CHAPTER 5

Implementing Dashboard-Style Report Objects

Charts, maps, indicators and other Reporting Services objects add visual interest to reports. Many of these objects also allow you to communicate a great deal of information at a glance that would otherwise be time-consuming to discover from reading lines of detail in a report containing only columnar data. Reporting Services provides a number of chart types and other report objects that have their own purpose. The visual report objects at your disposal are:

- **Chart**: SSRS provides many chart styles that can be incorporated with other report objects such as the Table or Matrix or used as a stand-alone report.

- **Gauge**: Released with SSRS 2008, these visually appealing controls provide at-a-glance views, typically used as Key Performance Indicators of business measurables, such as sales and profit trending. Prior to SSRS 2008, gauges had to be acquired separately.

- **Image**: This report object can embed standard format images, such as JPEG or TIFF, directly in a report. You can embed images directly in reports, say for a company logo, or pull them directly from a database table.

- **Map**: The map object allows developers to add overlaying visualizations on top of aerial maps to represent data returned by a map gallery, a spatial query or from Environmental Systems Research Institute, Inc (ESRI) objects and shape files.

- **Data Bar**: This report item can be used as a horizontal bar or vertical data column. It is often used to convey a lot of information in a smaller amount of space than typical bar charts. For example, you might use a data bar if you wanted to visually represent the test scores that a group of students received on a particular assessment.

- **Sparkline**: Much like the Data Bar, this report object is usually used to visualize large amounts of trending data on a particular measure, but in a more condensed fashion than the traditional chart provides. This is much like the depiction of the price of stock over a given date range with few or no labels and legends present.

- **Indicator**: Added in SSRS 2008 R2, this report item can be used to show different images that visually represent a certain predefined or data driven value. Examples of this object are commonly seen in report sections that provide a comparison against a Key Performance Indicator (KPI).
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Note The Map, Data Bar, Sparkline, and Indicator report items were released with SSRS 2008 R2. Each of these items provided report developers with more sophisticated report objects commonly seen in dashboard and analytical style reports.

The rest of this chapter takes you on a tour of SQL Server 2012 Reporting Service’s charting capabilities. First, we’ll cover some needed ground pertaining to the chart data region. Then we’ll work through some examples of the available charts.

Understanding the Chart Data Region

The Chart data region of SSRS, like the Matrix data region, allows multiple grouping levels from a single dataset. Instead of the column- and row-level groupings that the Tablix data regions provide via Table, Matrix, and List objects, the Chart data region uses Series, Categories, and Values. You can set many properties for a chart, and as with all other data regions, a chart can use expressions to define its properties. In addition, as with other data regions, you can place charts by themselves or scope them within another region such as a List or Table data region. For example, you could use a simple chart to show the overall visits by type of clinician, which in your stored procedure is determined by the Service_Type field. You could also add the chart to a cell in a table that’s grouped by patient and time frame, such as Month and Year. The chart would show for each grouping a visit count for that patient over time. Let’s add a chart to the report that uses the Emp_Svc_Cost stored procedure. For the chart, you will add three familiar fields, one for each chart area: Series, Categories, and Values will contain Patient_Name, Employee_Name, and Visit_Count, respectively.

The starting-point report for the Chart object demonstrated in this section is available in the Pro_SSRS project in the Source Code/Download area for the book on the Apress Web site (www.apress.com). This report is called, creatively enough, Chart Start.rdl, which is also a breakfast cereal for corporate executives.

1. To begin, open the Chart Start.rdl report to the Design tab and double-click the Chart tool in the Toolbox to bring up the Select Chart Type dialog box. The Chart objects in SSRS 2008 were enhanced quite extensively, but mostly the updates are cosmetic. You will select the Stacked Bar chart shown in Figure 5-1.