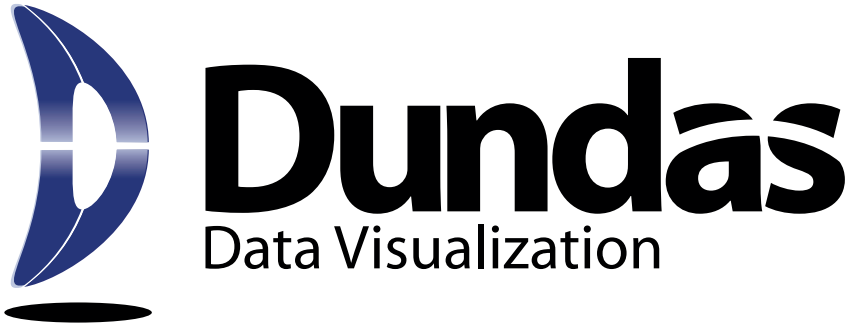

Enhancing SQL Server 2008 Reporting Services with Dundas Chart

Dundas
Data Visualization

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DUNDAS FEATURE SHEET:

Microsoft's SQL Server 2008 offers remarkable new charting capabilities. And while its rich set of integrated services offers much, Dundas Chart provides additional (and exceptional!) functionality for SQL Server 2008 Reporting Services (SSRS).

FEATURE: Dundas offers "intelligent charting"

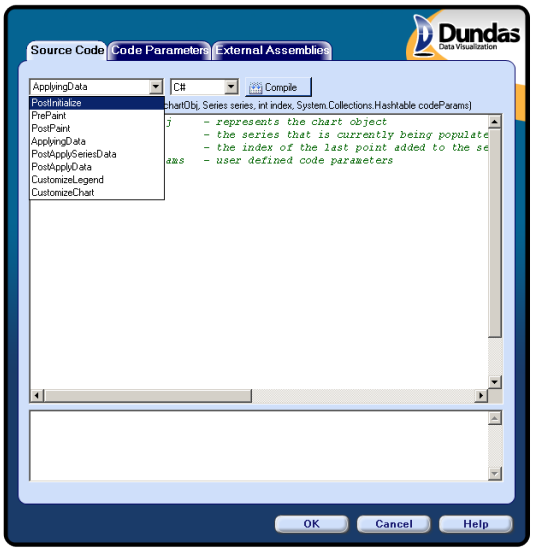
Dundas defines "intelligent charting" **as charts that look at the data and then change, depending on the data.** Imagine a chart that shows your monthly sales. If you have a particularly good month, the chart could change somewhat (e.g., different colors, added annotations) - or conversely, a bad month could offer annotations to potentially show where you're failing. Intelligent charting makes a point to identify issues for you clearly on the screen. The list of things you can do is almost limitless.

FEATURE: Dundas Chart offers "dynamic reporting"

Dundas offers an efficient way to produce hundreds of reports. With Dundas Chart, users can usually start with only a few dynamic reports and build from there. If you have to make a different report every month because it changes monthly, Dundas Chart allows you to make just one dynamic report and let it change itself. Think of the months of development time you'll save.

FEATURE: Dundas Chart includes the Dundas Code Editor

The Dundas Code Editor is what makes charts intelligent and hard working! It allows you to write code against the chart in any aspect of the chart, any property. It also allows you to produce complete corporate templates for saving time and potentially quick debugging. Here's a sample of what you get solely from the Dundas Code Editor:



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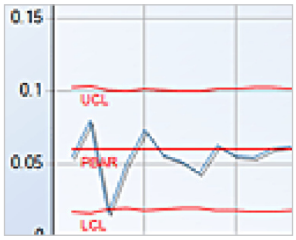
Add-ons - some Dundas Chart functionality to enhance your SSRS experience



Six Sigma

The SixSigma add-on lets you add Six Sigma charts to your Dundas Chart project. C-Chart, P-Chart, NP-Chart, U-Chart, S-Chart, R-Chart, Run Chart, XBAR Chart and Individuals Chart are all supported.

