

Step by Step Guide on How to Use Cell Definition in BEx Query



Applies to:

SAP BI 7.0. For more information, visit the [EDW homepage](#).

Summary

This article explains the functionalities of Cell Definition in BEx Query Designer. It provides a step by step guide on how to use Cell Definition to fulfill a real-time business requirement.

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Authors Bio

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Introduction

Cell definition is a useful functionality of BEx Query Designer which helps us to uniquely define each cell that is present at the intersection of two structures. Hence, this feature becomes enabled in Query Designer only when we are using two structures in the report. By Default, key-figures are always displayed in a Report as part of a structure. To activate cell definitions, we use one more structure and then explore the functionalities of Cell definitions.

Business Scenario

Here we are developing a Sales Report.

The requirement is to display the sales revenue from different types of sales in one column and then display those figures as a percentage in the next column.

However, there are two special requirements to add, as show in the table below.

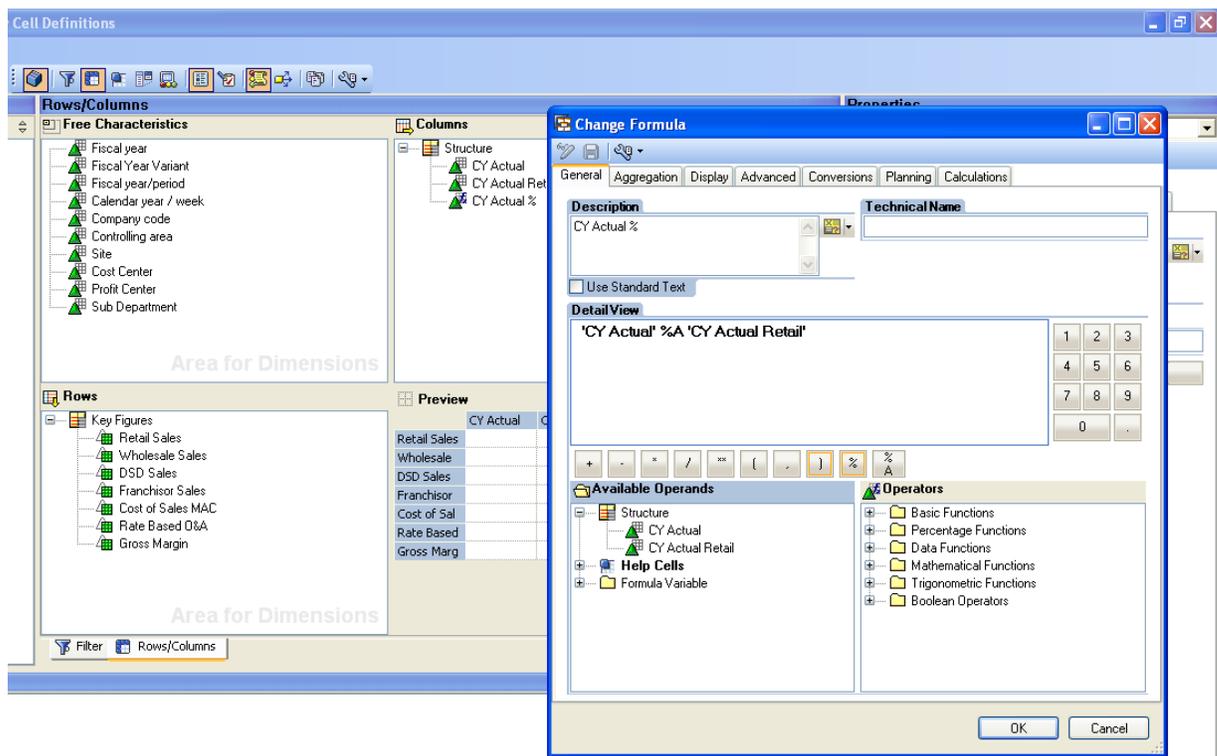
1. The Percentage figures should not be displayed for Retail Sales and Wholesale Sales.
2. The Percentage Figures shall not be based on the Total sales; it shall be based on one of the sales figure, say Retail Sales.

