

DeltaMaster clicks!

02/2010

Greetings, fellow data analysts!

When people talk about 'long-term means', they almost always are referring to weather data. In most cases, however, they are not talking about means in their true sense but rather variances or extremes such as the hottest summer and the coldest winter. Today, it is also popular to use a similar comparison to explain the occasionally erratic events on the stock market. 52 week highs and lows or moving averages over 38, 90, 100 or 200 days – these are indicators that investors and speculators use to make decisions.

Both of the examples above come from fields that are marked with great insecurity. Nevertheless, the smallest, largest, and average values are always a welcome support when you are reflecting on a series of numbers. This also applies to the data which you use in analysis and reporting – and here, too, you need to think about variances. Fortunately, you don't have to look back on past decades or ahead to future ones. Many times, you can either sense the reasons behind these changes or discover them with a little research and analysis.

DeltaMaster can help you with all of that. And that's why it's the long-term 'means' of choice for many users around the world.

Best regards,

Your Bissantz & Company team



**Industrial Reporting –
Bella Reporting Standards
with Dr. Rolf Hichert
24 February 2010, Nuremberg**

Our fight against anorexic, useless reporting heads into the next round...
www.bissantz.com/ir

**DeltaMaster Matinee
11 March 2010, Wolfsburg**

In this morning event, we will present two exemplary *DeltaMaster* solutions. Achim Schalk from MS Motor Service International (Kolbenschmidt Pierburg Group) will demonstrate its solution for multilevel planning as part of a complete sales control system. Rainer Goldbach from TFG Transfracht will present 'LARS', its logistical analysis and reporting system. Afterwards, we hope that you will join us for a guided tour through the 'Autostadt', the home of VW.
www.bissantz.com/matinee

**DeltaMaster Matinee
17 March 2010, Zurich**

In focus: Kai Steeneck from AMAG, the leading automobile company in Switzerland, reports on his experiences with *DeltaMaster*, SAP BW and Microsoft SQL Server.
www.bissantz.com/matinee

Bella Consults – 75 Rules for Better Visualization

Bella and co-author Dr. Nicolas Bissantz checked the color proofs for their new book, which went into production on 4 February 2010. The book contains a collection of articles from Bella's German blog. To catch up on Bella's latest advice in English, visit www.bella-consults.com.

...and yes, her fur coat looks just as beautiful and shiny in print.

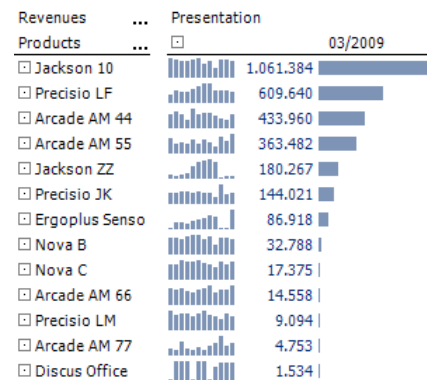
Tip of the month *Analyzing spans with scales and moving aggregations*

Instead of isolating numbers, most *DeltaMaster* applications present numbers in context – particularly, in their chronological context – with the help of sparklines. Sparklines are miniature graphics which show how a value has developed over a certain period in time. In addition to the visualization, however, some readers wish that they could have further reference data. This information, for example, might help them understand the current value in relationship to previous values so that they could better classify and understand it. In the stock market, for example, it is common to compare the current price with the highs and lows of the last 52 weeks or to use a moving average over the last 38, 90, 100 or 200 days. In this edition of *clicks!* we will show how – not to mention how elegantly – you can integrate these and other types of additional information into your reports.

In the beginning there were sparklines...

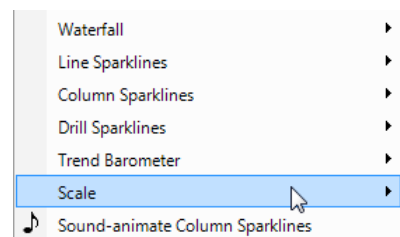
Let's start by using a pivot table with line or column sparklines as the starting point for each of the following scenarios. As you probably already know, you can display these sparklines starting with the *Pivotizer* level by activating the respective option in the context menu of the pivot tables. All of the procedures described below are also supported in *Pivotizer* or higher levels.

