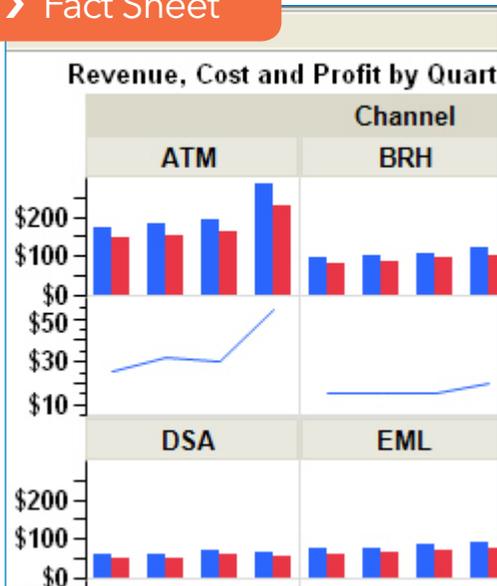


## › Fact Sheet



### What does SAS® Visual Data Discovery do?

SAS Visual Data Discovery provides a point-and-click interface to the advanced analytic capabilities of SAS. You get enhanced advanced analytics and exploratory data analysis with interactive data visualization for better analyses, faster decisions and more effective presentation of analytic results.

### Why is SAS® Visual Data Discovery important?

It lets you interactively explore ideas, investigate patterns, discover previously hidden facts and reveal opportunities through visual queries.

### For whom is SAS® Visual Data Discovery designed?

It's designed for business analysts, researchers, statisticians, engineers and scientists who want to make better use of data and information. It's also for anyone who needs advanced statistical capabilities and dynamic visualization in a self-service, interactive environment and who is restricted by the limitations in other desktop statistical packages, spreadsheets and static graphs.

# SAS® Visual Data Discovery

Advanced data analysis, graphics, reporting and data visualization

Today's organizations face enormous challenges with analyzing and reporting on data residing in different formats and multiple systems. Many statistical software products can't handle such large, varied data sources.

And because some products produce only static reports and graphs with no interactive capabilities for dynamically exploring data, it can be difficult to discover relationships and determine impacts to the organization without employing advanced statistical expertise.

SAS Visual Data Discovery helps organizations enhance their analytic capabilities to produce faster insights that lead to better decisions without placing further burdens on IT.

This solution combines Base SAS, SAS/GRAPH® and SAS/STAT® software, along with two interfaces (SAS® Enterprise Guide® and JMP®), for an easy-to-install, easy-to-use advanced analysis and data visualization package.

## Benefits

- **Access a powerful, comprehensive analytical environment.** Get point-and-click access to the advanced capabilities of SAS. This solution enhances advanced analytics and exploratory analysis with interactive data visualization. And that leads to better analyses, faster decisions and more effective presentation of analytic results.
- **Analysis, reporting and visualizations from one vendor.** Why piece together niche software packages from different vendors? A consolidated vendor portfolio reduces the cost of licensing, maintenance, training and support, and ensures that consistent information is available across your enterprise.
- **Easily communicate your analytical results.** SAS Visual Data Discovery provides exploratory data analysis and interactive data visualization in an extendable point-and-click environment, dynamically linking statistics with graphics for more compelling results.
- **Take advantage of our technical support and user communities.** When you have a question and need answers quickly, you have choices. Our technical support is staffed by highly experienced statisticians who provide a level of service and knowledge rarely found with other software vendors. You can also use our web communities to share your questions and thoughts on best practices and experiences.
- **Generate repeatable results that are easily documented.** We've got more than 37 years of experience developing advanced statistical analysis software and have a proven reputation for delivering superior, reliable results.

## Overview

SAS Visual Data Discovery provides two interface options for point-and-click access to data preparation, graphical and analytic functions from SAS.

SAS Enterprise Guide lets users build queries, manipulate and update data, perform simple to complex analyses, and run analyses in batch mode if desired.

JMP offers a discovery and exploration interface with interactive analytical capabilities. Users can achieve analytic excellence with the right data and the best analytic techniques that are available.

SAS Visual Data Discovery is easily augmented for specialized users by adding SAS/ETS® for forecasting, SAS/OR® for optimization, SAS/QC® for quality improvement or SAS/IML® for matrix programming.