	CY Actual	CY Actual %
Retail Sales	Amount in INR	blank
Wholesale Sales	Amount in INR	blank
DSD Sales	Amount in INR	= (CY Actual DSD Sales / CY Actual Retail Sales) %
Franchisor Sales	Amount in INR	= (CY Actual Franchisor / CY Actual Retail Sales) %
Cost of Sales MAC	Amount in INR	= (CY Actual Cost of Sales MAC / CY Actual Retail Sales) %
Rate Based O&A	Amount in INR	= (CY Actual Rate Based O&A / CY Actual Retail Sales) %
Gross Margin	Amount in INR	= (CY Actual Gross Margin / CY Actual Retail Sales) %

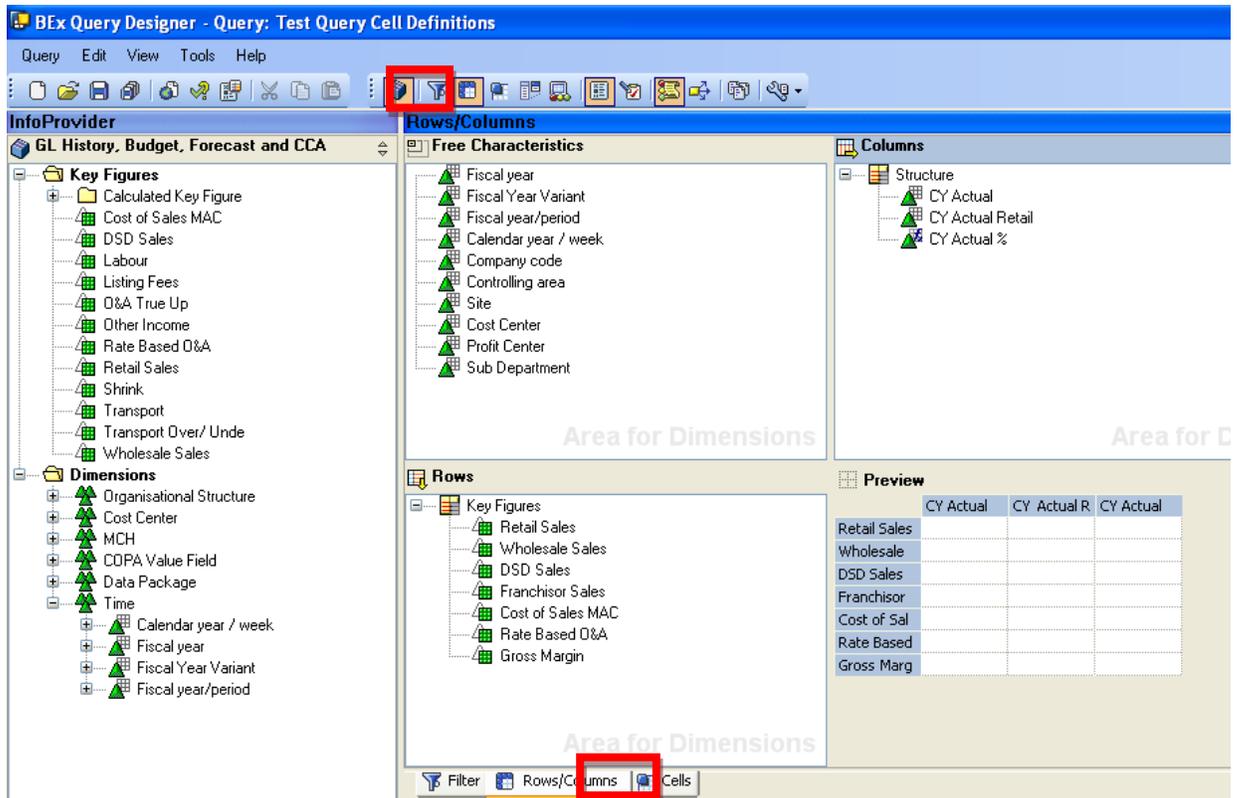
To achieve these, we shall use the cell definitions.

