



DADE BEHRING

Every minute of every day®

WORKSOFT CUSTOMERS

Worksoft's customers are among the most successful companies in their respective industries. A common thread among Worksoft customers is a commitment to exploiting leading edge technology solutions that lead to a sustainable and significant competitive advantage in the marketplace.

Worksoft's customers include such industry leaders as AFLAC, Charles Schwab and Northrop Grumman, all of whom have deployed Worksoft's flagship product, Worksoft Certify, within their organizations.

WORKSOFT CERTIFY®

From the back office to the front line, software applications once viewed as a productivity enhancement are now seen as a competitive weapon. In the past, however, software test automation required that test cases be documented by business and quality analysts, then translated into a specialized scripting language by programmers. As a result, test automation hasn't delivered on the promise of cutting testing time and costs.

Until now. Seeking to simplify and accelerate software quality testing, Worksoft Inc. offers an innovative approach called progression testing. Our comprehensive software testing solution eliminates the need for programming, so it can be used by business analysts and other expert users who know the business best. Our flagship product, Worksoft Certify, structures information about critical business processes and how they should operate in a way that is easy to define, automate and maintain. This approach slashes the time and cost of software test automation by 60% or more, helping businesses attain significant and sustainable competitive advantage.

"Because of the evolving nature of disease organisms and emerging antibiotic resistance and new drug therapies, Dade Behring needed an automated testing software solution that could keep pace with our product development. Worksoft® Certify vastly improved our coverage—the amount of testing we could do in a short period of time—and gave us the flexibility to work on multiple products simultaneously. Most importantly, we have an increased confidence that our software is essentially free of significant defects, which is critical with a product that can impact the health of critically ill patients."

—Bob Mende, Senior Systems Engineer, Group Leader of Automated Testing, Systems Integration Group, Dade Behring

Dade Behring, Inc.

Dade Behring, Inc.—The world's largest company dedicated solely to clinical diagnostics—delivers innovative lab products, systems and services that enhance patients' quality of life. Headquartered in Deerfield, Illinois, Dade Behring operates in 43 countries, employs approximately 6,000 people and serves more than 26,000 customers worldwide. The \$1.6B company has four core product lines: Chemistry/Immunochemistry, Hemostasis, Microbiology and Infectious Disease Diagnostics.

CHALLENGE

Dade Behring needed a more efficient testing methodology for LabPro™, the data management software component of its MicroScan® microbiology systems, which also includes disposable tests and instruments for reading and processing these tests. For patients with bacterial infections, LabPro™ identifies infectious organisms and the appropriate therapeutic drugs by running biochemical and drug test results through organism probability and therapy databases. The products are sent to countries around the world in multiple languages and configurations to meet the needs of each market. The time-and-labor-intensive manual programming approach used to test the LabPro™ software presented a number of challenges, including:

- Difficulty in cost-effectively producing and testing software that is essentially free of significant defects when accuracy is critical. Even very small changes to the software require comprehensive testing, as errors in the software could potentially delay the correct drug therapy of a seriously ill patient.

- **Delays in product releases.** Since the exclusively manual approach required testing live organisms to get expected values, software testing often took several months. As new strains of organism change their characteristics and become resistant to antibiotics, new drugs and tests are constantly being developed. The demand for these new tests is high, making it imperative to quickly release new products worldwide.
- **Expensive in terms of human and other resources.** Manual testing required costly, highly skilled professional talent. Automation would allow Dade Behring to leverage that talent in the development stage and then leave the testing to less experienced-and less costly-individuals.

SOLUTION

Worksoft's Certify has overwhelmingly addressed Dade Behring's need for an automated software testing solution. After a pilot project proved Worksoft Certify would speed automated test development and be easy for non-programmers to use, the company launched into a full implementation. Over the course of two years, Dade Behring has successfully implemented eight software development projects using Worksoft Certify. The company has completely integrated Worksoft Certify into its software evaluation process, which includes around four software projects per year.

RESULTS

Worksoft Certify has enabled Dade Behring to increase the quality of testing LabPro™ and the MicroScan® products beyond what was possible using manual testing. Major results include:

- **Increase in testing coverage over a shorter period of time.** Using probability tables generated by automated testing, Dade Behring can now run through tens of thousands of data points in days rather than only a few hundred data points in months. For example: Before implementing automated testing, it took six weeks to manually test 1,285 test points; Worksoft Certify can test 63,834 test points in four days.
- **More efficient resource allocation.** Worksoft Certify enabled Dade Behring to transfer automated test development efforts from highly specialized engineers to personnel with little or no programming experience. Staff with minimal training could perform tests, which before required lab technicians with special experience. With testing efforts increased tenfold and specialized resources freed up, Dade Behring can now simultaneously address multiple projects more quickly.
- **Builds on previous testing efforts for faster, more cost-effective Automated Test development.** Since Worksoft Certify utilizes a data repository approach, the initial tests automatically become regression testing for the future. As time goes on, more projects—including the releases of software in multiple languages—can be taken on with less effort.
- **Testing earlier in the Development/Evaluation Processes.** Comprehensive testing can now begin as soon as software is available. Problems are discovered earlier in the development/evaluation cycles, so corrective measures can be taken before the software goes to QA—a time and resource saving feature. Furthermore, since releasing an unplanned patch to a buggy release can cost as much or more than \$200,000. Automated testing using Worksoft Certify helps to ensure Dade Behring against such losses.