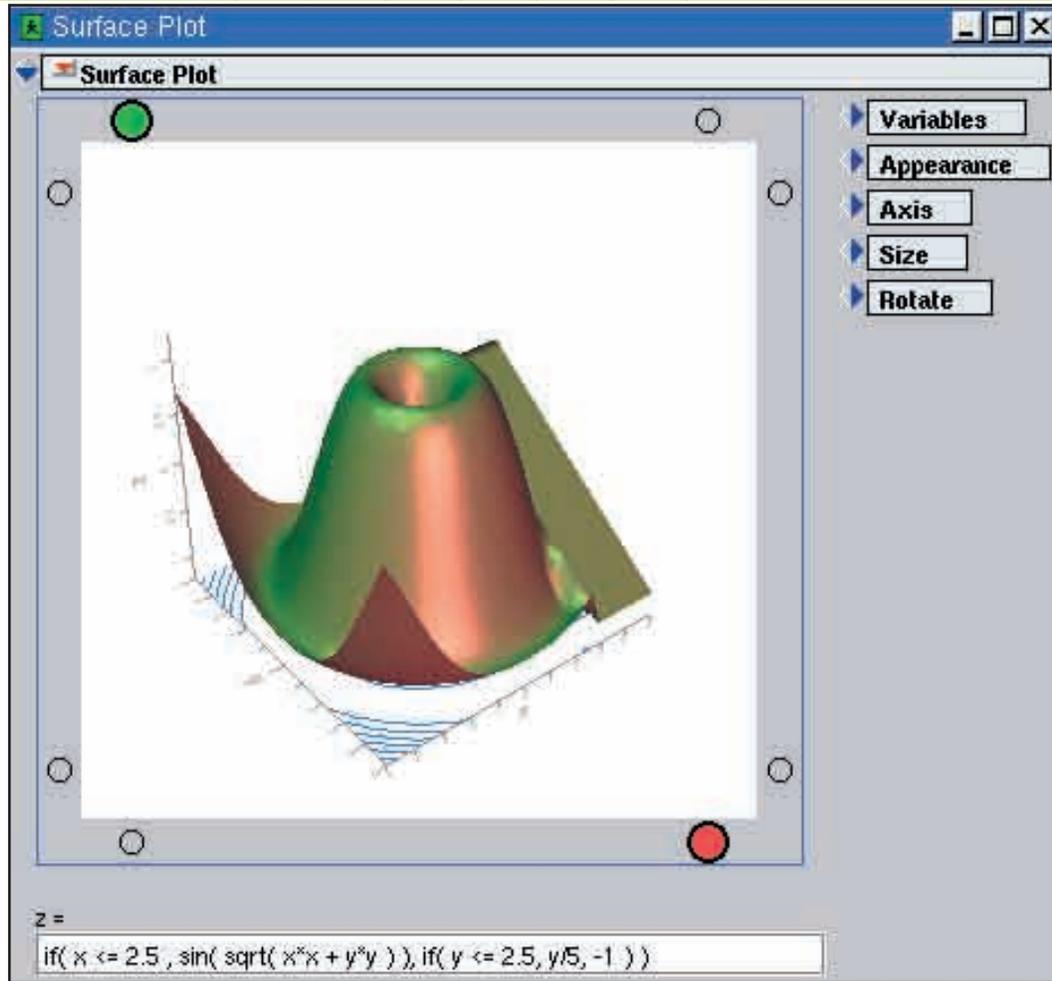




JMP[®] Software

A Qt Customer Success Story



When it comes to understanding statistics, seeing is believing. So it's no surprise that industry leaders including Dow Chemical, Honeywell International and Aventis Pasteur have relied on software tools like JMP[®] to get the most from their statistical data.

Developed by JMP, a business unit of SAS, JMP software dynamically links statistics with graphics and allows users to visualize, interactively explore, and discover relationships in their data. This capability speeds and enhances data analysis for business process improvements, scientific research, product design and development, and manufacturing. The JMP solution also has widespread use in organizations that are intent on achieving Six Sigma performance levels.

So successful was JMP on the Windows[®] and Macintosh[®] platforms that executives decided to port it to Linux[®]. "We needed to find a class library that would be compatible with our existing architecture," recalls Richard C. Potter, Senior Software Manager for JMP. JMP's existing code base is approximately 500,000 lines of code.