Step by Step Process

1. Create a BEx query with the required key-figures and free characteristics.
2. We create a structure in the column with 2 selections under it – one for CY Actual and another for CY Actual of Retail Sales. CY Actual can be restricted with any selection that is required throughout that column. Here I have restricted it by info provider.
CY Actual Retail is the selection that we shall require in columns, so that we can use it in the formula for CY Actual %. But the value in this column should be always the value that comes at the intersection of Retail Sales and CY Actual. It should be independent of the Keyfigure structure in Rows. We shall use Cell definitions to achieve this
3. We define a formula for CY Actual % as “CY Actual %A CY Actual Retail.

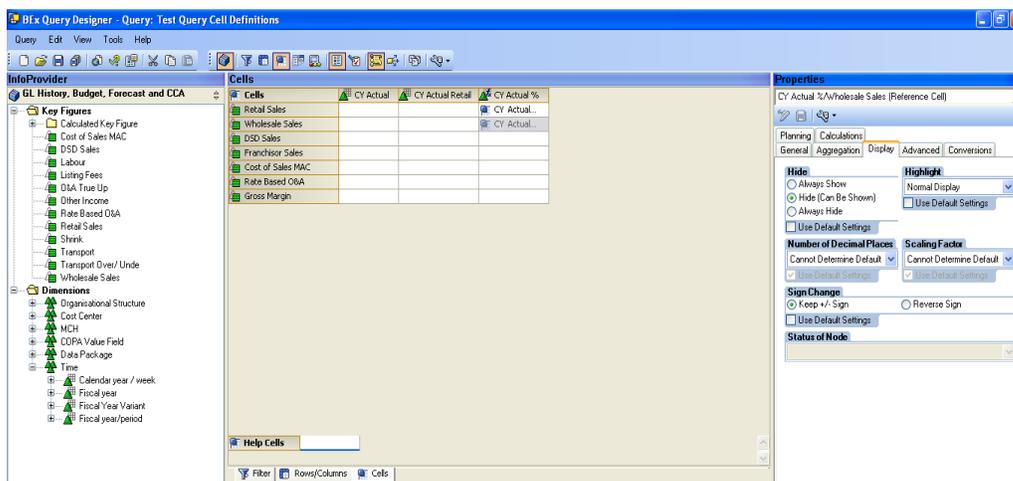


- Now the Cell definition is active and we can click its icon to bring in the Cells Tab. Click the Cells tab to go to the cell definition area.



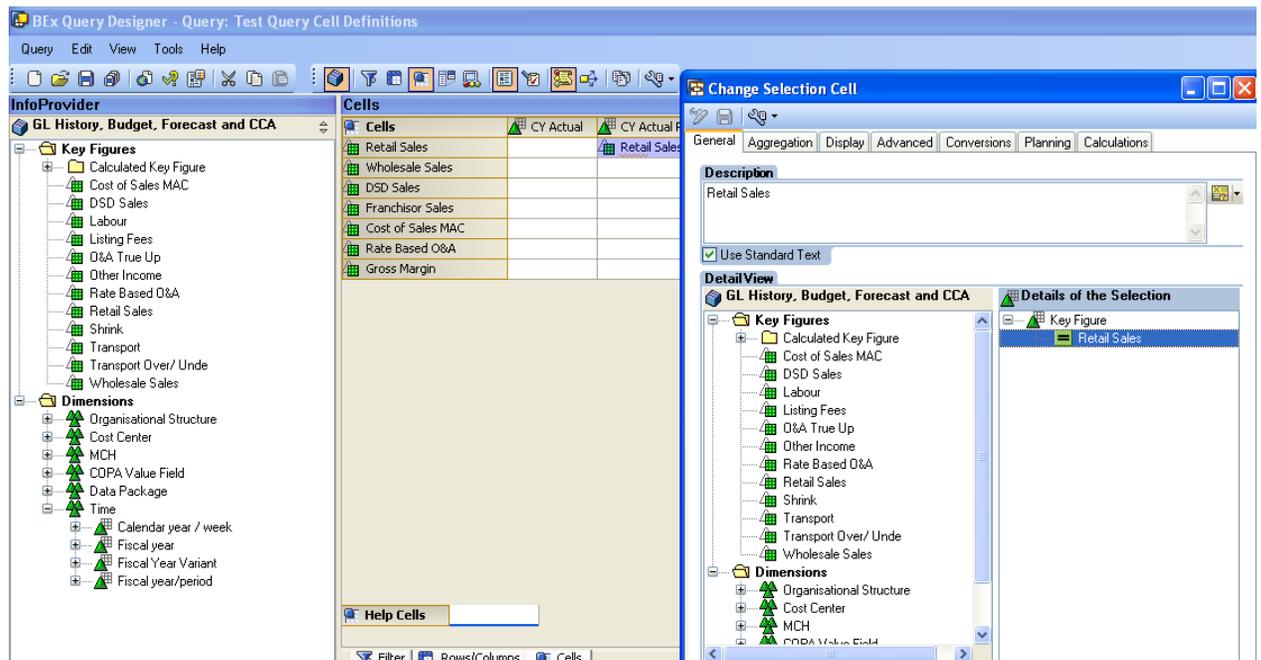
This tab shows both the structures on either side along with the empty cells devoid of any definitions. We shall begin with the simplest settings, the display settings. We do not need the CY Actual% values to be displayed in the first two rows.

