

DeltaMaster clicks!

02/2007

Greetings, fellow data analysts!

For many elite athletes and other overly ambitious people, winning is everything. You don't win silver. You lose gold! The same applies in modern business. The bottom line for most companies today is whether they win or lose, and not how they play the game.

Fortunately, not everything in business is top or flop. To make the well-informed decisions that ultimately pave your way to success, you need to monitor both the upper *and* lower ranks of your data. These lists of objects as well their proportions and spacing all provide key details in assessing your status quo.

Rankings are prized as one of the top analytic methods for analyzing this type of information. And as you would expect, *DeltaMaster* offers not one but two ranking options: traditional one-dimensional lists and the multi-dimensional *PowerSearch*. What these modules offer and how to use them efficiently is our focus in this edition of *clicks!* So...on your marks, get set, go!

Sincerely,

Your Bissantz & Company team

Purchasing control

March 1, 2007, Essen

Sophisticated purchasing software can save your company millions each year. Join us along with EDS, E.ON and the Elster Group to share experiences and success stories. www.bissantz.de/beschaffung

Me, myself and BI

Following in the footsteps (or paw prints?) of his dog Bella, Dr. Nicolas Bissantz has published his own BI blog. Be part of the discussion and add your comments to existing articles at blog.bissantz.de

DeltaMaster@Work

Join us on February 22, 2007 in our Nuremberg office to get better acquainted with our solutions. To sign up for this free workshop, contact Mr. Liepins at liepins@bissantz.de.

Archive

Download archived editions of *DeltaMaster clicks!* at www.bissantz.de/clicks/en.

When purchasing gets cloudy...

It is not uncommon for companies to have an 80% share of external purchase, and still not know where their money is going. Dr. Jörg Dittrich, director for purchasing solutions at EDS (on the right side in the pictures below) and Dr. Nicolas Bissantz recently discussed how companies can shed light on the situation. Join the debate and add your comments at blog.bissantz.de/joerg-dittrich (German language only).



Tip of the month: Rankings and PowerSearch

Rankings allow you to categorize report objects, so you can quickly answer important business questions such as who (or what) is bigger/smaller, better/worse or faster/slower. Sometimes the ranking delivers the report that you need and your work is already done for the day. Other times, it produces more questions than answers, and you will need to analyze certain objects in further detail.

The *Ranking*, *PowerSearch* and pivot table features in *DeltaMaster* offer the functionality you need to do just that. This edition of *clicks!* will focus on how to use the *Ranking* and *PowerSearch* analysis modules¹.

Ranking

The *Ranking* module in *DeltaMaster* allows you to create top ten, top/flop or other lists that sort dimension objects in ascending or descending order based on the given criteria.

DeltaMaster lets you sort your data using the measure of your choice. Just select a measure directly from the column heading menu or drag it from your cockpit. If you choose the drag and drop option, *DeltaMaster* will automatically create a new, user-defined measure if necessary. Let's say, for example, you are preparing a sales analysis for *Chair Inc.* and you want to show the gross margin variance in a pivot table. If you drag and drop the cell containing the actual margin into a *Ranking* analysis, *DeltaMaster* will create a filter measure (if it doesn't already exist), which you can then use in any other cockpit or analysis.

You will notice that the user interface reacts differently depending on where you drop the measure. If you drop it into a column headline, *DeltaMaster* will not automatically calculate the ranking so that you can set other

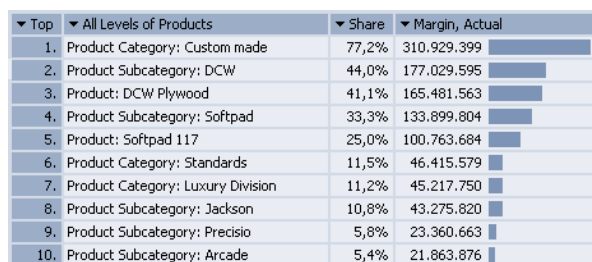
parameters and then *Calculate* when you are ready. If you drop the measure anywhere else within the preview pane, *DeltaMaster* will immediately execute the calculation.



The screenshot shows a software interface with a 'Margin' header and a table of values. Below it, a 'My Analysis for View (1): Ranking' window is open. The window has a 'Base Methods' list on the left with 'Ranking' selected. The main area shows a table with columns for 'Top', 'Product', 'Share', and '(Select Measure)'. The table contains four rows of data.

Top	Product	Share	(Select Measure)
1.	~	# %	#
2.	~	# %	#
3.	~	# %	#
4.	~	# %	#

In a similar way, you determine in which dimension you want the members sorted. You can either drag a dimension or hierarchy from *My view* into the analysis window or you can select the desired dimension level directly from the column heading menu. This route gives you the further option to run a ranking across *all levels*.



The screenshot shows a software interface with a table of values. The table has columns for 'Top', 'All Levels of Products', 'Share', and 'Margin, Actual'. The table contains ten rows of data.

