



SAS® VISUAL BI SOFTWARE

Dynamic, interactive business visualization

What does SAS Visual BI do?

SAS Visual BI, powered by JMP® software, provides dynamic business visualization that enables business users to interactively explore ideas and information, investigate patterns and discover previously hidden facts through visual queries. This product, part of the most comprehensive BI platform in the industry, enriches the already diverse SAS visualization landscape and overcomes niche tool limitations.

Why is SAS Visual BI important?

With SAS Visual BI, business users gain instantaneous insight into relationships and patterns in data by viewing and interacting with information in ways that static charts and Excel spreadsheets cannot match. Users can drill deep into content and explore a virtually unlimited number of columns and records—transcending information silos, diverse computing platforms and niche tools to discover new insights that drive business value for the organization.

For whom is SAS Visual BI designed?

SAS Visual BI is designed for business users who have a compelling need for dynamic, visual insights in a self-provisioned interactive environment but are restricted by the inherent limitations in spreadsheets and static graphs and charts.



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Large, complex data collections make it difficult to discover meaningful patterns and relationships. For most business users, the search for useful, valuable information is a time-consuming process that requires significant efforts from IT to service ad hoc requests for data and reports. For others, it means a dependency on spreadsheets with their inherent limitations or the use of niche solutions that aren't integrated with other applications or business process flows.

Business analysts need the ability to interactively analyze and explore large quantities of data, to investigate patterns, try different approaches, and ultimately discover the meaningful nuggets of information that bring sustained competitive advantage.

SAS Visual BI marries rich, interactive visualization capabilities with SAS' powerful analytics and integrated business intelligence platform. Available as an add-on for SAS Enterprise BI Server, SAS Visual BI provides yet another way for business users to interact with information, visually and dynamically. It provides instantaneous insight into patterns and relationships, surfacing long-term trends instead of limited year-to-date views. Users can interactively explore virtually unlimited amounts of data across information silos and diverse computing platforms to deliver new insights that drive business value.

SAS Visual BI overcomes these challenges:

- User frustrations associated with limited exploration and visualization capabilities in spreadsheets.
- The need for complex, ad hoc queries to generate tabular reports.

- Static charts and graphs with no interactive capabilities for exploring data.
- Niche tools that are not part of an integrated platform with predictive analytics.

Key benefits

- **Visually query data.** Instead of developing complex data queries in SQL or a prompter, users can simply drag across points in a graph or click subsets in a mosaic plot. Because querying is simple, fast and dynamic, users can visually ask and answer questions to derive additional value from their information assets, without requiring IT services.
- **Overcome data limitations.** SAS Visual BI, with the ability to process up to two billion rows and an unlimited number of columns and records, enables users to explore vast amounts of data and handle large, real-world problems.
- **Interact with data to gain insights into relationships and patterns.** With SAS Visual BI, users can graphically view and interact with data from multiple dimensions. Data, graphs and tables are linked so it is easy to notice patterns. Just point and click, drag and drop to explore areas of interest. Visualizing results graphically can lead more quickly to new insights.
- **See long-term trends instead of year-to-date views.** Create graphics with many distinct variables, and with motion-enabled graphics you can watch as trends become clear.
- **Make better, faster decisions and share results throughout your organization.** Tight integration with SAS Enterprise BI Server means business users can make better decisions faster based on new insights and easily share results across the organization.

Product overview

SAS Visual BI, powered by JMP®, provides dynamic visualization capabilities, extending the reach of BI by enabling business users to interactively explore data visually, investigate patterns and discover previously hidden facts. SAS Visual BI enables users to tap into the full power of SAS analytics and business intelligence through dynamic interactive graphics, and surface insights to the right person at the right time throughout the enterprise using SAS Enterprise BI Server.

Highly interactive business graphics

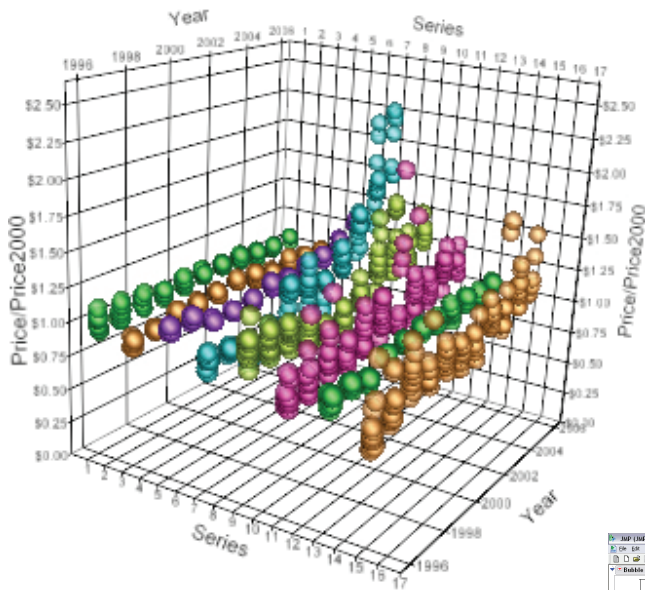
When business users can interact visually with data and analysis results, they can more easily explore infor-

mation and glean new insights. With SAS Visual BI, users can grab, spin and explore their data, viewing it from multiple angles. Interactive graphs range from 3D scatter plots to trellis plots, needle plots and summary charts. Animated bubble plots let you put graphs in motion for a more engaging experience. The bubble plot, a motion-enabled graph, harnesses and displays up to seven dimensions of data, including the X and Y dimension of the graph axes, the size and color of the bubbles (which show two more dimensions), and time and aggregation variables. The time variable lets you play the graph in continuous time, with the positions, colors and sizes interpolated across the time data points into smooth motion. Over the course of a

minute or more, you can watch a story unfold from your data. The story can be paused and replayed so you can absorb more detail.

