

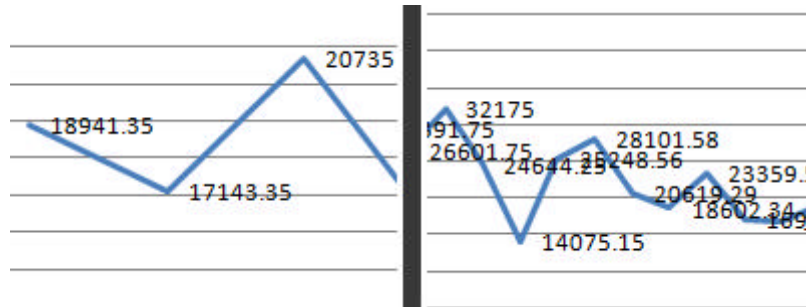
Modern-day Charting Technology

Since its introduction in 2002, .netCHARTING has pioneered a number of unique technologies, which have subsequently become industry standards. While it is common to see tutorials online demonstrating how to create basic charts from scratch; these samples use simple test data and quickly break down under production use. This article will detail a number of real-world cases where advanced .netCHARTING technologies ensure production ready visualization of your data.

Data Labels

Element Labels

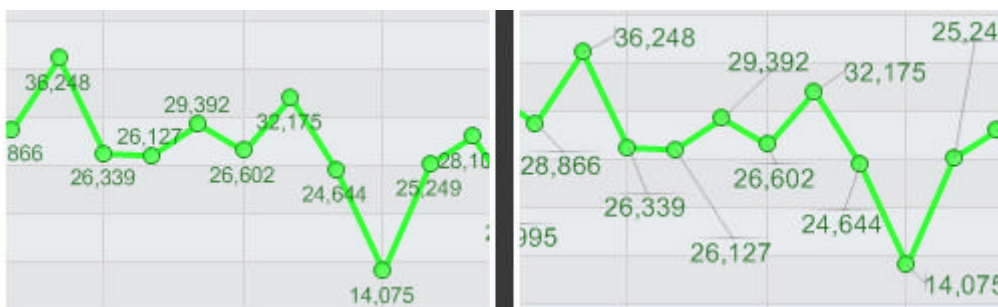
Labels are typically used to communicate exact values and other element information on the chart surface. While labeling a simple chart is straightforward, as the number of elements increase, labels quickly form an unorganized set of overlapping values. This issue can make reading an element value difficult, if not impossible, and even obscure the actual chart itself.



Charts produced with MS Office Excel

The .netCHARTING solution

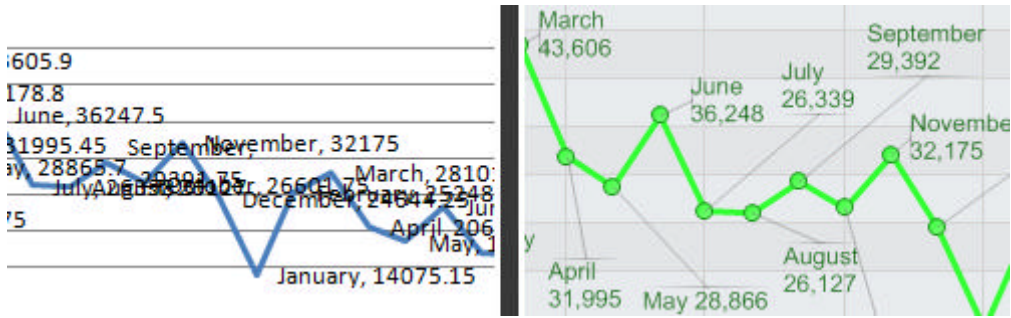
.netCHARTING pioneered SmartLabel™ technology in 2003 to elegantly address this problem case. Since that time, second generation SmartLabel™ functionality has further helped to resolve this complex issue. This feature prevents labels and data points from overlapping, and in doing so, ensure that both the data and elements are clearly legible. A simple but effective padding feature can also be applied in conjunction with the SmartLabel™ system to increase clarity even further.