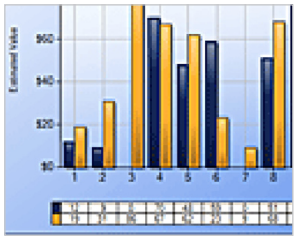
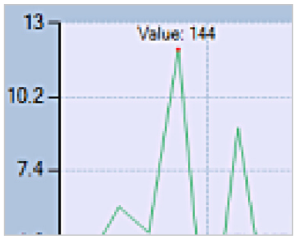


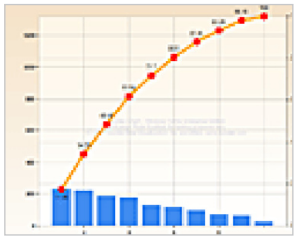
Chart Data Helper

The ChartDataTableHelper add-on lets you add a small table containing your chart's data to the chart area. In Windows Forms, you can also connect a chart area to a DataGridView so that the grid's data comes from the chart, and changes to the grid modify the chart's data directly.



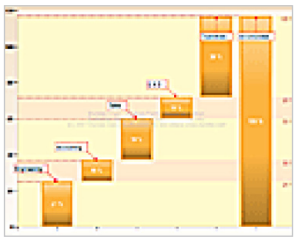
Spike Removal

Spike Removal modifies an input series so its values lie within a specified range and tolerance. This makes it easy to adjust errant data points without destroying the original data (it remains on the chart as a label and/or tooltip).



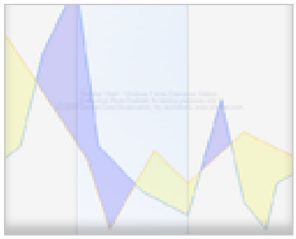
Pareto/Stacked Pareto Charts

Pareto Chart makes it simple (with two lines of code!) to add a Pareto series to a chart with an existing column series.



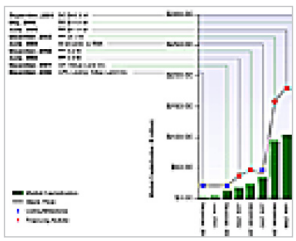
Step Column

StepColumn converts a simple column chart into a step column chart, which is an efficient way to see the breakdown of criteria (and those elements which make it up). This add-on makes the change with just a single method call.



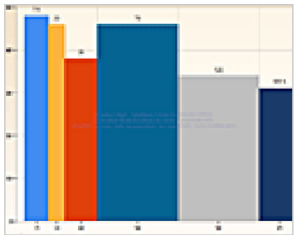
Range Polygon Chart

The RangePolygon add-on implements the RangePolygonControl class. Use RangePolygonControl to transform two intersecting line graphs into a difference line graph, with the areas between the lines colored to indicate areas of interest.



Activity Legend

Clarity is an important part of visualizing data and it happens to be a specialty of Dundas Data Visualization. The ActivityLegend add-on was created to assist in the marking of data and to provide additional details on key data, all without sacrificing the rest of the chart's clarity. The marked data is easier and clearer to visualize due to the way ActivityLegend connects the additional information to the data points.



Variable Width Column Charts

Most chart types in Dundas Chart are plotted so that the X value determines where each point should be plotted along the X axis. The variable-width column plots columns with the width determined by its X value. This makes each column "stacked" against each other along the X axis. This add-on is a static utility class that converts a data series into a special form that plots according to width.

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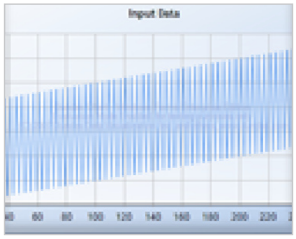
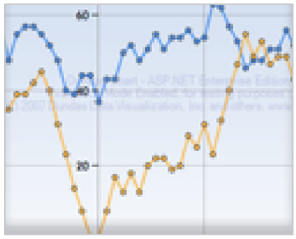


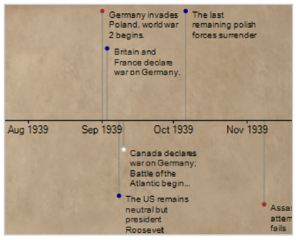
Band-Pass Filter

The Band-Pass Filter add-on provides a low-pass filter (to remove high-frequency signals or noise; used when calculating a simple moving average), a high-pass filter (to remove low-frequency components; useful for tracking market turns) and a band-pass filter (combining low- and high-pass filters).



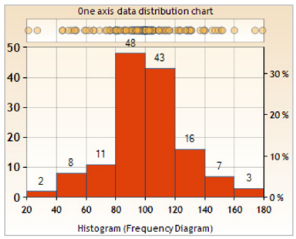
Pivot Stage

PivotStage lets you compare two or more series by selecting a pivot point in each series. The chart's X axis is adjusted so the selected points become the origin of each series. For example, these two series could represent sales for different products. The selected points mark the start of marketing initiatives for each product. Because the marketing initiatives started at different times, it's difficult to compare the effectiveness of each.