## Interactive statistical graphics

Visually interacting with data and analysis results lets you easily explore information and glean new insights faster. With SAS Visual Data Discovery, you can grab, spin and slice your data, viewing it from multiple perspectives. Interactive graphs range from 3-D scatter plots to trellis plots, cell plots, needle plots and summary charts. Animated bubble plots put graphs in motion for a more engaging experience.

Incorporating geographic maps into visualizations is becoming increasingly important for location intelligence. The software includes built-in map data sets and the ability to generate latitudes and longitudes for mailing addresses and IP addresses. You can also analyze point data against polygons to determine which polygon contains each point.

The JMP Graph Builder also lets you incorporate geographic maps into graphs, graph two independent Y variables on separate axes, see the shape of your data using density contours, and plot error bars and confidence intervals while using new custom color scale and gradient capabilities.

Interactive Adobe Flash animations can be exported and placed in presentations, web pages or other documents.

## Visual querying and filtering

With SAS Visual Data Discovery, you don't have to develop complex SQL queries because querying data is visual, intuitive and dynamic, and results are displayed immediately. You can interactively filter and query data, browsing and rearranging data at will. By just pointing and clicking, you can visually subset data, animate reports or drill down to underlying data.

Any number of columns can be added to the data filter, including continuous, categorical and hierarchical variables. Preview a fixed number of rows, choose columns, visually subset data, animate reports or drill down to underlying data, generate SQL or write custom code - all through a point-and-click interface. All graphs and reports are dynamically linked and updated automatically.

## Extensive visual analytics

SAS Visual Data Discovery supports both information producers and consumers with the ability to surface and analyze information from other software packages and share these results in an easy-to-understand manner. This enables more users to quickly assess and realize value from information assets via dynamic graphics and reports.

## Integration with SAS®

SAS functionality can be called through the JMP Scripting Language or SAS Stored Processes, or it can be coded in the SAS program editor. Custom GUIs to SAS Analytics are easily created using SAS Enterprise Guide. This enables SAS programmers to further leverage their SAS skills and core SAS capabilities, including analytics, stored processes, centralized metadata, SAS code, SAS reports and SAS output, and make interactive, analytic results available to others in the organization. Users can explore data on their own and do not have to depend on IT to fulfill their ad hoc requests.

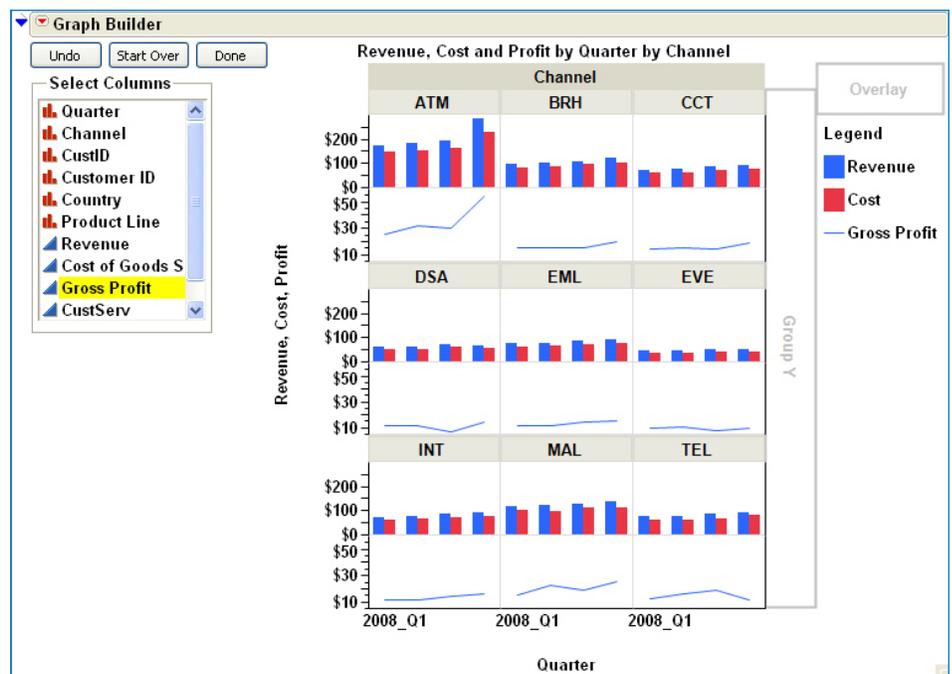


Figure 1: Quickly create and modify graphs using JMP Graph Builder's interactive interface. Select the variables that you want to graph and drag and drop them into zones. The instant feedback encourages further exploration of the data and lets you try out different types of graphs until you find the best fit for your data.

