

# DeltaMaster clicks!

## 04/2009

Greetings, fellow data analysts!

Mr View says, "I determine what this report reports." – "I beg to differ, I can handle my views on my own. After all, I have my own axis definition!" Mr Report contradicts. With this imaginary dialogue, we have assigned a voice to two DeltaMaster components that go hand in hand whenever pivot tables are asked for: the *View* and the *Report* or *Cockpit* windows. And even if it sounds like a little dispute: In perfect unity, both are responsible for the final structure of our table or chart and for its values. The difference of opinion mentioned above is quickly arbitrated when the tasks are clearly allocated. And that's exactly what this edition of *clicks!* is about: We'll show and explain how your *View* and *Axis definition* work together – in harmony!

Best regards,

Your Bissantz & Company team



### Bissantz in best of 'Wirtschaftsinformatik'

WIRTSCHAFTSINFORMATIK, a German journal on business information systems, is celebrating its 50th anniversary. In a commemorative issue, the journal reprinted a selection of the best articles over the past fifty years – including a 1993 abstract titled 'Data Mining' by Dr. Nicolas Bissantz and Dr. Jürgen Hagedorn. In a recent blog entry, Bissantz summarized his lessons learned in 16 years of data mining. Check it out! <http://blog.bissantz.com/data-mining-2009>.

### Executive Forum: 'From Guerilla Controlling to Management Intelligence'

25 May 2009, Berlin

Automation, visual standards, maximum resolution, sparklines and graphical tables – whether on paper, PCs or PDAs – have been long recognized as best practices among 'the best'. Join us as these pioneers explain their strategies to success and share insight on their next steps. [www.bissantz.com/executive](http://www.bissantz.com/executive)

### transport logistic 2009

12 – 15 May 2009, Munich

At this logistics trade fair, we will be presenting our *DeltaMiner* solutions for transportation and warehouse management in cooperation with our partner *active logistics*. [www.active-logistics.com](http://www.active-logistics.com)

### DeltaMaster@Work

23 April 2009, Nuremberg

Create reports that say something! [www.bissantz.com/dm@w](http://www.bissantz.com/dm@w)

### Bissantz Campus

Our training courses for *DeltaMaster* and Microsoft SQL Server/Analysis Services [www.bissantz.com/campus](http://www.bissantz.com/campus)

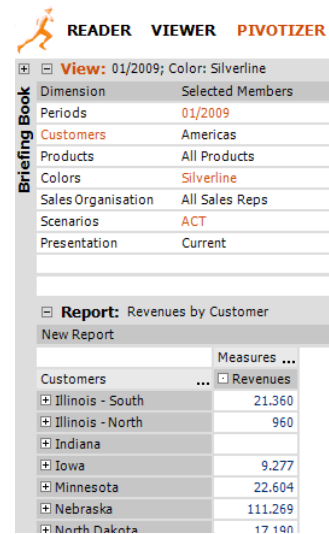
### Archive

[www.bissantz.com/clicks/en](http://www.bissantz.com/clicks/en)

## Tip of the month *Selecting Members in the View or Pivot Table*

If you regularly work in *DeltaMaster's* Viewer level or higher, you probably are already familiar with the *View* function, which lists the dimensions of your data model. Here you can select the desired dimension members, in other words, the different types of business information that will be referenced in the underlying report. The view and report (or cockpit) are linked to each other. As a result, if you change your view in the time dimension from December 2008 to January 2009, you will immediately see this change in the report or cockpit.

If you regularly use *DeltaMaster* in *Pivotizer* level or higher, you probably also know that you can also select members in pivot tables under the *Axis definition*.



How does this selection differ from that in the view? How does this affect how you work with the table? We will explore these and other questions in the next few pages.

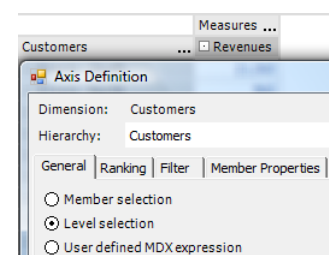
### *'In' or 'on top of' the report*

Although your selection in the *View* influences which values will be displayed, the selected members will not necessarily appear as rows or columns in the pivot table. Therefore, by selecting a member in the *View*, you are describing the context in which the reported values will be seen. This is one fundamental difference. *DeltaMaster* will display the view description as a text row above the report. The illustration above shows a simple pivot table from our 'Chair' reference model. It shows the January 2009 revenues for the 'Silverline' color – yet, the report does not contain any references to time or colors. The customers, however, are listed in the axis, which is why *DeltaMaster* has highlighted them in orange in the *View window*.