Timeline Chart

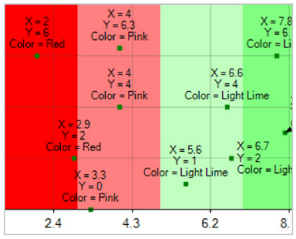
The Timeline add-on will allow your Dundas Chart to dynamically draw timelines. These timelines contain a feature similar to Smart Labels so that that maximum amount of space in the chart area is automatically used. This is essentially a new chart type and is great for anyone who needs to track historical changes.



Histogram Charts

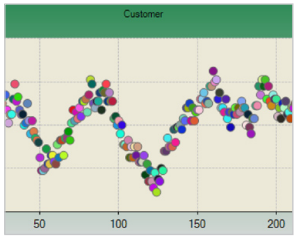
A brilliant add-on to Dundas Chart for Reporting Services, the Histogram Chart shows density distribution at a quick glace. This gives a new level of readability and is remarkably simple to implement.

Dynamic Content



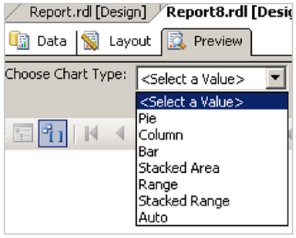
Intelligent Label Formatting

While Intelligent Label Formatting provides the ability for users to change the labeling as a report is rendered, it can also allow labels to change themselves. Imagine having labels that change upon certain conditions. In the case of this chart, the region that the point lays within the chart area determines the actual label.



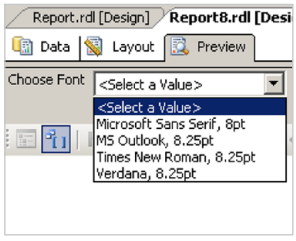
Dynamic Colors

Change the color of your series, data point markers, labels and other components dynamically through user interface elements or program code.



Dynamic Chart Types

Change a series chart type at will, without reloading the data. Visualize your data the way you want, when you want, without having to recreate the chart.



Dynamic Fonts

Change axis and data point label, legend and title fonts dynamically through the user interface or program code.

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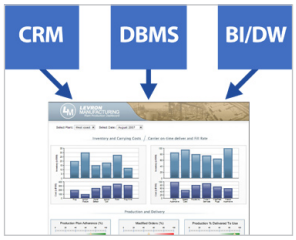
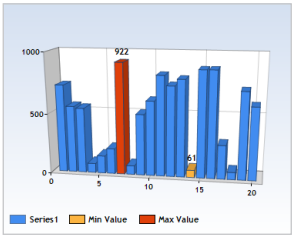
Additional Data Sources



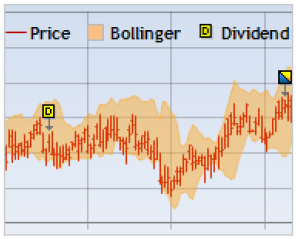
Dundas Chart for Reporting Services allows you to connect your chart to any data source supported within the .NET framework. This is especially powerful for users who have custom data sources or wish to manage data differently from the manner used by Reporting Services.

Custom Filtering



Custom filtering allows end users to determine the various filters that can be applied to data. As a developer, you have full control of the number and functionality of the filters available and all your users have to do is simply choose from a list. This also allows for custom selection, for example, finding the minimum and maximum values.

Dynamic Formula Support

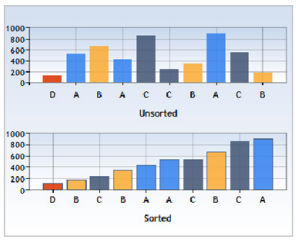


Dynamically apply financial and statistical formulas to series data for technical analysis of stock data, to predict future market trends by studying existing data and to analyze data to distill meaningful patterns and values.

Data Manipulation

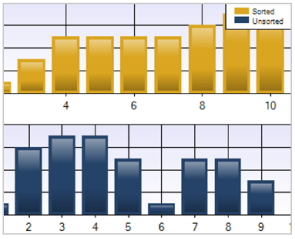
Dynamic Groups (by formula, axis label, values)

Group related data points together on the fly using a variety of formulas. This reduces the number of data points to render, making it easier to spot trends.



