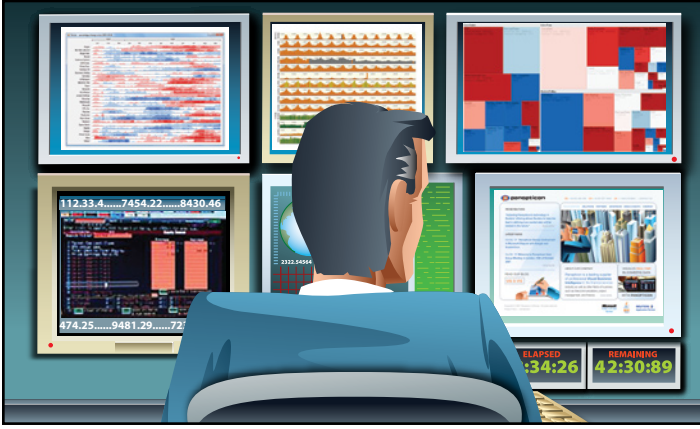


Monitor Trade Activity and Enterprise Risk With Visual Business Intelligence Tools



Visual Business Intelligence tools provide managers and traders in Buy-Side and Sell-Side organizations with the tools they need to effectively monitor trading activities and enterprise risk.

This paper describes this use case for Panopticon's VBI software and explains how software companies and client organizations can embed Panopticon's Trade Monitoring solution into their own proprietary applications.

Markets today are nothing like they were five years ago and making good decisions quickly has become even more important. People working in fast-paced trading environments within buy-side and sell-side organizations must struggle to cope with data that moves throughout the market at increasingly high speeds. The cost of making bad trading decisions is very high, and this places even more demands on managers who are responsible for the activities of traders and brokers. Static reports and traditional business intelligence tools simply cannot keep up with a market that's changing on a second-to-second basis. By the time traders and managers have read a report and tried to make sense of the data, market trends have changed completely. What traders and managers need is an effective way to monitor the performance of their orders throughout the whole organization, and to visualize trade risk across their entire enterprise.

New visualization tools are now available that work in real-time and can handle feeds from multiple sources and very large databases. These tools are built utilizing the latest developments in our understanding of the cognitive power of the human brain. They allow people to find outliers, anomalies and trends – within milliseconds – that until now required days to discover using standard reports.

This paper looks at a specific use case for Panopticon Visual Business Intelligence software: Trade Monitoring.

Global View of Performance, Exposures and Risk on a Single Screen

This solution gives managers the tools they need to quickly identify anomalies and track order activity. Traders and managers can also oversee the risk profile of all trading activities across the entire enterprise. This approach makes it possible for users to see a global view of trading activities on a single screen, understand exactly the status of their orders, and see how well each trade is performing by broker, strategy, country, industry, and so on.

By adding Panopticon Trade Monitoring to a system, client firms can pinpoint problem trades before they "get away" and identify opportunities they would have gone unseen using standard reports or systems. This is a valuable addition to any software system used by buy-side or sell-side financial institutions.

Panopticon Trade Monitoring can be implemented with support for real-time streaming data feeds from Bloomberg and Reuters and other sources; this is critical in today's fast-moving environment. The system also allows users to see information pulled from multiple databases (static and real-time). The software will automatically aggregate the data or even perform complex calculations and display the results using one of our intuitive visualizations.

Software vendors and client firms can choose from a variety of deployment options. The Panopticon SDK supports code-level integration with enterprise applications. The company also offers "white label" versions of productized web-deployed and desktop applications that can be bundled or combined with other software systems.

“These interactive visualizations help me understand market conditions and opportunities very quickly; I can truly understand underlying patterns right away without having to wade through stacks of reports”

Simon-Pierre Vullierme
Founding Partner
Cloran Finance

Multiple Deployment Options

- Comprehensive SDK
- “White Label” Desktop and Web Products
- .NET or Java

Real-Time Streaming Data

- Connects to Reuters and Bloomberg feeds
- Sonic MQ data connector
- Supports calculations with dynamic data
- Aggregates real-time data with historical (static) databases

Multiple Databases

- Connect to any number of disparate databases
- Visualize combined results from multiple sources
- Supports very large datasets

“Panopticon is flexible and easy to use. It gives an instant, at-a-glance view of how the market is doing. You can drill down to see what is going on”

