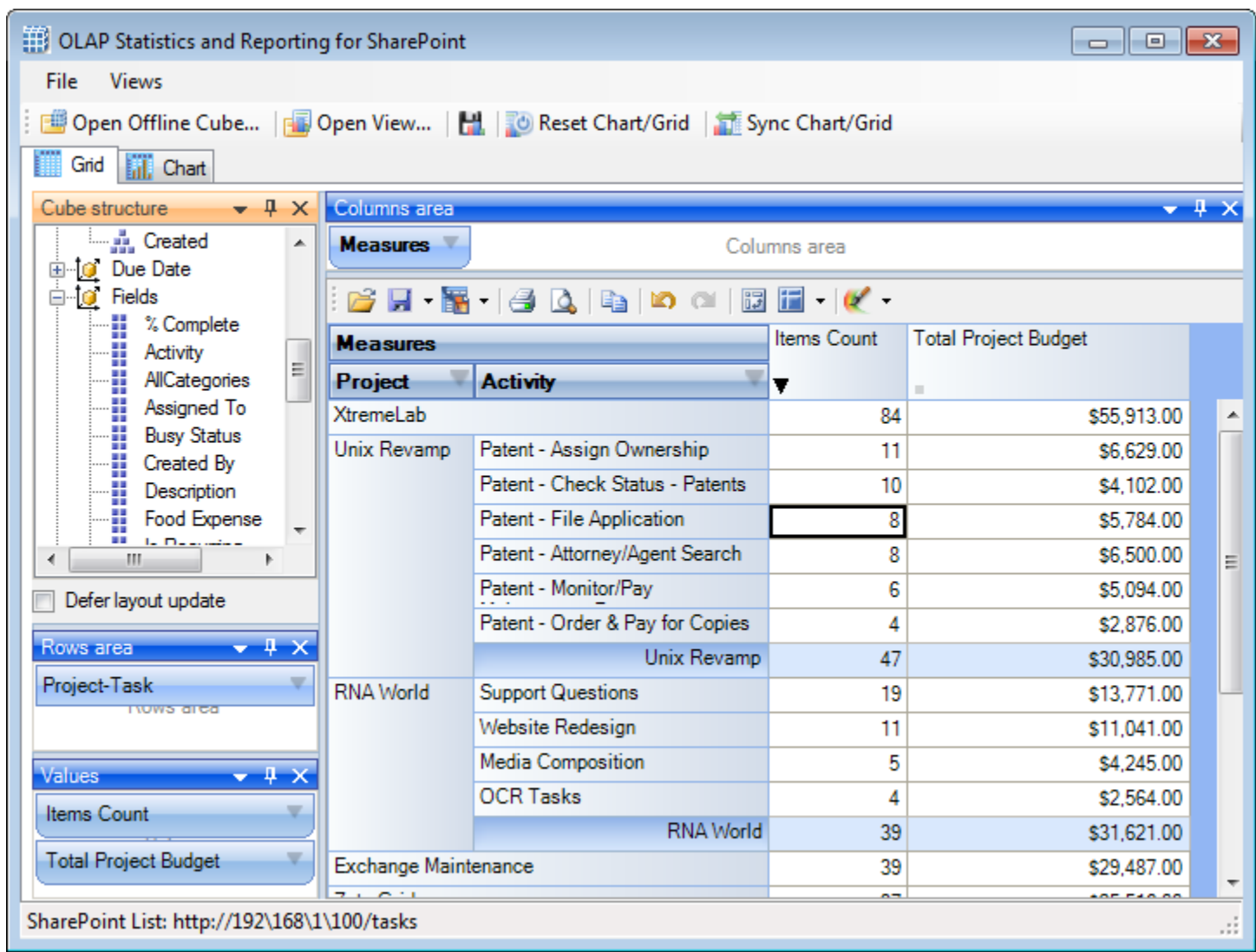# Welcome to AssistMyTeam OLAP for SharePoint

OLAP application for Microsoft® SharePoint® that makes it very easy and effortless to analyze your ever-growing SharePoint list data in multiple dimensional view and get useful insights and sense out of your lists, appointments or tasks.

Purpose of this tool – SharePoint has become the de-facto sharing platform for teams in organizations; storing business and transactional data on lists, document libraries etc. But unlike the ease of reporting and running statistics on relational database, SharePoint on its own does not provide such flexibility when it comes to extracting business intelligence. Due to this limitation, often, managers might find themselves spending a lot of time and resource in exporting data to spreadsheet and performing manual computation and parsing. Some organizations even use specialized data professionals and a dozen different software packages, just to produce simple reports. Worst, if the report doesn't have the required information, you will have to start over, wasting precious time.

As there is a time and expense involved in getting answers from SharePoint lists, a lot of business intelligence information often goes unused, due to that fact that, SharePoint is designed to store data, and not to help you analyze it. It is with this requirement in mind, that we have designed OLAP Statistics and Reporting for SharePoint, to give you a simple and yet powerful tool to let you configure OLAP cube from your SharePoint lists, and then analyze and create reports straightaway.

Simple and affordable solution, with no requirement of expensive Analysis or OLAP server. You don't even require MS Excel/MS Access to be installed.

Table of Contents

1. Introduction

AssistMyTeam OLAP for SharePoint enables you to connect to any SharePoint list and select fields of interest, and then explore them in a multi-dimensional grid, pivot tables, filters, and graph or chart view. With the capability of complex calculations, trend analysis and sophisticated data modeling, and reporting, it helps you to identify critical information on your not so obvious data and extract mission critical information and intelligence that will enable better decision in your business.

The tool supports the ability to explore large complex data sets and allows displaying in grids, charts and graphs and support most common operations such as pivoting, drill down/slice and dice, filtering etc. With such arrays of information, you and your management team can reengineer your business processes, reinforce resources and forecast problem areas and exploit all these factors for competitive advantage.

Why use OLAP techniques? Real strength of OLAP is its ability to examine and view data in ways not ordinarily possible. By allowing varying levels of granularity during data inspection and visualization a lot of information can be revealed that would otherwise be hard to attain. Given that most business models are constrained by more than three dimensions, it is hard to fully evaluate a business without the ability to inspect each dimension in detail while preserving context eliminating all guesswork. OLAP is perfectly suited for this purpose. Now it's easier than ever to spot new trends and discover unknown problems in your data flow. The statistical tool will help you gain an insight into your data and make new discoveries.

Reporting made easier - The statistical tool's simplistic point-and-click interface ensures that you easily achieve the high-level views of information you require. Additionally, the OLAP client makes creating reports destined for different management levels a simple task - eliminating managers' dependence on IT personnel. By unifying data analysis needs on a single platform, it provides an unparalleled array of reporting tools for web portals, intranet applications, websites, and other data-rich applications.

Printing capabilities - you can print your report to share it with others using the built-in Print Preview window. You can tune your page/printer settings before printing. Also, if you feel like sharing the report through the net or by email you can easy export it to a wide range of formats including PDF, XLS, CSV, JPG, etc.

Copy to Clipboard - Select any data range in Chart/Grid and copy to clipboard. Then you'll be able to paste it in an Office program for further analysis. You can also paste the chart like a picture to illustrate your investigations. This greatly simplifies the task of creating detailed, data-rich documents.

Save Reports in file - At any stage, you can save the report and distribute it to another person for analysis by network or email, so when the recipient gets the file he can open it and see the same OLAP slice.

2. Features:

Listed below are some of the salient features available on OLAP Statistics and Reporting for SharePoint.

- ✔ Works with **all version of SharePoint (***MOSS, 2010, 2013, 2016, on-premise or cloud such as Office 365***)**
- ✔ Save OLAP cube schema (**.olapschema*) and re-use it for subsequent operations to generate cube from the particular SharePoint list.
- ✔ Support almost all data types in SharePoint list.
- ✔ Choose your own fields from the SharePoint list and set them as measures or dimensions for the OLAP cube.
- ✔ Supports the following functions for Measures - **Count, Distinct Count, Max, Min, Average, Sum etc.**
- ✔ Supports most of the common OLAP operations including **slice and dice**, **drill down**, **roll up**, and **pivoting** on the cube.
- ✔ Supports date/time fields to be summarized or broken down to year, month, day, week, hours, minutes etc.
- ✔ Create your own **composite hierarchy.** *E.g. Country > State > City*
- ✔ Create your own **calculated member** involving computational relationship. *E.g. Total Sales = (UnitPrice X Quantity) + Freight*
- ✔ **OLAP Grid** and **Chart** with highly interactive, customizable and user-friendly interface.
- ✔ Save the pivot details to file (**.olapreport)* to make it easy for later retrieval and use without requiring to start from scratch.
- ✔ Support **offline cube** (to **.offlinecube* in compressed or uncompressed format) for use in disconnected mode.
- ✔ **Complete control over the export settings** of the grid/chart reports.
- ✔ Export grid/chart reports as BMP, GIF, JPEG, PNG, TIFF, TXT, CSV, PDF, HTML, XML, XLS
- ✔ Share pivot details, reports, offline cube, cube schema files among team members to facilitate collaboration.
- ✔ Unicode Support
- ✔ Print Preview tool
- ✔ No requirement of MS Excel, MS Access or Analysis Server

3. Requirements

To work with AssistMyTeam OLAP for SharePoint, you would require the followings 5

**Operating Systems** - Windows 10, 8, 7, Vista and Windows 2008 or higher.

SharePoint – SharePoint 2010 or Higher. Cloud-based SharePoint such as Office 365 are also supported.

4. Using the OLAP SharePoint Manager to Create Cube

The first step in generating statistics from a SharePoint list is to define an OLAP cube schema for the list. You can do this with the OLAP SharePoint Manager tool, with which you can choose which fields of the list are to be included into the cube. Further, you can also add new derived fields such as an OLAP hierarchy (also known as composite field) or a calculated field. Additionally, each selected field to be included can also be set as a measure agent for the OLAP cube.

First, start the OLAP SharePoint Manager, from *Start > All Programs > AssistMyTeam OLAP for SharePoint*.
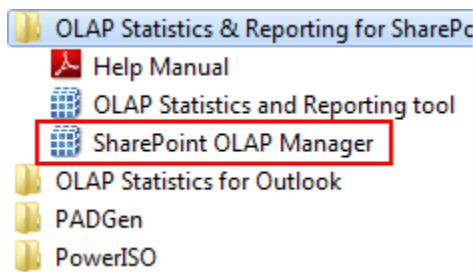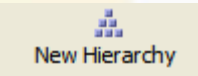
An OLAP schema for a SharePoint list is given below:
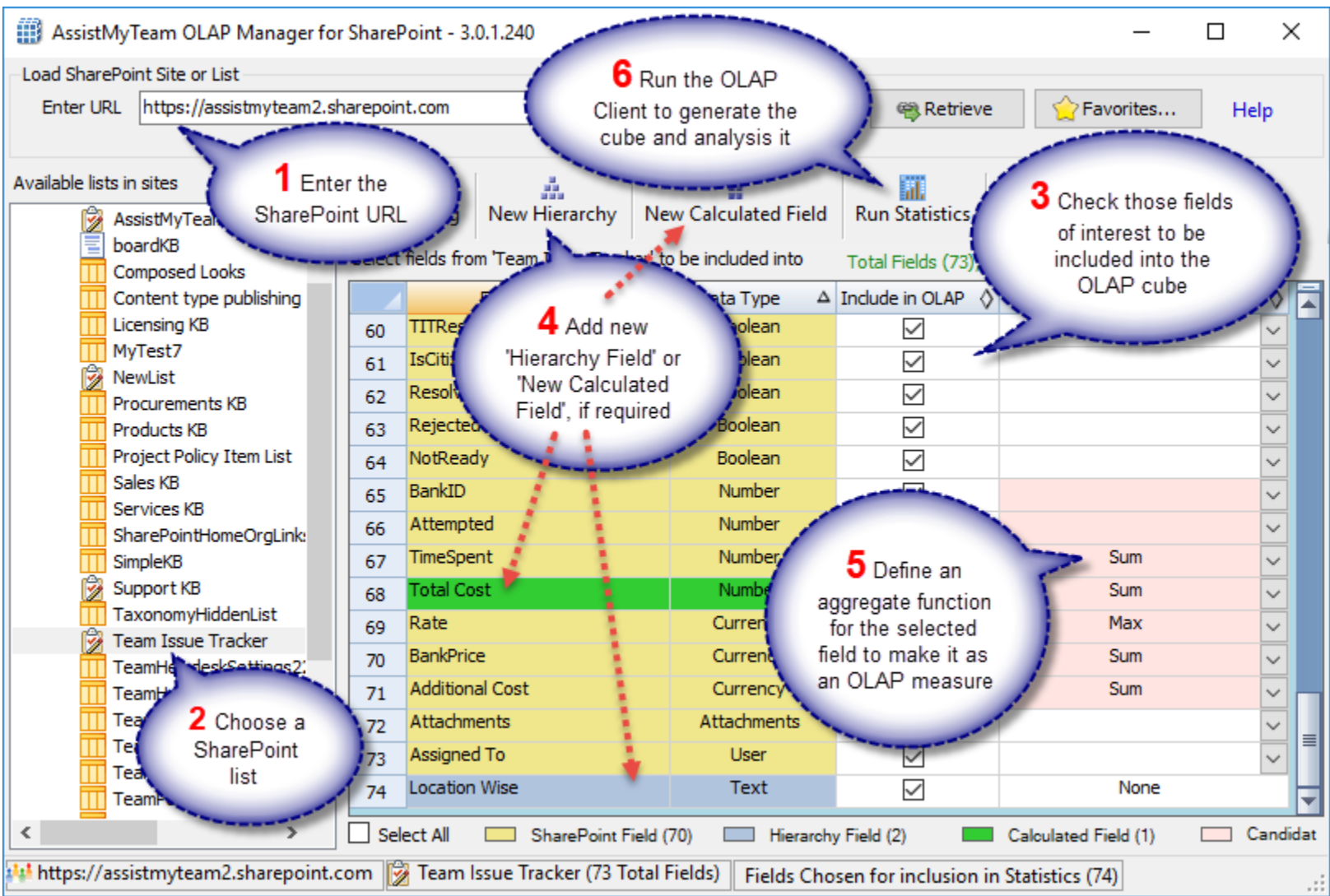
From the SharePoint Manager, you can connect to any SharePoint list. You can enter the root SharePoint website URL such as http://mycompany.sharepoint.com, in which case, all the available lists for that specific web site will be shown on the tree-view. Click one of the lists to load all the fields for that makes up the list. You can also directly enter the specific list URL (such as http://mycompany.sharepoint.com/Lists/Tasks/AllItems.aspx). Either way you choose, you can then configure list fields or define new derived fields to be included into the OLAP cube.

