


# DeltaMaster clicks!

## 06/2006

Dear Data Analysts,

The Association for the German Phonographic Industry laments that its members have been suffering from reduced levels of turnover now for some years. In 2005 their turnover "only" reached  1.5 billion euros. Among the causes are the availability and unchecked use of technologies to copy and reproduce recordings. Copying in this instance is the simple reproduction of something that already exists, meaning that the idea of multiplicity is almost turned on its head: after all, you're not getting multiple variants, but countless copies of one and the same thing.

If you want an example of how things can work differently, of how copying can be a creative and constructive process with new and interesting consequences, take a look at the *Folder Generator* in *DeltaMaster*. You only need a few reports as your starting point – and you will find you can look at your company from a wide range of angles: intelligent copying technologies that benefit you and can be used so quickly and easily that you'll hopefully find you have time on your hands to enjoy a good CD.

Kind regards,

Your team from Bissantz & Company

### DeltaMaster 5.1.7

We have recently released a new version of *DeltaMaster*. A print function, PDF export and new functions for Flexreports are among the new features. The planning option was further expanded. The current version is available as a download to all our customers and partners. [www.bissantz.de/login](http://www.bissantz.de/login)

### DeltaMaster@Work

The next free workshop for getting to know our solutions will take place on June 29, 2006 in Nuremberg. Please register by sending an email to Mr. Liepins: [liepins@bissantz.de](mailto:liepins@bissantz.de)

### Archive

To read previous issues of *DeltaMaster clicks!* go to: [www.bissantz.de/clicks](http://www.bissantz.de/clicks)



### OLAP Intensive Seminar from June 6 – 8, 2006

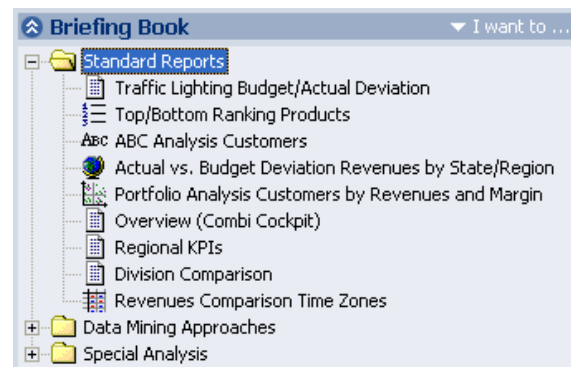
Three days of getting down to business in Nuremberg: Our project specialists invited to watch them at up close and personal as they show you how to set up Data Warehousing Systems, from data processing with the aid of SQL through OLAP modeling to programming using MDX. If you wish to attend next time, please contact Mr. Manns: [manns@bissantz.de](mailto:manns@bissantz.de) [www.bissantz.de/aktuell](http://www.bissantz.de/aktuell)

## Trick of the Month Copying reports with the folder generator

In the August 2005 issue of DeltaMaster clicks!, we introduced you to *Report Server*, which takes tiresome tasks off your hands such as the updating, alteration and distribution of reports. The *Report Server* enables the automatic creation of report files, either at the request of the user or at set time intervals, as a *DeltaMaster* Analysis Session, as a Word or Excel document or in PDF format, and their delivery to the correct recipients either by email or via the file system to the relevant folders on a file server.

The *Folder Generator*, an individual module within *Report Server*, also automates process steps that have to be repeated, but in a different respect: it does not create additional files, but additional reports and/or additional folders in the *Briefing Book* of a specific analysis session. New reports with specific views arise very simply from just a few basic reports, which serve as a "template" for the generator.

As an example, let's look at the Briefing Book shown on the right from our demonstration application *Chair*. It includes the folder "Standard Reports", whose reports promise insights from various different angles:



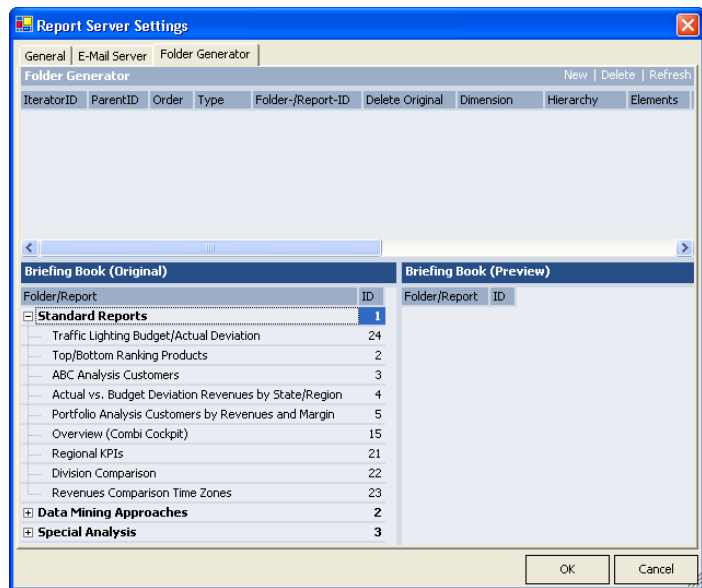
- For example, you might like events in the sales regions to be presented as overall data, in our example this means aggregated for the whole country; on the other hand, you would also like to perform the same analyses for each individual time zone (Eastern, Central, Mountain, and Pacific) and display the results of these.
- Furthermore, you would find it interesting not only to cast light on the regional structures, but also to investigate the product dimension and execute standard reports for each of the product groups or main groups (in our example, standard, luxury and custom made models).
- The trick then consists of combining the two reports to be produced and delivering figures for each individual product group in each individual region (regional product management).

