Why Choose Nevron Chart for SQL Server Reporting Services

Nevron Chart for SSRS
Delivering Nevron advanced Charting
technology to your reporting projects in
SQL Server Reporting Services 2005/2008

Why Choose Nevron Chart for SQL Server Reporting Services

While SSRS 2005/2008 both come equipped with a free chart report item and with chart report items available from other vendors, you may ask yourself: Why use Nevron Chart for SSRS in my reports? This article gives a brief overview of the benefits of using our charting solution in your reporting projects.

Charting Types

Nevron Chart for SSRS provides a complete and unmatched set of 2D/3D charting types and subtypes. Many of the charting types/subtypes that we support are unique within the industry. We support all major charting types and extend all charting types with options that are otherwise not available. Additionally, we provide an option to create truly advanced charting type combinations.

For example: while the default chart report item can display clustered bars, you cannot control the gap between the clusters, nor can you create cluster-stack combinations.

As a total, Nevron supports **174 charting types** by counting only the Chart Type/Subtype and availability in 2D/3D combinations - which is an unrivaled industry record.
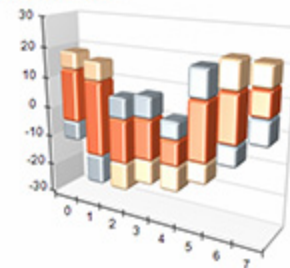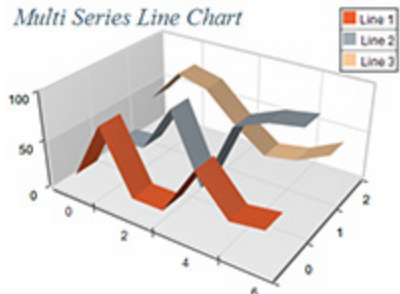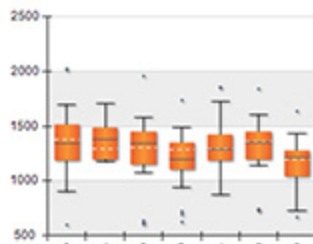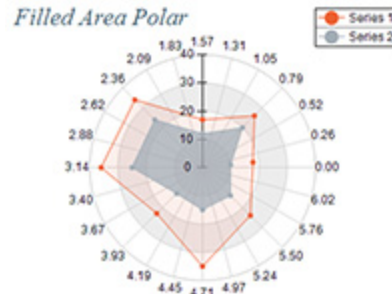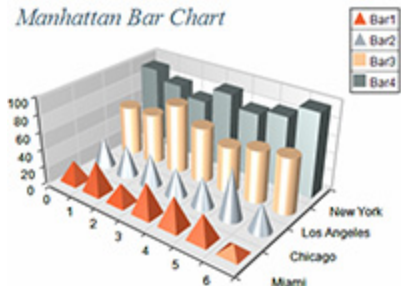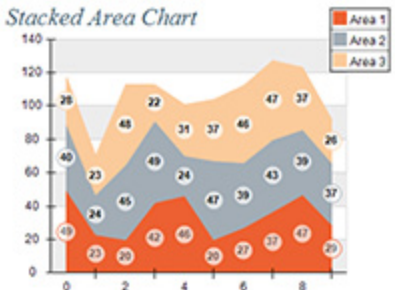
This number does not include the shape combinations available. For example, the default report item considers Cylinders Columns as a different subtype of the Column chart type - in fact it can display columns only as bars and cylinders. Compare this to the 9 shapes with which you can display columns in Nevron Chart for SSRS.

Also not counted are the possible horizontal charting types that you can author - other currently available charting report items are using different charting types to display either left-to-right or right-to-left horizontal bars. In Nevron Chart any 2D/3D chart can be converted to a horizontal chart in either direction - this includes combo charts too. You should also consider the charts that you can author by creating combo charting types - which in Nevron Chart for SSRS are limitless.

