

Improving Productivity by Managing Technical Expertise



Monsanto applies innovation and technology to help farmers around the world be more successful, produce healthier foods, better animal feeds, while also reducing agriculture's impact on the environment.

"EASA makes our valuable legacy applications more accessible to new users. It does not alter the underlying code so there is no need for revalidation. Over the past year, we have created many EASA applications without any programming, in a fraction of the time that would have been required using a conventional language."

"EASA provides the opportunity for substantial productivity improvements throughout our organization."

Denny Hayek, Process Engineering Manager,
Monsanto

About Monsanto

Monsanto is a leading global provider of agricultural products and integrated solutions that bring together chemicals, seeds, and biotechnology to improve farm productivity and food quality. Monsanto's products include Roundup agricultural herbicides and Roundup branded turf and ornamental products.

The problem of legacy applications

Over the past four decades, IT staff at Monsanto have developed many custom applications to help the firm's managers, engineers, and plant operators to solve problems specific to the business. However, these applications were developed in the days of DOS; being command line driven, they were very difficult to use, especially for younger employees accustomed to more modern graphical user interfaces.

"The text-based interface required the user to get the syntax exactly right," said Ed Casanova, Manufacturing Technologist for Monsanto. "If a user typed an incorrect character or a character in the incorrect location, an unhelpful error message would appear. The user typically had to start over,



trying to figure out what they had done wrong. Even more serious was the risk that data might be entered incorrectly - the program would run, but return the wrong results."

Managers considered out-sourcing a rewrite of the applications but rejected the idea because each application would have cost anywhere from \$20,000 to more than \$100,000. Not only that, the rewritten applications would have required a lengthy revalidation and testing phase, which would have been prohibitive.

Moving to a new environment

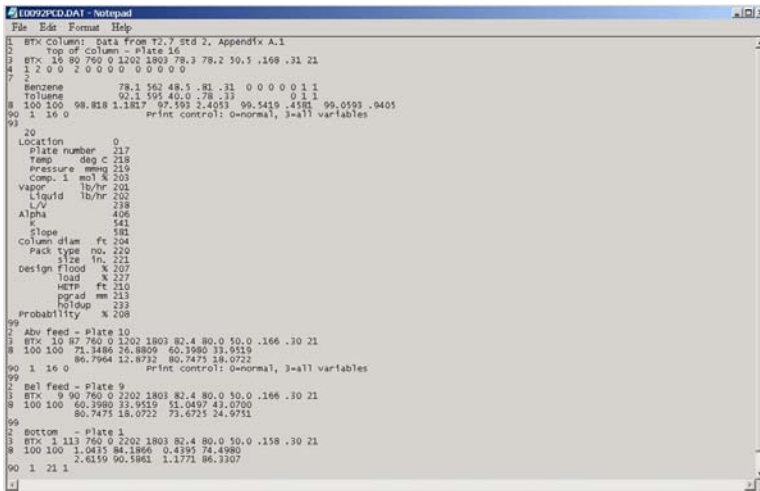
Monsanto decided to evaluate EASA's patented approach for extremely rapid codeless creation and deployment of web-based applications.

Each EASA application is a tailored solution to a company's specific problem. Applications may be created to simplify the use of legacy codes, databases and spreadsheets - in fact, almost any software where it would be

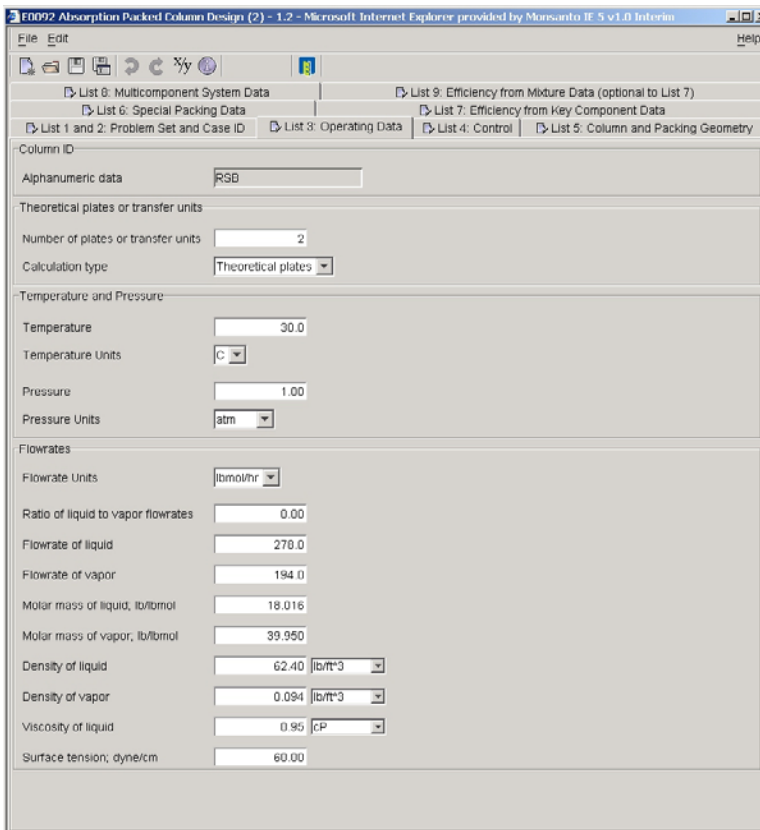
desirable to reduce the learning curve. The resulting libraries of custom tools are available over the Intranet, so authorized users throughout the enterprise can take advantage of them.

Monsanto estimates that by avoiding the need to develop and then maintain custom tools using conventional programming technology, EASA has saved the company at least \$1 million.

"EASA makes building new applications as easy as using any other Windows application. Many of our EASA applications have been created in a single day while the most complex require only two or three days," Casanova concluded. "EASA has allowed Monsanto to reduce the amount of time our staff spends on many key tasks."



Monsanto's legacy applications were technically sound, but completely outdated in terms of usability. New users typically found these tools difficult to learn, and would often make errors while entering data.



The new EASA applications are easier to use, and hence are more likely to be used. In addition, the author can embed checks to ensure that user errors are reduced or eliminated.