

DeltaMaster clicks!

12/2008

Dear data analysts,

thinking and design belong together. If creating a comparison is the challenge at hand, then the chart should do exactly this. The principles of analytic design are the principles of reasoning about evidence. They are about visual thinking. Good design is the visualization of clear thinking.

Multiple charts (Small Multiples) offer a compact, repetitive presentation of several variables, just as Galileo used for his observations of Saturn. This high information density makes it easy for us to understand their message. If an observer understands the general principle, he will understand the other illustrations as well. Their credibility is also very high because they always show all the data that is available. The general principles behind the individual charts just need to be clear and simple.

We're proud to introduce the concept of Small Multiples in *DeltaMaster*, accommodating our aspiration for straightforward, serious, modest, and matter-of-fact reporting.

Have a wonderful Christmas time and a good start into the new year!

Your Bissantz & Company team

DeltaMaster 5.3.7 is there

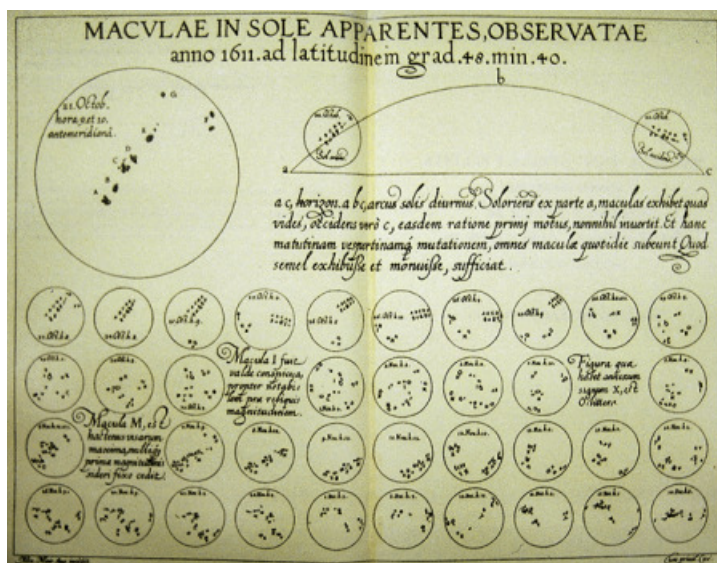
In Mid-November, the new 5.3.7 release was published. Apart from the *Small Multiples* that are portrayed in this edition of *clicks!*, there is a new tuple editor that allows for easy and flexible combinations of members and measures in pivot tables. The accompanying *DeltaMaster deltas!* document 16 improvements altogether. www.bissantz.com/login
www.bissantz.com/deltas

DeltaMaster in XING

In the XING.com network, we have set up a group for you *DeltaMaster* users to discuss your experiences and current topics to your heart's content. Our experts are there, too, to give hints and answer your questions. www.xing.com/net/deltamaster

DeltaMaster@Work

Januar 29th 2009, Nuremberg
Create reports that mean something!
www.bissantz.com/dm@w



Learning from the past

Almost four centuries ago, a Jesuit rival of Galileo reused his data on sun spots to create a multiple chart showing all 38 pictures at a glance.

Trick of the Month Small Multiples

Good design gets even better when it is repeated. *DeltaMaster* has always been rich in methods to create meaningful analytical reports. You can get especially information-dense and easy-to-understand reports when you combine several similar representations to a single report. This is the idea of *Small Multiples*, a new analysis method which is available since *DeltaMaster* 5.3.7 in the *Miner Expert* mode.

This method automatically creates reports containing several ‘multiples’ or similar report parts. For example, it could contain pivot tables with the same structures or several rankings with the same construction. Similar to a combination cockpit, an analysis template or cockpit serves as a basis. *DeltaMaster* then iterates the calculation of this template for multiple measures, members or dimensions to answer the same question for different report components. It automatically formats these multiples and displays them on the screen. Visualization elements may be used globally or individually for each part of the report.

Several names for his concept are conceivable, for instance multiple charts, multi-charts or tile chart. If one refers to only one part of the overall report, one may talk of a subreport, a (diagram) tile, or “a multiple”.

The following sequence from our “Chair” reference model shows an example about how Small Multiples reports can be constructed and what differentiates them from other methods. The starting point is a simple pivot table you’ve created as a cockpit.