Without a doubt, Nevron Chart for SSRS stands in a class of its own when it comes to XY and XYZ scatters of any type.
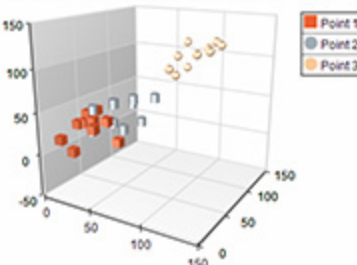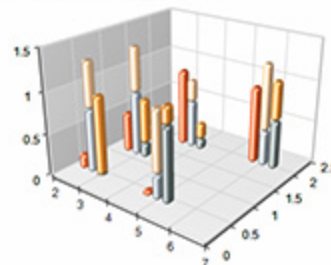
Advanced Axes Features

Unquestionably, charting axes are a very important aspect of each chart. Charting axes have to deal with different scaling, labeling, auto show/hide, layout and value/range highlighting features, and provide flexible annotation options that all result in better chart readability. It is safe to say that Nevron Chart for SSRS features one of the most advanced axis models available in charting technology today.

The axes of Nevron Chart can scale all types of axis data - ordinal, hierarchical, numeric, logarithmic, and have the industry-leading support for date-time scales - including value and range timelines scales that are largely used in financial and project management charting. Scaling all types of data is not enough - for each of these distinct types of scales Nevron Chart for SSRS provides advanced and unique options for further tuning. For example: Even though the default chart in SSRS can display hierarchical categorical scale it only supports this in bracket mode - Nevron Chart for SSRS supports three distinct modes for display of such scales with options to control different aspects of the category hierarchy annotation.
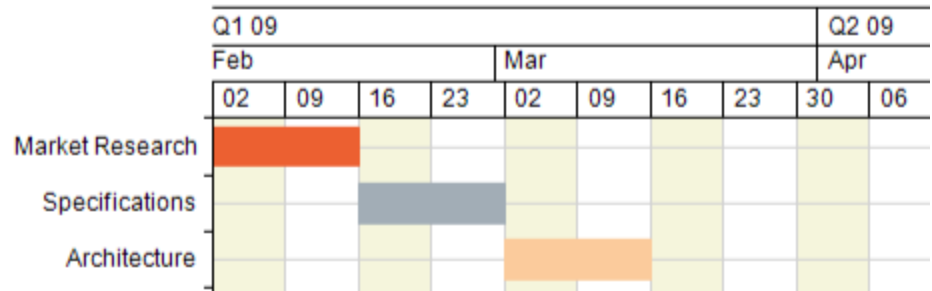
Besides scaling, axes have the important role of helping you visually understand the data. Nevron Chart for SSRS supports advanced options for section highlighting, which help you split the axes in visually distinct ranges. Other annotation options include constant lines, stripes, gridlines etc. - all implemented with a wealth of settings. Many of the visual decoration settings are not available in the default chart for SSRS and are generally unique within the industry.

Another important aspect of the visual perception of data is being able to compare it visually. However, when the data is clustered in distant data ranges (for example: half the data points are around 100 and the other half are around 1,000,000) you cannot compare it visually - all small bars will look the same. For the purpose of cases like this, Nevron Chart implements advanced support for manual and automatic scale breaks. Scale breaks are not available in the default chart for SSRS. Chart report items from other vendors that support scale breaks do so only for Y axes in 2D - they do not support scale breaks in 3D, nor do they support axis scale breaks crossing (for example scale breaks that are applied to the X and Y axes of an XY scatter).
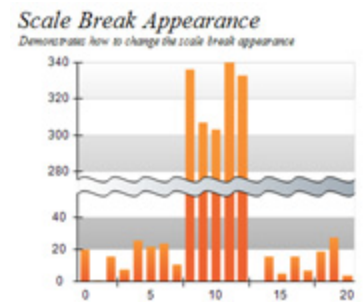

Axis positioning is also not left behind. In Nevron Chart for SSRS Cartesian axes can be crossed, docked to chart sides or displayed one above the other. No other report item provides such flexibility in axis positioning - for example many report items can cross the axes at value or percent along another axis, but cannot be docked to the same side (try making the Secondary Y axis appear on the left side docked next to the Primary Y axis - again only Nevron can do this). Another unique feature in axis positioning is the ability to display axes one above the other - for example the Primary Y axis can occupy the bottom part of the chart, while the Secondary Y occupies the top).