This all sounds like a load of work – but the *Folder Generator* takes care of it for you. The central concept behind the *Folder Generator* is something known as iterators. In general terms, an iterator is a variable by means of which all elements of a set can be itemized and processed individually. In our specific context, iterators serve to define a single, specific view for every report that is to be generated. Each iterator is assigned a dimension whose members it itemizes and processes.

The *Folder Generator* is configured individually for each *Report Server* job. Select a job in *Report Server* and call up its *Settings*.



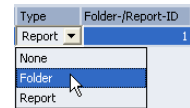
The *Folder Generator's* dialog box is divided into three parts. In the section at the top, you manage the iterators. In the bottom left, the *Briefing Book* of the selected analysis session is displayed, just as you are accustomed to from "normal" *DeltaMaster* sessions. In the bottom right, you receive a *Preview* of how the *Briefing Book* will look after all the iterations on request. This function is particularly useful for testing what effect the iterators will have, before *DeltaMaster* creates the actual reports and calculates the figures.



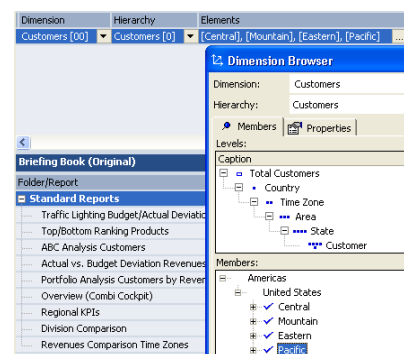
### Defining folder iterators

Let's start with a simple iteration: say you want to calculate the basic analyses for the sales regions North, South, East and West, and store each of them in its own folder.

- Create a *New Entry*. The *IteratorID* identifies the iterator uniquely; it is assigned automatically by the system.
- Select the "Folder" *Type*. This determines that the repeat operations apply to an existing report folder – specifically the report folder named in the field *Folder/Report ID*. The ID expected here is the same as those displayed in the window *Briefing Book (Original)*. Therefore, if we want to copy the basic analyses, the ID is 1, for the special analyses it would be 3.



- In the next step, you specify the dimension members through which *DeltaMaster* is to iterate by selecting the *Dimension*, the *Hierarchy* and finally the *Members* desired. The *Dimension Browser* assists you in the usual ways, so you can for example select several members by holding down the *Ctrl* key, even over different levels, and consecutive areas of members can be selected by holding down the *Shift* key. Alternatively, you can also enter an MDX expression.



- By making a selection under *Target Book* you control where the new report folders are to be stored: on the highest level of the book ("Root"), on the same level as the original folder ("Sibling") or as a sub-folder of the original folder ("Child"). We'll decide to use "Child" in this instance, so that the aggregated analyses form the frame and more specialized views are subordinate to them.

Before going into more detail about the further parameters, let's take a look at the outcome of the configuration. When you click on *Update*, *DeltaMaster* displays a preview of the new briefing book.

Underneath the original folder "Basic Analyses," there are now four new folders with specific views and names to go with them. As you can see from the "open" folder for the West region, all the reports contained in the original folder have been copied and adjusted to the view.