Measures	Value
Revenues	636.917.049
Discounts	24.111.795
Rebates	54.264.557
Net Revenues	558.540.698
LaborCost	260.492.988
Material Cost	12.469.511
Margin	285.578.199

Using Small Multiples, you can create a report that shows the margin for each of our customer regions (Central, Mountain, Eastern, and Pacific time zones) with just a few clicks of a mouse.

DeltaMaster automatically groups these four report components into the allotted space on your screen.

	Central	Mountain
Revenues	17.809.468	14.733.140
Rebates	3.860.052	3.396.863
Discounts	2.383.225	2.077.883
Net Revenues	11.566.190	9.258.394
LaborCost	839.764	799.227
Material Cost	2.304.724	1.750.572
Margin	8.421.703	6.708.594

	Eastern	Pacific
Revenues	29.368.717	8.173.440
Rebates	6.315.144	2.683.995
Discounts	3.973.685	1.692.858
Net Revenues	19.079.887	3.796.587
LaborCost	1.691.182	349.197
Material Cost	3.899.654	797.602
Margin	13.489.051	2.649.787

4 objects; individual scale; each with 7 rows, 1 column

Depending on how you partition your screen, you could view four multiples in a single row.

	Central	Mountain	Eastern	Pacific
Revenues	17.809.468	14.733.140	29.368.717	8.173.440
Rebates	3.860.052	3.396.863	6.315.144	2.683.995
Discounts	2.383.225	2.077.883	3.973.685	1.692.858
Net Revenues	11.566.190	9.258.394	19.079.887	3.796.587
Labor Cost	839.764	799.227	1.691.182	349.197
Material Cost	2.304.724	1.750.572	3.899.654	797.602
Margin	8.421.703	6.708.594	13.489.051	2.649.787

Whenever there would be redundancy and thus a waste of space, *DeltaMaster* automatically omits labels. The seven measures, therefore, only appear at the beginning of each row because they would be identical in all four multiples in that row.

Until now, the bars of the waterfall chart are scaled individually for each tile. In order to compare the segments, you could also apply a uniform, global scale to the bars of the waterfall charts to visualize the relative size of each bar's length in relation to all multiples in that report and not just a single one.

	Central	Mountain	Eastern	Pacific
Revenues	17.809.468	14.733.140	29.368.717	8.173.440
Rebates	3.860.052	3.396.863	6.315.144	2.683.995
Discounts	2.383.225	2.077.883	3.973.685	1.692.858
Net Revenues	11.566.190	9.258.394	19.079.887	3.796.587
Labor Cost	839.764	799.227	1.691.182	349.197
Material Cost	2.304.724	1.750.572	3.899.654	797.602
Margin	8.421.703	6.708.594	13.489.051	2.649.787

4 objects; global scale; each with 7 rows, 1 column Write Action Title | Write Comment

DeltaMaster hints on the current scale in the status bar below the report.

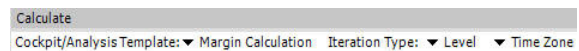
Finally, you could also organize the report parts based on their values so that the strongest region – in this case, Eastern – appears first and the weakest one – Pacific – comes last.

	Eastern	Central	Mountain	Pacific
Revenues	29.368.717	17.809.468	14.733.140	8.173.440
Rebates	6.315.144	3.860.052	3.396.863	2.683.995
Discounts	3.973.685	2.383.225	2.077.883	1.692.858
Net Revenues	19.079.887	11.566.190	9.258.394	3.796.587
Labor Cost	1.691.182	839.764	799.227	349.197
Material Cost	3.899.654	2.304.724	1.750.572	797.602
Margin	13.489.051	8.421.703	6.708.594	2.649.787

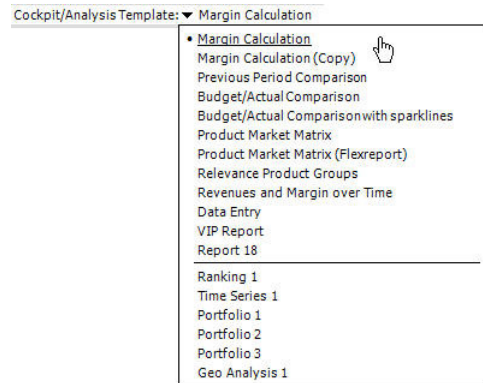
4 objects; global scale; sorted by largest value; each with 7 rows, 1 column Write Action Title | Write Comment

Multiplying made easy – creating Small Multiples reports

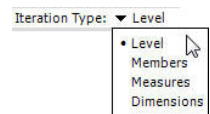
To multiply cockpits and analysis templates, only three simple steps are required. They can all be taken within the header of the *My Analysis* window.