To pile the heap of axis features, Nevron Chart for SSRS implements great support for automatic labels arrangement, label value formatting and support for XML formatted titles (see below) that can be aligned and rotated at will.
All axis labeling features are crafted to blend with the chart layout - labels and/or chart will grow/shrink to fit perfectly in the available chart area - whatever the data.
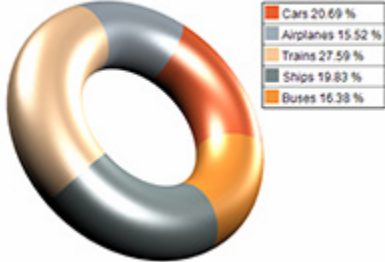
3D Charting

With almost an entire decade of research, Nevron is a leader in 3D charting technology. Nevron Chart for SSRS comes equipped with a fast and robust 3D rendering engine built on top of OpenGL. The 3D charts generated by Nevron Chart for SSRS are unrivaled in image quality, speed, layout, features and consistency aspects.

Intersected Surfaces
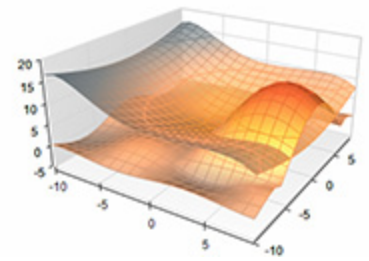

Standard Pie - Torus Mode

Nevron is one of few companies that make True 3D charting, and implements it with superb quality and a rich set of features. Most of the other charting engines available today are the so-called 2D-Half engines, which generally use 2D technologies to render 3D charts with smart painting tricks like back-to-front rendering, etc. For example, the default chart for SSRS uses a 2D-Half engine for 3D charting.

All 2D-Half engines, however, remain restricted in the following aspects of 3D charting:

Standard High Low Chart

- Lighting - the way a 3D chart is lit greatly contributes to the overall image quality of the rendered chart. Nevron Chart for SSRS provides 11 predefined lighting modes and the ability to define custom lighting via code injection (see below).

- Materials - no 2D-Half engine supports material specification. Materials are widely used in 3D modeling software to define how objects reflect light - if you want to make some bars shinier or more glittery than others - you can do so by specifying their material.

- Texture mapping - all 2D-Half engines suffer texture mapping abilities in 3D. Texture mapping in 3D appears when you want to display a 3D element with gradient, pattern or image filling. For example: you cannot apply gradient filling to a 3D column chart in the default chart for SSRS, but you can apply gradient filling to any element in Nevron Chart for SSRS - in 2D and 3D.

- Z-Buffer - 2D-Half engines do not have a Z-buffer - hence hidden surface removal is performed only when possible. A Z-buffer is, however, needed when displaying XYZ scatters, mesh or triangulated surfaces - things that you can easily do only with Nevron Chart for SSRS. The Z-buffer is an indispensable requirement for scientific plots.