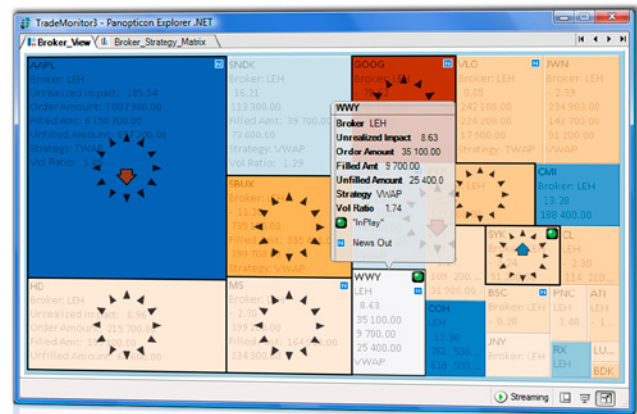
Silvio Olivero
Vice President of E-Marketing
JP Morgan Chase

**Sell-Side:
Effective Desk Management & Reduced Trading Costs**

Panopticon’s real-time, zero-latency view of ordered, placed and executed trades lets managers easily gauge the efficiency and risk levels of their trading activities and view all aspects of ongoing activities. Panopticon visualizations display multiple views of trading activities on different levels. View the activities by trader, broker, team, sector, or security and quickly switch between the views. For example, users can view outstanding placed and executed orders by trader and see expected trading impact, inventory status and other security trading details. They can monitor the quality of execution down to the level of individual trading tickets. Panopticon’s Trade Monitoring solution will let you get fast answers to questions like: What is the cost of this order on my portfolio, today? Which brokers or strategies are working best? Where are my problem areas? Do I need to change strategy? Are traders – individually or as a group – meeting revenue and profit goals?

Desk managers monitor individual and collective results by using the software’s highly interactive visualization tools combined with its capabilities to connect to multiple databases and handle real-time streaming data inputs from sources like Reuters and Bloomberg.

The software allows traders and managers to aggregate data quickly in many different ways. For example, users can review results and holdings by country and then aggregate the results in a region. They can program alerts into the system that provide notices to individual traders or groups. Managers can also use the software to review global credit limits and risks and see immediately where traders are close to limits. The combination of excellent interactive visualization tools with extensive functions makes Panopticon software an excellent fit for trade monitoring requirements.



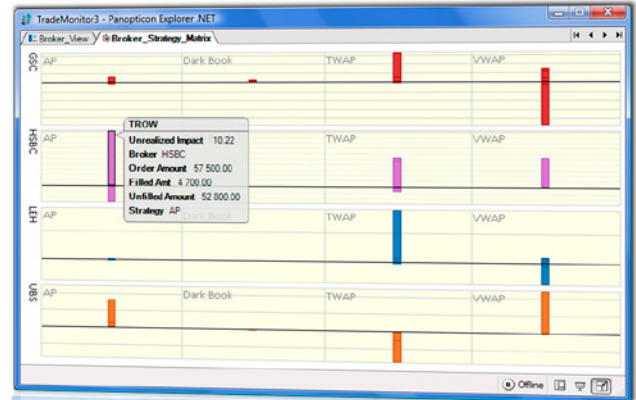
Panopticon lets users view trading activities by trader, strategy, broker, portfolio, team, sector security and quickly switch between views. In this view, the manager is reviewing the current activities of a single broker. The system is displaying real-time data based on a streaming feed.

Buy-Side: Immediate Understanding of Enterprise Risk

Traders and Managers in buy-side organizations must be able to see the whole picture – across all trading desks, portfolios and brokers – and make decisions based on accurate information that they can comprehend quickly. Panopticon visual business intelligence software gives managers a global view of the trading action. Users no longer have to piece together useful information from reports. They can look at a single screen and understand where they stand in real-time! Organizations can provide their managers with a seamless user experience by using our SDK to embed Panopticon visualizations into their Order Management, DMAs or Risk Systems.

Managers using Panopticon's Trade Monitoring solution can view the status of their Ordered/Placed/Executed (OPE) trades and easily gauge the efficiency of their market activity.

Panopticon interactive visualizations display views at the Trader, Strategy, Broker, Portfolio, Team, Sector and Security levels with OPE relative to intraday and longer term day impact, price changes and relative workloads. In addition to helping them easily oversee and understand their enterprise risk profile, Panopticon's ability to handle and visualize real-time streaming data allows managers to easily benchmark the holding and performances of their operation against various indexes. Managers can also monitor trading costs, performance of traders compared to goals, day impacts, execution risk, accumulated and averaged values, ordered values versus executed values, and other criteria that will help them better manage their people and operations. The software's comprehensive analytical capabilities also help managers make more effective and useful reports to other departments, supervisors and clients.