Top	All Levels of Products	Share	Margin, Actual
1.	Product Category: Custom made	77,2%	310.929.399
2.	Product Subcategory: DCW	44,0%	177.029.595
3.	Product: DCW Plywood	41,1%	165.481.563
4.	Product Subcategory: Softpad	33,3%	133.899.804
5.	Product: Softpad 117	25,0%	100.763.684
6.	Product Category: Standards	11,5%	46.415.579
7.	Product Category: Luxury Division	11,2%	45.217.750
8.	Product Subcategory: Jackson	10,8%	43.275.820
9.	Product Subcategory: Preciso	5,8%	23.360.663
10.	Product Subcategory: Arcade	5,4%	21.863.876

When you view the top-ten list on your right, you may be surprised that the product "DCW Plywood" (#3) generates more margin than the entire collection of standard models (#6). This function also

¹ Stay tuned to future editions to learn how to incorporate rankings into pivot tables.

helps you uncover compensating effects, such as when an object on a subordinate level has a greater value than one on an higher level.

Your current view and the *Analysis Context* of the chosen measure determine which dimensions can be used in rankings. When working with a virtual cube (which is a composition of multiple physical cubes in MS Analysis Services 2000 – the same applies to measure groups within an AS2005 cube), you will be dealing with measures that are located in only one of the underlying base cubes (or measure groups, respectively) and can thus only be sorted by their dimensions.

In the left-hand column you can change the direction of the ranking. If you choose *Top*, *DeltaMaster* will start the list with the largest value and continue in descending order. If you select *Bottom*, the list will begin with the smallest value and proceed in ascending order. The *Top and Bottom* option creates a top/flop comparison with both an ascending and a descending list.

▼ Top	▼ Product	▼ Share	▼ Margin, Actual	▼ Bottom	▼ Product	▼ Share	▼ Margin, Actual
Top	id	41,1%	165.481.563	1.	Discus Office	0,0%	-13.466
Bottom		25,0%	100.763.684	2.	Ergoplus Basic	0,0%	-1.195
• Top and Bottom		5,4%	21.693.640	3.	Discus Comp	0,0%	6.677
Settings...		5,4%	21.582.180	4.	Arcade AM 77	0,0%	168.339
▼ Softpad 217		5,2%	21.040.295	5.	Precisio LM	0,0%	183.502
6.	Precisio LF	4,8%	19.239.475	6.	Ergoplus Nova	0,1%	300.618

Since *DeltaMaster* calculates the best and worst performers by default, you can switch among these views without needing a separate database query. If you want to export your ranking to PowerPoint, *DeltaMaster* 5.2.1 (and higher) gives you the option of a one or two list output and offers appropriate wildcards².

The horizontal bar in each row further illustrates the actual and relative size of the objects. If you prefer an alternative or additional graphical presentation, you can select one from the View menu.

The *Share/Difference* column ranks the individual object against the total of all objects in the current view of the selected dimension.

- If the sorting criterion is an additive measure, such as revenue, *DeltaMaster* will render the *Share* of the single value to the total value of all objects in the current view. In the column headline you can switch to see the *Difference* of the total sum and the individual value. The additivity of a measure is defined in its *properties* (*General* tab).
- If the sorting criterion is *not additive*, such as a relative margin variance, *DeltaMaster* will automatically render the *Difference* of the individual value as the average of all objects. If you then switch back to *Share*, *DeltaMaster* will then reveal how the individual value compares to the average, which is set at 100%.

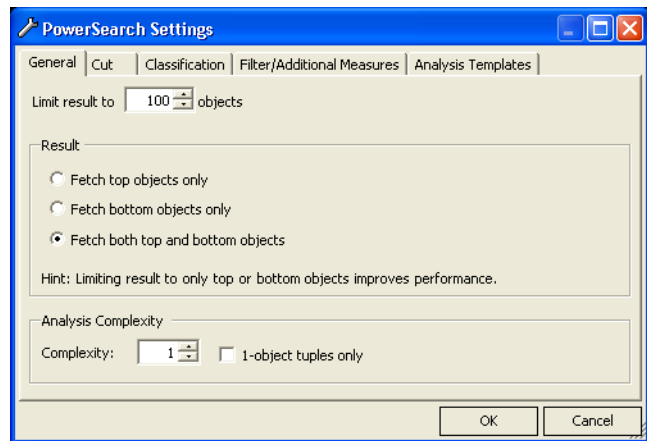
▼ Top	▼ Product	▼ Share	▼ Margin, Actual
1.	DCW Plywood	41,1%	165.481.563
2.	Softpad 117	25,0%	100.763.684
3.	Jackson ZZ	5,4%	21.693.640
4.	Jackson 10	5,4%	21.582.180
5.	Softpad 217	5,2%	21.040.295
6.	Precisio LF	4,8%	19.239.475

▼ Top	▼ Product	▼ Diff.	▼ Margin, Dev. Actual-Bud...
1.	Jackson ZZ	+34,0%	28,4%
2.	Precisio LM	+16,1%	10,5%
3.	Arcade AM 77	+15,5%	9,9%
4.	Discus Office	+14,7%	9,1%
5.	Ergoplus Basic	+13,7%	8,1%
6.	Ergoplus Senso	+13,2%	7,7%

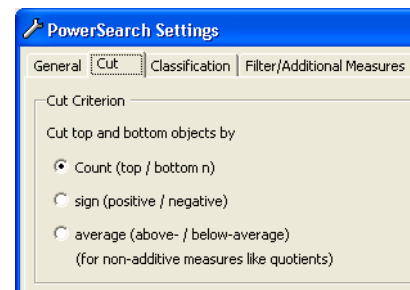
Using the context and *I want to...* menus, you can show and hide the *Share* and *Difference* column at any time.