- Speed - rendering a 3D chart with a 2D rendering engine can be quite slow, especially with thousands of data points. The majority of 2D rendering engines are software engines (use the computer CPU). OpenGL, however, uses hardware acceleration, which transfers rendering to the video board GPU.
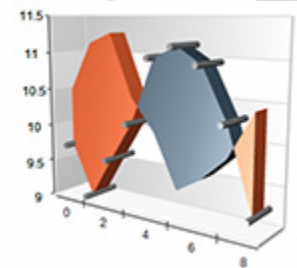
3D Funnel Chart
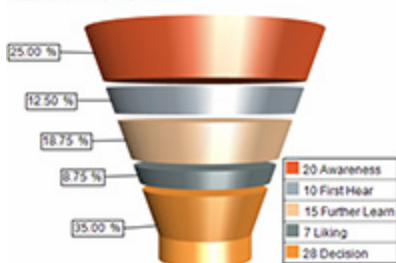
Using a 3D engine such as OpenGL is not enough to make quality 3D charting. This is why Nevron spared no efforts to implement lots of shapes (for bars, pies, points etc.), enforce perfect chart layout in 3D, ensure that 2D and 3D features behave consistently, and increase the readability of 3D charts in general.

If you need quality 3D charting - look no further.

2D Charting

Although Nevron became popular with the quality 3D charts that it develops, the 2D charting abilities of Nevron Chart for SSRS are just as impressive.

Besides implementing all chart related features required to produce quality charts in 2D, Nevron Chart for SSRS adds the industry unique support for image filter effects - bevel and emboss, glow, lighting etc. Simply put, no other charting engine can produce charts with better looks.

Image filters help you create pixel perfect charts, only comparable to charts that professional designers can produce with Adobe Photoshop after countless hours of work.

In Nevron Chart for SSRS image filters can be applied to all chart elements including texts in 2D and to all texts in 3D. Image filters are also used internally in shadows and that is why Nevron Chart for SSRS is the only chart that can display soft shadows with pixel perfect quality.

2D/3D Consistency

Nevron Chart for Reporting Services is consistent in 2D/3D modes. For example, you can map gradients, textures to elements in both 2D and 3D. Colors specified in 2D are inherited by materials in 3D. You can mix 2D and 3D chart areas in a single chart control.

Forward / Backward Compatibility

Nevron Chart for SSRS 2005/2008 is forward and backward compatible. This means that charts created in SSRS 2005 can be used in SSRS 2008 and vice versa.

The forward/backward compatibility ensures chart design reuse not only when migrating from 2005 to 2008, but also when sharing chart designs between departments possibly using different versions of reporting services.

Chart Templates

Nevron Chart for Reporting Services allows saving and loading XML templates for appearance settings. This is very helpful in order to accelerate time needed to produce consistent charts and charts with company brand styling.

The state generated by the VS2005 and VS2008 report items is compatible, meaning you can easily convert reports generated with different versions of Visual Studio. The embedded styling support allows you to quickly apply color palettes in order to change the appearance of the chart contents. In addition, you can create your own, custom set of palettes to further accelerate the authoring of company branded charts.
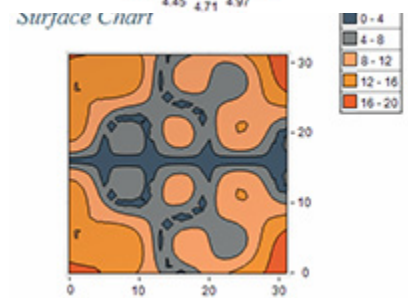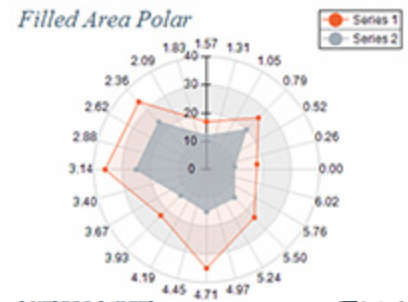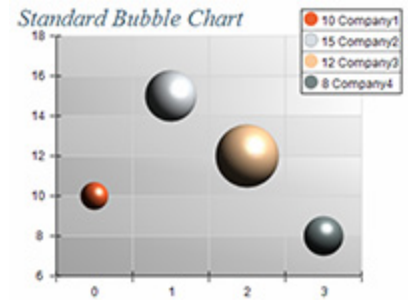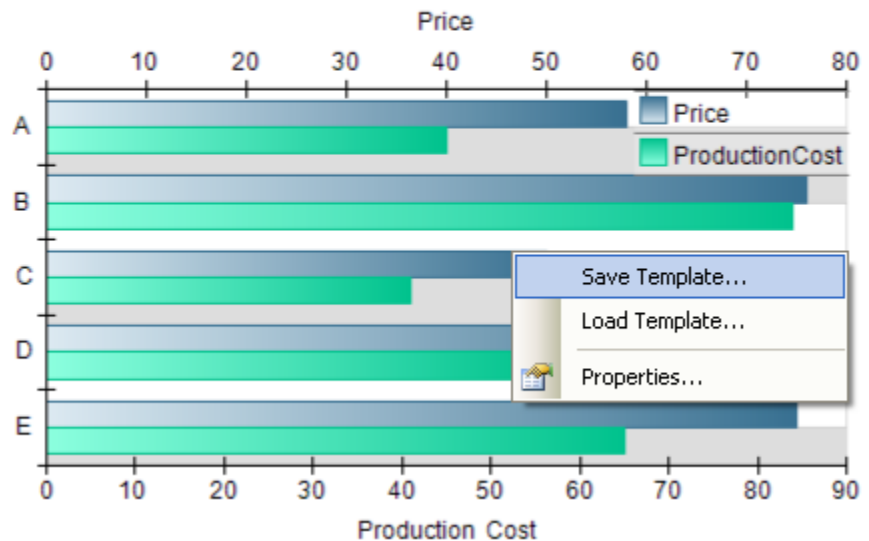
Visual Editors