(Continued next page)

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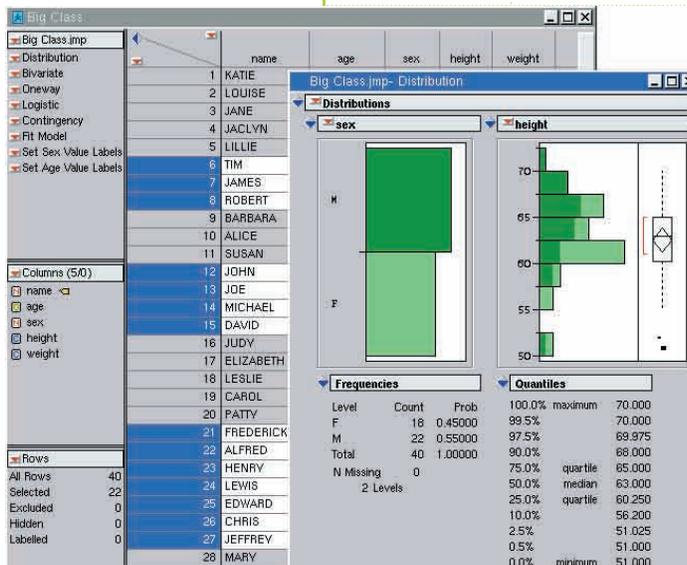
**Richard C. Potter
JMP Software**



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JMP used Microsoft Foundation Classes (MFC) to build its Windows version, and PowerPlant™ for its Macintosh version. In targeting a third platform, the challenge was to find an application development framework that easily ported to Linux source code originally written using MFC. An article in a Linux trade magazine led Potter to Qt® from Trolltech®. Qt is a cross-platform C++ application framework enabling developers to write a single source that runs natively on different target platforms. Qt features a fast 2D drawing engine, modular architecture, and extensive widget set. And Qt makes it easy to build reusable code.



For Potter and his team, those advantages made all the difference. “We briefly considered porting to Linux using GTK+,” recalls Potter, “but we quickly realized that it would not be acceptable. Qt was a better fit with the existing architecture of our product. Since Qt classes match closely with those in MFC, converting our existing MFC-based source code into Qt-based source code was straightforward. Qt made porting from Windows to Linux easy.”

Fast and Easy

Qt quickly translated into two key benefits for JMP’s Linux porting efforts: speed and ease.

Potter established the basic framework using Qt and then hired an experienced Linux programmer, Paul Nelson, as project leader to complete the feature set. Together, Potter and Nelson worked to finalize the port and get the product ready for market.

“Had we chosen some other technology to port JMP to Linux, I’m sure it would have taken much longer than it did with Qt,” says Potter. “For example, I often found that I could take our existing Windows host code for a particular routine and, by changing just a few lines, convert it into Qt host code. I suspect it would have taken us at least twice as long to get to market had we used some other solution.”

<<Qt made porting from Windows to Linux easy>>

About JMP software

- Designed for everyone in an organization who needs to analyze data and interpret the results, including individuals with limited formal statistical training
- Utilized in industries, including: semiconductors, chemicals, plastics, pharmaceuticals, biotech, healthcare, consumer goods, banking
- Provides sophisticated statistical analyses, including nonlinear modeling, neural nets, recursive partitioning, multivariate analysis, and time series models
- Features state-of-the-art Design of Experiments techniques with sophisticated graphics including three-dimensional graphs based on OpenGL®
- JMP Scripting Language (JSL) allows end users to automate various tasks and write their own statistical routines

Overall ease of use made a difference to JMP as well. “Qt is definitely superior to MFC in terms of its structure and naming conventions,” says Potter. “It is much easier to program using Qt than using MFC.”

‘The Best Class Library’

Qt gave JMP’s developers a solid, robust foundation for the JMP port, which led to further time and cost savings. “As we were testing our application,” Potter recalls, “we rarely found bugs that were caused by Qt itself. This was very different from our experience with applications based on MFC and PowerPlant. With Qt, we probably cut our testing time and resources in half.”

Potter says Qt was crucial in helping JMP deliver a Linux version of its software product to the market. “When you port a complex application to a new platform using Qt, you’re enabling the software to run natively on that new platform,” he says. “As an application development environment, Qt is excellent and very well thought out. In fact, I don’t think it would have been possible to port JMP to Linux with anything else. It’s the best class library I have ever used.”

<<I don’t think it would have been possible to port JMP to Linux with anything else.>>

Today, in addition to Windows and Macintosh, JMP runs on four major Linux distributions: Red Hat®, SuSE®, Mandrake®, and United Linux. But JMP may not stop there.

Potter says JMP’s use of Qt “opens up other possible markets for our product,” including hand-held devices and PDAs. With Qtopia®, Trolltech’s mobile application platform for embedded Linux-based consumer products, it is easy for JMP’s developers to visualize the possibilities. 📍

About Trolltech

Trolltech® is a world leader in delivering tools, components, and libraries for C++ developers across all major operating systems. Trolltech products constitute a leading open source application development framework and are an integral part of the Linux desktop. Trolltech also develops innovative UI platforms that enable key players to adopt Linux for mobile devices.

Trolltech creates two product lines: Qt® and Qtopia®. Qt is a complete C++ application development framework, which includes a class library and tools for multiplatform development and internationalization. Qtopia is the first comprehensive application platform built for embedded Linux, and is used on numerous Linux-based PDAs and mobile phones.

Trolltech is a second generation open source company with a dual licensing business model and provides development software to some of the largest companies in the world including Intel, IBM, Motorola, and Sharp, among thousands more. Trolltech is headquartered in Oslo, Norway, with offices in Brisbane, Australia, and Palo Alto, California. More about Trolltech can be found at www.trolltech.com.

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