

## Market data and analytics in an intuitive interface

### Introduction

StockPlot™ is a Java™ applet and servlet that enables its user to display a time-series of pricing and volume data together with related comparisons, annotations and statistical indicators.



### Interactivity

StockPlot™ is a highly interactive Java™ applet that enhances the user's ability to understand the trends and patterns manifest in pricing data.



Useful information pertaining to chart objects can be displayed by simply passing the mouse pointer over those elements. The figure to the left shows the result of placing the mouse pointer over a high-low-open-close symbol. This action reveals the underlying pricing data in a concise annotation.

StockPlot™ supports chart zooming, allowing the user to select and expand the chart across an arbitrary range of dates by dragging the mouse across the plot region.

Trend lines may be added to a chart by simply drawing on the plot region. These trend lines may then be saved to the server for later analysis and retrieval. Annotations also may be added interactively and saved to the server.

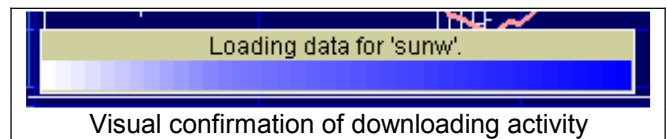
A special "crosshair" mode displays additional price and date information interactively.

### Servlet

StockPlot™ may be deployed as either a client-side applet for maximum interactivity, a server-side servlet for reduced download footprint or as a powerful combination of the two. Initiating a session with StockPlot™ as a servlet-generated GIF, replacing it at the user's option with an interactive applet is particularly effective. In this manner, the user is presented with the chart immediately, foregoing the more extended download associated with the full-featured applet.

### Data Access

StockPlot™ may receive its data from any of several sources, thereby allowing seamless integration into most backend architectures. The primary source is an open, XML formatted data stream, compatible with many of the emerging XML-aware applications. Optionally, a pluggable architecture allows any Java™ object implementing a simple, well-documented interface to serve as a data source. In this way, StockPlot™ may communicate with many of the existing standards for accessing real-time and historical securities pricing data.



### XML Configuration

StockPlot™ is configured through a very flexible XML-based configuration mechanism. All aspects of StockPlot™ appearance and functionality are configurable ranging from data access to chart presentation to exception handling. The same XML that configures the applet may be employed to configure the servlet, further reducing the effort expended in deploying a unified servlet/applet charting solution. An abridged list of configurable parameters includes:

- All fonts, colors, line widths and line patterns.
- Display of primary pricing information as a line, area, OHLC or candlestick chart.
- Statistical indicators (studies) and comparison data
- Status messages
- Annotations
- Background images such as corporate logos

## Localization

StockPlot is fully localizable, displaying numerical and textual information in the user's locale through robust support for resource bundles. All messages, annotations and currencies are customizable.

## Statistical Indicators

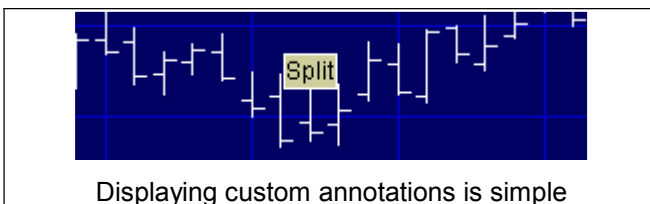
StockPlot™ provides the ability to display a wide range of statistical indicators (studies) within the primary chart as part of the pricing data or in a separate chart utilizing an independent scale. An unlimited number of indicators may be added. Supported indicator types include:

- Bandwidth
- Bollinger bands
- DMI
- Exponential moving average
- Fibonacci Lines
- MACD
- Momentum
- Money Flow
- Moving average
- On Balance Volume
- Percent B
- Price oscillator
- Price rate-of-change
- Relative Strength
- Stochastics
- Typical Price
- Williams' %R

In addition, custom indicators may be developed using an open interface or imported from any data source supported by StockPlot™.

## Annotations

Annotations may be positioned at any date and are a powerful means of displaying events and other time-sensitive information. The text and formatting of these annotations are fully configurable through both the XML and JavaScript™ interfaces.



## JavaScript™

When deployed as an applet, StockPlot™ may be configured at run-time with a rich collection of JavaScript™-accessible methods. These methods include the ability to modify the following:

- Chart appearance
- Primary pricing symbol
- Comparison pricing symbols
- Indicators
- Time frame and frequency
- Addition and removal of annotations
- Interactive mode (zoom, trend line, annotation and drag)

Data may be updated through calls to JavaScript™ methods. In this manner, the chart may be periodically updated to reflect the most recently available data.

Additionally, the StockPlot chart may be extracted from the browser into a separate frame for continual monitoring.

## Exporting Images

Through interaction with the server, StockPlot can export images as GIF, PDF or WMF with a single mouse click. This enables charts to be imported into documents or printed for distribution throughout the enterprise.

## Exception Handling

Errors relating to invalid symbols, indicator parameters, etc. are handled through a unified exception handling mechanism through which StockPlot™ displays valuable diagnostic data to aid the user in rectifying the problem.

## Features and Benefits

StockPlot™ has the following features:

- Compatibility with any browser or operating system with a JDK 1.1 (or higher) Java™ Virtual Machine (JVM)
- Use of interaction to improve data comprehension and accessibility
- Support for dynamic data from a variety of data sources, including proprietary databases and feeds
- Intuitive interface ensuring a shallow learning curve and quick adoption
- Applet and servlet deployment

These features provide the following benefits:

- Reduced Total Cost of Ownership through thin-client implementation
- Dynamic data handling to ensure decisions reflect current conditions, thereby reducing errors
- Easy integration into backend systems, reducing maintenance and implementation costs
- Server-side deployment reducing download size and related delay prior to data display.

## About Visual Technologies

Founded in 1996, Visual Technologies mission is to design, develop, and deliver high-end data visualization software for enterprise level, Internet-based services. Our DataVista™ and VantagePoint™ software products provide major corporations and their customers with the ability to make timely decisions through visual representations of complex, dynamic data sets.

**Visual Technologies, LLC**  
11811 North Tatum, Suite 3031  
Phoenix, Arizona 85028  
(877) 861-0999

[www.visual-technologies.net](http://www.visual-technologies.net)