Nevron Chart for SSRS provides numerous editors, allowing you to easily modify the chart appearance and customize all elements of your charts - quickly and completely visually. Changes that you make to the chart are previewed in real time so that you can instantly see the effect of your settings.
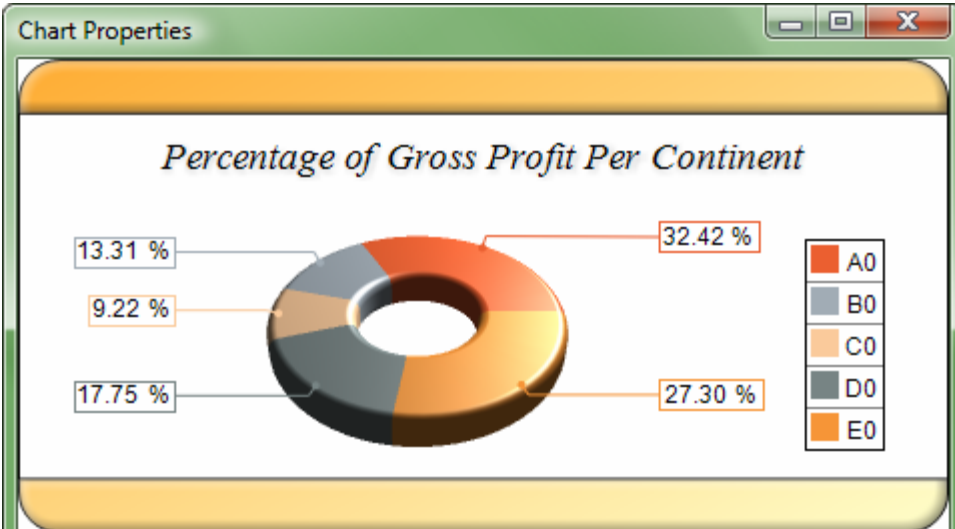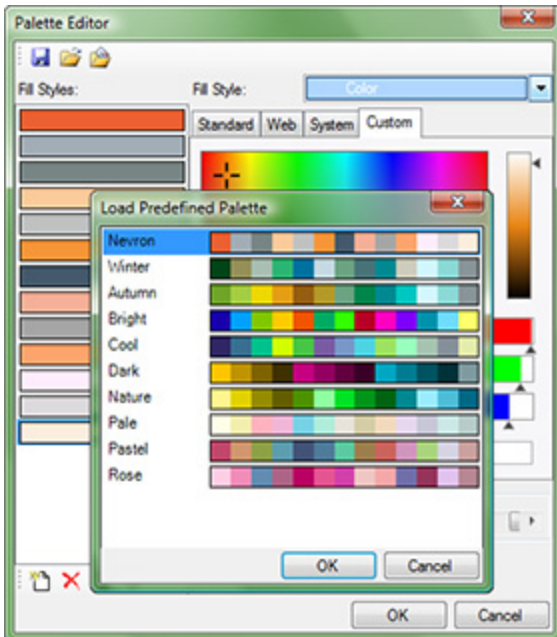
We spared no effort in making the Chart Designer truly improve your report authoring experience. That is why we had to make it multithreaded. You may have noticed that other chart report items for SSRS are edited very slowly and not all changes that you make are instantly previewed. A common limitation of single threaded chart designers (currently all others) is that you cannot make instantly previewed changes very quickly. This is because a single threaded designer will block your UI on preview update and leave it unresponsive. The Nevron Chart Designer is multithreaded - the more cores you have finally matter - it loads blazingly fast and chart customization becomes a real pleasure.