Long Labels

At times, labels must display more information, typically requiring a long linear string that further complicates layout.

Modern Charting

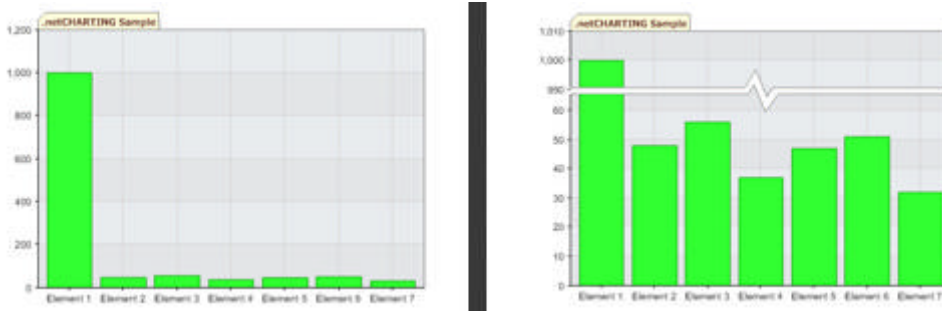


Left chart produced with MS Office Excel

.netCHARTING addresses this issue with an AutoWrap feature that automatically determines whether wrapping text will result in a more efficient label that promotes legibility.

Smart Scale Breaks

A chart's visual deficiencies are not always obvious. In this example, the chart appears to be legible and clear; however, it is difficult to accurately compare the included values. A number of elements are too similar in value to clearly show a difference given the required Y axis scale for the chart. To address this issue, .netCHARTING introduced another industry first: Scale Breaks. This “smart” feature will automatically analyze your data and determine whether scale breaks are appropriate, then select the value to break on to most clearly represent the chart values.

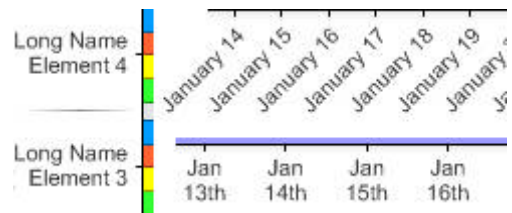


Axis Labels

Axis Tick Label Issues

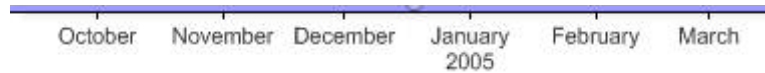
Axis tick labels can become problematic as they grow in number, or incorporate lengthy labels. .netCHARTING has a strategy to accommodate these scenarios while maximizing the number of labels displayed. The automated axis label layout algorithm will analyze the situation and decide on the best course of action.

This image shows how axes will handle certain situations to maximize the chart area space and ensure all labels are visible. Auto wrapping and delimiters enhance clarity where required.



Time Scales

.netCHARTING includes a very rich set of time scale features, handling time scales automatically with an advanced algorithm. The design goal of this feature was to provide the ability to take any arbitrary segment of time and clearly identify when it occurs while simultaneously creating intuitive intervals for labeling. In addition, the system will automatically determine the best format to present the data in. For example, with a time scale encompassing six months from 2004 to 2005, .netCHARTING will indicate where on the scale the year changes, as well as label the individual intervals using full month names.



Time scale labels provide .netCHARTING users an unprecedented level of customization and smart logic which are beyond the scope of this article. The **Axis Time Label Automation** (http://www.dotnetcharting.com/documentation/v5_0/AxisTimeAutomation.html) tutorial describes some of this functionality in more detail.



About .netCHARTING



.netCHARTING provides WebForms and WinForms versions with a free developer license allowing anyone to download and get started without limitations or trial time expirations.

<http://www.dotnetcharting.com> (<http://www.dotnetcharting.com/>)

Conclusion

In today's dynamic, data-centric web environments, traditional charting implementations are faced with a number of scenarios they are unable to accommodate. .netCHARTING's smart features and automated handling elegantly address these requirements, ensuring your charts are clear and visually stunning, even as the data they represent continues to change.