Managers get an enterprise-level view of trading activities, costs and risk. In this view, the manager is comparing the activities of several different brokers. A hover display provides more detail on demand.

“Panopticon’s visualization software provides a rich way to conceptualize data that our users love. It offers them a natural, intuitive way to understand complex hierarchies along with the most important attributes that matter to them. The software’s interactive capabilities help them make better decisions”

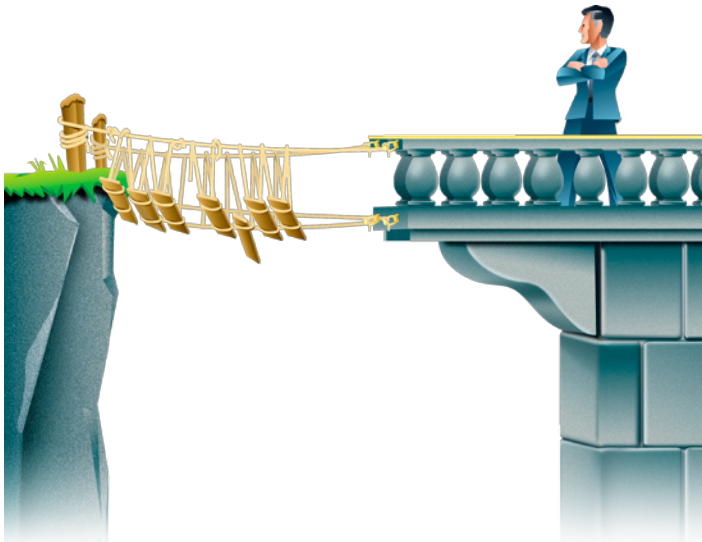
Kuldeep Chaudhary
VP, Global Equities Technology
Citi Markets and Banking

Low Risk Strategy: Fast Implementation Using Comprehensive SDK

Panopticon's comprehensive SDK makes it easy to embed interactive visualizations to existing applications to enhance their usability and effectiveness. These visualizations are a great fit with Order Management Systems, Portfolio & Position Systems and Tick Engines. Adding Panopticon visualizations to legacy applications can greatly improve utilization by making the applications easier and more fun to use – as well as reducing training time and improving productivity.

Panopticon software requires no additional middleware and is available for either .NET or Java environments. Implementation cycles vary from a few days to a few weeks. Embedding our visualizations in your existing applications using our SDK usually takes less than a month.

Our customers have proven that it's substantially faster and cheaper to implement Panopticon's interactive visualizations than it is to develop proprietary one-off solutions. You get a solid, robust package incorporating over 40 man-years of development – plus the results of our on-going R&D efforts – in an implementation that is completely unique to your organization.



Implementing Panopticon's interactive visualizations carries substantially less risk than developing proprietary one-off solutions.

Panopticon Software

Panopticon's Visual Business Intelligence technology and products help financial institutions, retailers, telecoms companies, and other organizations dramatically increase the value of their process support systems. Our software provides monitoring and analytical functions that help users make timely, insightful and informed decisions. The Panopticon VBI platform combines innovations in three areas:

- World class, academically validated information visualizations
- Business Intelligence capabilities
- Ability to connect to virtually any data source, including streaming feeds, relational databases, OLAP servers, and proprietary data formats

The Panopticon VBI platform is available as an SDK that enables software companies and corporations to embed these capabilities into their own applications. Panopticon also offers enterprise and desktop versions of its VBI tools that companies can deploy quickly.

We work closely with OEM partners who use our information visualization tools to make their applications easier to sell based on improved usability. They also use our friendly user interface to clearly differentiate their products from their competitors. Our partners include Tbricks (algorithmic trading platforms), Deltek (project management), Polystar (telecommunications), Thomson Reuters (financial services), Advent Software (enterprise software for financial institutions).

More Information

For more information about how you can embed Panopticon Visual Business Intelligence tools into your own applications, contact:

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UK: +44 (0)20 7877 0640
www.panopticon.com

“We selected Panopticon after a careful evaluation of the market for visualization technology. The final decision was based on Panopticon's record of success with SDK-based implementations at leading financial institutions and the results of a technology workshop we completed with the Panopticon people.”

Todd Gottula

Vice President, Product Development, Client Services, and Support
and Co-Head of Global Accounts
Advent Software

Panopticon software is available in Microsoft .NET and Java implementations.



“The concept of Panopticon's treemaps is useful and powerful not only for financial markets but also industrial or educational markets. We are sure that Panopticon will be known as one of the greatest mission-critical applications in Japan.”

Koh Yong Mo
Founder and President
LightStone International