First, you simply select the template that should be repeated (i.e. iterated) for the multiple, under *Cockpit/Analysis Template*. Here you can choose either an existing cockpit (based on a pivot table or Flexreport) or an analysis template (where *DeltaMaster* saves the settings of the analysis methods; discussed in more detail in the December 2005 issue of *DeltaMaster clicks!*). The upper part of the list displays the possible cockpits while the bottom section shows the analysis templates.



In the second step, you determine what type of repetition you would like to use – i.e. what should be different from tile to tile – under *Iteration type*. *DeltaMaster* can calculate each part of the report for a different member or measure. To repeat the tiles for multiple dimension members, select either *Levels* or *Members*. If you want to calculate the template with different measures – for example, sales, revenues and margin – select *Measures*. If you choose to repeat by *Dimensions*, each tile will perform the same analysis within a different dimension.

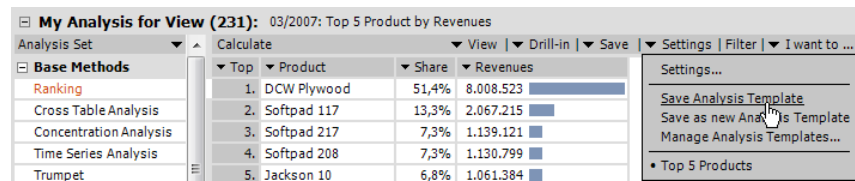


Third, you select which members, measures or dimensions you would like to use in your report, depending on the selected iteration type.

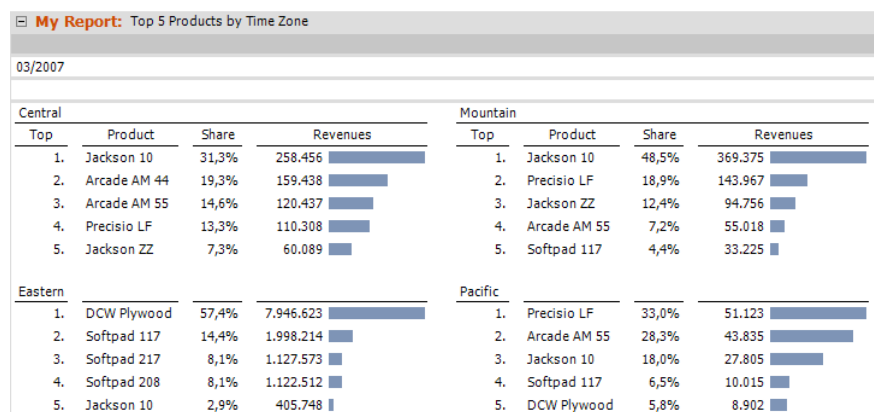
Multiplication manifold – the iteration types

The differences between the various iteration types are most obvious when using the *Ranking* method which is supported by all iteration types (see also the table further down).

First, you create a top 5 product ranking by revenues as usual and save it as an *analysis template* to be used as a basis for the Small Multiples.



In this report, we have iterated the ranking over the “time zones” level in our customer dimension. *DeltaMaster* has then changed the view internally to the Central, Mountain, Eastern, and Pacific time zone, calculated the ranking for each step and automatically arranged the results on the report pane. The scale still is individual for each chart here.



In the image on the right, several members are iterated as well; contrary to before, they were selected manually instead of via their dimension level. This resembles selecting members in a pivot table; here, too, it is possible to pick entire levels or individual elements. The scale is now global so that all bars are painted in the same scale and are thus comparable. The order of the subreports is based on analytical logic, too: The multiple with the largest value stands first, the others follow sorted descendingly.