To add a new hierarchy, click [New Hierarchy] to pop up the dialog below. Up to five (5) levels of parent-child members are supported to form a hierarchy. *For example, we have defined a new hierarchy 'Project-Task' having the member fields 'Project > Activity'.*

Add new composite dimension

Give a name to this new dimension

Project-Task
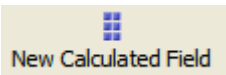
Specify fields for the hierarchy composite dimension
Eg. Country > State > City

- Project
- Activity

[Update]
[Cancel]

Note: You need to specify at least 2 fields to create a composite hierarcy dimension

To define a calculated member, click [New Calculated Field] and this dialog box would appear. For example, below, we have added a new calculated member 'Total Project Budget' that performs a computational operation involving (*Total Cost + Travel Expense + Food Expense).*

Add new calculated member

Give a caption for this calculated member

Total Project Budget   (Total_x0020_Cost + Travel_x0020_Expense) + Food_x0020_Expense

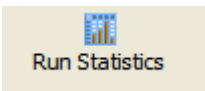| Select 1st field *	operator*	Select 2nd field *	operator	
Total Cost	ADD	Travel Expense	ADD	Food Expense
* Required fields	◉ 1st Precedence		○ 1st Precedence	

[Update] [Cancel]

Hierarchy and calculated members will have a green background in the grid, to distinguish from the fields of the tables. To re-edit existing hierarchy or calculated members, just double-click the corresponding row to popup the dialog box, with all the previous settings in place.

To define a measure - Once you have chosen which fields or dimensions to include in the statistic, you can select aggregate functions such as *count, distinct count, sum, average, maximum or minimum* for those numeric or currency fields, so as set them as 'measures' in the OLAP cube, such that, statistics can be generated across other fields, based on the value of the 'measure' fields.

To generate a cube and analyze it, click [Run Statistics]. Selected fields and their aggregate functions (if defined) are all saved for that specific SharePoint list so that when you connect back to this list the next time, it will retain and show the same selected fields, and other composite/calculated fields, if you have added any.
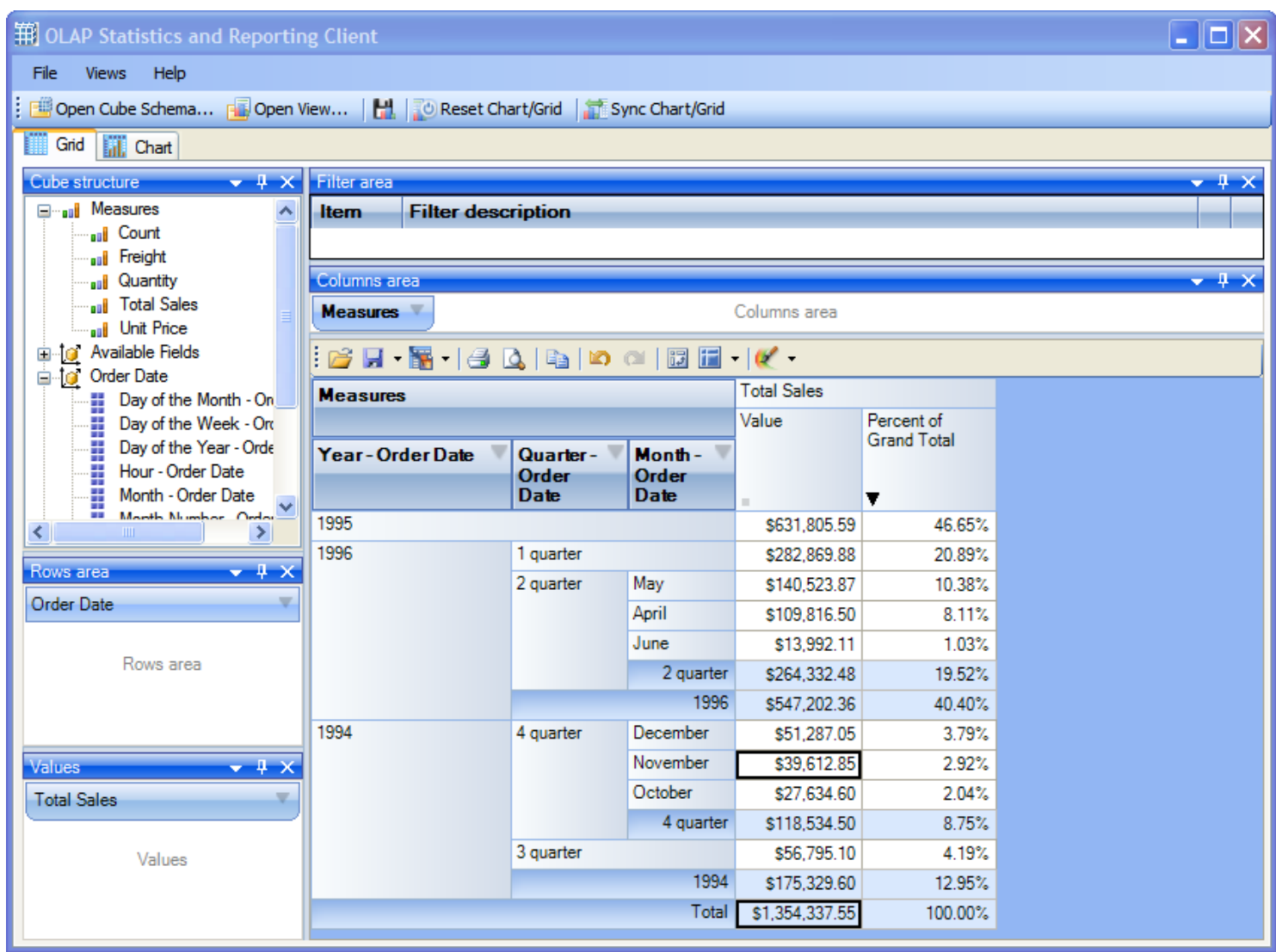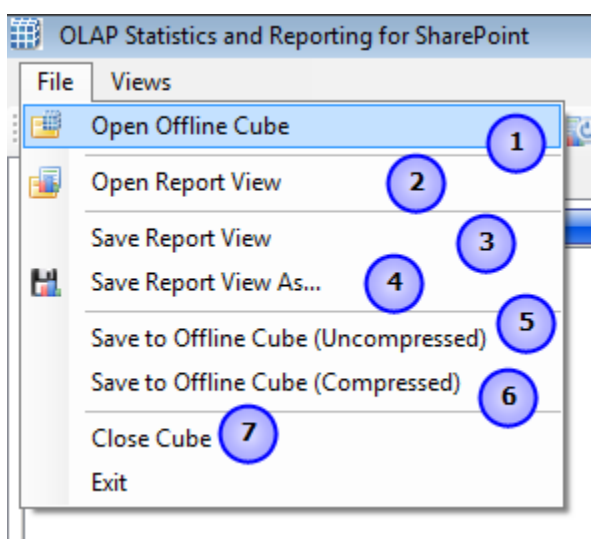
5. Understanding the OLAP Client User Interface

The OLAP Statistics tool is the main interface for analyzing the cube and generating reports. This tool consists of the Grid and Chart Views with a high level of customizable user interface and interaction.

The Files Menu

All the important export/import of cubes and reports are included in this menu.

1 Open Offline Cube from file

While generating a live cube from a SharePoint list always provides the advantage of analyzing live data, often, you might be away or disconnected from SharePoint on the network. In such scenario, you have the option of connecting to an offline cube, which was previously generated and saved to your local folder using this utility. An offline cube file has the extension *.offlinecube* and can be either in compressed or uncompressed format. An offline cube gives the same functionality as that of a live cube (which is generated from the SharePoint list at real time), except that the data in the offline cube is only current to the time the cube was saved to file. This provides the flexibility to continue analyzing the cube and writing reports etc., while you are on the move.
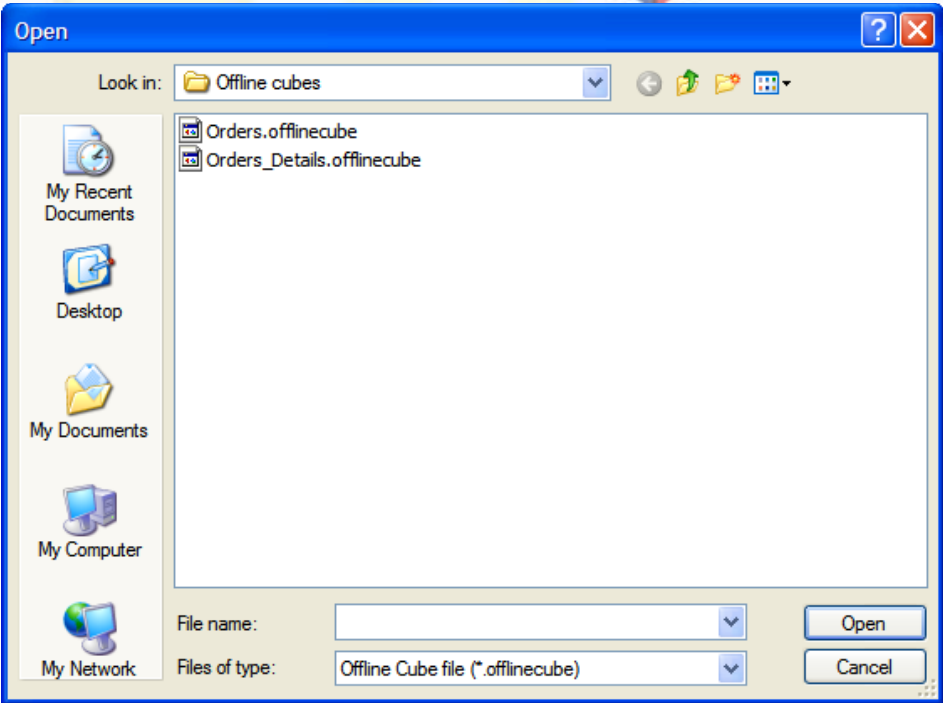
2 Open Report View from file

If you had saved a report view file (*.olapreport*) to another location, you can use this menu option to open it.
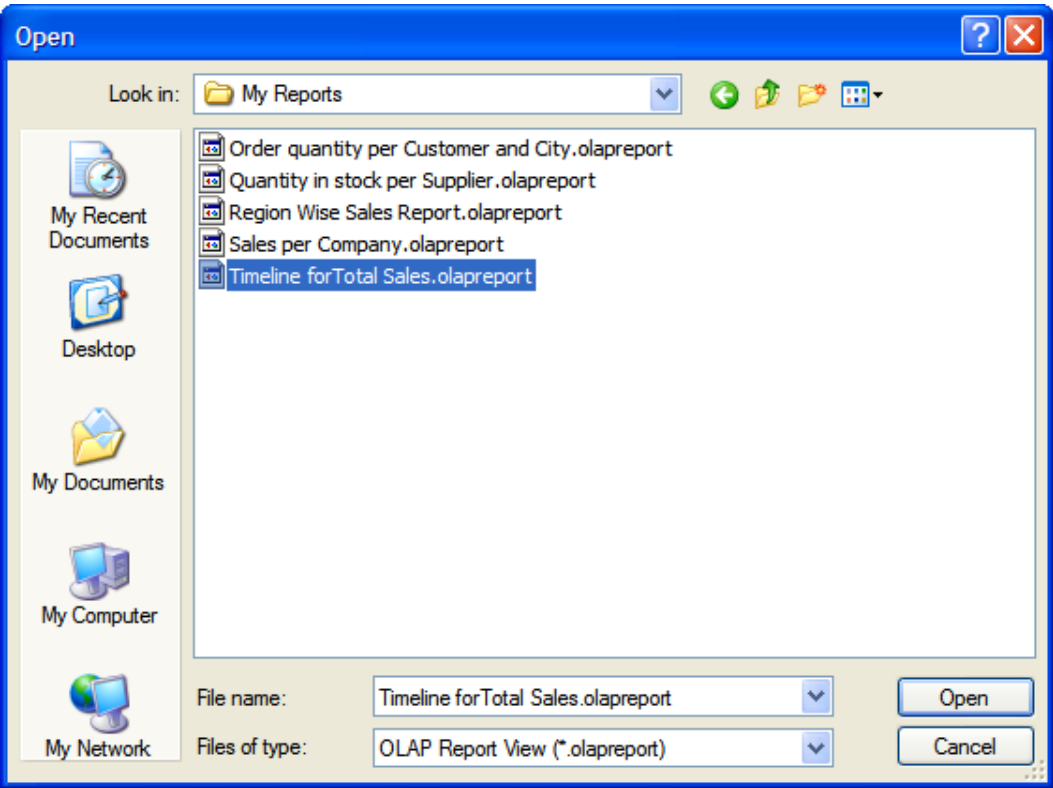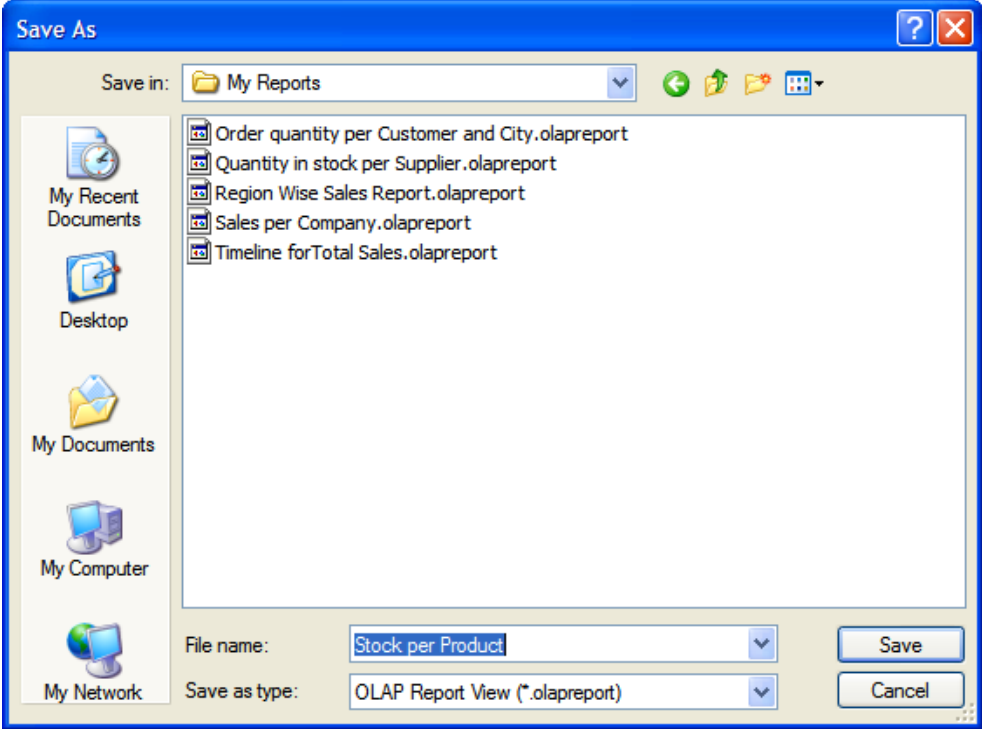
(3) (4) Save report view to file

If you want to share a report view with others, you can simply save the current report (state of the statistics along with the pivot details) to a file folder of your choice - could be a network folder also.