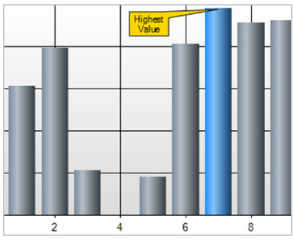
Custom Sort Ordering

Write your own data point sorting algorithms to complement the standard ascending and descending sort orders.



Dynamic Sorting

Dynamically sort series data using ascending, descending or a custom sort order.



Find mix/max (and color or annotate it)

Easily get the minimum and maximum for a series to color or annotate your data.

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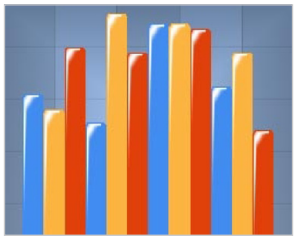
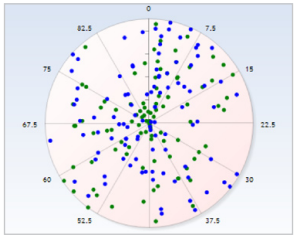
Custom Painting



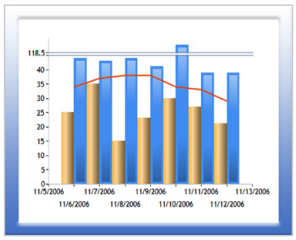
Custom Drawing Styles

Use custom drawing methods to change the way your chart is drawn. Highlight important data or restyle any chart component.



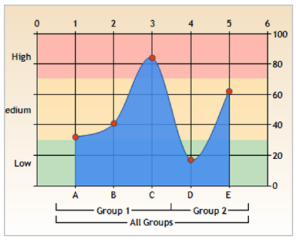
Custom Chart Types

Create your own custom chart types, with full control over how the chart type is drawn at runtime.



Custom Border Styles

Add custom borders to any bordered element in a chart.



Custom Labeling

Extremely flexible custom labeling for your axis, data points, legends and annotations (including support for multiple labels per location).

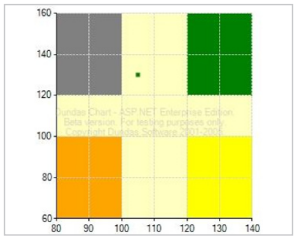
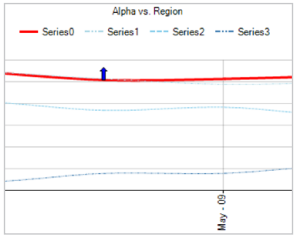


Chart area division (quadrants)

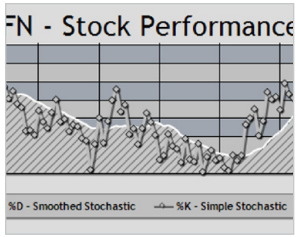
Easily divide a chart area into quadrants using custom paint event code.

Zooming



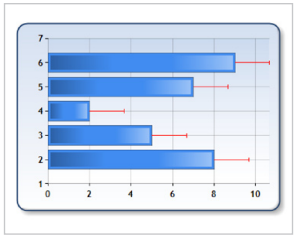
Users can select a zoom level in order to see a deeper level of detail in the data. Zoom levels can even be customized to provide an advanced form of drill down.

Printer-Friendly Charts



The ability to set the colors used by a chart dynamically lets you adjust it to be printer-friendly on the fly when rendering to a black and white printer.

Horizontal Error Bars



Support for horizontal error bars makes it easy to add statistical variance information to any bar chart.

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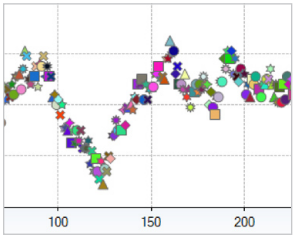
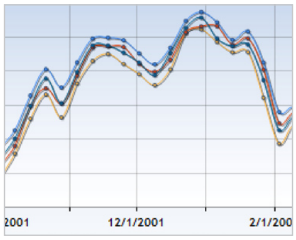
Dynamic Markers



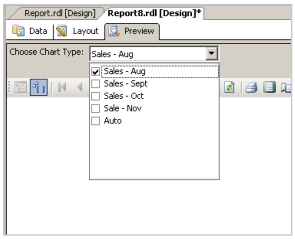
Create and manipulate markers dynamically; modify the marker shape, colors or display a bitmapped image on any data point.

