



Guide to Data Visualizations

Published May 2012

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1. Panopticon Data Visualizations

Panopticon software supports a wide range of information visualizations, including our well-known Treemaps and Heat Maps as well as Scatter Plots, Horizon Graphs, and a range of other great visualizations designed for fast comprehension and easy interpretation of static, time series, real-time streaming and historic data sets.

No one visualization is ideal for every purpose; use the appropriate visualization for the analytical task at hand. Here are some general recommendations:

Analytical Task	Recommended Visualization
Read Numeric values quickly	Table / Pivot Table
Performance against a KPI	Bullet Graph
Performance across a single variable for a small number of data elements, with different magnitudes	Bar Graph
Performance across a single variable for a small number of data elements, each with similar magnitudes	Dot Plot
Performance across a single variable for a large number of data items	Heat Map
Performance across a single variable for a large number of data items, which have different importance values	Treemap
Performance across a hierarchical or grouped dataset	Treemap
Correlation between two categories of data	Heat Matrix
Correlation between two or more numeric data columns	Scatter Plot
Geographic correlations of data	Geographic Scatter Plot
Correlation over both a single numeric data column and various categories of data	Dot Plot
Trending performance across ordered categories	Dot Plot
Trending performance between two numeric variables	Numeric Line Graph
Trending performance between three numeric variables	Surface Plot
Trending performance across time	Line Graph
Time based Ranking	Line Graph with Ranking Axis
Time Based Contributions	Stack Graph
Time Based Correlations between time series	Horizon Graph
Time Based Transactions	Needle Graph
Financial Time Series Distributions	Candle Stick or OHLC Graph
Auction Price & Interest/Volume Distribution	Numeric Needle Graph
Geospatial Area Densities	Shapes
Spread between two time series	Spread Graph

2. Time Series Visualizations

The ability to handle very large quantities of multivariate time series data is an essential element in a complete visual analysis system. Panopticon offers a range of specialized data visualizations, including Horizon Graphs, Stack Graphs and Line Graphs, designed specifically to make analyzing historical data easier and more efficient. The software's ability to connect to traditional row-oriented relational databases or column-oriented databases is key to supporting fast, responsive multi-dimensional analysis of large data sets. Our time series capabilities are especially important for users in global investment banks, hedge funds, proprietary trading firms, and exchanges.

2.1. Candlestick Graph

Candlestick graphs are a traditional financial visualization for display of time based price distributions. Specifically for each time slice, they display:

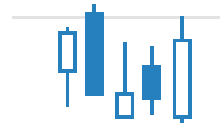
- Opening Price
- Highest Price
- Lowest Price
- Closing Price

The Candle is filled if the closing price is lower than the open and empty if the closing price is higher than the open.

The vertical line (or Candle wick) displays the range of traded prices across the period.



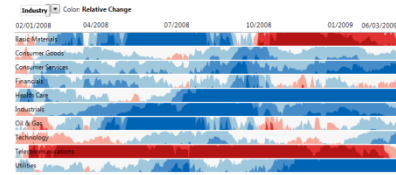
Surface Plot



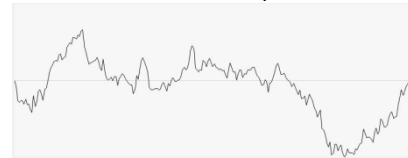
2.1. Horizon Graph

Horizon Graphs are a fantastic way to overview a large number of time series in a limited rectangular space. Since this visualization packs the information in a line graph in 1/6th the space through a smart pre-attentive color encoding, it allows for an overview of a large number of time series. Users can scan huge amounts of data points across all relevant time series and immediately identify areas of concern that require closer scrutiny.

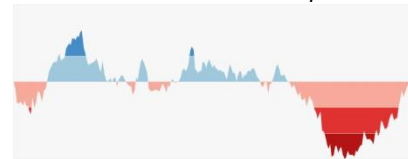
Our Horizon Graph visualization is particularly useful when you need to see a large number of time series on a single screen. This makes it easy to compare trends and spot patterns that would be very difficult or impossible to see in a standard report.



Horizon Graph



Start with a Line Graph



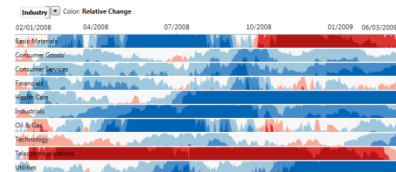
Color Performance Bands



Invert Negative Regions



Collapse the Performance Bands

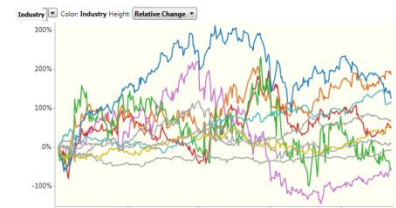


To Produce the Horizon Graph

2.2. Line Graph

Line Graphs are easy to understand and are a great way to communicate important time based trends, clustering and outliers.