² See *DeltaMaster deltas!* 5.2.1, feature 22 for further information.

When working with large data volumes, you can improve response times by altering the *Settings*. You can make database queries faster, for example, by limiting the number of database records. If you do so, you may find that the sum of the percentage values in the *Share* column does not add up to 100%. This occurs because *Share* is calculated based on the total value of the objects in the current view, including those that are not displayed. This condition is documented in the legend. You can generate even faster results if you only *Fetch top or bottom objects*.



DeltaMaster classifies the periphery between the top and bottom objects as the *Cut*. Using the *Cut* tab, you can determine how *DeltaMaster* should separate the objects: based on the *Count* (number of objects set in the *General* tab), the *Sign* (which is helpful for variance analysis) or the *Average* (for quotients and other non-additive measures). *Sign* and *Average* ensure that objects are not duplicated in both lists. If you select *Count* and the set limit (doubled) is larger than the number of objects, however, some objects will fall into both categories.



You can create a very data-dense report, when you display additional values in the list. *Chair Inc.*, for example, uses a sales statistic showing margin, turnover, and units sold. The easiest way to add additional measures is to press and hold the CTRL key while dragging the desired measure into the analysis window. Use the *Hide filter* or *Remove filter* options in the column heading menu to remove these values from your view.

▼ Top	▼ Product	▼ Share	▼ Margin, Actual	Turnover	Units Sold
1.	DCW Plywood	41,1%	165.481.563	459.069.011	1.521.735
2.	Softpad 117	25,0%	100.763.684	107.855.087	592.202
3.	Jackson ZZ	5,4%	21.693.640	28.732.501	290.476
4.	Jackson 10	5,4%	21.582.180	60.569.798	1.395.809
5.	Softpad 217	5,2%	21.040.295	74.653.591	1.000.906
6.	Precisio LF	4,8%	19.239.475	44.680.163	598.717

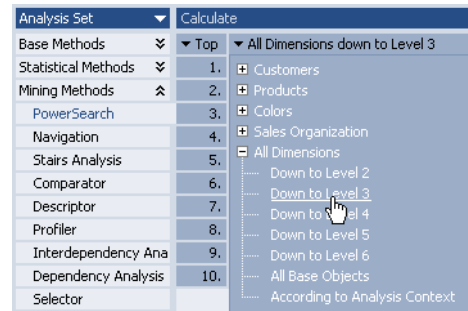
If you want to learn more about a given object in your ranking, double click its name or use the *Drill-in* menu option to take the object over to the view (analysis chain technique) and continue your analysis.

PowerSearch

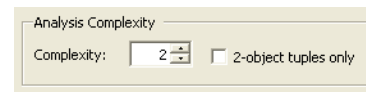
PowerSearch goes beyond “traditional” ranking to offer data mining functionality. While a ranking can only sort objects in a single dimension, *PowerSearch* works across one or more dimensions. This way, you can search an entire OLAP cube and retrieve interesting findings without ever leaving your current view. This one-step process saves you a tremendous amount of time.

The usability and options that you now know from *Rankings* also apply for *PowerSearch* with a few slight differences in the settings and the dimension selection process.

With *PowerSearch*, you can select *All Dimensions* in addition to the dimension lists used in *Rankings*. When you choose all dimensions, *DeltaMaster* searches all available dimensions of the cube and retrieves a list of the biggest and smallest objects. Dimensions are available for analysis when they are incorporated in the analysis context *and* they are not located on a base member in the view. Alternatively, you can limit your analysis to the top levels. If you choose “down to level 3” in the *Chair* data model, for example, the customer dimension would only include “country” and “region”, and the product dimension would only contain the “Product Category” and “Product Subcategory” levels. If you select *All Base Objects*, however, *DeltaMaster* will only search the base members (i.e. leaves) in the various dimensions.



Another *Settings* option is *Analysis Complexity*, which signifies how many dimensions can or must be combined to the objects that will be sorted. A setting of “1” means that the objects will be directly observed and only have one dimension. The resulting list looks as if you had created a ranking for each individual dimension of your data model and then took the biggest individual objects in the dimension for a new ranking. If you select an analysis complexity of 2 or higher, objects combining two or more dimensions are possible: e.g. “Product Category: Standard Models. Region: South”. The check box regulates if *DeltaMaster* should only search for object combinations (i.e. tuples) containing the given number of dimensions or if it should serve as the maximum level, which means that items combining fewer dimensions can also be retrieved.



Questions? Comments?

Just contact your Bissantz team for more information!