The screenshot on your right shows a product overview containing sales data for the current month as well as the previous 11 months displayed as sparklines for a total of 156 values. Report consumers can easily see the trends in this visualization. Their eyes glide over the sparkline from column to column and can feel the ups and downs, the growth and decline.



Sometimes, however, you don't just want to observe the development as a pattern. Instead, you want to make a comparison with distinctive values from the time series. Is the current result particularly large or small? Does it lie close to the maximum or minimum of the values that are contained in the sparkline? Is it an unusual or average result? You can also extract this and other information from the sparkline. Depending on the data pattern, however, it can involve some time and effort. First, you must identify the extreme value and mentally place it next to the last column – even if other columns are located between it. That's why *DeltaMaster* offers a special option called a *Scale* so that you can analyze this exact question regarding the 'state' of a value compared to the others in same range.

The *Scale* processes the values within the sparklines similar to the *Trend barometer* and the *Sound animation*. Since these three functions are based on sparklines, they are only offered in the context menu when sparklines have been activated. (A *Trend barometer* executes a regression calculation for the values of each sparkline, checks if there is a visible trend and, if necessary, notes this in the table cells. For more information on this feature please refer to *DeltaMaster clicks!* 12/2007.)



You can display the *Scale* in *Traffic light colors*, *Business colors*, *Gray scale* or as an *Axis*. If you choose the *Axis* option, your table will now look like the one in the screenshot below.

The span of the values from the sparkline has been scaled on a horizontal axis. The left end stands for the smallest value in the sparkline, the right end represents the largest and the black triangle shows the current value – the one which is displayed as a number in the pivot table. The axis is broken down into four sections. The three small points directly off the axis mark 25%, 50% and 75% of the span. Through the scaling, all axis markings of a column lie directly underneath each other. These, of course, represent different absolute figures.

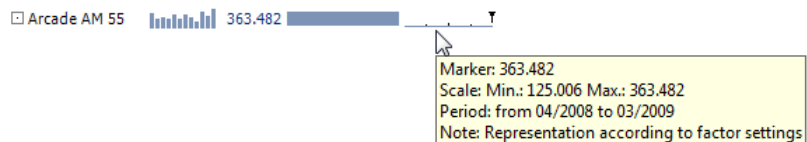
Revenues	Products	Presentation	03/2009
<input type="checkbox"/>	Jackson 10		1.061.384
<input type="checkbox"/>	Precisio LF		609.640
<input type="checkbox"/>	Arcade AM 44		433.960
<input type="checkbox"/>	Arcade AM 55		363.482
<input type="checkbox"/>	Jackson ZZ		180.267
<input type="checkbox"/>	Precisio JK		144.021
<input type="checkbox"/>	Ergoplus Senso		86.918
<input type="checkbox"/>	Nova B		32.788
<input type="checkbox"/>	Nova C		17.375
<input type="checkbox"/>	Arcade AM 66		14.558
<input type="checkbox"/>	Precisio LM		9.094
<input type="checkbox"/>	Arcade AM 77		4.753
<input type="checkbox"/>	Discus Office		1.534

You can sort the table using the scale (context menu of the column header) so that objects that lie close to the maximum are arranged at either the top or the bottom of the table.

Revenues	Products	Presentation	03/2009
<input type="checkbox"/>	Arcade AM 66		14.558
<input type="checkbox"/>	Ergoplus Senso		86.918
<input type="checkbox"/>	Arcade AM 55		363.482
<input type="checkbox"/>	Discus Office		1.534
<input type="checkbox"/>	Nova C		17.375
<input type="checkbox"/>	Jackson 10		1.061.384
<input type="checkbox"/>	Nova B		32.788
<input type="checkbox"/>	Arcade AM 77		4.753
<input type="checkbox"/>	Arcade AM 44		433.960
<input type="checkbox"/>	Precisio JK		144.021
<input type="checkbox"/>	Precisio LM		9.094
<input type="checkbox"/>	Precisio LF		609.640
<input type="checkbox"/>	Jackson ZZ		180.267

If you place your mouse on the scale, you can view the value, minimum, maximum and the represented time frame as a tooltip.