They work especially well when comparing ten or fewer data sets (Our Horizon Graph is a good solution for displaying time series data with ten or more data sets)



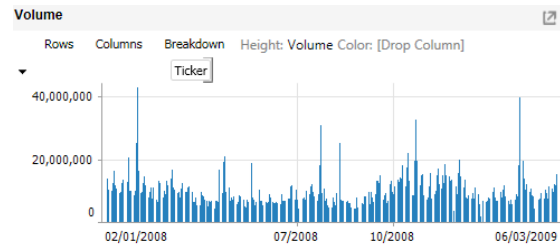
Line Graph

2.3. Needle Graph

Needle Graphs display time based transactions or occurrence frequency, rather than time based trends. They are simply time based Bar Graphs where each bar is located at a particular time point on the axis.

They work especially well, when combined with a Line Graph.

The most common use of a Needle Graph is when showing the Trading Volume for a stock, typically underneath the price performance.

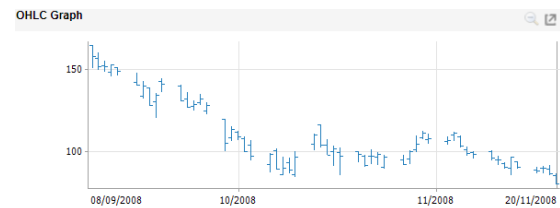


2.4. OHLC Graphs

OHLC Graphs also display time based distributions of price data. For each time slice, they display:

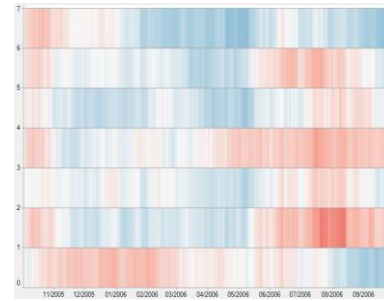
- Opening Price
- Highest Price
- Lowest Price
- Closing Price

As with the Candlestick Graph, the vertical line defines the range of traded prices across the period. However in this case the Left notch determines the opening price and the right notch determines the closing price.



2.5. Percentage Area Graph

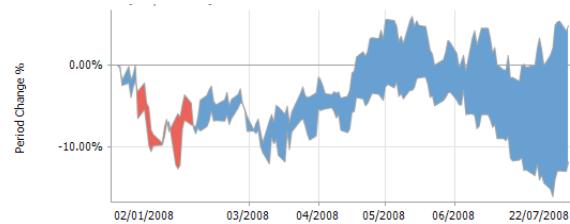
A Percentage Area Graph is like a Treemap spread out over time; you can see how each constituent part contributes to the total at any point in the time series. It is an excellent choice for visualizing time series data when you are interested in seeing the relative contributions for each data set in the series, regardless of the absolute total.



2.6. Spread Graph

The Spread Graph displays the variance or spread between two time based data series.

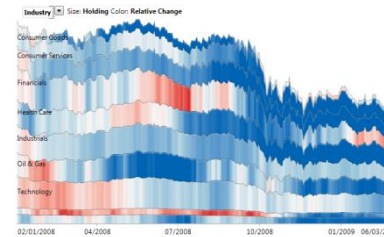
Typical use cases include comparing a stock's price performance to an Index, or a bond's yield to a benchmark rate.



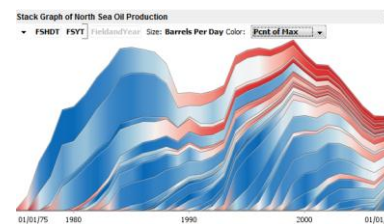
2.7. Stack Graph

Stack Graphs let you visualize quantitative changes to several data sets over time, and you can see how each data point contributes to the total. As with the Treemap the Height of the stack relates Importance, while the color relates Urgency or variance.

Stack Graphs are a great way to look at revenue or gross profit figures over time across several product lines. Stack Graphs are also good to use when you have up to ten or eleven time series data sets to look at, especially for data sets that have a large number of data points.



Portfolio Stack Graph



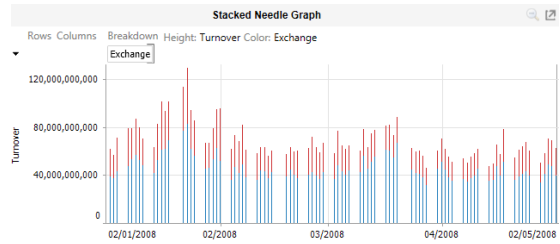
Oil Production Stack Graph

2.8. Stacked Needle Graph

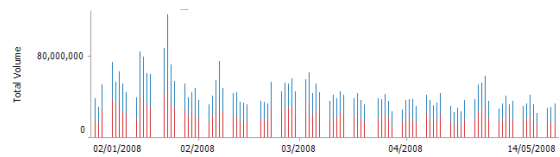
Stacked Needle Graphs display time based transactions or occurrence frequency, similar to the standard Needle Graph.

It allows each transaction to be split into its components, allowing the contribution to the total to be viewed across time.

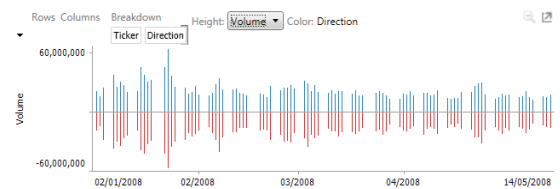
Common uses include the split of transaction volume by venue or by direction (Buy / Sell).