- We can define the data display settings per cell. For this, we have to create a cell reference first by right clicking on the specific cells.
- In the display properties, we have the option to change the display settings. As we do not need CY Actual% Values to be displayed for the first two rows, we can do that here.

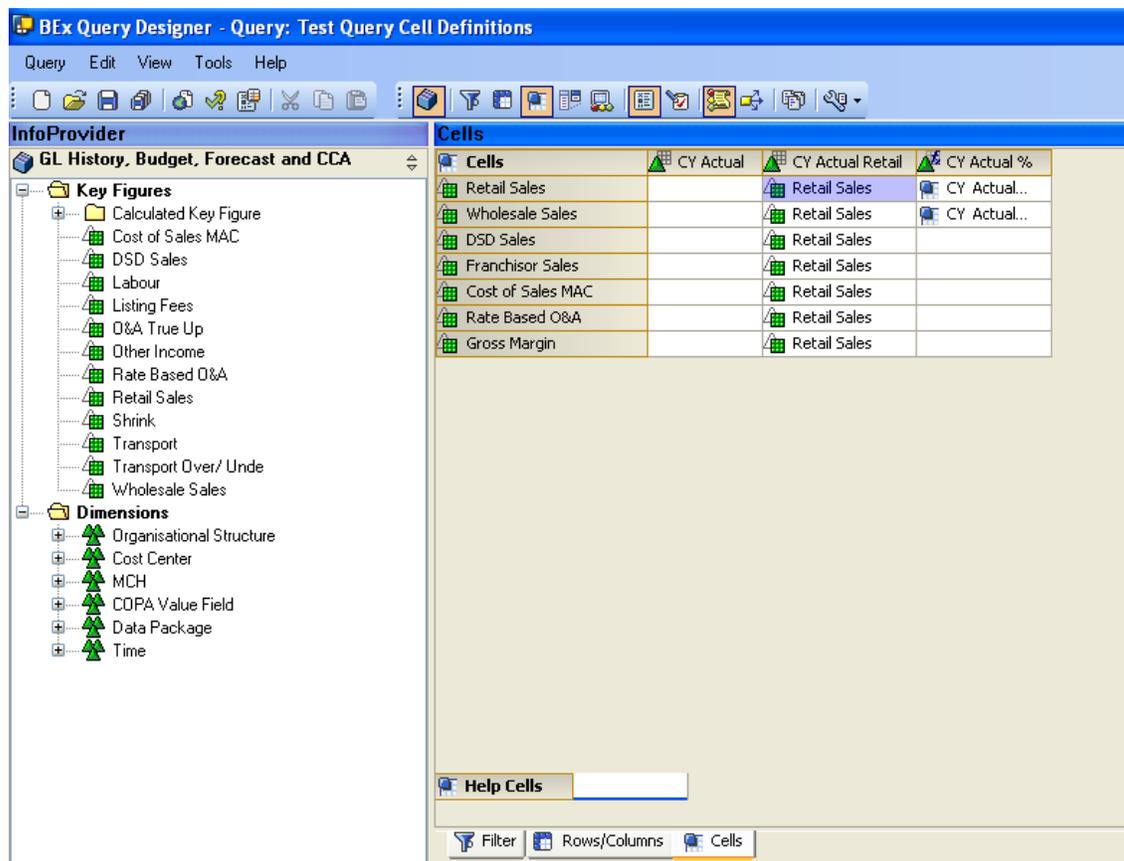


Next we proceed with the cell definitions for the selection of CY Actual Retail.