## Add-in for Microsoft Excel

With the JMP add-in for Microsoft Excel, you can easily move your data from Excel into JMP. You can also bring the visualization power of the JMP Profiler to your Excel spreadsheets. Interactively explore what-if scenarios using the Profiler as Excel calculates the model in the background, receiving inputs from JMP and sending back outputs. Use the JMP Optimizer to find the best solutions to problems and get instant insight into the key factors influencing risk with the simulator that is built into the Profiler.

## Integration with R

With the R open-source statistical programming language, R programmers can leverage the dynamic graphics in JMP that interactively link data to visuals. R programmers can also build JMP add-ins that make advanced R capabilities accessible to nonprogrammers.

## Comprehensive toolset for advanced statistical analysis

With SAS Visual Data Discovery, the broad and deep range of SAS software's advanced analytics are available from an easy-to-use, point-and-click interface.

## Data presentation

Visual components can be created, customized, easily stored in catalogs, retrieved as needed and combined with other graphics and information. Create both static and interactive visuals, even free-form designs, and output them on hundreds of different devices. The software also supports the batch processing of high-volume graphics. Results can be delivered across the enterprise via printed reports, email or the web, or embedded in other applications.

## Key Features

### Highly interactive statistical graphics

- Interactive graphics include: animated bubble plots, 3-D scatter plots with categorical and continuous data, scatter plot matrix with categorical and continuous data, trellis plots, summary charts, cell plots, line plots, needle charts and path diagrams.
- Create new graphics via the JMP Scripting Language.
- Incorporate geographic maps into graphs. Includes built-in map data sets.
- Generate latitudes and longitudes for mailing addresses and IP addresses.
- Analyze point data against polygons to determine which polygon contains each point.
- Graphics interact with the data table via brushing, highlighting, hiding, etc.
- Embed interactive graphics in web pages or Microsoft Office documents.

### Visual querying and data filtering

- Rearrange data at will.
- View and interact with dynamically linked statistics, tables and graphics.

### Extensible visual analytics

- Add custom analyses with the SAS programming language.
- Easily move data from Excel into JMP using the add-in for Microsoft Excel.
- Provides integration with the R open-source statistical programming language.

### Comprehensive set of tools for advanced statistical analysis

- Analysis of variance.
- Bayesian analysis.
- Categorical data analysis.
- Cluster analysis.
- Descriptive statistics.
- Discriminant analysis.
- Distribution analysis.
- Exact methods.
- Group sequential design and analysis.
- Market research.
- Mixed models.
- Multiple imputation.
- Multivariate analysis.
- Nonparametric analysis.
- Post-fitting inference.
- Power and sample size.
- Psychometric analysis.
- Regression.
- Spatial analysis.
- Structural equations.
- Survey sampling and analysis.
- Survival analysis.
- Transformations.
- Multithreaded procedures.
- Statistical graphics.
- Ability to add drill-down capabilities so users can visually explore analyses.
- For a complete list of methods, see the [SAS/STAT](#) documentation.
- Time series analysis, structural equation modeling, DoE, nonlinear modeling and decision trees from within [JMP](#).