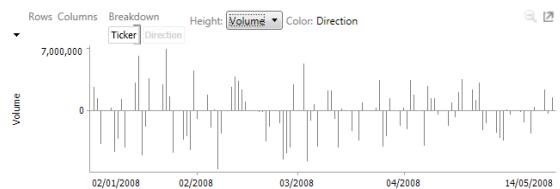
Stacked Needle Graph (Turnover by Exchange)



Buy & Sell Volume (Stacked)



Buy & Sell Volume (Separated)



Net Volume Through Aggregation (Buys - Sells)

3. Snapshot Visualizations

Some of the most common use cases for data visualization software require the system to display information about a data set as it exists at a particular point in time. These “snapshot” visualizations are extremely useful for understanding relative quantitative and qualitative measures and enable users to gain a comprehensive understanding of very complex data sets very quickly.

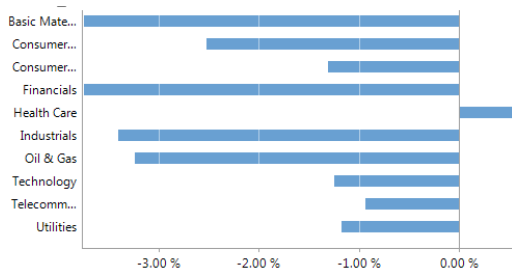
3.1. Bar Graph

Bar Graphs are probably the best known visualization for quantitative data.

You can display Panopticon Bar Graphs either horizontally or vertically. They are available in three variants:

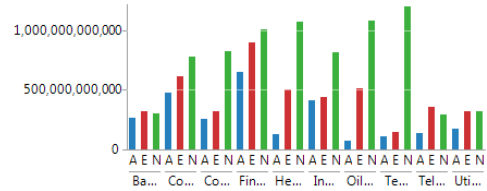
- Standard
- Grouped
- Stacked

In each case, you can sort the layout of the bar graph to your requirements, and with hierarchical data, the graph represents the netted position at each aggregated depth level.

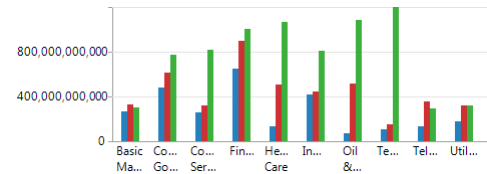


Horizontal Bar Graph

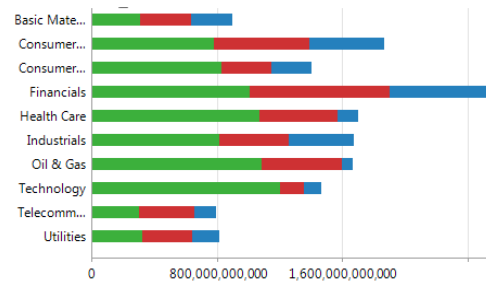
You can also use the Bar Graph visualization to display demographic data in so-called Tornado Charts or Population Pyramids.



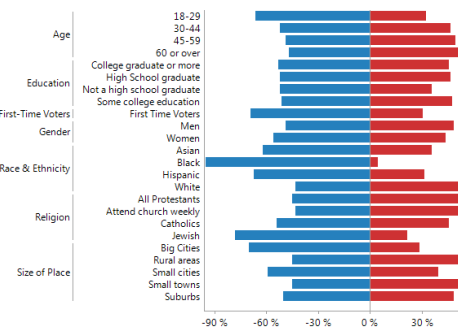
Standard Bar Graph



Grouped Bar Graph



Stacked Bar Graph

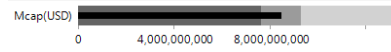


Stacked Bar Graph showing a Tornado Chart layout

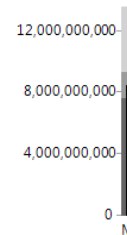
3.2. Bullet Graph

Bullet Graphs have been designed by Stephen Few to remove unnecessary clutter, and instead focus on visualizing metrics like Key Performance Indicators (KPI).

Research has shown that Bullet Graphs are easier to interpret in less time than the radial gauges or speedometers often seen in BI dashboards.



Horizontal Bullet Graph



Vertical Bullet Graph

3.3. Cross Tab Pivot Table

Although selected visualizations can be cross tabbed into small multiples each showing subsets of the original data set, the Cross Tab can itself be used to display a Pivot table.

This Pivot Table supports a single numeric value being represented at the cross point of hierarchical rows and columns.

Each intersection cell can both display the aggregated numeric value, plus the associated color range, which can be subdued or intense.

The numeric labeling can also be removed to produce a Heat Matrix.