Code Embedding

Nevron Chart for SSRS supports customization through C# code, allowing users with development experience to further customize the chart using the full Nevron Chart for .NET API inside SSRS.

Although Nevron Chart for SSRS already exposes a vast amount of settings, the Nevron Chart engine beneath it has even more. If you cannot do something with the settings already exposed - ask us - it may be doable with code.

This is a truly great and rare feature that helps you standardize on Nevron Charting technology at all levels in your company - from developers to IT professionals.
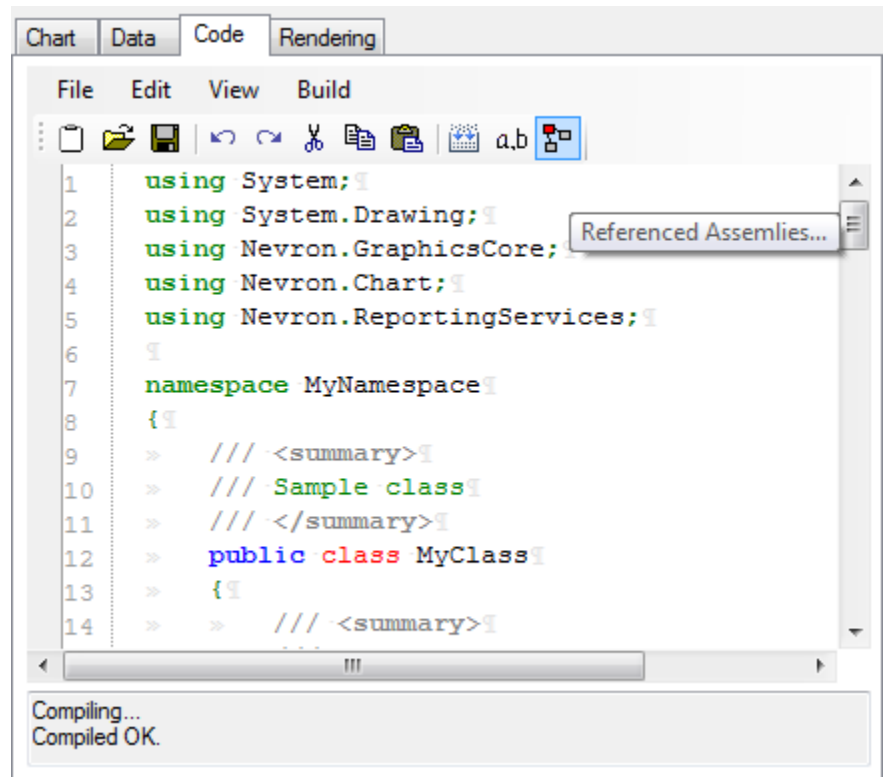
Rich Texts and Texts Quality

Nevron Chart for SSRS is not just great in displaying charts - it is great in displaying texts too. It features the unique XML formatted texts feature, which lets you create titles, labels, headers, footers etc. with rich texts formatting.

