

TECHNOLOGY LEADER SERIES

Maximizing the impact of test engineering

New off-the-shelf software tools help engineers increase their productivity, while encouraging collaboration with remote partners and suppliers

A recent Test & Measurement World careers survey says it all: Design and test engineers are being stretched to the limit. Respondents report that they lack sufficient time, support and training to tackle all their day-to-day challenges.

Working for highly competitive electronics and communications companies, these time-limited engineers must assure the success of new product launches with ever tighter deadlines, while supporting off-shore electronics manufacturing services (EMS) providers.

In the end, most test engineers eventually face the same glaring issue: How to successfully achieve shorter product development cycles while ensuring product performance and quality?

Real World Pressures

Typically, engineers spend significant effort on programming, above and beyond what is required for test automation. They struggle to maintain deployed test systems in synch with new product releases, and they must aggregate and interpret test data scattered across Excel spreadsheets. Often, they must wait several days to see if product and process changes are

being deployed properly in production by EMS staff in distant locations.

Before standardized software platforms became available, companies like Nortel, Alcatel and Harris realized the need to streamline their test processes. Yves Lacroix, Test Director at ONI Systems in the late 1990s, recalls the challenge of having new and complex products and software features coming along at an ever-increasing rate. "We badly needed a way to systematically introduce new products to the market, while making sure that they met the most stringent quality requirements for multiple product releases."

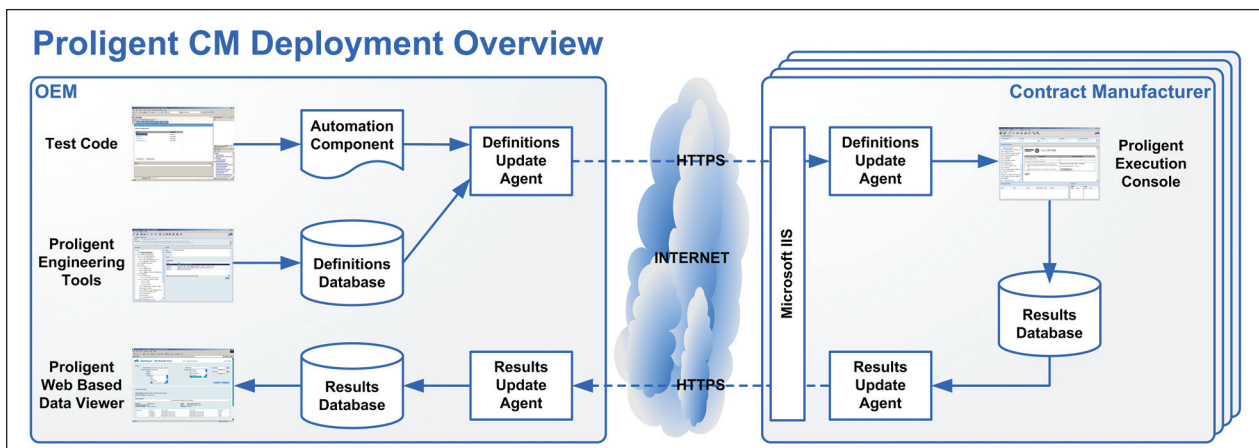
Working at Nortel in the 1990s, Jean-Yves Allard, now VP of R&D at Averna, decided to develop a platform internally that would do just that. A major challenge: How to sustain test developments at partners' sites all over the world. There was no consistency in how tests were being performed, nor was their any visibility over pro-

duction results. Furthermore, Allard recalls, maintaining software on computing platforms that changed every other year became almost impossible.

Finally, an answer to these problems arrived in the form of Prologent™ by Averna. This ready-to-use solution eases the implementation of test strategies, while accelerating and standardizing test system development. As result, more OEMs are coming to depend on Enterprise Test Software (ETS) platforms like Prologent to provide an infrastructure for defining how test processes are created, deployed, monitored and analyzed. Additionally, they can integrate and synchronize test systems with other enterprise functions, ranging from R&D to manufacturing to supply chain.

Reengineering the Way You Work

Prologent delivers value to test engineers across a number of dimensions. For example, the platform can help engineers build test systems faster and more intuitively by avoiding programming issues not directly related to measurement automation.