Cross Tabbed Pivot Table

Rows	Columns	Breakdown	Color	1 Day Change % (USD)							
Region	Country	Industry									
Asia Pacific	AU	BasicMat.	Consumer	Consumer S.	Financials	Health Care	Industrials	Oil & Gas	Technology	Telecomm.	Utilities
	HK	-4.49%	0.38%	-1.15%	-1.95%	-1.17%	-1.93%	-5.27%	-1.19%	0.44%	
	JP	0.97%	0.00%	-4.41%	-3.91%		-5.75%	-7.89%	-1.14%	-3.17%	1.74%
	NP	-8.22%	-6.47%	-4.68%	-10.42%	-4.92%	-6.73%	-7.77%	-3.14%	-5.99%	-3.27%
	NZ			-3.15%						-0.94%	-7.03%
Europe	SG		-1.89%	-1.80%	-3.26%		-3.66%			-3.94%	
	AT	-2.78%			-5.89%	0.09%	3.43%	3.32%		4.74%	-1.49%
	BE	1.91%	2.04%	1.87%	-1.98%	1.03%	-0.20%			-0.62%	
	CH	-1.82%	2.24%	-2.45%	-0.42%	3.10%	0.52%		-4.42%	-3.73%	0.44%
	DE	-3.28%	-6.46%	-0.55%	-4.10%	0.07%	-2.63%	-2.89%	-0.41%	0.73%	-1.85%
	DK		-0.15%		-2.45%	-1.96%	-1.18%		-2.59%		
	ES	-1.23%	-1.99%	1.06%	-2.99%	0.00%	-1.64%	-0.53%	-1.24%	-0.22%	-2.29%
	FI	-5.41%	-5.76%	-3.25%	0.63%	4.08%	-3.22%	0.89%	-0.33%	1.18%	-8.45%
	FR	-2.89%	-0.48%	0.70%	-2.95%	1.71%	-0.77%	-2.79%	1.89%	0.63%	-2.48%
	GB	-2.17%	3.08%	3.67%	-2.61%	5.81%	0.79%	-1.05%	0.46%	5.14%	0.61%
North America	GR		0.03%	-0.87%	0.89%		5.73%			0.14%	-0.22%
	IE		7.01%	1.71%	-1.49%	7.08%		-0.78%			
	IT	-2.43%	1.02%	-1.48%	-4.49%		-2.36%	-2.71%	-1.93%	0.61%	-2.32%
	NL	-3.17%	-1.89%	1.08%	-8.66%	1.44%		-1.23%	-2.23%	2.00%	0.50%
	NO	-5.99%	-1.84%		-4.15%				-4.80%	-1.82%	-2.13%
	PT			2.41%	-0.80%		1.83%		-0.58%		3.33%
	SE	-4.99%	-0.57%	-1.09%	-3.68%	-3.24%	-2.40%	-2.20%	-0.44%	-0.17%	
	US	-1.37%	-5.51%	-1.09%	-2.79%		-2.87%	-2.27%	-3.85%	-2.16%	-2.34%
	CA										
	US	-3.28%	-2.76%	-1.79%	-2.65%	-0.12%	-3.40%	-3.78%	-0.83%	-2.73%	-0.14%

Pivot Table with Subdued Colors

Cross Tabbed Pivot Table

Rows	Columns	Breakdown	Color	1 Day Change % (USD)							
Region	Country	Industry									
Asia Pacific	AU	BasicMat.	Consumer	Consumer S.	Financials	Health Care	Industrials	Oil & Gas	Technology	Telecomm.	Utilities
	HK	-4.49%	0.38%	-1.15%	-1.95%	-1.17%	-1.93%	-5.27%	-1.19%	0.44%	
	JP	0.97%	0.00%	-4.41%	-3.91%		-5.75%	-7.89%	-1.14%	-3.17%	1.74%
	NP	-8.22%	-6.47%	-4.68%	-10.42%	-4.92%	-6.73%	-7.77%	-3.14%	-5.99%	-3.27%
	NZ			-3.15%						-0.94%	-7.03%
Europe	SG		-1.89%	-1.80%	-3.26%		-3.66%			-3.94%	
	AT	-2.78%			-5.89%	0.09%	3.43%	3.32%		4.74%	-1.49%
	BE	1.91%	2.04%	1.87%	-1.98%	1.03%	-0.20%			-0.62%	
	CH	-1.82%	2.24%	-2.45%	-0.42%	3.10%	0.52%		-4.42%	-3.73%	0.44%
	DE	-3.28%	-6.46%	-0.55%	-4.10%	0.07%	-2.63%	-2.89%	-0.41%	0.73%	-1.85%
	DK		-0.15%		-2.45%	-1.96%	-1.18%		-2.59%		
	ES	-1.23%	-1.99%	1.06%	-2.99%	0.00%	-1.64%	-0.53%	-1.24%	-0.22%	-2.29%
	FI	-5.41%	-5.76%	-3.25%	0.63%	4.08%	-3.22%	0.89%	-0.33%	1.18%	-8.45%
	FR	-2.89%	-0.48%	0.70%	-2.95%	1.71%	-0.77%	-2.79%	1.89%	0.63%	-2.48%
	GB	-2.17%	3.08%	3.67%	-2.61%	5.81%	0.79%	-1.05%	0.46%	5.14%	0.61%
North America	GR		0.03%	-0.87%	0.89%		5.73%			0.14%	-0.22%
	IE		7.01%	1.71%	-1.49%	7.08%		-0.78%			
	IT	-2.43%	1.02%	-1.48%	-4.49%		-2.36%	-2.71%	-1.93%	0.61%	-2.32%
	NL	-3.17%	-1.89%	1.08%	-8.66%	1.44%		-1.23%	-2.23%	2.00%	0.50%
	NO	-5.99%	-1.84%		-4.15%				-4.80%	-1.82%	-2.13%
	PT			2.41%	-0.80%		1.83%		-0.58%		3.33%
	SE	-4.99%	-0.57%	-1.09%	-3.68%	-3.24%	-2.40%	-2.20%	-0.44%	-0.17%	
	US	-1.37%	-5.51%	-1.09%	-2.79%		-2.87%	-2.27%	-3.85%	-2.16%	-2.34%
	CA										
	US	-3.28%	-2.76%	-1.79%	-2.65%	-0.12%	-3.40%	-3.78%	-0.83%	-2.73%	-0.14%