Dynamic Series Merging



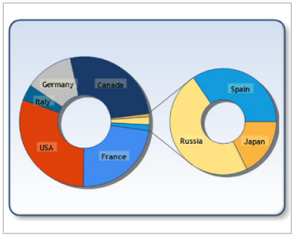
Merge data from multiple series into several Y values in a single series. Got stock data stored in four series (high, low, open, close)? It's easy to merge the data and display a proper stock chart.

Ability to hide/show multiple series



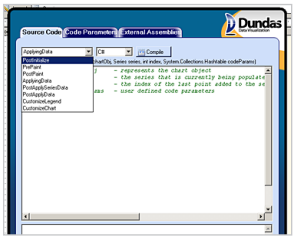
Dynamically show and hide any series from your user interface or programmatically.

Supplemental Pie Charts



Explode small pie or doughnut chart segments into a supplemental pie chart connected to the original area of the small segments using the Pie Collected Data Helper sample code.

Support for user-defined classes and methods



Use C# or VisualBasic.NET to create your own add-ons to easily add functionality or even your own completely customized chart types!

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Also, with the Dundas Code Editor, you receive two additional features.

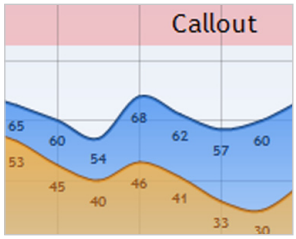
FEATURE: Dundas Chart includes annotations

Annotations are a critical part of intelligent charting, driven through code. They change and highlight elements based on certain conditions, adding a new dimension to your charts. Dundas Chart includes:

Callouts

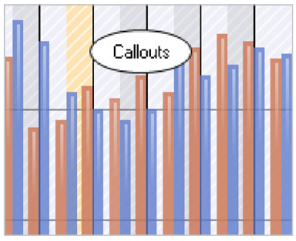
Rectangles and Rounded Rectangles

Rectangular callout annotations provide a professional way to signal your users about a specific event or detail regarding your data. This is particularly useful in cases where you want to explain the actual value of a data point so that it is not taken out of perspective.



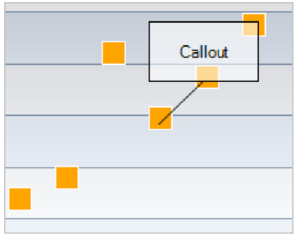
Text Annotations

This is a powerful tool that can assist in many of your visualization needs. Text annotations allow you to place text anywhere you want within a chart area and can even been used in order to provide custom data point labeling. A key example of custom data point labeling is when you want the labels to sit in a straight line like a table underneath your data.



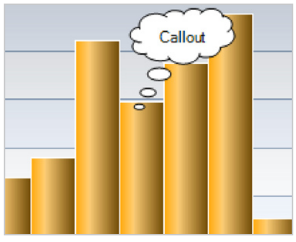
Ellipses

Ellipses allow you to mimic what an analyst would do when he/she draws a circle on specific data in order to highlight it for a client. Ellipses can come in different shapes and sizes and can even contain text.



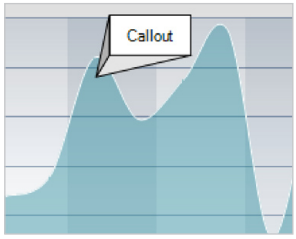
Borderline

Borderline annotations are necessary if you want to use Smart Labels with annotations. These are particularly useful if you have a lot of annotations on a single chart so that you can see where your annotation is attached.



Clouds

Give a playful look to your annotations while maintaining a degree of professionalism.



Perspective

Perspective annotations are similar to rectangular callouts but provide an attractive 3D look and feel. Try mixing the perspective annotation with an actual 3D chart!

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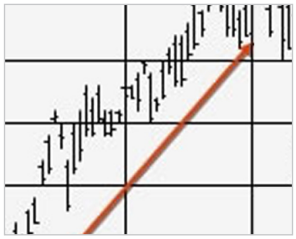
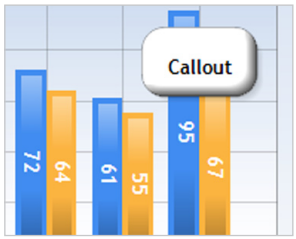


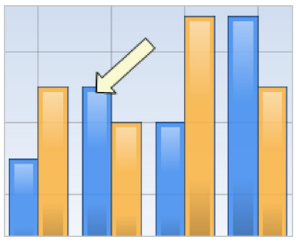
Line Annotations

Line annotations allow you to define visible thresholds to see if your values reach a minimum target. They are also useful in cases where you want to show some kind of correlation by drawing a line between points.