The graphic on your right shows an enlarged section from the table above for the product 'Arcade AM 55'.



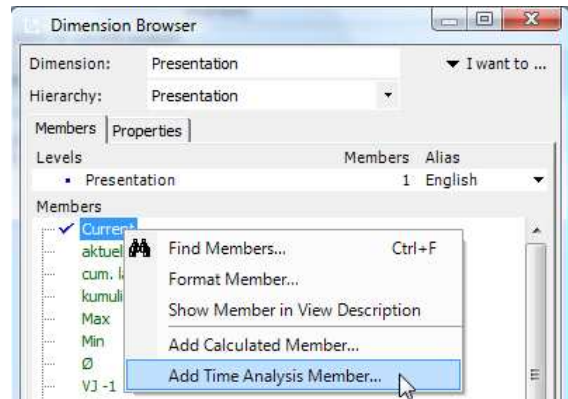
You can already identify the

current (or last) value 363,482 as the maximum just by looking at it. The label and the tooltip – which by the way are also shown in *DeltaMaster's* presentation mode (*F5* key or *Shift* +*F5*) – confirm this observation. For more information on how to interpret the scale or use the *Traffic light colors* or *Business colors* presentation options, please refer to *DeltaMaster deltas! 5.3.2*, feature #19.

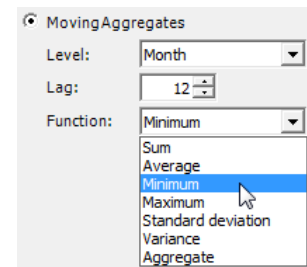
Displaying the minimum and maximum in a report

The explanations in the tooltip are useful as long as the user interactively works with *DeltaMaster* and only wants to access the span for select objects. However, if you want to print a report or export it, for example, to Microsoft Office, the better alternative would be to display this reference data directly in the pivot table. To do this, however, you need 'access' to this data – which you can get, for example, from moving aggregations in time analysis members.

Time analysis members, which we described in detail in *DeltaMaster clicks! 8/2007*, are a special type of calculated members. To start, simply create a new time analysis member in the presentation dimension or another helper dimension. Then, in the *Editor for time analysis members*, select *Query* as the *Calculation type*. Now, you can use *Moving aggregations*. An aggregation is a function that summarizes a number of data records or values into an object usually with a value – a number. In OLAP databases, the most common aggregation function is the sum. Averages, minimums, maximums, standard deviations, and variances, however, are also aggregations. They, too, summarize values – not to create a sum but rather an average, minimum, maximum and so on.



To return to the same values as in the sparkline and the scale where you started, simply choose 'Month' for the *Level*, '12' for the *Distance* (the same number of months as in the sparkline; the current month was counted in the aggregation) and 'Minimum' as the desired *Function*. Later, you can follow the same process again for the *Maximum* and *Average*. (For more information on creating calculations across different levels, please read *DeltaMaster deltas! 5.2.1, feature #25.*)



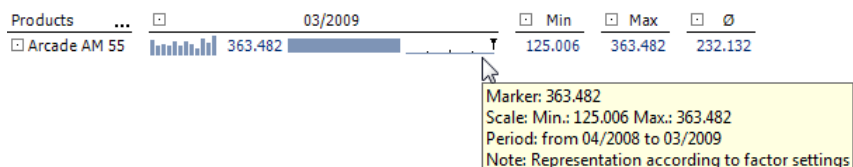
Following these steps, you can create three new time calculated members which you can use in your analyses and reports.

Maximum({pp11} to {cp})
 Minimum({pp11} to {cp})
 Ø({pp11} to {cp})

DeltaMaster will then suggest a name which you can modify or shorten as you please. Afterwards, it will display the table as seen on your right.