(5) (6) Save to Offline cube

If you have loaded a live cube from a SharePoint list using a cube schema file, you have the option to save the entire cube data to a file (with the extension *.offlinecube*) for offline use, to be re-used when you are disconnected from the SharePoint. Offline cube can be saved in compressed or uncompressed format, the former option being able to reduce the file size considerably.
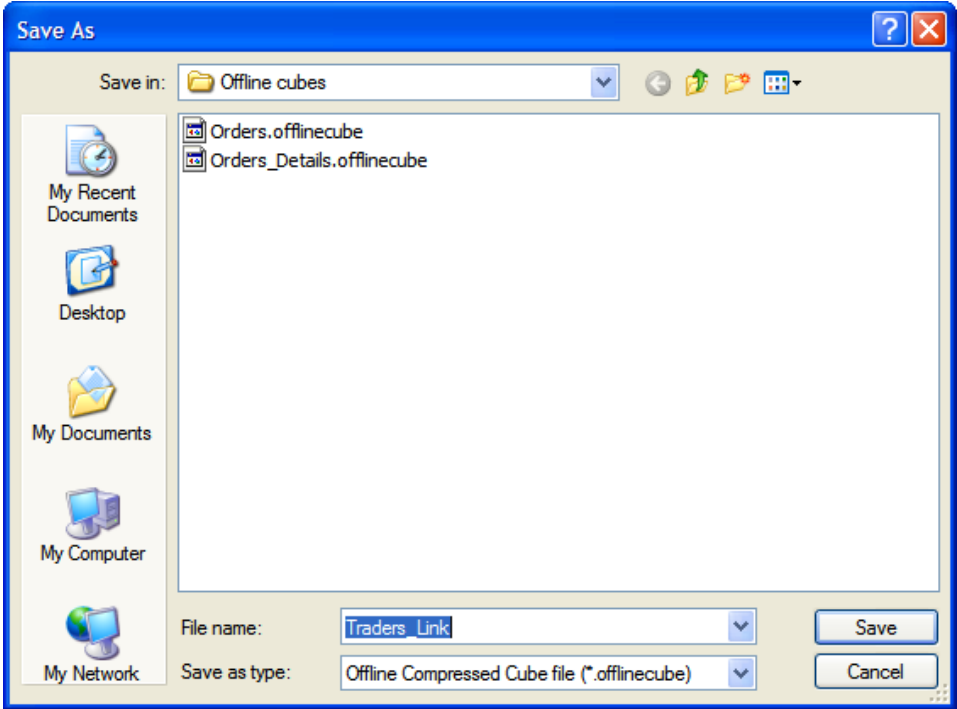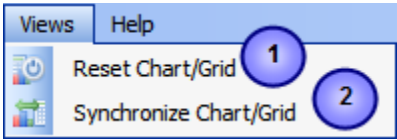
(7) Close the cube

This option closes the cube from the OLAP Statistics and free up the memory for loading another cube.

View Menu

Contains actions that you can perform on the current report view.

1 Reset Chart/Grid

Empty all the member fields from the pivot as well as the data from the working area of the chart/grid. This is useful if you want to start over on a new report view.

2 Synchronize Chart/Grid

This option allows you to reflect the state of the statistics between the Grid and the chart. It is particularly useful, for example, when you have built up a grid with aggregated data but want a more visual representation of the statistics in form of graphs and bars. Also note that, the synchronization will be done to the other part (grid or chart) based on the current interface. For example, if you are in the grid view, and if you pressed 'Synchronize Chart/Grid' it would read the state of the Grid view and impart the same state (same members and measures) to the Chart view and vice versa. Each of the Grid and Chart view can be worked independently as long as you don't press this synchronize option.

OLAP Components

Let us explore some of the main components that make up the OLAP Statistics tool.
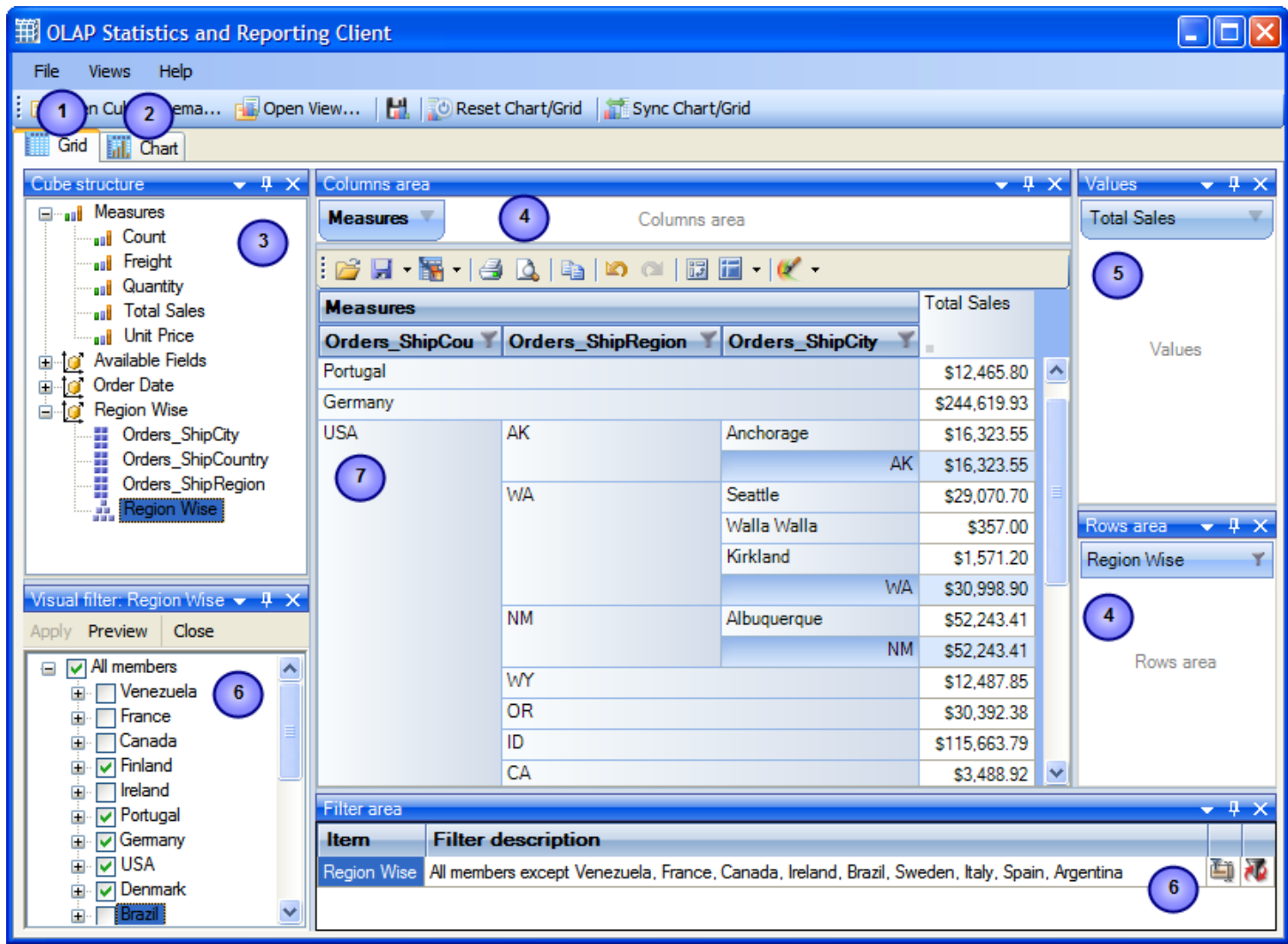
1 Grid Chart panel

The OLAP Grid control is comprised of a multi-dimensional table with expandable nodes. These nodes group and display data according to the hierarchies used to define the measures and dimensions upon which the underlying data has been organized. Unique features of control allow for building the OLAP-reports of the exceptional level of complexity. In tandem with the OLAP Chart, the OLAP Grid provides an ideal means of clearly conveying data to the user.

2 OLAP Chart panel

While the OLAP Grid allows working with numbers, the OLAP Chart allows representing the data graphically. This gives you and your team members a unique opportunity to analyze their business data visually, dealing with charts rather than numbers, which is much easier to perceive.
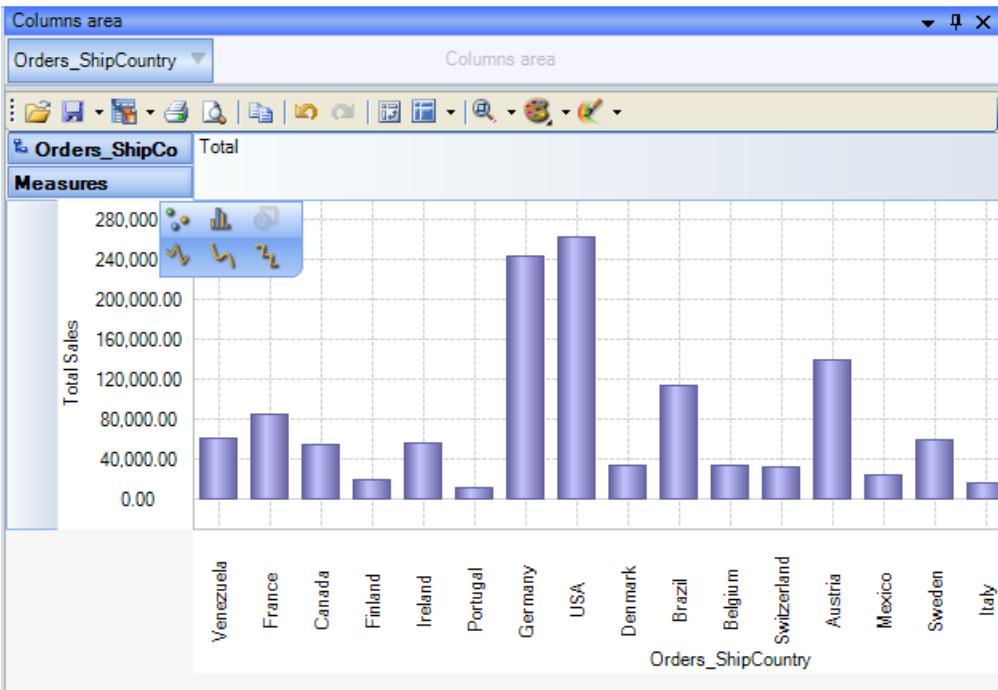
3 Cube structure panel

The panel contains the Cube structure - measures and hierarchies as a tree. The measures are grouped in the set, displayed in the branch. All the rest of the tree nodes are the dimensions that contain hierarchies. To select a measure for display you need to drag-n-drop it to the Measures panel or the data area. To select a hierarchy for display – drag-n-drop it to the hierarchy area or the pivot panel (rows or columns area).

- Measure
- Dimension
- Attribute hierarchy
- Multilevel hierarchy
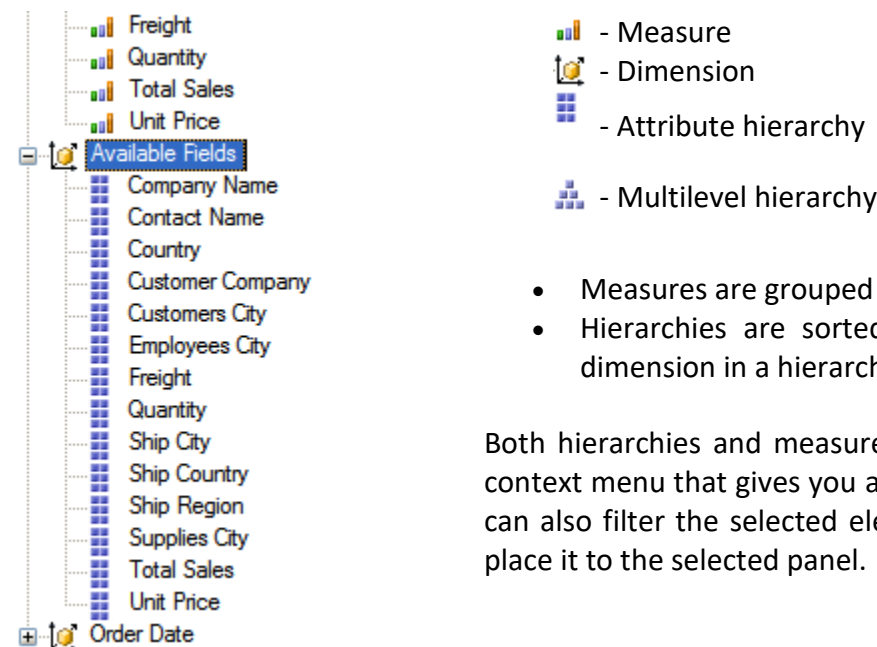
- Measures are grouped in the Measures category.
- Hierarchies are sorted into folders - dimensions. If there's only one dimension in a hierarchy, it will be displayed in the tree root.

Both hierarchies and measures have their own menus. Right click will call the context menu that gives you an option to place the element where you like. You can also filter the selected element (see Filtering hierarchies and measures) or place it to the selected panel.