- Right click on the first cell in the column and create a new selection. In the selection box, note that the key-figures are again available for selection, although we had already used them up once in the Key-figure structure. We restrict the Selection with Retail Sales Key-figure.



Since this selection is required throughout the column, we can right click and copy the selection and paste it in all the remaining cells.



- The query is now ready to satisfy the two special requirements. Value for CY Actual Retail is independent of the key-figure structure, and the first two cells of the CY Actual% shall be blank.

The screenshot shows a Microsoft Excel spreadsheet titled "Test.xls [Compatibility Mode] - Microsoft Excel". The ribbon includes Home, Insert, Page Layout, Formulas, Data, Review, View, and Add-Ins. A security warning states "Macros have been disabled." The spreadsheet content is as follows:

Row 1: Test Query Cell Definitions

Row 2: Author GHORMES Status of Data 02/4/2011 10:17:14

Row 3: Chart Filter Information

Row 14: Table

	CY Actual	CY Actual Retail	CY Actual %
Retail Sales	10000.00 INR	10000.00 INR	
Wholesale Sales	8000.00 INR	10000.00 INR	
DSD Sales	2000.00 INR	10000.00 INR	20.00 %
Franchisor Sales	3500.00 INR	10000.00 INR	35.00 %
Cost of Sales MAC	5000.00 INR	10000.00 INR	50.00 %
Rate Based O&A	4000.00 INR	10000.00 INR	40.00 %
Gross Margin	7500.00 INR	10000.00 INR	75.00 %

Using Formulas in Cell Definition

Now we shall see how we can use cell definition for formulas. For this, we will have to create the elements required in the formula as help cells.

Let us assume that the formula for CY Actual % is not the same for all the cells in that column. For eg: CY Actual % of DSD Sales = (CY Actual DSD Sales / CY Actual Wholesale Sales) %. In this case, we will have to define the formula by cell. We begin by creating DSD Sales and Wholesale Sales as Help cells.

1. Right click by the side of Help Cells tab and select new selection. This way we can create 2 selections based on DSD Sales and Wholesale Sales.

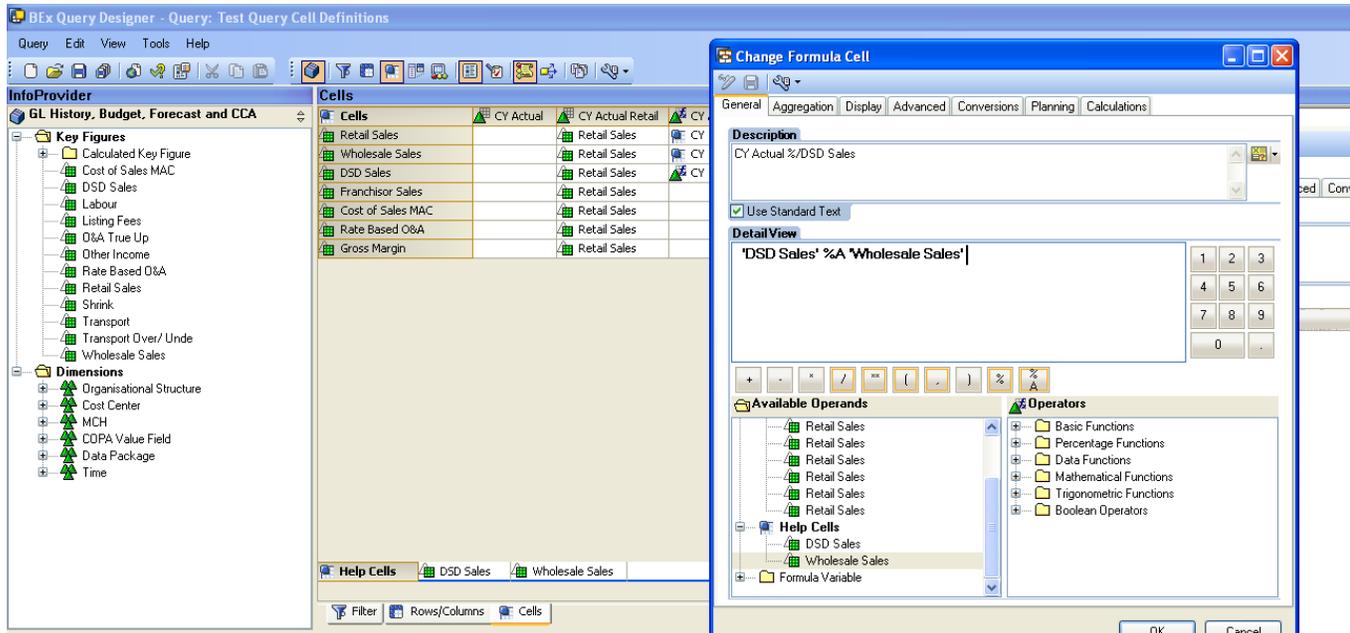
The screenshot shows the BEx Query Designer interface. The main window displays a table with the following columns: Cells, CY Actual, CY Actual Retail, and CY Actual %. The table contains the following rows:

Cells	CY Actual	CY Actual Retail	CY Actual %
Retail Sales		Retail Sales	CY Actual...
Wholesale Sales		Retail Sales	CY Actual...
DSD Sales		Retail Sales	
Franchisor Sales		Retail Sales	
Cost of Sales MAC		Retail Sales	
Rate Based O&A		Retail Sales	
Gross Margin		Retail Sales	

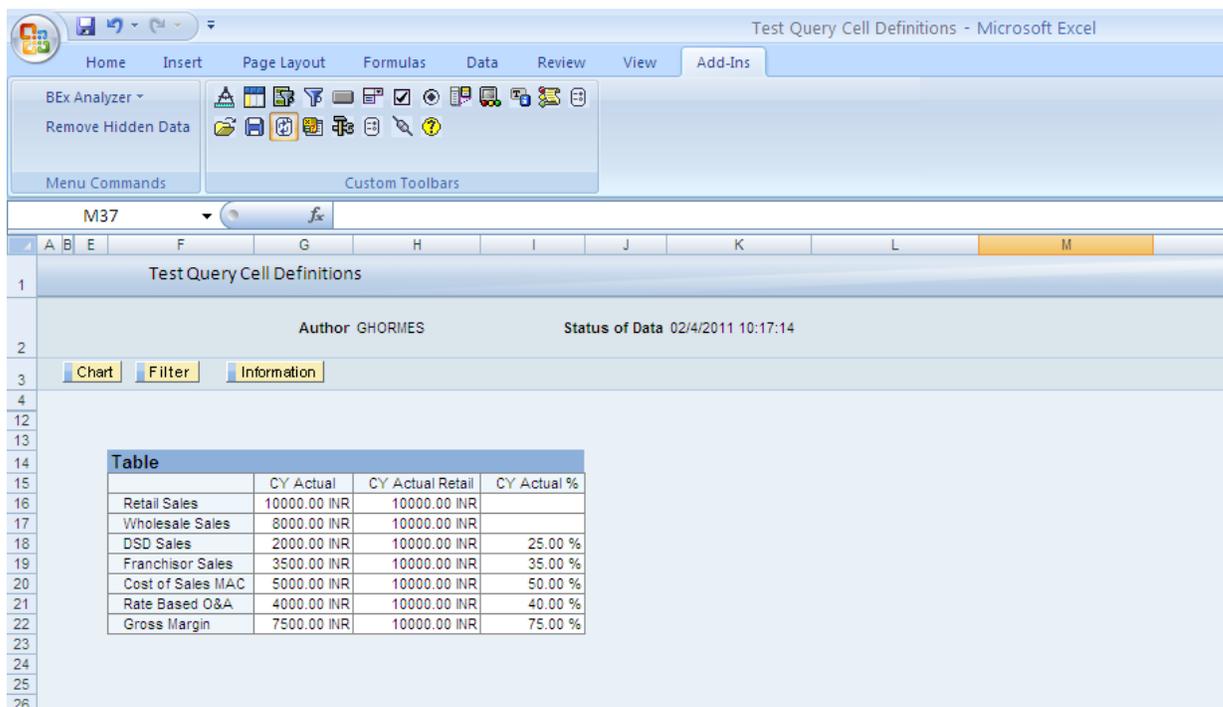
The 'InfoProvider' pane on the left shows a tree structure under 'GL History, Budget, Forecast and CCA' with 'Key Figures' and 'Dimensions' sections. The 'Help Cells' tab is selected, and a context menu is open over it, showing the following options:

- New Cell Reference
- New Selection
- New Formula

- Next we create a new formula at the intersection of DSD Sales and CY Actual % and define it as DSD Sales upon Wholesale Sales.

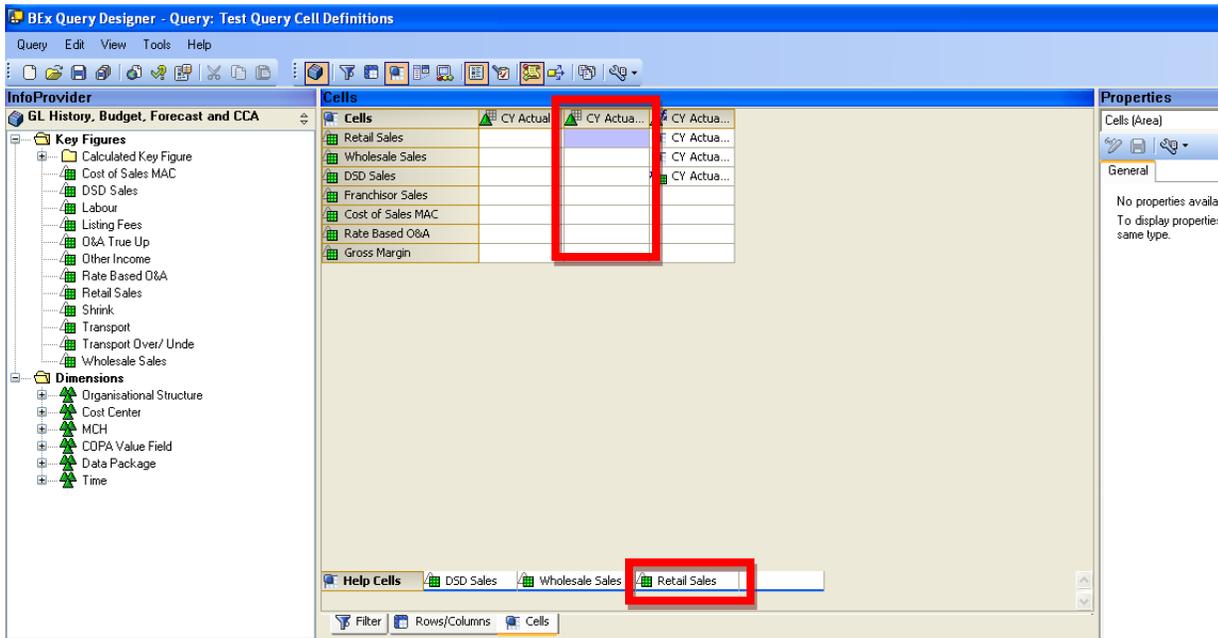


When we run the report, we can see that the value of CY Actual% for DSD Sales has changed from 20% to 25 % due to the new formula.