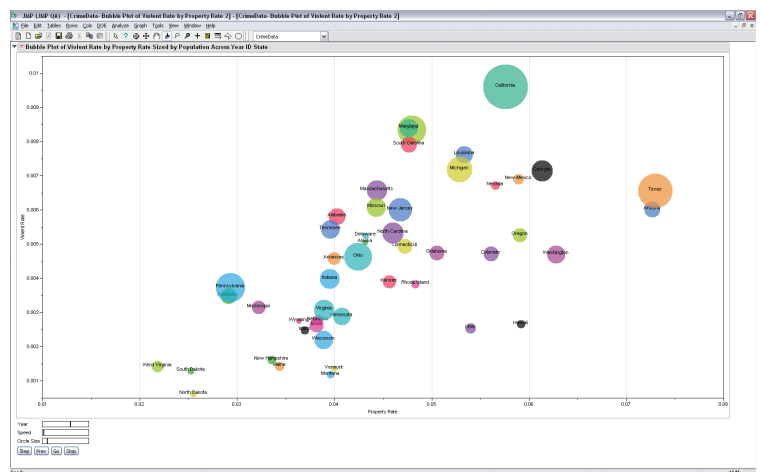
Visual querying and data filtering

With SAS Visual BI, users don't have to develop complex SQL queries because querying data is visual, intuitive and dynamic—results are displayed immediately. And SAS Visual BI can handle unlimited amounts of data. Users can interactively filter and query data, browsing and rearranging data at will. With SAS Visual BI, it's all point and click to 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. Users can preview a fixed number of rows, choose columns, generate SQL or write custom SQL—all through an intuitive point-and-click interface. All graphs and reports are updated automatically.



(Above) With SAS Visual BI, you can spin 3D plots in all directions in real time so data can be viewed from any desired aspect. Highlight a point in a spinning plot and its corresponding data is highlighted everywhere else it is represented.

(Below) The motion-enabled bubble plot harnesses and displays up to seven dimensions of data at one time. The time variable lets you play the graph in continuous time, with the positions, colors and sizes interpolated across the time data points into smooth motion, revealing data patterns and relationships. Simply point and click to turn labels on and off, subset data or get more detail about any data point.



Visual analytics

SAS Visual BI brings an interactive exploration environment to SAS' advanced analytics, including simulations and optimizations, state-of-the-art time series modeling, and exploratory and predictive analyses. With the ability to run SAS Stored Services authored by SAS Enterprise Guide or other SAS components, business analysts can take advantage of existing models and reports.

A depth of support is available for programmers who want to create point-and-click interfaces to SAS' powerful analytics. Syntax "autofill," syntax tool tips and online help with sample code are provided. SAS Visual BI supports both the information producer and the information consumer by allowing the ability to easily surface information and share visual results in an easy-to-understand manner. By distilling complex data structures into succinct information pictures and movies, you can quickly assess and realize the value in information assets.

Leverage the SAS Enterprise Intelligence Platform

With SAS Visual BI, you get dynamic visualization capabilities and the industry's most comprehensive business intelligence platform. This means users don't have to depend on IT to service their ad hoc requests. They can explore the right data on their own, see trends and communicate the results quickly where needed across the entire organization.

Key Features

Highly interactive business graphics

- Animated bubble plots show data with sized bubbles that move over time.
- 3D scatter plots with categorical and continuous data.
- Scatter plot matrix with categorical and continuous data.
- Trellis plots.
- Summary charts.
- Line plots.
- Needle charts.

Visual querying and data filtering

- Handle unlimited data.
- Rearrange data at will.
- Interactive tabulation.

Visual analytics

- Interactive simulations and optimization.
- State-of-the-art time series modeling.
- Exploratory and predictive data analysis.

Leverage core SAS capabilities

- Analytics.
- Stored services.
- Metadata.
- SAS code.
- SAS reports and output.

SAS® Visual BI Software Technical Requirements

SAS Visual BI software is a desktop product that runs on Microsoft Windows, Macintosh and Linux. It marries the dynamic data visualization of SAS' JMP® software with the integrated platform of SAS Enterprise BI Server.

Windows system requirements

- OS: Windows 2000 with SP4, Windows XP, Windows XP Professional x64, Windows Vista.
- Browser: Microsoft Internet Explorer 5.01 or higher.

Macintosh system requirements

- OS: Any Macintosh computer running Mac OS X 10.4.8 or higher.

Linux system requirements

- OS: Red Hat Linux 9.0; Fedora Core 1, 2, 3; Fedora Core 4, 5, 6 with libstdc++ compatibility libraries installed; SuSE 9.0, 9.1, 9.2, 9.3, 10.0, 10.1, 10.2; Red Hat Advanced Server 3.0 or higher.

Required software (on server)

- SAS Enterprise BI Server or SAS BI Server, and all of its core components.



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