4 Pivoting panels

A pivot table lets user design the report online by dragging and dropping measures, dimensions and levels into the pivoting panels. Note that the column panel may contain no more than one (!) measure. Panel elements can be dragged with the mouse to other panels. To filter elements, press the Filter button (see Pivot panel view) or use the appropriate items from the context menu.

5 Measure panel

Measure panel consists of groups of measures that make up the charts' vertical axes (see Measure panel components). Each group of measures corresponds to a set of charts in the data area. Groups of measures are situated in the main part of the panel.
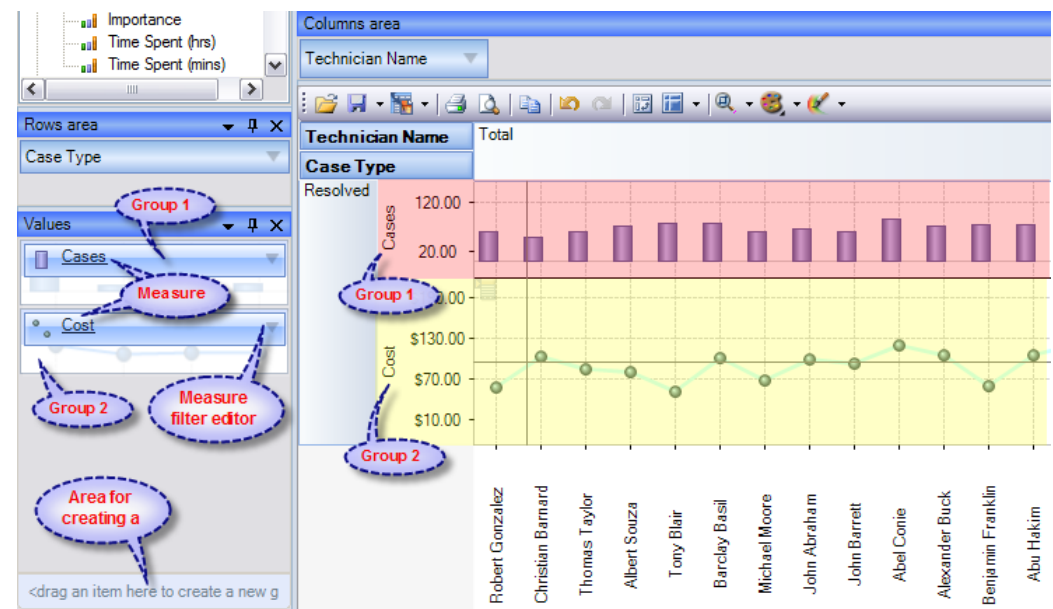
You can drag measures from one group to another, or extract measures from groups to delete them. To create a new group, you need to drag a measure to a place on the panel not occupied by another group or to the <drop an item to create a new group> panel.

Clicking a mouse button on measures will call the context menu. From here, you can move a measure to one of the pivot panels or to the modifiers axis or assign a measure filter. Also, you can assign the marker type of a chart point and its color.

6 Filters, Groups, and Sorting

The statistical tool allows for easy selection on what data you want to see and what you don't. You can apply powerful filters to anything including hierarchy members, and measure values, thus leaving out the unimportant data. You can sort the data to see, for example, the top 10 values and then you can gather the rest values into a single group, so you only have what you really need.
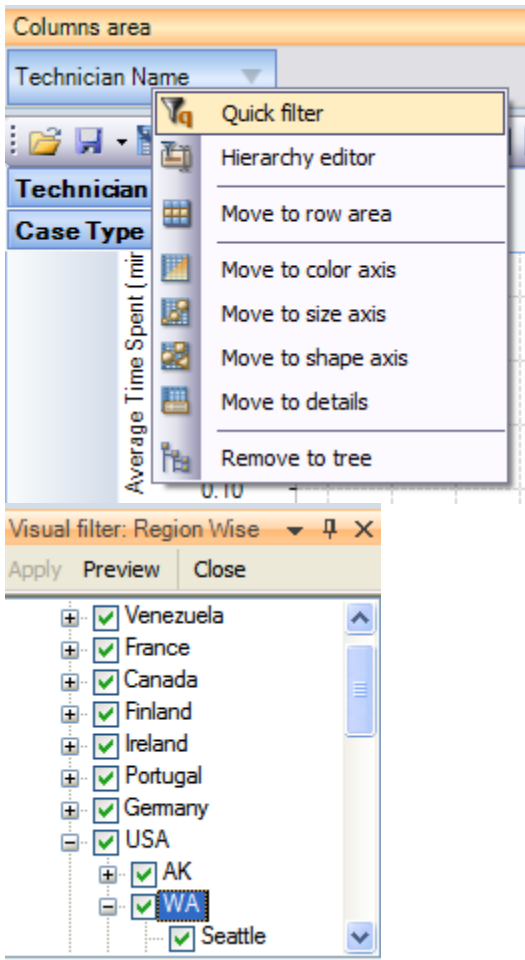

The panel is applicable for quick filtering of elements. You can filter just one hierarchy or one measure at once. To assign a quick filter, use the context menu. Quick filtering of a hierarchy is a simplified version of the Hierarchy filtering editor. You can show or hide hierarchy members, while selecting them from the Hierarchy tree. All the changes will be displayed in the Grid upon checking the "Preview" button. If a non-empty filter is assigned, it will be shown in the Filter panel. To delete a filter, select the "All Members" node and choose the "Delete filter" command on the Filter panel.

Quick filtering of measures is a fine way to hide some of the values in the Chart. It doesn't mean you create a measure filter in the Filter area. Repositioning of the trackbar sliders will be reflected with a slight delay (~0.4 second), you can set its threshold values in the input boxes. To clear a filter, check the "Clear" button.

Filter panel

The filtered elements (hierarchies and measures) are automatically transferred to the Filter panel. To assign a filter, you have to move an element to the Filter panel. If the element hasn't been filtered the appropriate editor will be called (Hierarchy Filter Editor for hierarchies and Measure Filter Editor for measures). In the Filter panel, you can call the Filtered Element Editor individually for each element.
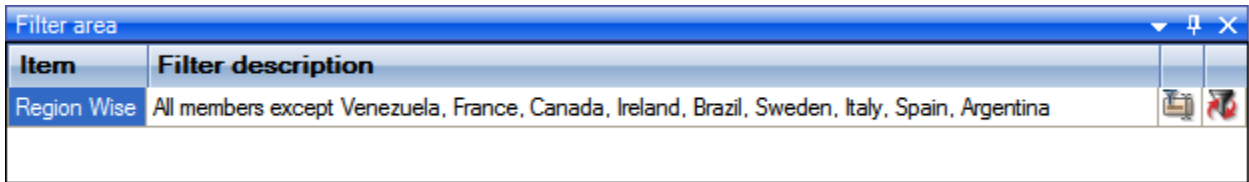
On the hierarchy levels' captions area panels, you can find the Hierarchy Editor buttons. If the button looks like this, it means that there are hidden members in the hierarchy. Pressing the button calls the Hierarchy Editor.

7 Working Area

The OLAP-slice data is displayed in working area. In its upper part there is a menu for the quick access to the frequently used commands². The rest is occupied by the current OLAP-slice and consists of the following parts - Cube Axis headers, Cube Axes, Data Axes, Data Axis headers, Chart Panes

Grid Working Area

Measures		Total Sales
Orders_ShipCountry	**Orders_ShipRegion**	
Venezuela		$60,806.99
France		$85,488.61
Canada		$55,329.30
Finland		$19,776.45
Ireland		$57,311.14
Portugal		$12,465.80
Germany		$244,619.93
USA	AK	$16,323.55
	WA	$30,998.90
	NM	$52,243.41
	WY	$12,487.85
	OR	$30,392.38
	ID	$115,663.79
	CA	$3,488.92
	MT	$1,947.24
	USA	$263,546.04

Chart Working Area
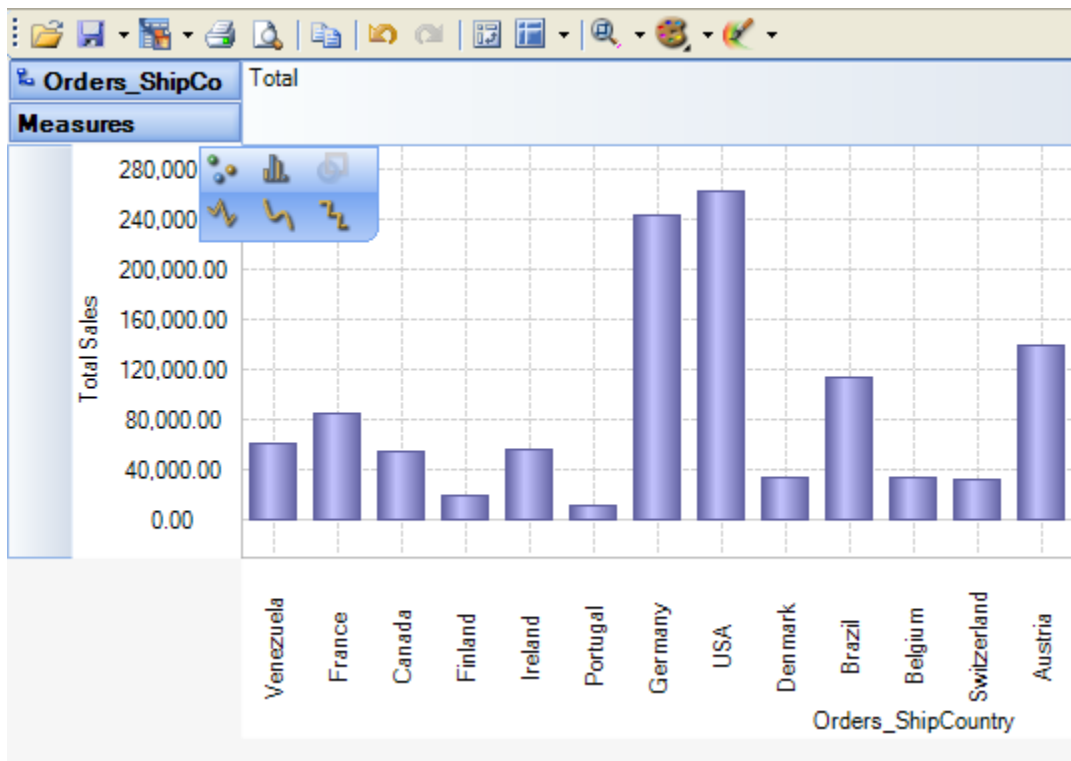
After a particular snapshot of the statistics is achieved, you have the options to save the pivot settings to file, for accessing the same snapshot in future, in a click. If you need to share or publish the statistical findings, export it to image, PDF, Excel etc., or print it.

6. Working with OLAP Grid

The OLAP Grid view is comprised of a **multi-dimensional table** with expandable nodes. These nodes group and display data according to the hierarchies used to define the measures and dimensions upon which the underlying data has been organized. In tandem with the OLAP Chart view, the OLAP Grid view provides an ideal means of clearly conveying data to the user. **It is highly navigable and quickly provides detailed information to the user**. The speed with which data recall occurs and the strong formatting the grid enforces ensure data is always presentable and easily understandable. Consequently, OLAP Grid views can easily be ported to spreadsheet applications for report compilation purposes.

Additionally, the OLAP Grid view allows users to effortlessly add and remove categories, filter and sort categories, and **drill up** or **drill down** on data using powerful built-in menus. One of the greatest benefits this affords is that it allows users to explore, navigate and refine data until the desired snapshot is achieved. Once in place this snapshot can then be reflected in a complementary chart. This is possible as OLAP operations in Grid view can be synchronized with Chart view. These two data views can then be deployed side-by-side or on top of one another.

Data Visualization

- ✓ Unicode support.
- ✓ Simultaneous display of several different measures in the Grid.
- ✓ Simultaneous drilling down based on different parameters: up to the nearest child, up to the next level, up hierarchy.
- ✓ Saving and restoring the current OLAP-slice.
- ✓ Hierarchy members grouping (including multilevel and parent-child hierarchies).
- ✓ Separate sorting on different hierarchy levels. Possibility to override any sorting method.
- ✓ Ascending or descending sorting based on the cell values in any column of the Grid.
- ✓ Filtering of hierarchy members with or without applying these filters to the OLAP calculations.

✓ Auto filtering of the hierarchy members depending on their values in the Grid. Major/minor members selection, either based on their rank or on the Pareto principle.
✓ Replacing hierarchy members by drag-n-dropping them within the Grid.
✓ Auto sizing of cells depending on their contents.
✓ Flexible export to MS Excel, HTML, GIF, JPG, PNG, BMP, CSV, TXT, PDF formats.

Operating the OLAP-slice
The OLAP-slice data are displayed in a table, whose appearance may be amended to some extent. For operating the current OLAP-slice there are the following functions available:

1. **Navigation**
2. **Selecting and copying data**
3. **Drilling, sorting and moving hierarchy members**
4. **Operating context menus**
5. **Filtering data**
6. **Editing data**
7. **Setting the column width**

1. Navigation - You can easily navigate the data using the keyboard:

Button	Action
Home	Move to the first cell of the row
End	Move to the last cell of the row
PageUp	Move one page up
PageDown	Move one page down
Ctrl+Home	Move to the top left cell
Ctlr+End	Move to the bottom right cell

Using the mouse, you can scroll the table up and down.

Mouse Action	Component Action
Scrolling the mouse wheel	Vertical scrolling of the table
Scrolling the mouse wheel with the Shift button held down	Horizontal scrolling of the table

2. Selecting and copying data - The data area in the component can be selected like everything else in Windows:

• Select all the cells pressing Ctrl+A;
• Capture the area with the mouse;
• Change the boundaries of the selected area with direction buttons, holding down the Shift button.

You can copy the data from the selected area to the clipboard by pressing Ctrl+C. If there's no selection, pressing these buttons will copy the whole OLAP-slice to the clipboard.

3. Drilling, sorting and moving hierarchy members - To perform the drilling of the hierarchy members press buttons on the Grid cells. If there's only one drilling button in a cell, then, instead of pressing it, you can double-click the cell itself. By default, the drilling buttons are shown only in the cells under mouse. To see all the buttons, press the Ctrl button. The last cells in the column area of the hierarchy members allow showing the sorting direction. A pointer that

OLAP Statistics & Reporting *for SharePoint*

*Analyze SharePoint List data in multiple dimensions
& seek useful insight & understanding for
better decision making*

indicates the descending order of data illustrates it. You can manage the sorting modes by single clicking on the cells of the specified area: they are changed cyclically [descending sorting] -> [ascending sorting] -> [no sorting].