Pivot Table with Intense Colors

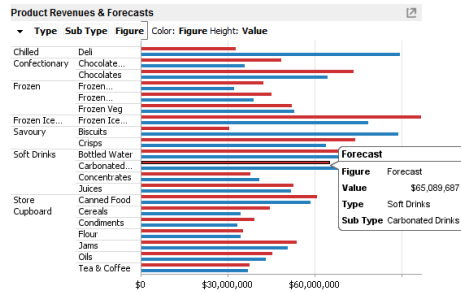
3.4. Dot Plot

Dot Plots have two primary use cases:

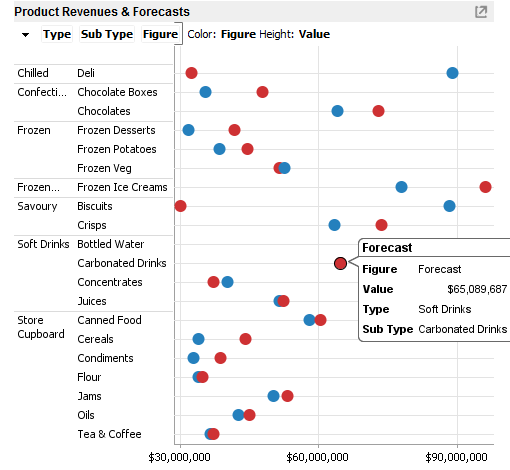
- A more effective alternative to a Bar Graph
- A distribution display similar to a Scatter Plot

Dot Plots are an effective alternative to Bar Graphs, particularly in cases where the data being analyzed contains many similar numeric values.

In comparison to the Bar Graph, Dot Plots do not use a zero baseline and are less cluttered. This makes it easier to add additional data variables to the visualization.

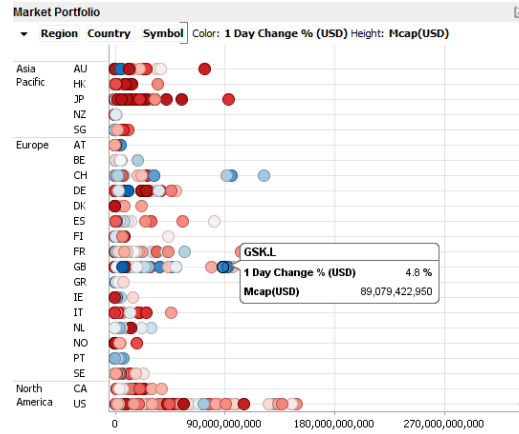


Bar Graph of Revenues vs. Forecast



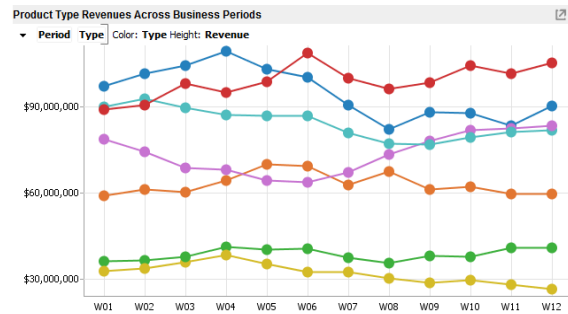
Dot Plot of Revenues vs. Forecast

Dot Plots can also be used to represent data distributions in which one axis is numeric while the other axis is categorical. Scatter Plots using such data sets can be misinterpreted; Dot Plots of the same data are unambiguous and easy to understand.



Distribution Dot Plot

You can also use Dot Plots to generate categorical Line Graphs in which the X axis represents categorical periods rather than a specific time range.



Business Period Categorical Line Graph

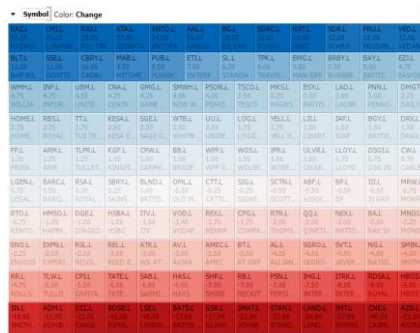
3.5. Heat Map

A Heat Map is a special type of color-based data visualization that is well suited for analyzing large flat data volumes using an intuitive graphical display. Heat maps are good at representing large numbers of data points in ways that would be unwieldy and hard to interpret using traditional tables or charts.

A Heat Map represents each item in the data set as an equally-sized cell, unlike a Treemap that uses the size of the box to represent a qualitative value, and location to represent hierarchical relationships. In a Heat map, the color of the square represents a quantitative value relative to the other boxes in the Heat map, while the location can represent the sorting of another quantitative or categorical value. This allows the analyst to see all of the data items simultaneously. The user can also hover over any item to bring up more detailed information on demand.