My Report: Top 5 Products, Elements

03/2007

Sort: ▼ by largest value

Connecticut				Maine			
Top	Product	Share	Revenues	Top	Product	Share	Revenues
1.	DCW Plywood	64,0%	7.107.014	1.	DCW Plywood	42,1%	782.162
2.	Softpad 117	13,0%	1.441.719	2.	Softpad 117	27,7%	514.792
3.	Softpad 208	8,7%	968.632	3.	Softpad 217	14,0%	259.955
4.	Softpad 217	7,7%	857.374	4.	Softpad 208	8,2%	151.981
5.	DCW Steel	1,5%	164.956	5.	DCW Steel	3,4%	62.975

Vermont				New Hampshire			
Top	Product	Share	Revenues	Top	Product	Share	Revenues
1.	Jackson 10	54,3%	55.228	1.	Jackson 10	59,9%	13.534
2.	Arcade AM 55	21,3%	21.696	2.	Arcade AM 55	21,5%	4.871
3.	Precisio LF	7,1%	7.169	3.	Softpad 117	13,9%	3.148
4.	Arcade AM 44	6,8%	6.932	4.	Precisio JK	2,2%	496
5.	DCW Plywood	3,6%	3.677	5.	Nova C	1,6%	368

4 objects; global scale; sorted by largest value

With the third iteration type, measures, the business indicator is varied. The multi-chart reveals at first glance that the products that have the highest numbers of sold units are not necessarily the ones with the biggest contribution margin. Technically, the measure that has originally been saved in the analysis template is "overruled".

My Report: Top 5 Products, Measures

03/2007

Sort: ▼ default

Units Sold				Revenues			
Top	Product	Share	Units Sold	Top	Product	Share	Revenues
1.	Precisio JK	21,2%	35.158	1.	DCW Plywood	51,4%	8.008.523
2.	DCW Plywood	15,2%	25.256	2.	Softpad 117	13,3%	2.067.215
3.	Jackson 10	14,5%	23.952	3.	Softpad 217	7,3%	1.139.121
4.	Arcade AM 44	9,1%	15.012	4.	Softpad 208	7,3%	1.130.799
5.	Softpad 217	9,0%	14.854	5.	Jackson 10	6,8%	1.061.384

Margin				Rebates			
Top	Product	Share	Margin	Top	Product	Share	Rebates
1.	DCW Plywood	42,4%	3.009.846	1.	Jackson 10	31,5%	309.131
2.	Softpad 117	27,8%	1.970.212	2.	Precisio LF	30,1%	295.095
3.	Jackson 10	4,7%	330.863	3.	DCW Plywood	13,4%	131.451
4.	Softpad 217	4,6%	329.280	4.	Arcade AM 55	8,7%	85.465
5.	Softpad 208	4,2%	295.572	5.	Arcade AM 44	3,7%	35.963

With the fourth iteration type, dimensions, you vary the dimension or hierarchy stored in the analysis template. For example, you get the two analyses shown on the right, depicting the results using the customer dimension's "State" level and the color dimension.

My Report: Top 5 Products, Dimensions

03/2007

Sort: ▼ default

State				Color			
Top	State	Share	Revenues	Top	Color	Share	Revenues
1.	Connecticut	71,2%	11.102.674	1.	Metal	65,9%	10.278.444
2.	Maine	11,9%	1.857.850	2.	Blue Acqua	21,7%	3.381.919
3.	Pennsylvania	2,4%	376.169	3.	Silverline	10,4%	1.625.978
4.	Utah	1,9%	288.530	4.	Antique	1,9%	303.342
5.	New Mexico	1,8%	277.909				

Supported cockpit types and analysis methods

The following table shows which combinations of Small Multiple templates and iterations *DeltaMaster* currently supports:

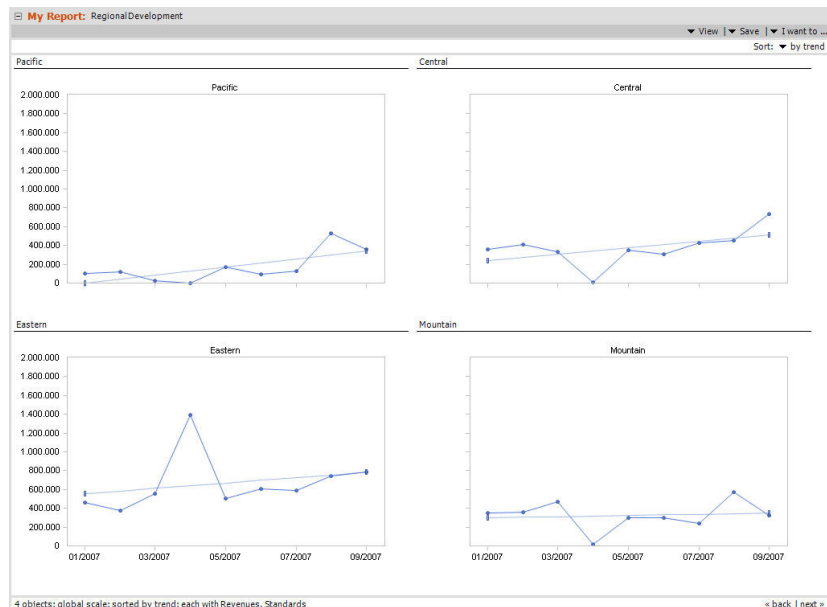
		Levels	Members	Measures	Dimensions
PIV [†]	Pivot tables	+	+		
FLX [†]	Flexreports	+	+		
RNK	Rankings	+	+	+	+
HTB	Cross table analysis	+	+	(+) ¹	+
TIM	Time series analysis	+	+	+	
PFL [†]	Portfolio analysis	+	+		+
GEO [†]	Geo analysis	+	+		
PWR [†]	PowerSearch	+	+	+	+

¹ cross tables containing only one measure

Further examples

When multiplying analysis results, Small Multiples consider the features and distinctivenesses of the individual methods.

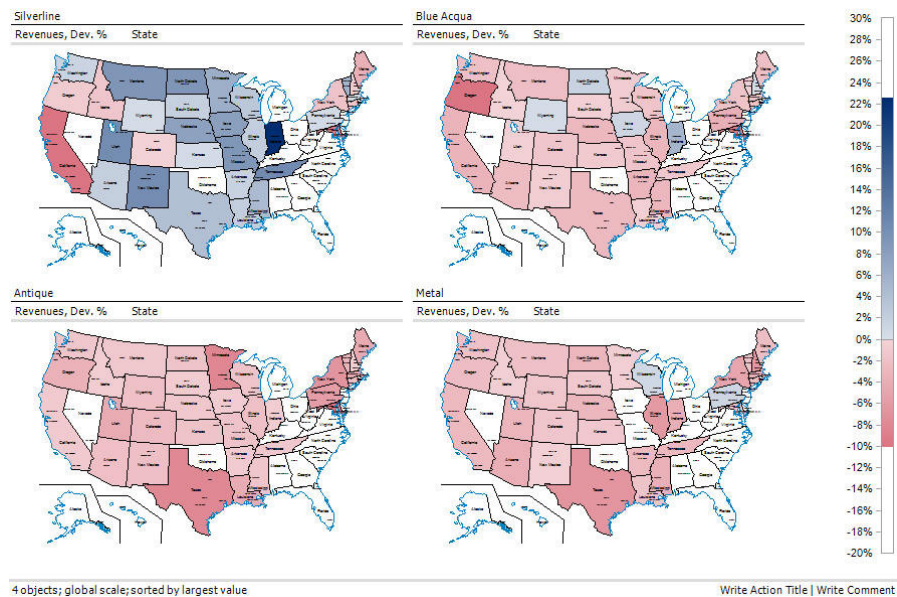
For instance, in multiplied time series, several scaling options are available.



Selected objects are highlighted in all portfolio tiles, e.g. in order to show shifts in position.



In multiplied Geo analyses, a global color schema helps to keep the individual maps comparable.



From the "Expert" to everyone

Like all other report types, a Small Multiples report can be annotated, and Action Titles can be added. The result can be exported to Microsoft Word, Excel, PowerPoint, or as a PDF document, saved into the repository for the DeltaMaster WebOption, and certainly called in the briefing book in all DeltaMaster modes from Offline Reader all the way up to Miner Expert. Only to create and modify Small Multiples, a Miner Expert license is required. If you want to try the new features, we'll be pleased to provide you with an evaluation license; just send an e-mail to service@bissantz.com.