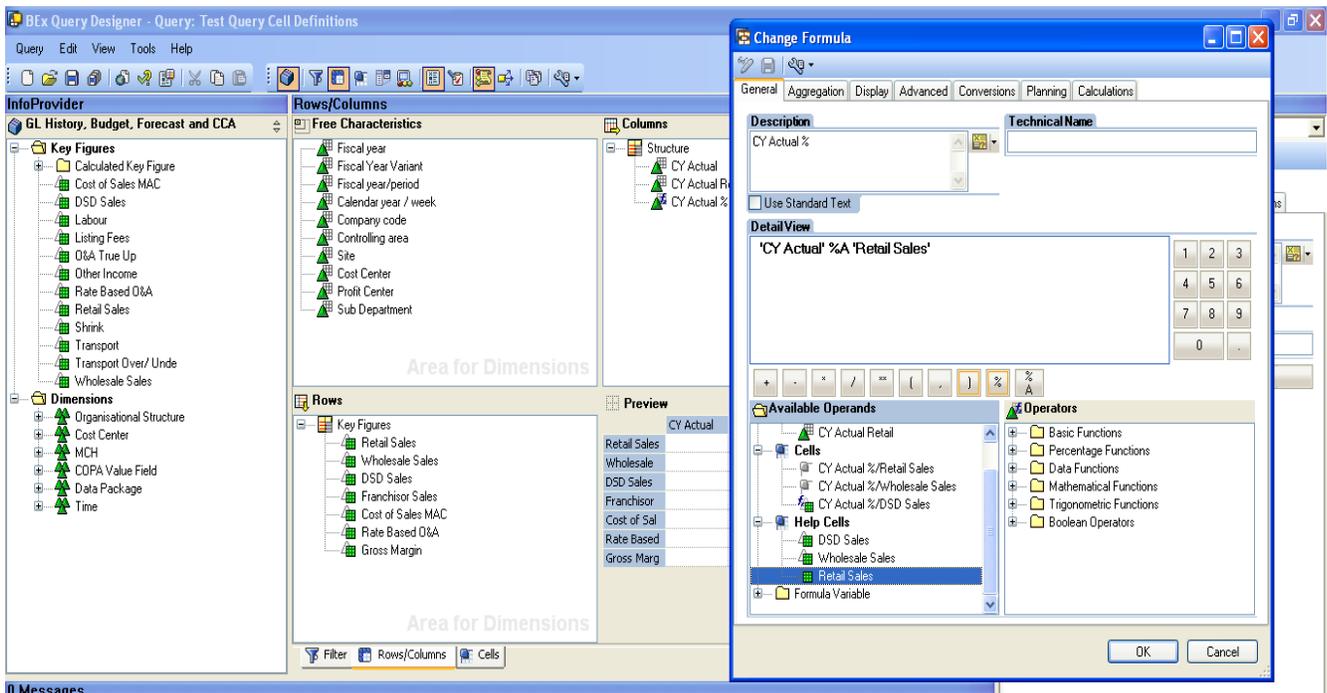


Using Help Cells in Structures

Once Help cells are defined, we can also use them in structures as per query requirements. Here we create a help cell for CY Actual Retail Sales and use it in the structure to replace Step 7 mentioned above. In this case we can remove the Cell definitions in the second column.



We can change the Formula definition in structure to replace the Selection with the Help Cell of Retail Sales.



Now we do not need the second Selection "CY Actual Retail Sales" in Column Structure.

Note: When we use Help Cells in a structure, the Structure cannot be saved as a reusable structure.

BEx Query Designer - Query: Test Query Cell Definitions

Query Edit View Tools Help

InfoProvider GL History, Budget, Forecast and CCA

Key Figures

- Calculated Key Figure
 - Cost of Sales MAC
 - DSD Sales
 - Labour
 - Listing Fees
 - O&A True Up
 - Other Income
 - Rate Based O&A
 - Retail Sales
 - Shrink
 - Transport
 - Transport Over/ Unde
 - Wholesale Sales
- Dimensions**
 - Organisational Structure
 - Cost Center
 - MCH
 - COPA Value Field
 - Data Package
 - Time

Free Characteristics

- Fiscal year
- Fiscal Year Variant
- Fiscal year/period
- Calendar year / week
- Company code
- Controlling area
- Site
- Cost Center
- Profit Center
- Sub Department

Columns

- Structure
 - CY Actual
 - CY Actual %

Rows

- Key Figures
 - Retail Sales
 - Wholesale Sales
 - DSD Sales
 - Franchisor Sales
 - Cost of Sales MAC
 - Rate Based O&A
 - Gross Margin

Preview

	CY Actual	CY Actual
Retail Sales		
Wholesale		
DSD Sales		
Franchisor		
Cost of Sal		
Rate Based		
Gross Marg		

Filter Rows/Columns Cells

2 Messages

Related Content

[Exception Cells](#)

For more information, visit the [EDW homepage](#)

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