### *Selection options in the axis definition*

The *Axis definition*, which you can open by clicking the ellipsis (...) after 'Customers', offers four different ways to select members:

- Choose *Member selection* to explicitly select the desired members using the *Dimension browser* – just as you would in the *View* window. This type of selection is sometimes referred to as a 'pick list'.
- Use *Level selection* to choose members based on their respective hierarchy level, for example, all members on the product group or customer level. You can synchronize this option with the current view, which we will explain further below in detail.



- A *user-defined MDX expression* allows you to describe the desired number of members using MDX query language.
- The *Tuple selection* comes into play when you are working with nested dimensions (i.e. when you want to combine members from several hierarchies on an axis). This option is not listed in the screenshot on page 2 because our sample table does not contain any nested dimensions. For more information on the *Tuple selection* function, please refer to *DeltaMaster clicks!* 1/2009.

Generally, the settings in the *Axis definition* overrule those in the *View* window. This always applies for the *Member selection*, *User-defined MDX expressions* and the *Tuple selection*. In these cases, *DeltaMaster* will ignore the respective dimension; this is signaled in the *View* window through parentheses.

### *Synchronizing the member selection with the view*

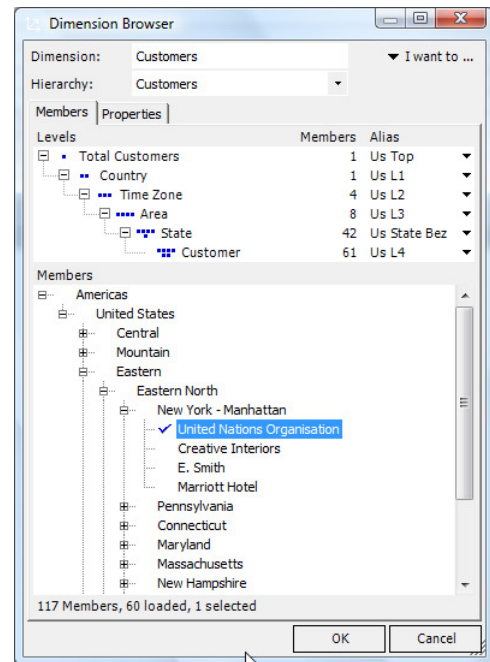
- Synchronize with Current View
- Synchronize Level with Current View Level

The *Level selection* is an exception because it can either dynamically follow the view or overrule it. You can define this setting in an option stored on the *General* tab in the *Axis definition*.

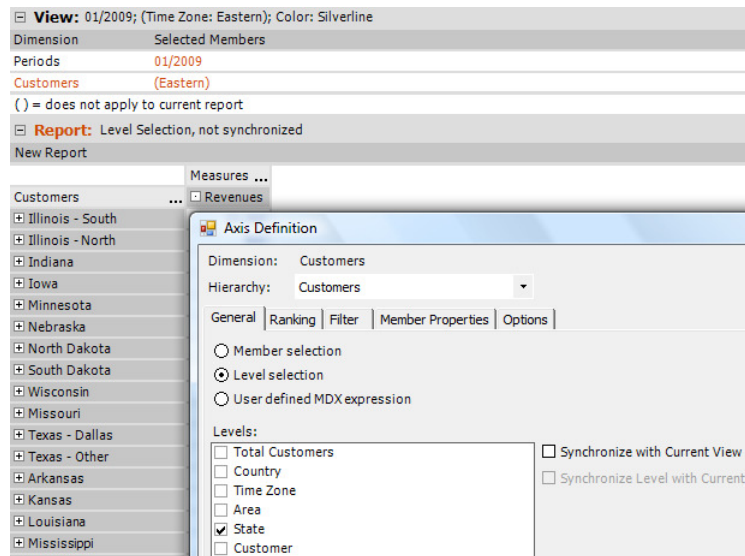
- If you do not want to *synchronize [the selection] with the current view* (option = deactivated), *DeltaMaster* will display all members of the selected level(s) in the table regardless what is selected in the *View* window. The members appear as individual rows or columns in the report.
- When you *synchronize [the selection] with the current view* (option = activated), the *View* window will determine which members are to be displayed.