Heat map (No Sorting)

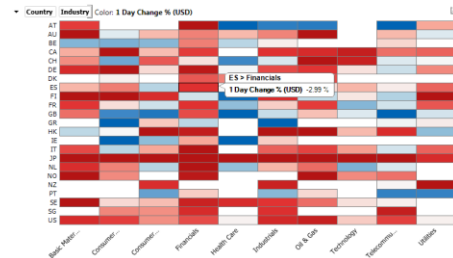


Heat map (Sorting by Color)

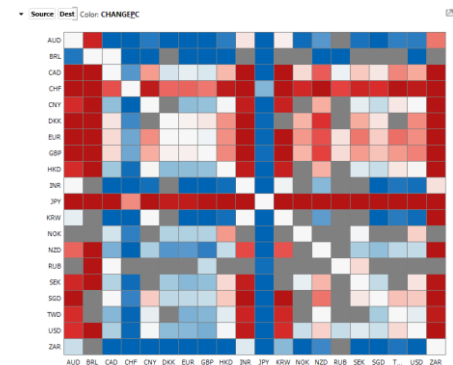
3.6. Heat Matrix

A Heat Matrix is similar to both the Heat Map and Treemap in that it displays many different data items and it represents the value for each item using colors. However, unlike its cousins, the Heat Matrix has a defined structure where two data attributes define each axis, thus producing a correlation matrix. Within the Heat Matrix, each column and row represents a unique attribute, and the point where two items intersect represents a unique combination of the two attributes.

Our Heat Matrix data visualization helps our clients identify correlations within their data sets using an intuitive graphical display.



Heat Matrix



FX Cross Rates Heat Matrix

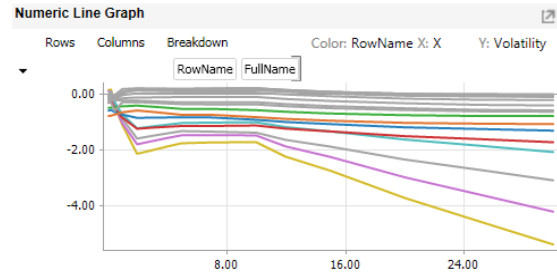
3.7. Numeric Line Graph

Numeric Line Graphs, differ from the standard line graph, in that they have a numeric X axis, rather than one based upon time.

They are commonly used in both scientific and financial scenarios to show trends in functions that are based on two numeric inputs (X and Y).

Common uses include the display of Yield Curves.

Numeric Line Graphs can also be used to display selected cuts through a Surface Plot.



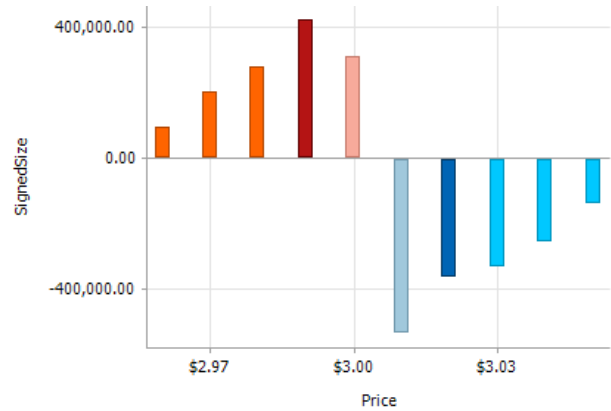
Numeric Line Graph

3.8. Numeric Needle Graph

Numeric Needle Graphs display price distributions.

Unlike a traditional Bar Graph the X Axis is numeric rather than categorical. Bars are positioned along the X axis according to their X value, and their height is determined by their Y values.

This allows gaps, and clustering in price to be more accurately identified.



3.9. Pie Chart

Pie Charts are one of the oldest and best known visualizations for displaying contributions to a total.

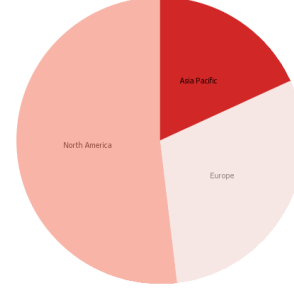
Panopticon can produce standard Pie Charts in which the pie slice represents a numeric variable that is proportional to the total size of the pie. The color variable can represent either a category or another numeric variable.

Pie Charts can be flat, showing a single set of slices. They can also be hierarchical and display multiple levels of data in a variant called a Multilevel Pie Chart. This is also known as a Sun Burst or a Radial Treemap.

The user can modify the visible depth level and drill into particular slices to investigate further detail.

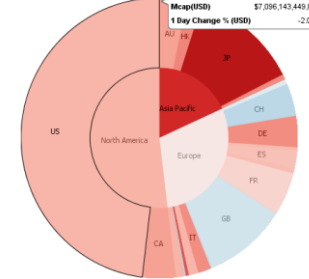
The center of a multilevel Pie Chart can be cut to form a Donut Chart. However, rather than simply leaving the area blank, EX Pie Charts show the aggregate color for the complete data set.

▼ Region | Country | Company | Size: Mcap(USD) | Color: 1 Day Change ...