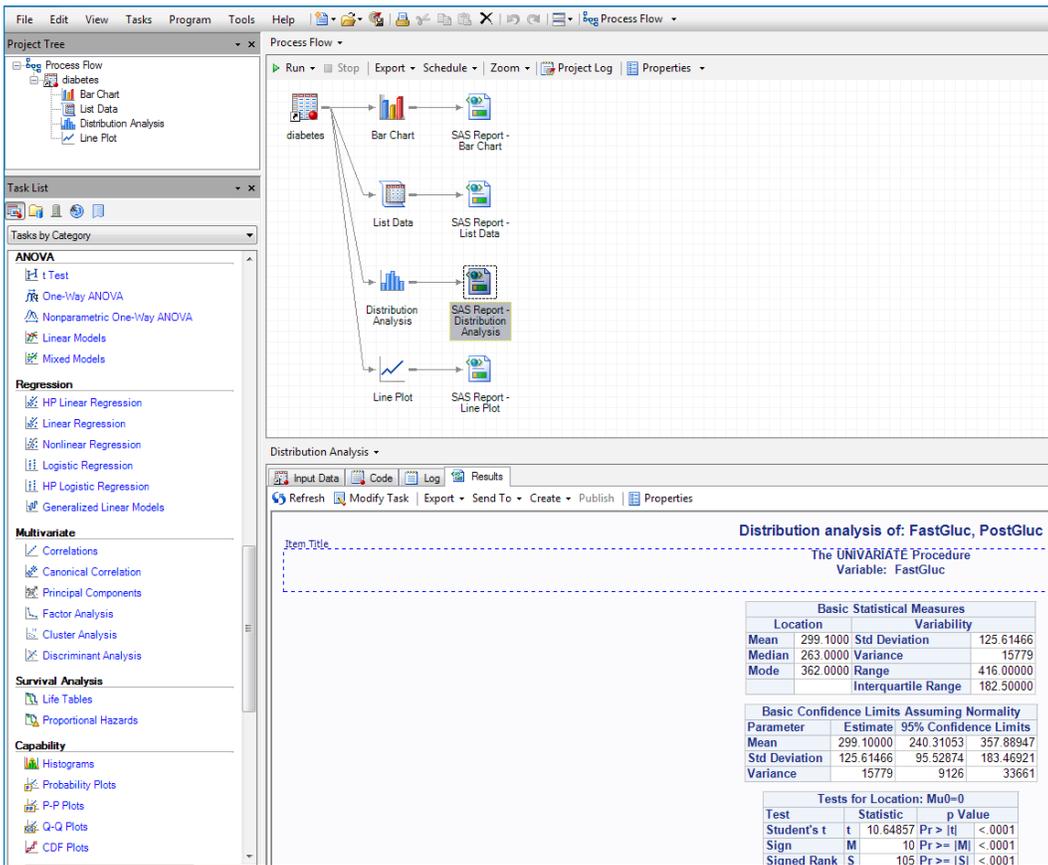
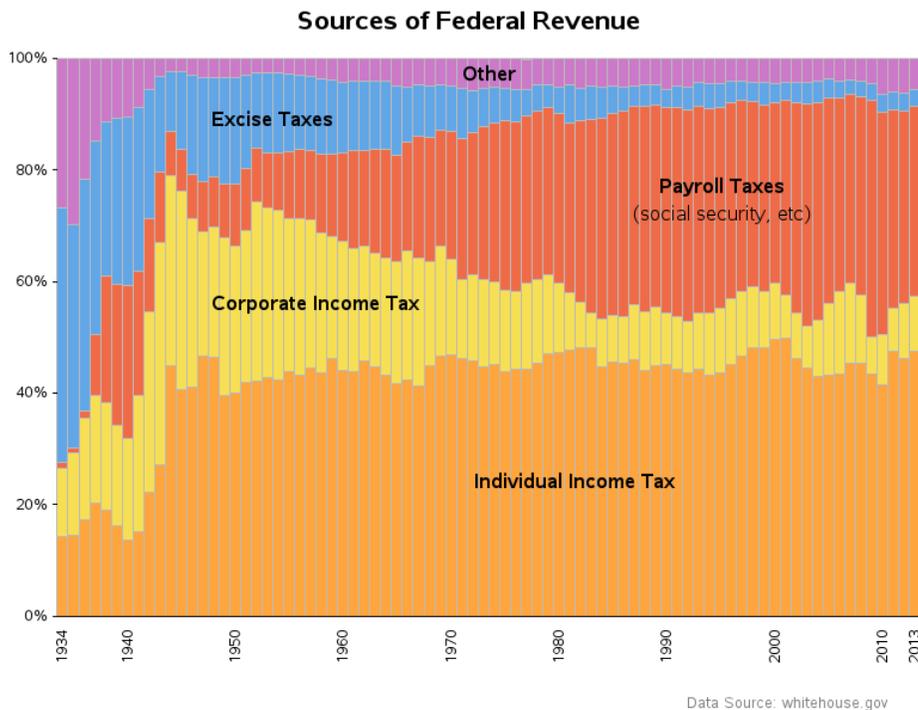


Figure 2: SAS Enterprise Guide provides easy point-and-click access to the analytical power of SAS.



To learn more about SAS Visual Data Discovery, download white papers, view screenshots and see other related material, please visit [sas.com/visualdatadiscovery](http://sas.com/visualdatadiscovery).

Figure 3: Eye-catching graphs help everyone easily visualize data.