Products		03/2009	Min	Max	Ø
Jackson 10		1.061.384	614.820	1.194.299	1.027.172
Precisio LF		609.640	437.386	1.112.023	759.495
Arcade AM 44		433.960	256.842	637.582	440.808
Arcade AM 55		363.482	125.006	363.482	232.132
Jackson ZZ		180.267	100.792	1.107.449	502.938
Precisio JK		144.021	80.784	246.986	146.596
Ergoplus Senso		86.918	1.757	86.918	42.436
Nova B		32.788	21.902	41.068	34.843
Nova C		17.375	11.679	18.230	15.855
Arcade AM 66		14.558	8.887	14.558	11.698
Precisio LM		9.094	7.552	13.101	10.523
Arcade AM 77		4.753	1.939	7.481	3.722
Discus Office		1.534	25,94	1.617	1.377

Since you have set your report to the proper level (i.e. Months) and used the number 12 both for the length of the sparkline and the distance in the moving aggregation, the extreme values from the tooltip are now identical with the numbers presented above.

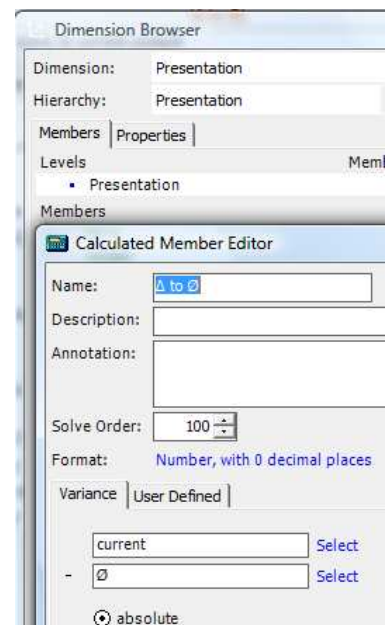


Anything but average

You can also use the average in a moving aggregation – a rolling twelve month average. With the help of this measure, you can create a few other enlightening analyses. To start, simply hide the scales and the extreme values and activate the visualization with bars for the average instead. This scale is the same for the entire table. The ranking is based on the '03/2009' column. If you now designate the second data column with the average as a *Reference column* (context menu of the column header), the result will look like the screenshot on your right. Here, you can see the differences between the current month and the rolling average.

Products	03/2009	Ø
Jackson 10	1.061.384	1.027.172
Precisio LF	609.640	759.495
Arcade AM 44	433.960	440.808
Arcade AM 55	363.482	232.132
Jackson ZZ	180.267	502.938
Precisio JK	144.021	146.596
Ergoplus Senso	86.918	42.436
Nova B	32.788	34.843
Nova C	17.375	15.855
Arcade AM 66	14.558	11.698
Precisio LM	9.094	10.523
Arcade AM 77	4.753	3.722
Discus Office	1.534	1.377

You can even capture this variance, the distance from the current value to its 12 month average, in its own calculated member so that you can use it in further analyses. To do this, you don't need a separate time calculated member; all you need is the 'normal' editor for calculated members.



The result is the following table, which directs your attention to the variances from the average.

Products	Current	Ø	Δ to Ø
Jackson 10	1.061.384	1.027.172	34.212
Precisio LF	609.640	759.495	-149.855
Arcade AM 44	433.960	440.808	-6.848
Arcade AM 55	363.482	232.132	131.350
Jackson ZZ	180.267	502.938	-322.671
Precisio JK	144.021	146.596	-2.576
Ergoplus Senso	86.918	42.436	44.483
Nova B	32.788	34.843	-2.055
Nova C	17.375	15.855	1.520
Arcade AM 66	14.558	11.698	2.860
Precisio LM	9.094	10.523	-1.429
Arcade AM 77	4.753	3.722	1.031
Discus Office	1.534	1.377	157

As always, you can further analyze these results in *DeltaMaster*, for example, from the *Miner* mode by dragging a variance value into a *PowerSearch* to search for the underlying causes.

Questions? Comments?

Just contact your Bissantz team for more information.