XML formatted texts use a format similar to HTML, which lets you mix fonts, subscript and superscript, bold, italic, underline formatting and - as you would expect from Nevron - advanced features like different fill styles, borders, shadows, image filters etc. - all inside a single label, title etc.

This helps you display certain mathematical formulas, which would otherwise not be possible. It also helps you replicate nicely titled charts that you can otherwise only see in print magazines (by the way, many print magazines already use Nevron Chart for .NET).

Supported and Documented
We take great pride in the quality of our support, which is provided by the people who developed this solution for you. You do not need to be an expert in charts and reporting, because we already are and we are here to help you.

The documentation of Nevron Chart for SSRS is also very thorough, complete and straight forward.

Constantly Enhanced
Nevron Chart for SSRS is a product that is constantly enhanced with new features added at each volume release. You can be sure that we will make everything possible to satisfy all your advanced charting needs.

Additional Features

Except the many advantages and customization options already mentioned, Nevron Chart for SSRS offers great number of additional features like:
- Chart Walls and Legends customization
- Per Series values Data Groupings
- Data Grouping Editors
- Control over the Rendering Properties
- Pie Chart Non-Overlapping Labels
and more...
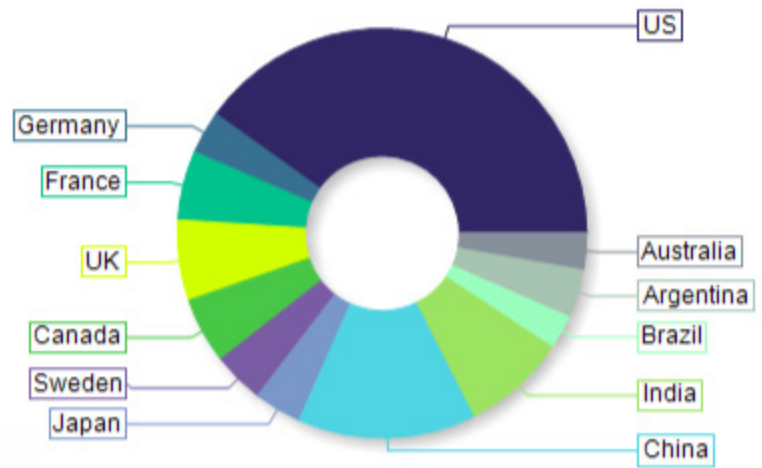
Nevron Pie Chart Non-Overlapping Labels mode solve the labels overlapping issue, caused by small pie segments or in cases where there are many pie slices - the Spider Non-Overlapping labels mode is similar to the Spider mode, however the pie chart labels are automatically positioned in a manner that doesn't allow them to overlap with each other.

Pricing and Licensing

Nevron Chart for SSRS offers a simple and cost-effective licensing model. It is an affordable solution, bringing to your reports the most advanced charting engine available today. The Chart for SSRS is licensed per designer and report server, there is no restriction on the number of CPUs the server has. In terms of ROI, it is simply unmatched.

Conclusion

We hope that this document gives you more than one reason why you should be on the board of the most advanced charting technology available in SSRS today. Do not take our word for granted - download the evaluation now and see for yourself how we can chart your data.

About Nevron

Nevron Software is a global leader in component based data visualization technology for a diverse range of Microsoft centric platforms. Built with perfection, usability and enterprise level features in mind, our components deliver advanced digital dashboards and diagrams that are not to be matched. Today Nevron components are used by many Fortune 500 companies and thousands of developers and IT professionals worldwide.

Learn more - For more information regarding Nevron Data Visualization for SQL Server Reporting Services, full demo and report examples, download a fully-functional evaluation of the product, visit: http://www.nevron.com

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