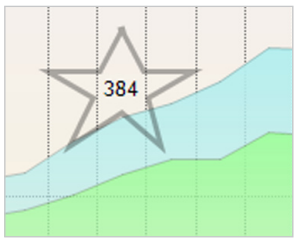
3D Borders

The 3D border annotation allows you to create custom borders around certain chart elements like legends, chart areas, titles and even the entire chart.



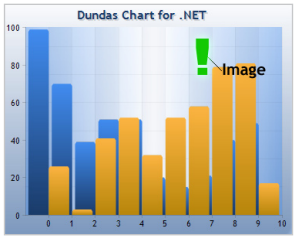
Arrows

Arrow annotations give you the ability to point to certain values on the chart. This is particularly helpful when you need to point out irregularities or values of interest.



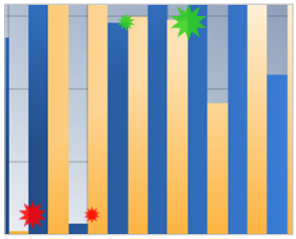
Polylines

Polyline annotations are similar to line annotations with the ability to have multiple user-definable endpoints. This allows to you draw any shape you want on top of the chart.



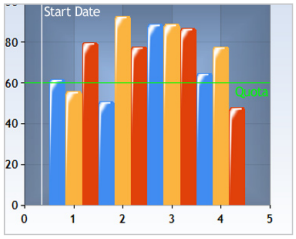
Images

The custom placement of images on a chart is provided by image annotations. You can add company logos or even show a picture of the metric you are charting.



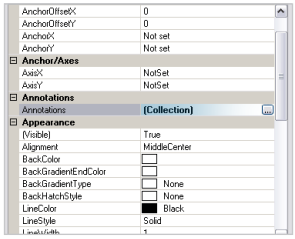
Polygons

Polygon annotations are similar to polyline annotations in that they allow a set of user-definable points in order to draw any object desired.



Horizontal and Vertical Trend Lines

These annotations allow you to add target lines and even highlight specific regions of the axis.



Annotation Groups

With Dundas Chart, you can have a set of annotations defined as a group of annotations. This is useful in cases where you want to quickly give the user the ability to show/hide certain groups of annotations.

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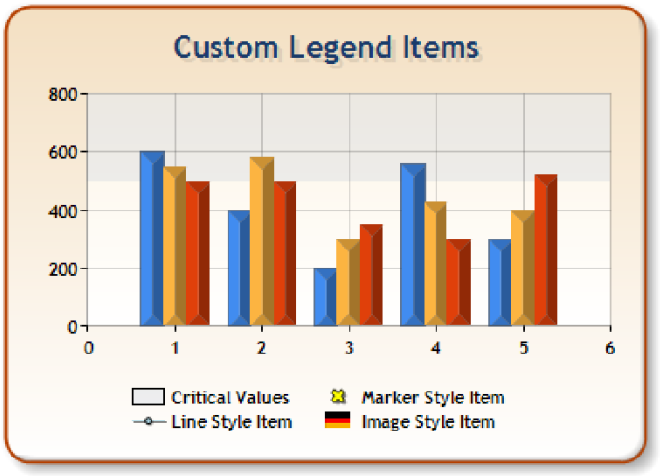
FEATURE: Dundas Chart offers custom legends

Custom legends is a powerful feature that allows you to build tables and add more data into the chart (e.g., the actual values in the legend of a pie chart). Unlike Microsoft Legend, which lets you hide or remove a series - and that's all - Dundas Chart lets you define different colors. The chart can actually tell you "green is good, red is bad." The custom legends feature applies to custom legend items, tables and images, as well as multiple legends.



IN CONCLUSION, the developers at Dundas Data Visualization are constantly creating new chart types and new add-ons - and they all will be driven through the Dundas Code Editor. Visit www.dundas.com every month to see the new offerings.

Advanced and expandable charting capabilities from SQL Server 2008 Reporting Services and Dundas Chart - an unbeatable combination!