the workstation," said Morris. The team realized an easier transition between analysis and design, and the RAD Workstation helped reduce the consensus time significantly. Developers could see what the business community wanted; the business community could look at the screens and easily visualize how the work flow would be impacted.

### **Far-Reaching Benefits from Rapid Prototyping**

When the business community develops the scenarios for the prototype, the rules come to the forefront much sooner. "We had information that we didn't have in the other phases, and we had it fast," said Morris. For example, screen navigation is accomplished early in the process. Prior to the RAD Workstation, navigation didn't happen until design. "The transition between the phases became much quicker," Morris said.

In addition, demonstrating prototyped screens to users vastly improved the communications process. Before, with paper scripts, users couldn't "feel" how the screens would work and interact. As a result, response and feedback were minimal.