Case Type		Resolved	Total
Problem Category	**Problem Type**		
Accessories	Apple Wireless Mouse	25.82	25.82
	Time Capsule	19.90	19.90
	Airport Base Station	17.15	17.15
	Apple Wireless Keyboard	16.42	16.42
	Apple TV	16.07	16.07
	Accessories	95.35	95.35
Services	Complains	22.72	22.72
	Loyalty Scheme	17.42	17.42
	AppleCare	17.17	17.17
	Sales	14.75	14.75
	Apple Rental	10.77	10.77
	Buy Back Scheme	8.73	8.73
	Services	91.55	91.55

4. Operating context menus -The context menu, called by right clicking a table cell, partly duplicates the OLAP-slice control functions.

Hierarchy levels' menu

Case Type	Resolved
Problem Ca	

- Show totals first
- ✓ Show totals last
- Don't show totals
- ✓ Default sorting
- Sort ascending
- Sort descending
- Aggregate all hierarchy members
- ✓ Aggregate visible members only
- Drill all down ▸
- Drill all up
- Clear filter
- Filter on captions ▸
- Show empty cells
- Create new group...
- Copy selection
- Conditional formatting ▸

	Resolved
Accessories	25.82
	19.90
	17.15
	16.42
	16.07
	95.35
Services	91.55
Applications	84.45
Music Players	20.57
	20.40
	18.65
	18.62
	78.23
Notebooks	14.83
	14.82
	13.73
	43.38

There is a list of commands available in the context menu of the hierarchy levels' area

Command	Function
Show totals first	Show the aggregated cells before all the rest
Show totals last	Show the aggregated cells after all the rest
Don't show totals	Do not show the aggregated cells
Default sorting	Range hierarchy members by default
Sort ascending	Range the hierarchy members by values from the bottom to the top
Sort descending	Range the hierarchy members by values from the top to the bottom
Aggregate all hierarchy members	Aggregate all the hierarchy members (including hidden)

|	
Aggregate visible members only	Aggregate the visible hierarchy members only
Drill all down\ to the next hierarchy	Drill all down to the next hierarchy
Drill all down\ to the next level	Drill all down to the next level
Drill all down\ to the same-level children	Drill all down to the same-level children
Drill all up	Collapse all the elements of this level
Clear filter	Remove any applied filters
Filter on captions	Set the filter for measures
Show empty cells	Show the cells with no aggregated values
Create new group …	Create a new group. It will appear at the first level of the hierarchy
Copy selection	Copy the selected area to clipboard
Conditional formatting	Show the Conditional formatting menu

Hierarchy members' menu
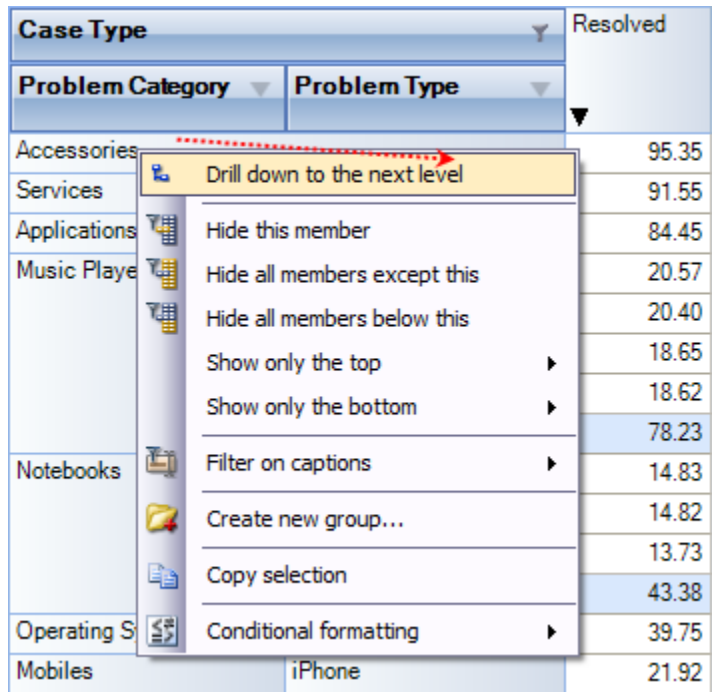
The functions of the hierarchy members' area menu:

Command	Function
Drill down to the next hierarchy	Open the node up to the next hierarchy in the current area, ignoring all the lower levels of the current hierarchy
Hide this member	Hide the member
Hide all members except this	Hide all the members of the hierarchy, except the selected one
Hide all members above this	Hide all the members of the hierarchy above the selected one
Hide all members below this	Hide all the members of the hierarchy below the selected one
Show only the top	Show the top elements of the level. Their number is specified in the sub-menu. If you specify a percent value there, then the picking of members will be such that their total value does not exceed the one, specified in the sub-menu. You can choose a threshold value from those offered in the appropriate menu item or set your own one, selecting Other from the menu.
Show only the bottom	Show the bottom elements of the level. Their number is specified in the sub-menu. If you specify a percent value there, then the picking of members will be such that their total value does not exceed the one,

	specified in the sub-menu. You can choose a threshold value from those offered in the appropriate menu item or set your own one, selecting Other from the menu.
Filter on captions	Set the filter for measures
Create new group..	Create a new group on the current level
Copy selection	Copy the selected area to clipboard
Conditional formatting	Show the Conditional formatting menu

The menu for groups of hierarchy members

The context menu that appears above the group cell:

Command	Function
Hide this member	Hide the selected member
Hide all members except this	Hide all the hierarchy members except the selected one
Hide all members above this	Hide all the hierarchy members above the selected one
Hide all members below this	Hide all the hierarchy members below the selected one
Show only the top	Show the top elements of the level. Their number is specified in the sub-menu. If you specify a percent value there, then the picking of members will be such that their total value does not exceed the one, specified in the sub-menu. You can choose a threshold value from those offered in the appropriate menu item or set your own one, selecting Other from the menu.
Show only the bottom	Show the bottom elements of the level. Their number is specified in the sub-menu. If you specify a percent value there, then the picking of members will be such that their total value does not exceed the one, specified in the sub-menu. You can choose a threshold value from those offered in the appropriate menu item or set your own one, selecting Other from the menu.
Filter on captions	Set the filter for measures
Create new group	Create a new group
Delete this group	Delete the selected group
Clear this group	Clear the selected group
Rename this group	Rename the selected group

| Copy selection | Copy the selected area to clipboard |
| Conditional formatting | Show conditional formatting menu |

Measure values' menu
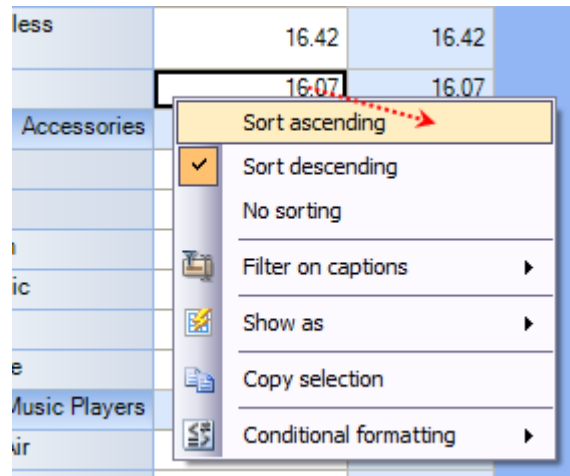
The context menu that appears above the group cell:

Command	Function
Sort ascending	Range the cells in the column by values from the bottom to the top
Sort descending	Range the cells in the column by values from the top to the bottom
No sorting	Remove any sorting
Filter on captions	Set the filter for measures
Hide this measure	Hide the selected measure
Show as	Specify the display mode of the current measure in the Grid: default percent aggregated value in the row percent parent element of the row percent parent element of the column percent total aggregated value
Copy selection	Copy the selected area to clipboard
Conditional formatting	Show conditional formatting menu

5. Filtering data - The filtered elements (hierarchies or measures) are automatically placed on the filters' panel. To start filtering, move the element to the filters' panel. In case the element has not been filtered, the appropriate editor will launch (the Hierarchy Editor for hierarchies and the Measure Filter Editor for measures). In the filters' panel, you can launch an editor for each element independently.

The buttons for launching the editor ( ) are placed on the panels in the Hierarchy levels' area. If the button looks like this ( ), it means the hierarchy had hidden members inside. Pressing the button starts the Hierarchy editor.
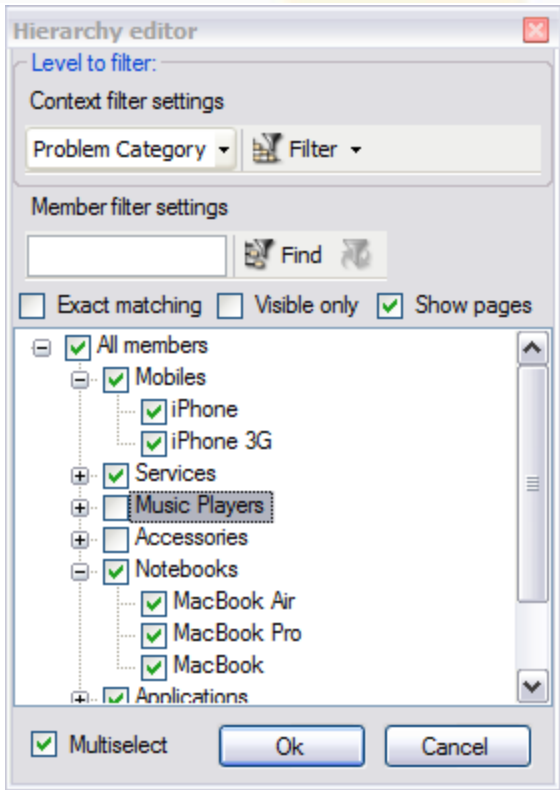
6. Setting the columns' width - You can change the width of columns in the data display area by dragging the right boundary with the mouse. If possible, these changes will be saved during other operations with the table (like drilling, sorting, etc.) To return to the original width, double click the right boundary of the column where it is visible. In case there were such changes in the table that saving the assigned width of the columns was impossible (for example, if as a result of the Collapse drilling, the column with the assigned width has disappeared), it will be set automatically. Unfortunately, if you operate a big table, calculating the columns' width takes up too much time. This is why if there are more than 10, 000 cells in your table, their width will be set to default, but it can be corrected later.

7. Working with OLAP Chart

While the Grid view allows working with numbers, chart view allows representing your data **graphically**. This gives you and your team a unique opportunity to **analyze data visually**, dealing with charts rather than numbers, which is much easier to perceive. Now it's easier than ever to spot new trends and discover unknown problems in your data flow. The statistical tool will help you gain an insight into your data and make new discoveries.
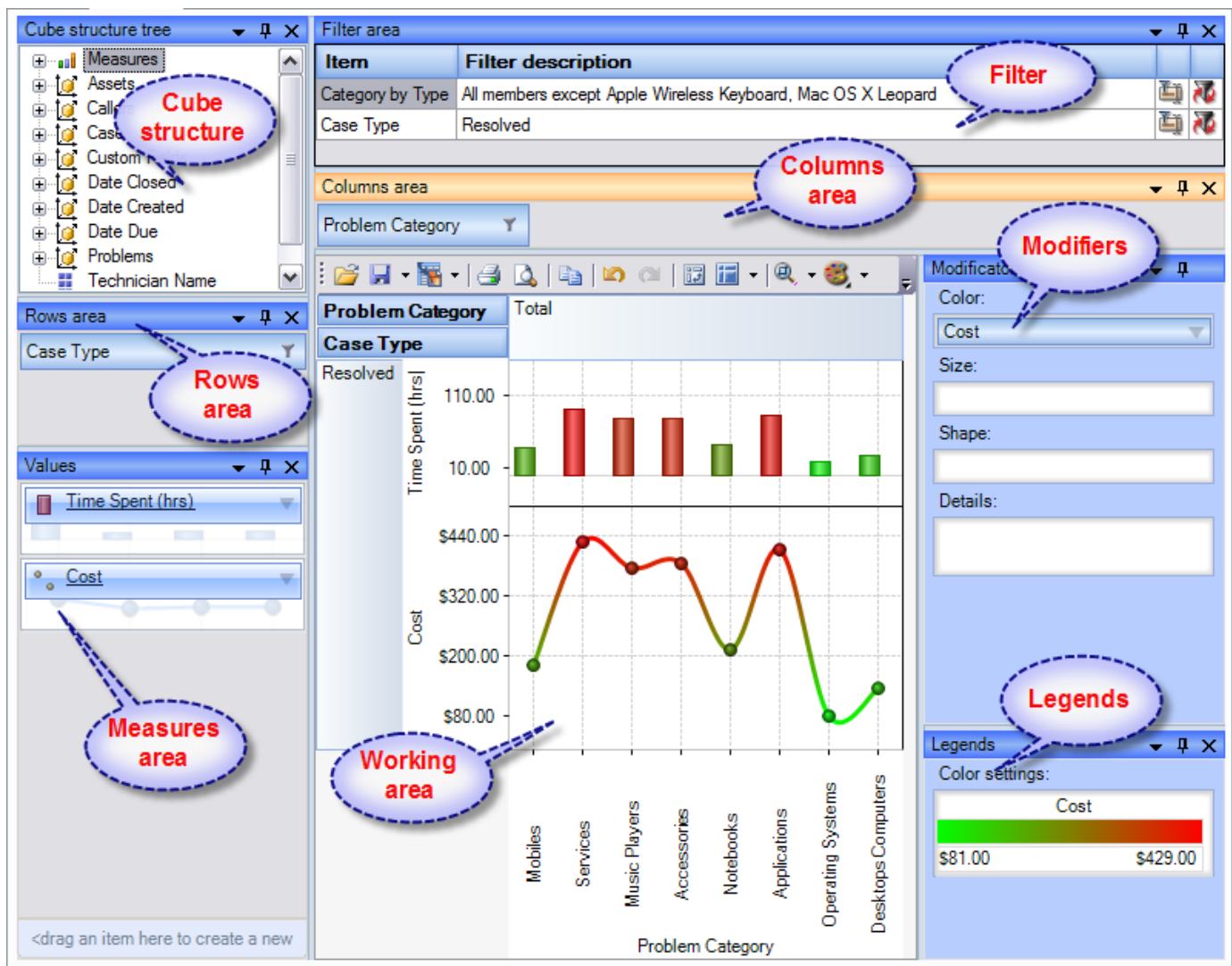
Tools panel
This panel houses all the frequently used operations on the OLAP chart - save, export, print and display options.