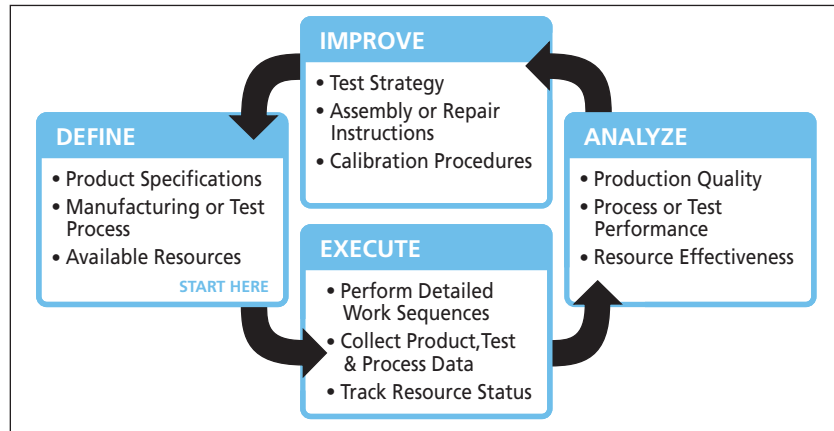
You can deploy Prologent on a few test and assembly stations, on a complete production line, or at contract manufacturer's site. Usage can be expanded as needs evolve.

Proligent comes with an easy-to-use configuration interface for creating entire test sequences. You can easily create a product test plan without writing thousands of lines of code or dealing with troublesome spreadsheets.

The platform also makes it easy to define test plans in terms of product characteristics, measurement tolerances and test processes. Once your test plans are defined, they can be automatically deployed to all stations. Introducing new products is significantly simplified, since test sequences can be built without assuming a particular product configuration. Proligent's run-time arbitration capability helps you select the right tolerances and binaries to be used according to the unit under test product specification.

When it comes to Product Data Management, Proligent lets you collect, store, distribute and share product and test data in a central database. This eliminates having to manually sift through log files and Excel spreadsheets. Test data is also 100% traceable.

Process control issues can be addressed, too, since Proligent manages the flow of activities between test,



Proligent has been designed to help test engineers design test systems faster and more efficiently, and maximize the impact of test from the early stages of conception to execution and analysis.

repair and assembly stations. Proligent comes with standardized reports, including defects Pareto, cycle time, yield, and measurement analyses. Since test data is exportable to XML or CSV format, you can easily build customized reports.

Facilitating how your organization deals with multi-site collaboration, Proligent can eliminate problems caused by time zones and error-prone updates of new product and test software releases. When product tolerances, or test procedures are adjusted, Proligent can synchronize test systems with these engineering changes, even when the systems are located

at another facility such as an EMS provider. All reporting is done via the web, so information is quickly communicated anywhere in the world.

A Powerful Partnership

As a National Instruments Select Alliance Partner, Avera developed Proligent in collaboration with National Instruments to provide additional capabilities to NI TestStand.

"In addition to the leading test management features provided by NI TestStand, test developers are interested in tools to extend their existing systems," says Craig Anderson, Marketing Group Manager for NI TestStand. "They want to easily store and analyze their test data, as well as manage multiple test stations. Proligent and NI TestStand together deliver the development efficiency, data visibility and streamlined deployment required in today's complex and competitive manufacturing industry."

And those advantages are present, whether your company is a small start-up or an established OEM or EMS, or whether you manufacture your products in-house or overseas. Whatever the situation, Proligent is making a big difference in how test engineers do their jobs and contribute toward their company's success.

FOR MORE INFORMATION

Engineers can learn more about the Proligent test engineering platform by visiting www.proligent.com, emailing info@proligent.com or calling 1-877-842-7577.

Customers Speak: Lower Costs, Fewer Defects

Harris Corporation, a giant electronics company, has used the Proligent test platform alongside NI TestStand to develop its test stations.

"Proligent is a key part of the Harris strategy for implementing test management best practices and establishing critical links to the rest of the production flow," explains Denis Gagnon, manager, Test Engineering, Harris MCD. "It allows us to significantly lower the cost of developing test software in order to automate defect detection and the characterization of units in production. Without adding overhead to test development, Proligent allows us to supervise, control and trace our products anywhere our test stations are located."

Harris is now considering retrofitting its legacy microwave test systems to standardize on Proligent, thereby reducing maintenance costs and better managing the collaboration with remote production facilities.

But Proligent isn't just a way to alleviate headaches at large companies. Proligent helped SigmaPoint, a contract electronics manufacturer, push its operations to improved performance levels. "Using this ready-to-use tool that incorporates best practices, we were able to develop a test station in as quickly as three weeks," says Steve Blouin, Test Engineering Director, SigmaPoint.