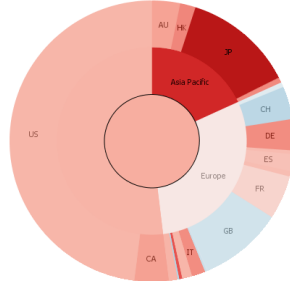
Pie Chart

▼ Region | Country | Company | Size: M(US) | Mcap(USD) | 1 Day Change % (USD)



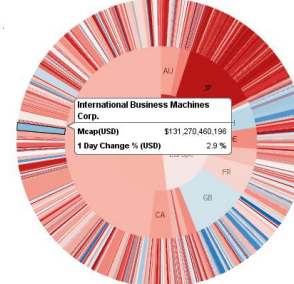
Multilevel Pie Chart (Sun Burst)

▼ Region | Country | Company | Size: Mcap(USD) | Color: 1 Day Change % (USD)



Center showing aggregate color

▼ Region | Country | Company | Size: Mcap(USD) | Color: 1 Day Change ...



As Above with Deeper Hierarchy

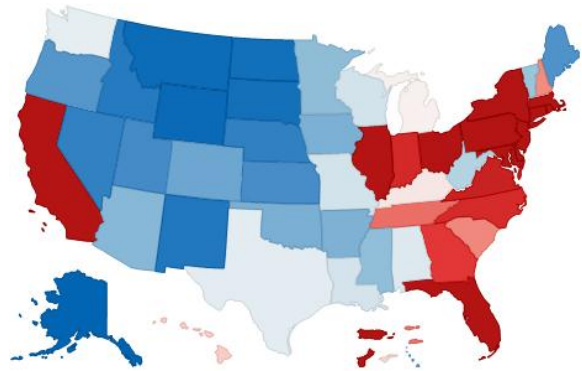
3.12. Shapes / Choropleth

The Shapes visualization allows the display of Choropleth Graphs, and any other displays built from SVG Paths.

The Shapes visualization can be used to display data where both physical location and size are important.

They clearly show data correlations and clustering that is geospatial in nature.

Unlike the Geographic Scatter Plot, the size of each shape is fixed imparting the importance of the item. As a consequence data should be relative to each shape size, such as area densities.



3.13. Surface Plot

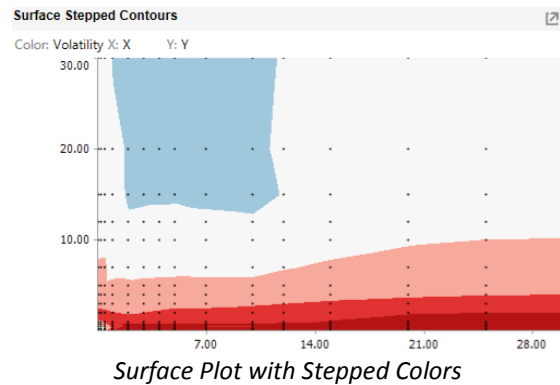
Surface Plots are used to identify trends, and outliers within numeric surfaces.

The Surface is made up of a series of points, where each point has:

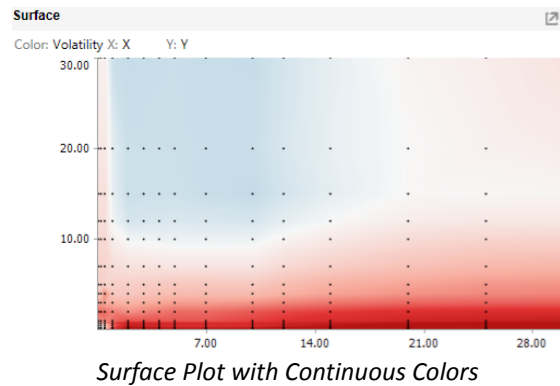
- X Position
- Y Position
- Color (Which represents the Z Axis).

The Surface Plot can support data sets where the X and Y positions can both be regular and irregular in their distribution.

Additionally, the color scale can be continuous, or stepped to show a surface gradient.



Surface Plot with Stepped Colors



Surface Plot with Continuous Colors

3.14. Treemap

Treemaps represent hierarchical data sets, showing both each level in the hierarchy and how they interact with each other.

They are represented by a colorful mosaic of rectangular cells based on your data. The size of a cell reflects its importance. The color conveys urgency or variance:

- White – Target/Benchmark Performance
- Red – Under Performance
- Blue – Over Performance

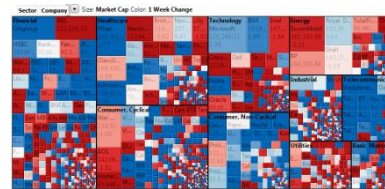
The intensity of the red or blue indicates the level of under or over performance.

Most people can learn to understand the information presented in a Treemap in under a minute – even if that Treemap is showing data representing an underlying data set of thousands of records.

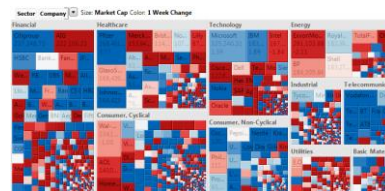
Our Treemaps are not static pictures. The real value of the visualization is quickly apparent when you interact with the data. Users can zoom, filter and view details on demand, as well as link to and highlight other sources of information. For example, fund managers can link to a trading system directly from within the Treemap.