Button	Function
	Load the Grid state
	Save the Grid state
	Export OLAP-slice data
	Print OLAP-slice data
	Preview
	Undo
	Redo
	Switch axes
	Select the docking panels layout
	Set the scale of Chart display
	Select the color palette for measures

Modifier panel

Modificators are easy and powerful options of data representation. You can choose your data be shown in different colors, using different shapes and sizes, so that you can easy distinguish them in a single graph. You can simply place a dimension or a measure on a modificator's pane and get the graph showing different values in a different manner. For example, you might place the "Problem Category" dimension on Color pane and get the Chart showing problem categories in different colors. Or you can place the "Cost" measure on Color pane to highlight the top rates of supporting the service requests. The same can be done for Shape and Size so that you can make your data perfectly distinguished.
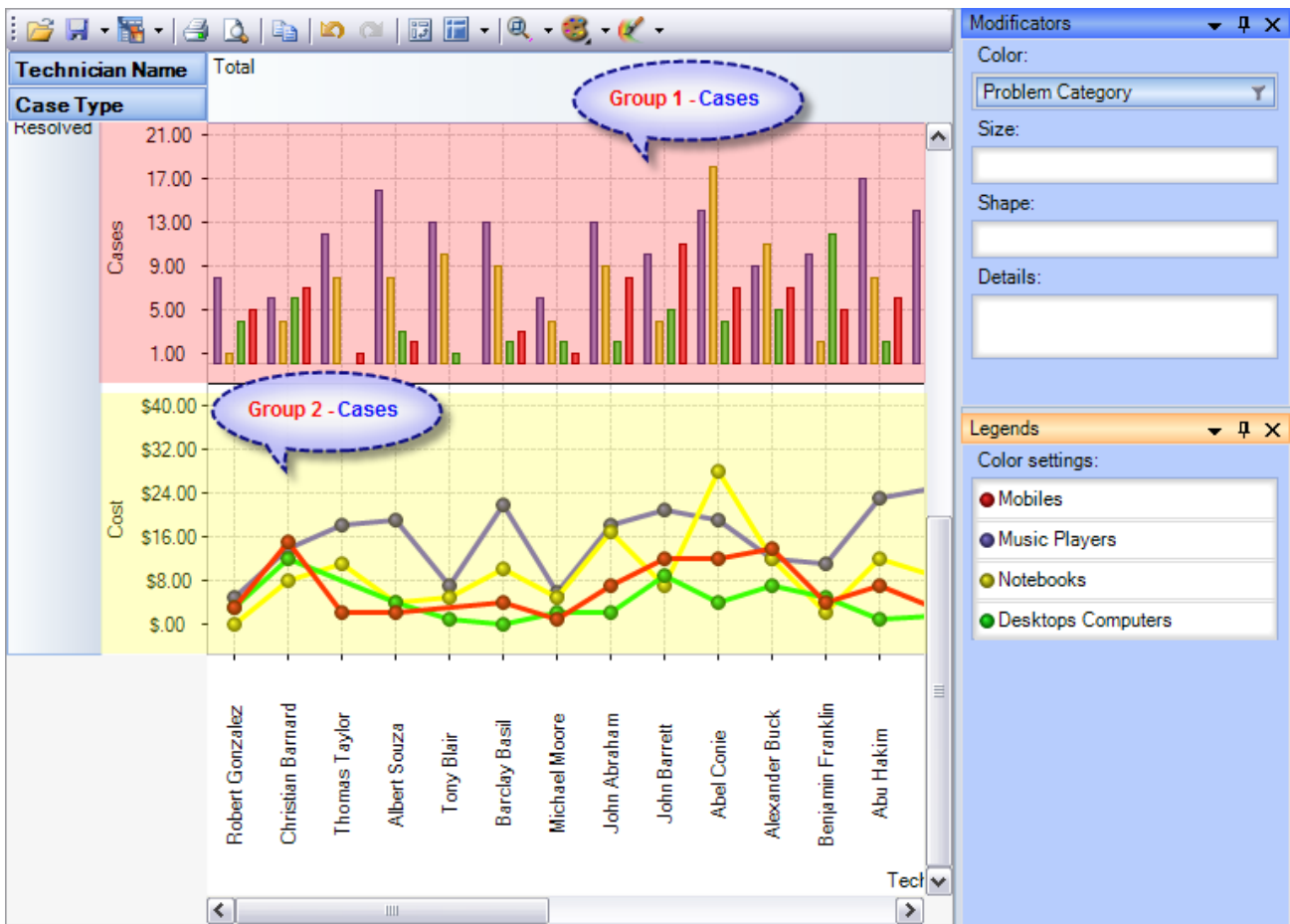
The layout of panels and hierarchies on the Modifier panel allows you to change the appearance of the displayed slice. When an element is placed to the modifier panel (except for Details), its legend will contain the display parameters. If you modify the color and shape of an element, the appropriate parameters can be amended.

Modifier	The changes made upon placing a Chart element to the modifier area of...	
	a measure	a hierarchy
	The color of the Chart elements will be chosen from the standard set of gradient colors	Hierarchy members will be painted with the colors from the current palette
Color	The elements with the minimal value will be painted with the first of the gradient colors, and the elements with the maximal value - with the last one	N/A
Size	Depending on the value of the measure the size of the Chart points will vary from the minimal to the maximal.	Hierarchy members will differ in size
Shape	Forbidden	Hierarchy members will differ in shape. If the number of hierarchy members will exceed the number of available shapes, some of them will be used more than once
Details	Forbidden	The panels will display series for all hierarchy members

If a measure is placed on the Color pane, its values range is mapped to the given colors range so that it's

tremendously easy to spot the top/low values. If you select the discrete gradient type, you'll be able to set threshold values for filling the Chart elements. While the continuous gradient will let you evaluate the trend as a whole. To select the gradient type and tune its content, turn to the legend panel.

The Legend panel
The panel contains descriptions of the modified elements. The value, shape and color of a legend element can be edited.

Setting the Color legend
To select a color, simply double-click the appropriate element and choose a color from the pop-up editor.
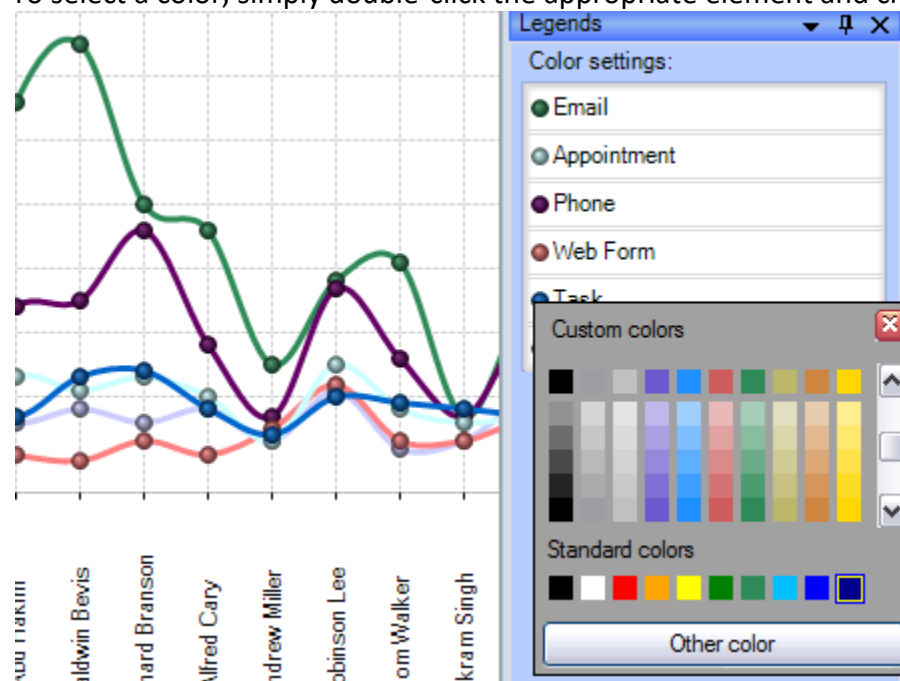
Setting the Gradient legend
To edit the gradient, double-click the element and tune the settings in the editor. In the Gradient Editor there are:

- a set of pre-made gradients;
- selecting gradient option (continuous or discrete);
- creating a gradient with a set number of intermediate colors option;
- setting threshold in per cent and measure values option;
- selecting threshold color option.
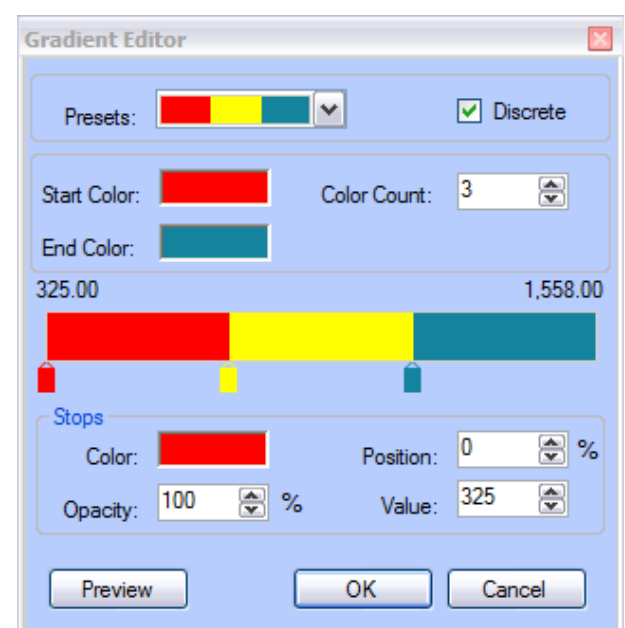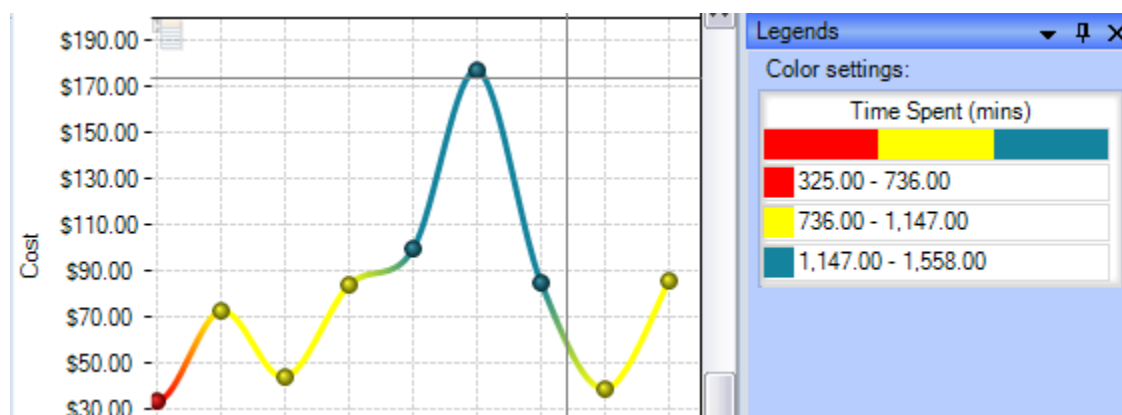
Setting the Shape legend