Which members *DeltaMaster* lists in the pivot table, however, depends on two factors: the levels that are selected in the *Axis definition*, and those that belong to *View* members. Only members on the levels defined in the *Axis definition* will be displayed. You could create a selection on a higher level in the *View* window but the subordinate members – and not the higher level itself – will be placed in the report. *DeltaMaster* can display *View* members on levels that are lower than those in the *Axis definition* if you activate the second option (i.e. *Synchronize with the current view levels* – see below for more information).

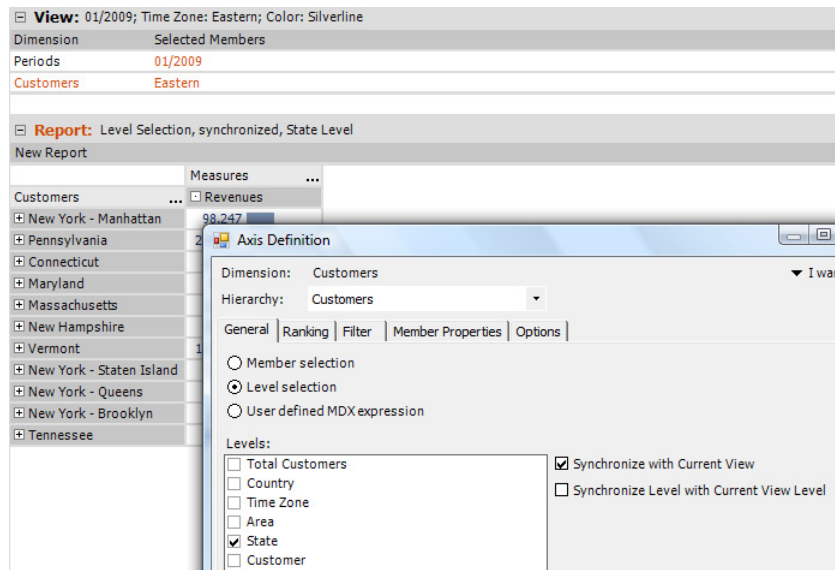
Let's look at an example. The screenshot on your right shows the customer dimension of our reference model. 'Customers' has six levels as we can see in the dimension browser.



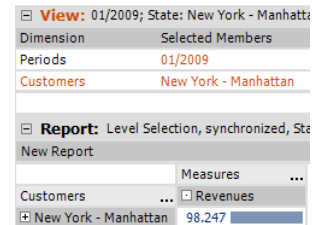
In our pivot table, we have activated the *Level selection* and deactivated the *synchronization*. As a result, *DeltaMaster* will not apply the 'Eastern' selection in the *View* window and has placed it in parentheses accordingly. The table shows all members on the 'State' level.



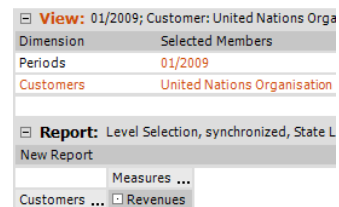
In the report on your right, we have kept the 'State' level but synchronized the View selection so that 'Eastern' is activated. As a result, the pivot table only shows the members of the states in the 'Eastern' time zone.



If we change our View to show the state for 'New York - Manhattan', DeltaMaster will list this single member.

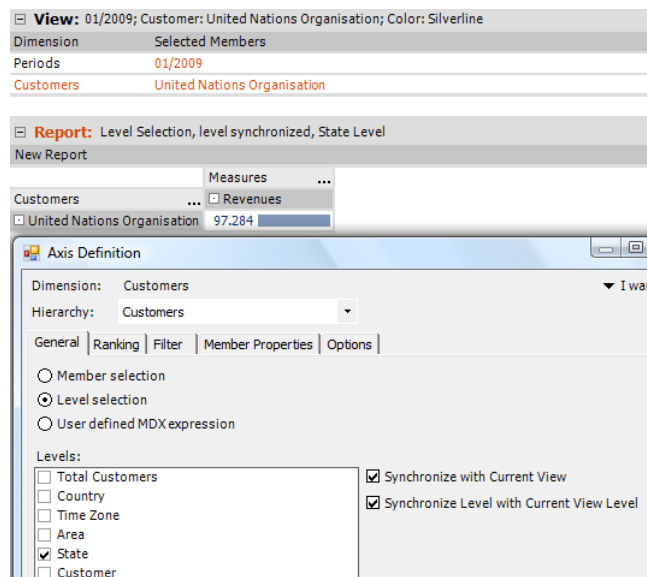


If you select 'United Nations Organisation', the table will remain empty because the individual customer in this case is positioned lower than the state in the hierarchy. As a result, this information cannot be displayed in the table.