Briefing Book (Preview)	
Folder/Report	ID
[-] Standard Reports	1
Traffic Lighting Budget/Actual Deviation	24
Top/Bottom Ranking Products	2
ABC Analysis Customers	3
Actual vs. Budget Deviation Revenues by State/Region	4
Portfolio Analysis Customers by Revenues and Margin	5
Overview (Combi Cockpit)	15
Regional KPIs	21
Division Comparison	22
Revenues Comparison Time Zones	23
[+] Standard Reports (Central)	4
[+] Standard Reports (Mountain)	5
[+] Standard Reports (Eastern)	6
[-] Standard Reports (Pacific)	7
Traffic Lighting Budget/Actual Deviation (Pacific)	52
Top/Bottom Ranking Products (Pacific)	53
ABC Analysis Customers (Pacific)	54
Actual vs. Budget Deviation Revenues by State/Region (Pacific)	55
Portfolio Analysis Customers by Revenues and Margin (Pacific)	56

### Combining folder iterators

Analog to the above, you can now define further iterators that run through any other elements of your choice. If, as mentioned in the example at the beginning, we also want to provide the product perspective in the briefing book and therefore define a second iterator for this dimension, we get a picture as the one shown on the right. *DeltaMaster* first iterates through all the members selected in the customer dimension, and then through all the members we marked in the product dimension. Once again, the folder with ID 1, the basic analyses, was selected as the "original" and once again, the *Target Book* was specified as a "Child".

Briefing Book (Preview)	
Folder/Report	ID
[-] Standard Reports	1
Traffic Lighting Budget/Actual Deviation	24
Top/Bottom Ranking Products	2
ABC Analysis Customers	3
Actual vs. Budget Deviation Revenues by State/Region	4
Portfolio Analysis Customers by Revenues and Margin	5
Overview (Combi Cockpit)	15
Regional KPIs	21
Division Comparison	22
Revenues Comparison Time Zones	23
[+] Standard Reports (Central)	4
[+] Standard Reports (Mountain)	5
[+] Standard Reports (Eastern)	6
[+] Standard Reports (Pacific)	7
[+] Standard Reports (Luxury Division)	8
[+] Standard Reports (Custom made)	9
[+] Standard Reports (Standards)	10
[+] Data Mining Approaches	2

### Nesting

The *Folder Generator's* particular charm lies in its ability to also perform iterators nested within one another. The key to this is the *ParentID* field, which expresses whether the iteration is dependent on others (in this case the field is empty) or whether the cycle is to be performed for each member of a superordinate list; in the latter case, the ID of the superordinate list is to be given as the *ParentID*.

An example clearly demonstrates the principle: The Products dimension has the iterator no. 2 – i.e.

Folder Generator						
IteratorID	ParentID	Order	Type	Folder-/Report-ID	Delete Original	Dimension
2		0	Folder	1	<input type="checkbox"/>	Customers [00]
3	2	1	Folder	1	<input checked="" type="checkbox"/>	Products [02]

Customers – as its "parent". Therefore, processing of the Product members for each individual member of the "external" cycle will be triggered via the Customer members. Or, to put it the other way round: for each member that we have selected in the Customer dimension, *DeltaMaster* will start a new cycle for the Products. This creates the desired "nesting" effect and we get the following briefing book.

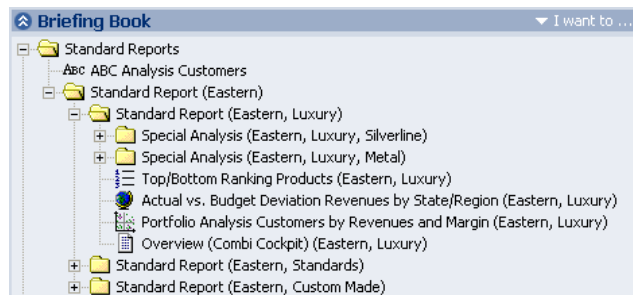
We have left the reports contained in the folders out of the picture, so that the nesting becomes more apparent. Further options are described below.

Since the iterators with *ParentIDs* are able to refer to their direct predecessors, you can take nesting to any depth you desire. Bear in mind the combinatorics: if you carry out nested iteration of three dimensions with five members each, your briefing book will reach 125 folders.



In this briefing book, three dimensions are nested in one another: customers, products and groups of materials. The iterators were configured with differing briefing books: standard reports for customers and products, special analyses for the groups of materials.

Once you have defined the iterators as desired, leave the *Settings* dialog by clicking on *OK* and carry out the job in *Report Server*.



### Further Parameters

There are a few parameters we haven't mentioned yet: checking the *Delete Original* option results in the folder that is serving as the "copy template" being deleted after reproduction along with all its sub-folders and reports. *Target ID* and *Target Index* only apply to iterators of the "Report" Type and determine for these iterators in which folders and precisely where the generated reports are to be inserted.

If you choose the option *IncludeSubFolders*, *DeltaMaster* also reproduces all sub-folders in the selected folder and all the reports that they hold; otherwise, just the folder itself, and the reports contained in it, will be reproduced. The *IncludeSubReports* option causes folders and the reports they contain to be processed; if the option is not active, *DeltaMaster* only replicates the organizational structure, but does not create any reports.

The *Folder Generator* is a most flexible tool that can save you a lot of time and work. If you haven't worked with it so far, we'll be happy to help you take your "first steps" and set up the Generator with you.