The shape selection is made through the context menu. This option is available only for points or lines Charts. If the number of hierarchy members exceeds the number of available shapes, they will be repeated.
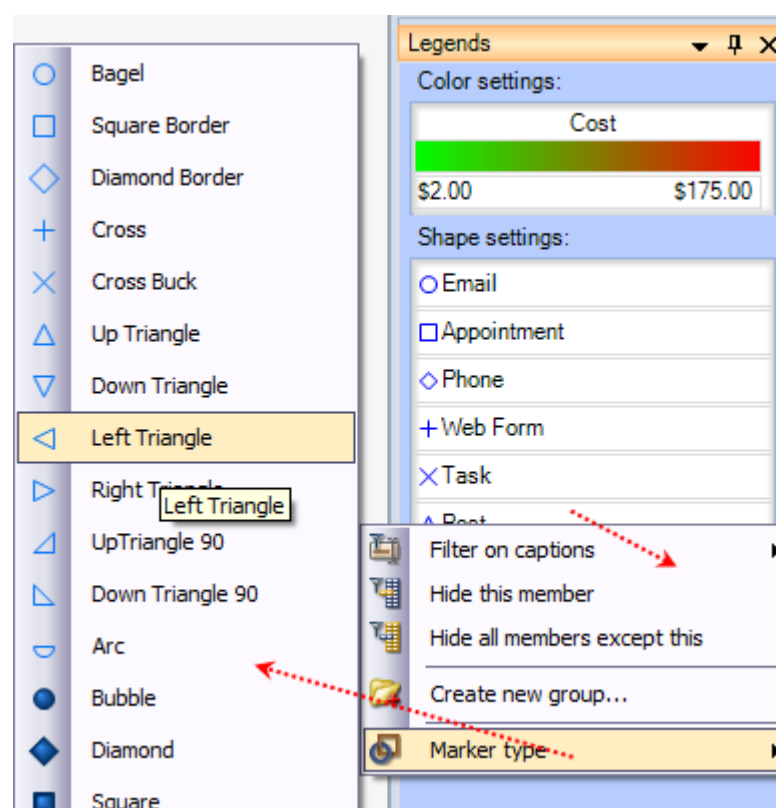
Chart Panes
The bulk of the OLAP-slice data are placed into cells with Charts. Each measure group has its own set of panes.
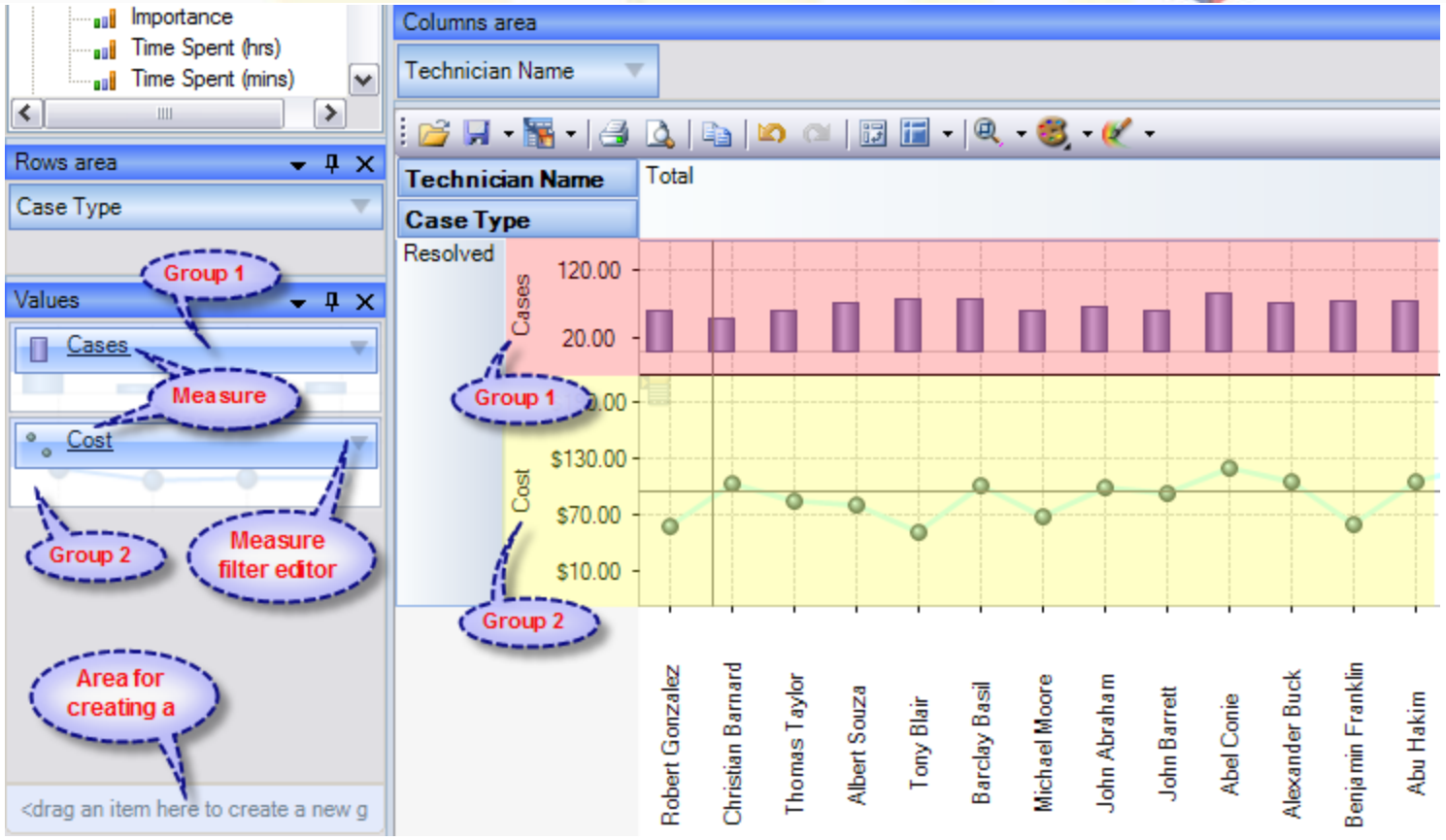
Measure groups with corresponding Charts in the working area

In the upper left part of each Chart, there will appear a context menu for selecting its type.
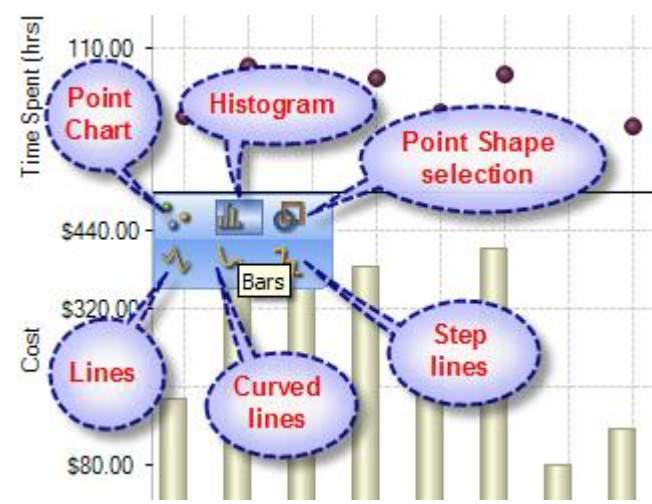
Chart type menu

The size of Charts can be changed to some extent. To expand a Chart along either one of the axes, you need to capture its boundary with the mouse and drag it. You can change the size along both axes (and return to default) through the tool menu in the upper part of the working area.

Hot keys for changing the scale	
Ctrl+*	Reset Scale to 1:1
Ctrl+Num+	Zoom In
Ctrl+Num-	Zoom Out

Navigation
If the content of the Grid exceeds the client area, the scroll bars will appear. You can scroll down the data using the mouse wheel. To scroll the Grid in the vertical direction, turn the mouse wheel, while holding Shift.

Selecting Data
You can select Chart points with the standard Windows' method. Holding down the Ctrl button, you can add selected points, holding down the Shift button, you can select the horizontal range. You can filter the Grid's points while

OLAP Statistics & Reporting for SharePoint

Analyze SharePoint List data in multiple dimensions
& seek useful insight & understanding for
better decision making

selecting. In that case, the corresponding hierarchy members will be filtered automatically.

Selecting and filtering parts of Charts
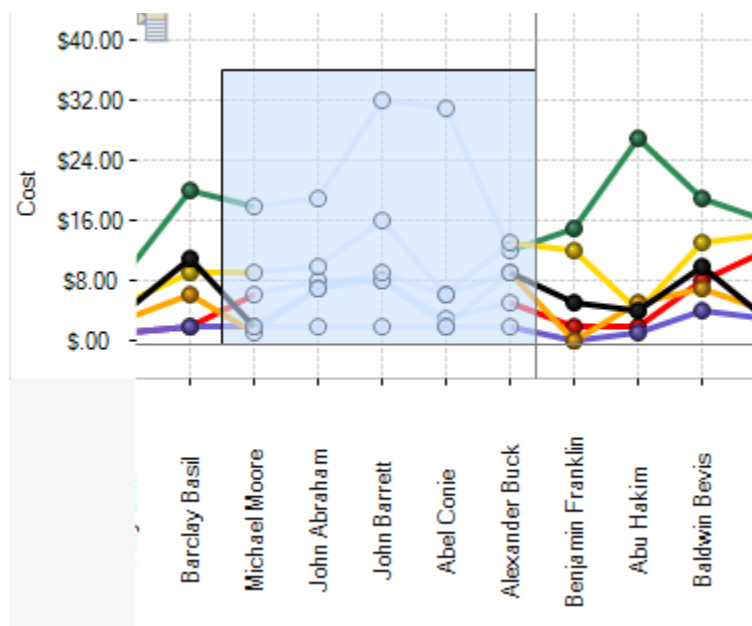
a. Selecting some of the Chart points
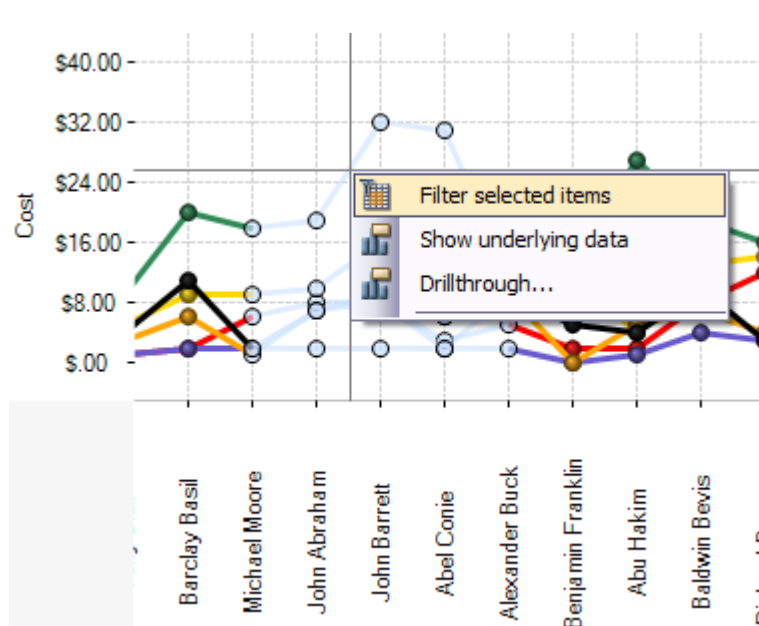
b. Selecting the Filter command
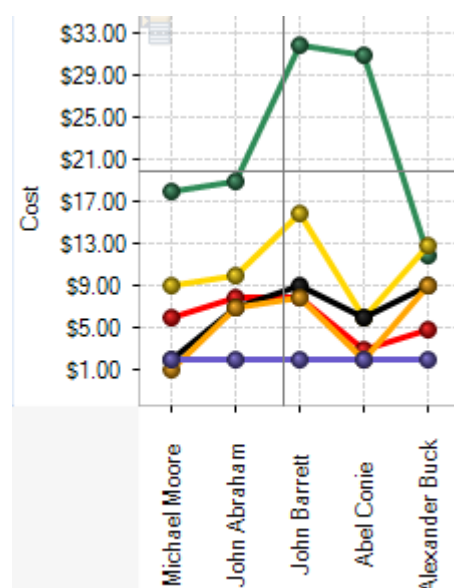
c. The result

Note: When moving the mouse cursor over a data axis, you are able to select a continuous range of members (if the axis is composed of them) or a range of values in Charts.

Filtering hierarchies
In case you need to collect data not from the whole Grid, but just from a part of it, the component has a few functions at your disposal: they let you select or remove elements from the slice. Also, there is a standard option of exporting data into a number of formats and printing out the content of OLAP-slices.

The simplest way of selecting data is through the context menu. When you click a hierarchy member on the Cube axis, there is a set of commands for quick operations with members:

- Hide this member
- Hide all members except this
- Hide all members above this
- Hide all members below this

Filter on hierarchy level
The Filter area of the Editor becomes visible only in case if filtering by hierarchy levels is available. To apply a filter to

hierarchy members, you need to select a hierarchy level (if there's more than one) and assign the Filter condition in the Filter menu. In the same menu, there's a command to clear filter.

Filtering hierarchy members

If the search field is not empty, the "Find" command will make the component perform a search for hierarchy members, whose levels contain the specified string. You can narrow the search results by checking the "Exact matching" box.

Filtering a single member of a hierarchy

By default, the Editor is able to select any number of hierarchy members. To switch to the single-select mode, uncheck the "Multiselect" box. In that case, only one the hierarchy member with all its parents and members will be selected.
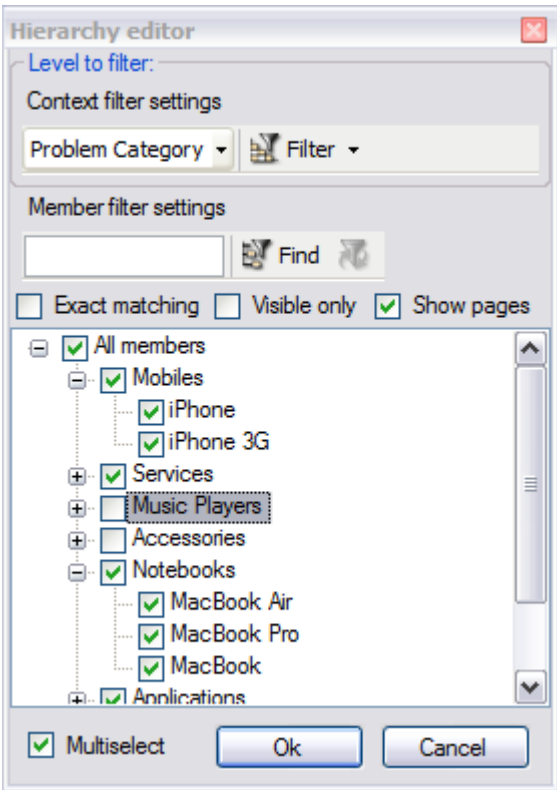
Filtering measures

There is a number of available parameters for filtering measures. In the same Editor, you can clear the filter.
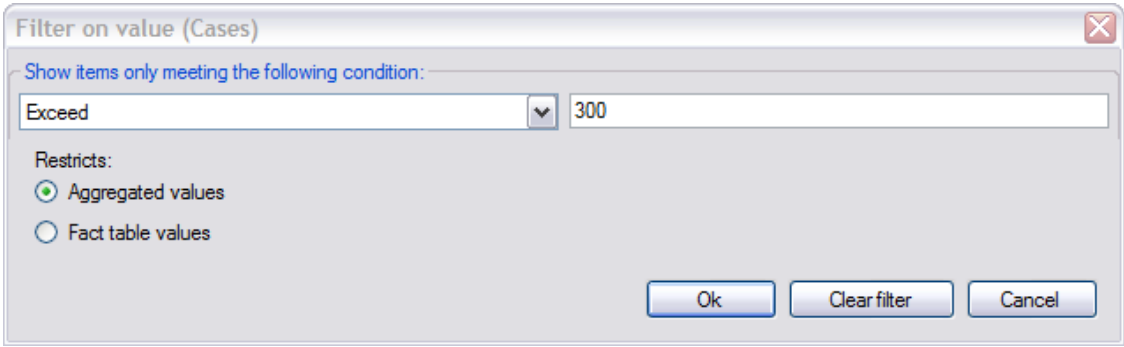
The visual OLAP-analysis is an advanced technology that creates graphical OLAP-data slices suitable for visual manipulation of data to reveal "hotspots", hidden interrelation between different kinds of data and form graphical reports. The screenshot below illustrates two ways of presenting the same data: textual and graphical, so that you can see the difference between them.