EX supports three different styles of Treemaps:

- Classic Treemaps
- Windows Treemaps
- Cluster Treemaps



Classic Treemap



Windows Treemap



Cluster Treemap

4. Mixed Mode Visualizations

Mixed Mode Visualizations are capable of displaying either time series and snapshot data. In some cases, these types of visualizations can display both time series and snapshot data simultaneously.

4.1. Table

A table can be used to display a small dataset, where all the values are visible, or the aggregate values of a larger data set.

The table can be configured to show hierarchies allowing sub totals and grand totals to be displayed. Additionally branches of the hierarchy can be expanded and collapsed.

The table can be sorted by clicking on a column heading, and the sorting is applied across the defined hierarchy.

Columns cells, can be represented in their value form, or alternatively graphically as a series of micro-charts including:

- Bullet Graph
- Bar Graph
- Dot Plot
- Line Graph
- Needle Graph

	Mcap(USD)	1 Day Change %...	1 Week Change...	1 Month Change...
Basic Materials	\$889,465,969,106	-3.74%	-3.74%	13.23%
Consumer Goods	\$1,860,384,194,222	-2.52%	-1.11%	3.30%
Consumer Services	\$1,399,419,319,489	-1.31%	-0.72%	7.86%
Financials	\$2,546,812,258,311	-3.75%	-5.23%	12.38%
Health Care	\$1,698,382,149,841	0.55%	0.40%	2.55%
Industrials	\$1,665,548,943,290	-3.41%	-2.49%	8.09%
Oil & Gas	\$1,661,193,841,291	-3.24%	-5.78%	2.39%
Technology	\$1,456,797,585,162	-1.24%	-1.24%	12.01%
Telecommunications	\$787,667,544,952	-0.93%	-2.35%	2.15%
Utilities	\$811,127,128,583	-1.18%	-3.42%	0.58%

Simple Table

	Mcap(USD)	1 Day Change %...	1 Week Change...	1 Month Change...
Basic Materials	\$889,465,969,106	-3.74%		
Consumer Goods	\$1,860,384,194,222	-2.52%		
Automobiles & Parts	\$328,426,116,057	-6.61%		
Food & Beverage	\$765,925,707,172	-0.61%		
Personal & Househo...	\$766,032,370,993	-2.68%		
Consumer Goods Total	\$1,860,384,194,222	-2.52%		
Consumer Services	\$1,399,419,319,489	-1.69%		
Media	\$271,230,902,901	-0.92%		
Retail	\$835,677,756,783	-0.92%		
Travel & Leisure	\$292,510,659,805	-2.07%		
Consumer Services Total	\$1,399,419,319,489	-1.31%		
Financials	\$2,546,812,258,311	-3.75%		
Health Care	\$1,698,382,149,841	0.55%		
Industrials	\$1,665,548,943,290	-3.41%		
Construction & Mate...	\$205,163,200,091	-2.69%		
Industrial Goods &...	\$1,460,385,743,199	-3.51%		
Industrials Total	\$1,665,548,943,290	-3.41%		
Oil & Gas	\$1,661,193,841,291	-3.24%		
Technology	\$1,456,797,585,162	-1.24%		
Telecommunications	\$787,667,544,952	-0.93%		
Utilities	\$811,127,128,583	-1.18%		
Grand Total	\$14,776,798,934,247	-2.24%		

Table with Hierarchy, Totals & Micro charts

	Ticker	Holding	Price	Price Change	Price Change	Price Change	Price Change
Basic Materials	Alcoa Inc	3,023 US\$	27.0 US\$	24.96 %	24.96 %		
	Avery Dennison Corp	477	62.0 US\$	16.07 %	16.07 %		
	Balmain Corp	676.0 US\$	10.19 US\$	10.19 %	10.19 %		
	Cabot Corp	5,882 US\$	37.2 US\$	18.60 %	18.60 %		
	CF Industries Holdi...	2,843.4 US\$	17.72 US\$	17.72 %	17.72 %		
	Quaker Chemical Co.	3,229.3 US\$	19.9 US\$	11.99 %	11.99 %		
	Sevenson Inc	189.1 US\$	18.4 US\$	4.22 %	4.22 %		
	Sigma-Aldrich Corp.	9,351.1 US\$	76.7 US\$	16.99 %	16.99 %		
Basic Materials Total		30,841.9 US\$	48.9 US\$	16.99 %	16.99 %		
Consumer Goods	Citica Corporation	2,813.1 US\$	48.0 US\$	-8.71 %	-8.71 %		
	Electronic Arts Inc	7,980.0 US\$	39.8 US\$	-8.71 %	-8.71 %		
	Hudon Inc	1,751.0 US\$	22.0 US\$	14.90 %	14.90 %		
	Kennametal	384.4 US\$	26.0 US\$	14.80 %	14.80 %		
	RCRC Corp	1,928.3 US\$	33.0 US\$	-8.03 %	-8.03 %		
Consumer Goods Total		14,332.7 US\$	44.9 US\$	2.31 %	2.31 %		
Consumer Services	Bed Bath & Beyond L.	1,550.4 US\$	38.3 US\$	-8.01 %	-8.01 %		

Table showing Snapshot and Time Series Trends