### Synchronizing levels with the current view level

You can change the behavior for members on lower levels (as described above) using the second option on the *General* tab. If you also want to *Synchronize the level with the current view level*, DeltaMaster will also display the View members in the pivot table provided that they are located on a level that is lower than the one defined in the axis definition. This option takes effect as needed – as if you had reserved this axis for a lower level.



## Effects

Therefore, when you are working with pivot tables, it does make a difference where you have selected the members. The two most important things to consider are:

- Users working in *Viewer* mode cannot access the *Axis definition*. If these users should be able to change their views interactively, the parameters belong in the *View* and not should not bound to the pivot table.
- If you drag and drop a value from the pivot table into an analysis method, *DeltaMaster* will automatically generate an appropriate measure (i.e. filter measure) if it does not already exist. It will create one filter for each dimension that is incorporated in the pivot table – but not for the current setting of the view. The screenshots below illustrate the difference between more general (left) and more specific (right) filter measures. When the view is identical, both options will deliver the same results. In general, the flexible option (as seen on your left) is preferable.

**View (400):** 01/2009; Time Zone: Eastern; Color: Silverline

**Cockpit for View (400):** Level Selection, level synchronized, State Level

Customers	Revenues
New York - Manhattan	98.247
Pennsylvania	254.992
Connecticut	13.639
Maryland	4.428
Massachusetts	11.460
New Hampshire	25.704
Vermont	133.301
New York - Staten Island	33.612
New York - Queens	
New York - Brooklyn	2.195
Tennessee	19.262

11 rows, 1 column; 11 elements

**Analysis for View (400):** Revenues by Product in Manhattan

Base Methods	Top	Product	Share	Revenues, New York - Manhattan
Ranking	1.	Arcade AM 55	89,2%	87.655
Cross Table Analysis	2.	Arcade AM 66	5,8%	5.696
Concentration Analysis	3.	Arcade AM 77	5,0%	4.896

**View (400):** 01/2009; Time Zone: Eastern; Color: Silverline

**Cockpit for View (400):** Level Selection, level synchronized, State Level, with Time and Colors

Revenues	Periods	Colors
New York - Manhattan	01/2009	
Pennsylvania		Silverline
Connecticut		
Maryland		
Massachusetts		
New Hampshire		
Vermont		
New York - Staten Island		
New York - Queens		
New York - Brooklyn		
Tennessee		

11 rows, 1 column; 11 elements

**Analysis for View (400):** Revenues by Product in Manhattan \*

Base Methods	Top	Product	Share	Revenues, New York - Manhattan, 01/2009, Silverline
Ranking	1.	Arcade AM 55	89,2%	87.655
Cross Table Analysis	2.	Arcade AM 66	5,8%	5.696
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## Selecting superior and subordinate elements

Another important difference is related to selecting superior and subordinate elements.

In the *View* window, a multiple selection primarily serves to select elements that are supposed to be aggregated. If, for instance, in a customer dimension, you select “Americas” and “United States”, *DeltaMaster* supposes that the sum of “Americas” and “United States” is meant. Obviously this does not make much sense because one should not add parts of a total to the total itself. This is the reason why “it is not allowed to jointly select subordinate and superior members”, as the according *DeltaMaster* message hints if one attempts to do so.

A certain exception are dimensions that appear in the report itself. The synchronization with the current view (the option in the *axis definition* described above) leads to the result that instead of an aggregation being calculated, the selection from the *View* window takes over control about which rows or columns will be shown in the pivot table. However, nothing changes in the *View* window; as before, a valid

combination of members must be set – and thus cannot contain superior and subordinate members at one time.

Contrary, the element selection within the *axis definition* serves to pick those elements that are supposed to be displayed as rows or columns in the pivot table. A multiple selection here will not be interpreted as a command to aggregate the corresponding values, but instead to show them in the resulting table. This is why the *Dimension Browser* does not show any signs of protest in this case even if you pick superior and subordinate elements together.

### *Questions? Comments?*

Just contact your Bissantz team for more information!