Textual presentation of data is more precise, but seriously lacks clearness

The approximation of graphical presentation is easily compensated by its clearness

Graphical and textual OLAP-analysis is based on the same technology: presenting data in the form of OLAP-slice that can be pivoted (pivoting is rotation of the Cube), drilled, filtered, sorted or grouped. In addition to that, the graphical OLAP has its unique technologies, such as:

- Visual analysis and comparison of measures, using an adequate presentation of data;
- Revealing interconnections between measures in consideration of influential factors;
- Revealing clusters.
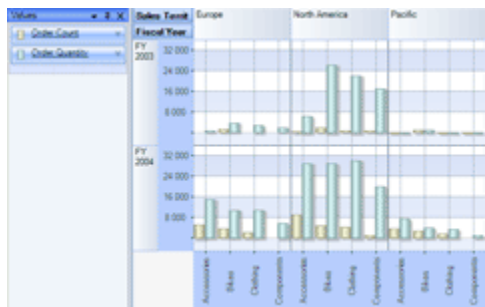
Visual comparison of two measures - Order Count and Order Quantity – in view of product categories by financial years.
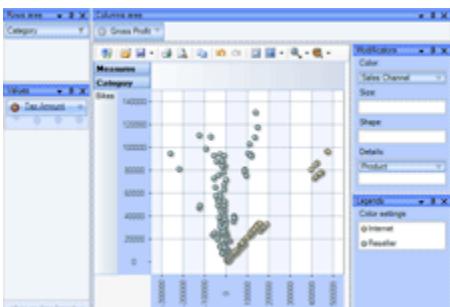
Revealing correlation between Tax Amount and Gross Profit measures in view of the products divided into sales channels. As you can see, there is a clear correlation between these two measures for the products sold through the Internet, but there is none for those sold by resellers
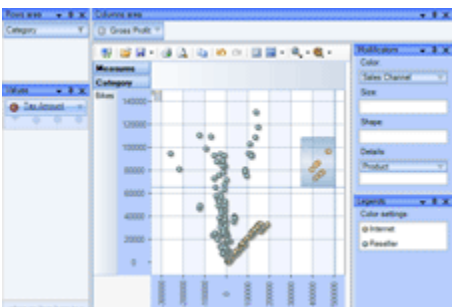
Selection of the products that bring the most significant gross profit. Later we can apply a filter that will leave out only the elements of the selected area, or view and, if necessary, copy the information about the selected objects

This is the easiest way of revealing hotspots in the analyzed data. With the correct way of graphic representation, an experienced analyst will evaluate the situation at a glance and make the necessary decision.
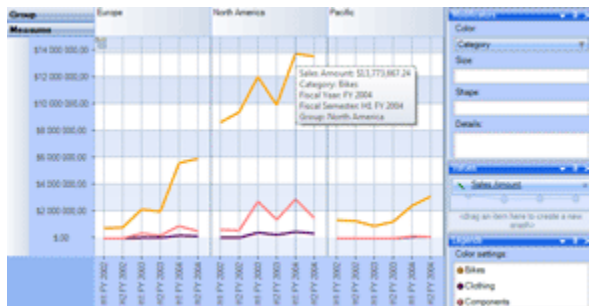
Diagrams of cost per problem category, summed up by half-years. Moving the mouse cursor over the point in the diagram, you can get the detailed information about it.

*The summed-up cost by products. The tree most significant regions are highlighted.*
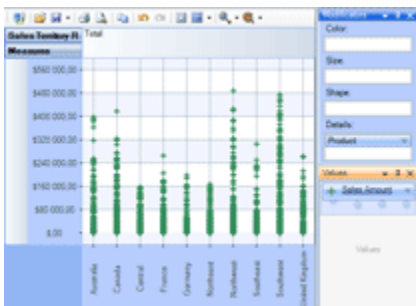
*Density of distribution of the cost' summed results by department.*

Revealing the interconnection between the measures in view of the inflectional factors

Using all the facilities of the graphic OLAP-analysis implies that you understand the methods of processing data OLAP-slices. Placing different measure to the X and the Y axes lets you detect the correlation between the measures even with different detaining conditions. For such analysis of data, place one of the measures into the Rows area, and the second – into Columns. The detailing hierarchies are situated in the Color, Shape and Details areas. For example:
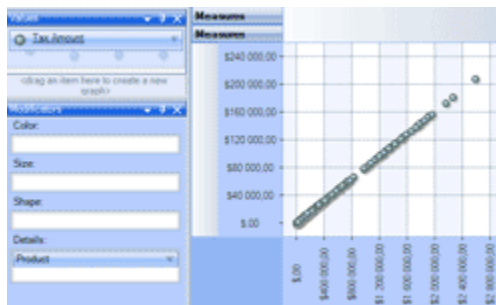
This chart presents a clear correlation between the Sales Amount and the Tax Amount measures in view of products (the Details axis), where the Tax Amount is directly proportional to the Sales Amount.

Analysis may reveal other correlation types, such as:
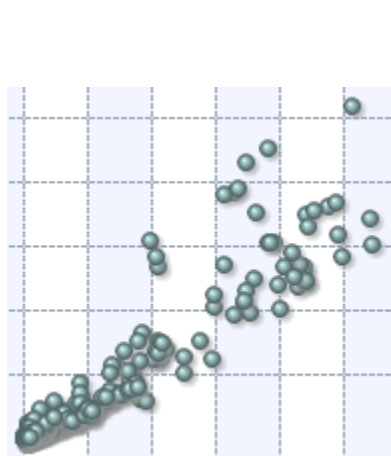
A fuzzy direct proportional relation
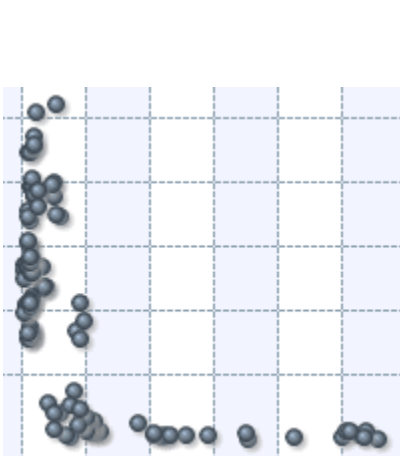
A fuzzy inversely proportional relation
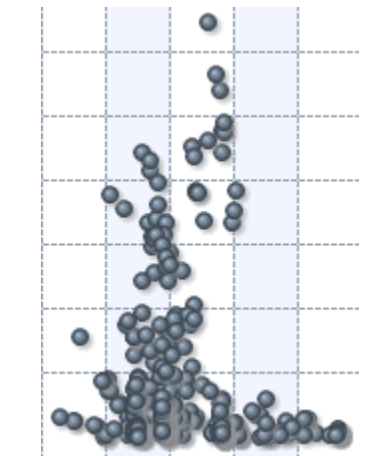
No correlation

Revealing Clusters

This type of analysis reveals groups of the detailed positions and their influence on the measure values.

For example, for the Internet Gross Profit and the Internet Average Unit Price measures in view of products, we get the following chart:

As we can see, the points are grouped in clusters, within which they have approximately the same corresponding axis values. Select one of the groups and watch the information about the selected points (click the chart, after the area is selected, click the right button of the mouse and choose "Show Underlying data"):
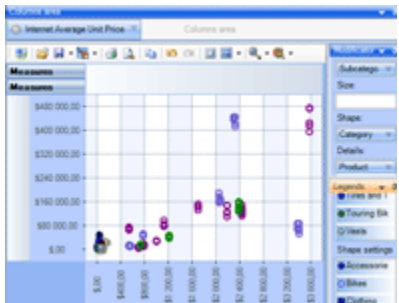

As we see, all the selected points have the same value in the "Product Category" and "Product Subcategory". Let's suppose all the other products are grouped according to the same principle. To confirm our idea, let's place the "Product Subcategory" to the color modifier and the "Product Category" – to the shape modifier.
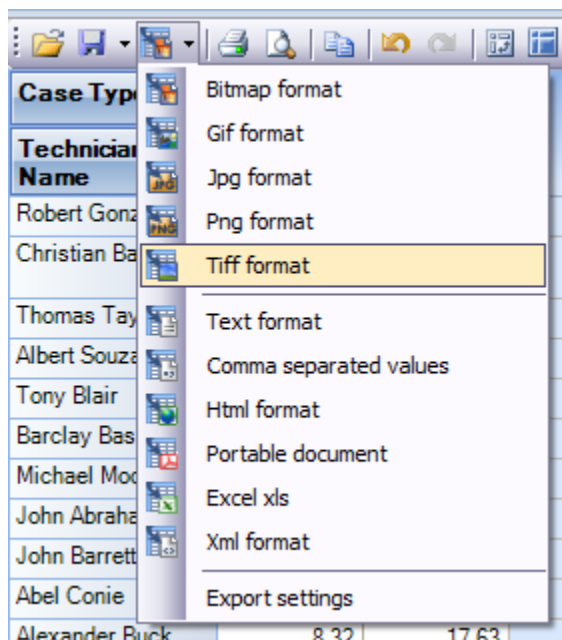
9. Printing, exporting statistical data and charts

Now that you have successfully designed a report, you might want to save it for future reference or share it with others. Reuse your work! You can now save data snapshots to HTML, BMP, CSV, GIF, HTML, JPEG, PDF, PNG, TIFF, TXT, XLS and XML as a simple way of reusing your data for documents and spreadsheets. Depending on the active view (Grid or Chat), the saved file would either take the grid data or the chart.
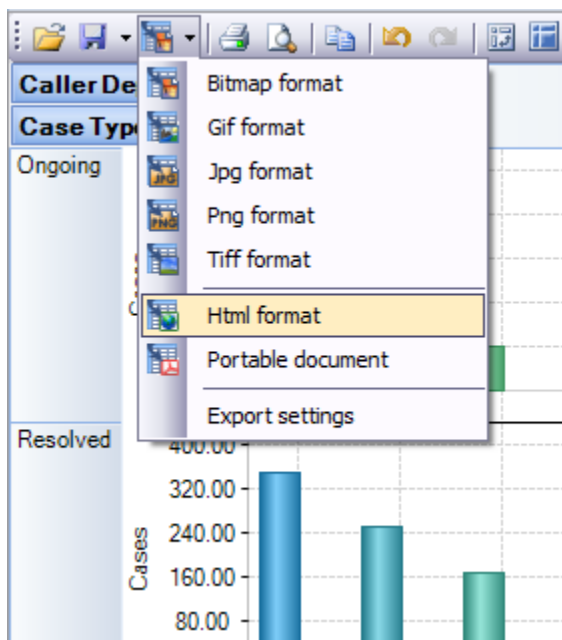

Available export formats in Chart View   *Available export formats in Grid View*

Printing

You can print your report to share it with others using the built-in Print Preview window. You can tune your page/printer settings before printing. Also, if you feel like sharing the report through the net or by email you can easy export it to a wide range of formats including PDF, XLS, CSV, JPG, etc.
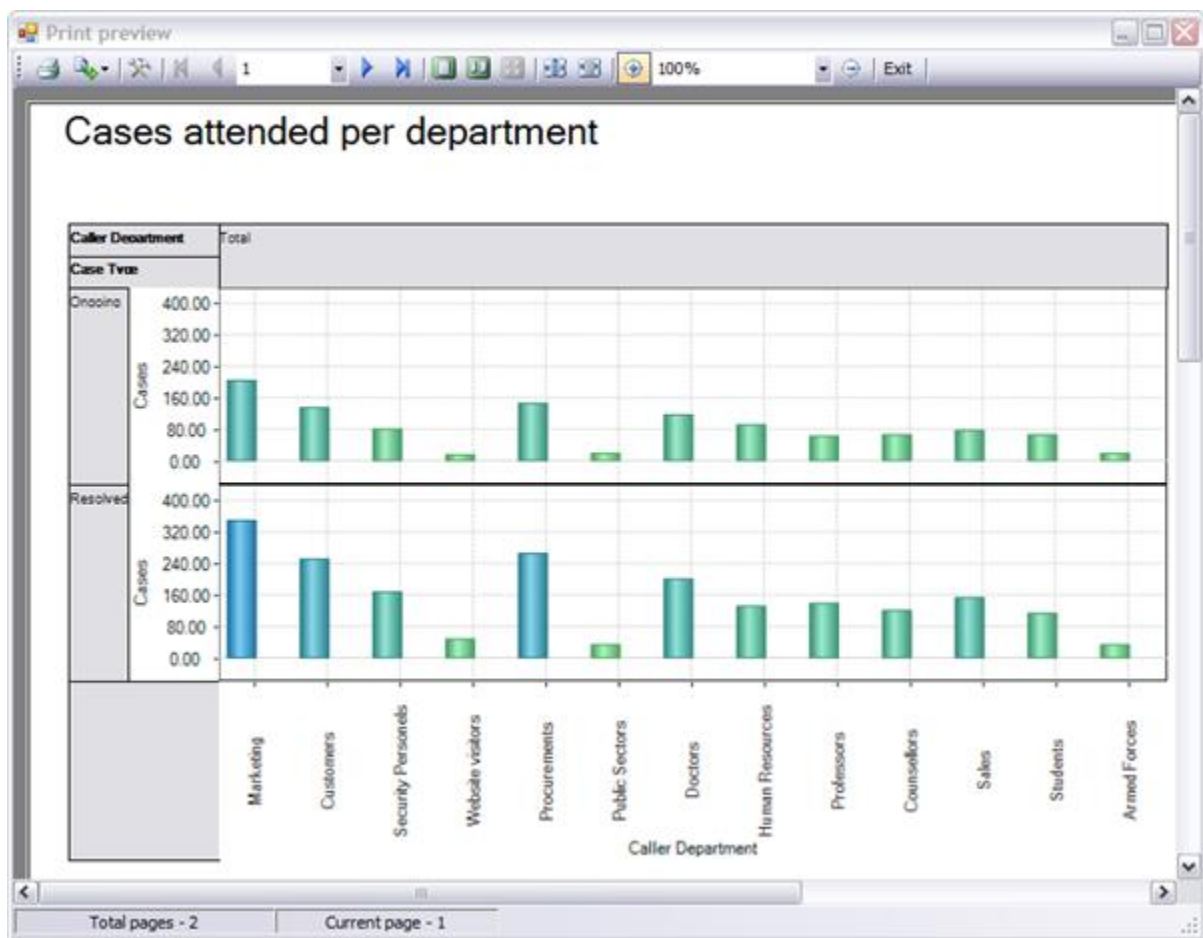
Export Settings

This tool allows you to customize the appearance of the reports to be printed or saved to a file format. You can specify the page size, orientation, headers & footers and color of the fonts and page background.

10. Important links

- **AssistMyTeam OLAP for SharePoint - Home page**
  Go to the official product website.

- **Contact us**
  Ask us any question

- **Purchase Single user license or Enterprise license**
  Acquire a single user license for 'AssistMyTeam OLAP for SharePoint' for personal use. If you want to deploy this product to multiple users and systems, check out for our enterprise license.

- **Submit an online support ticket**
  Use this web form to create a ticket with AssistMyTeam Technical Support.