

IBM Cognos Proven Practices: IBM Cognos BI – Freezing Crosstab Row Headers

Nature of Document: Tip or Technique; Product(s): IBM Cognos Report Studio; Area of Interest: Reporting

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This document describes a technique which applies column freeze functionality similar to Microsoft Excel on Crosstab row headers using IBM Cognos BI Report Studio toolbox items and JavaScript.

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Introduction

Purpose

This document describes a technique which applies column freeze functionality similar to Microsoft Excel on Crosstab row headers using IBM Cognos BI Report Studio toolbox items and JavaScript.

Applicability

The technique outlined in this document was validated using IBM Cognos BI 10.1.1 using the GO Data Warehouse (query) sample package.

Assumptions

This document assumes experience with IBM Cognos BI Report Studio.

Exclusions and Exceptions

The steps outlined in this document are applicable only in the HTML output version of the IBM Cognos Report Studio report.

The width of the row headers to be frozen, collectively do not exceed the screen width.

This technique requires the use of undocumented and unsupported capabilities in IBM Cognos BI. There may be a risk associated with this technique in that support for these capabilities may change or be dropped entirely in some future release.

This technique was created as a proof of concept and does not cover all usage scenarios. This technique should be thoroughly tested before being used on a live IBM Cognos BI system.

Overview

In some cases, crosstab report data is so extensive that it becomes difficult to analyze measures along with their respective row headers. There may also be instances where you are working with limited real estate in dashboard-style reports. The approach described in this document can aid with this problem by freezing row headers for the data while allowing users to scroll through the columns of measures.

Another approach to achieve similar results can be found in the document titled *Report Studio Freeze Panes With Scripting* which is available on IBM developerWorks at the following URL, <http://www.ibm.com/developerworks/data/library/cognos/page242.html>

That approach requires the hosting of a .JS file while this approach is self contained within the IBM Cognos Report Studio report.

Apply Row Freeze Functionality in a Crosstab

In this example we will create a new report using the GO Data Warehouse (query) sample package.

1. Open **IBM Cognos BI Report Studio**, select the **GO Data Warehouse (query)** package, and then create a new blank report.
2. From the **Toolbox** tab, add a table with two columns and one row to the report.
3. Insert a **Block** object in both cells of the newly created table.
4. Insert a **Crosstab** object within the Block object of the left table cell.
5. From the **Source** tab, navigate to **Sales and Marketing (query) > Sales (query)**, and then, from **Products**, add **Product line** to the **Rows** drop zone.
6. Nest **Product type** to the right of Product line.
7. From **Time**, add **Year** to the **Columns** drop zone, and then from **Order method**, nest **Order method type** under **Year**.
8. From **Sales** fact, add **Quantity** to the **Measures** drop zone.
The crosstab appears as shown below.

Illustration 1: Crosstab report inside Block object in the left table cell

Quantity		<#Year#>		<#Year#>	
<#Product line#>	<#Product type#>	<#Order method type#>	<#Order method type#>	<#Order method type#>	<#Order method type#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>

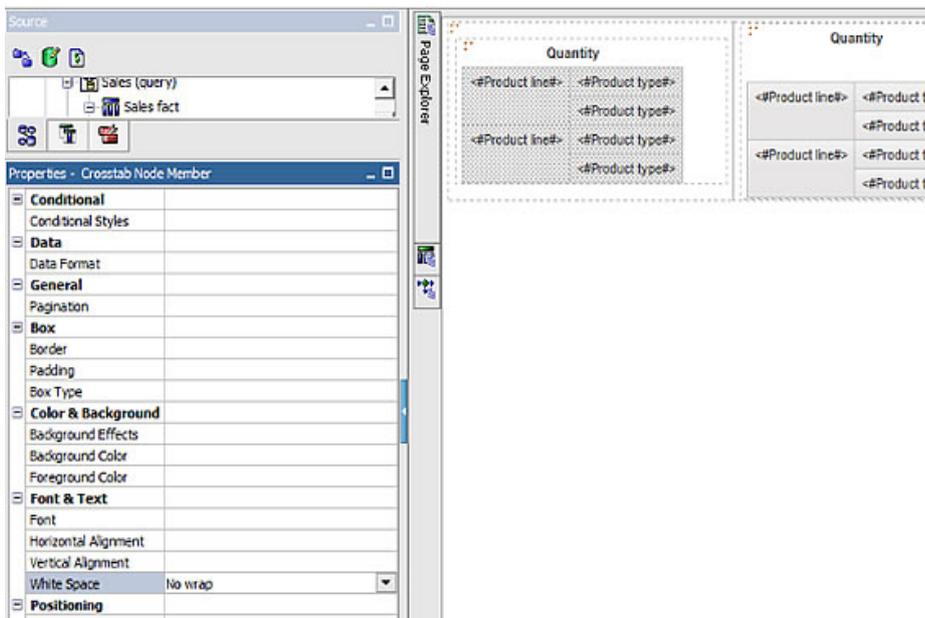
9. In the **Properties** pane, in the **Name** property, change the name of the crosstab to **leftCrosstab**.
10. Copy the crosstab into the Block object of the right table cell, and then name this crosstab **rightCrosstab**.
11. In the leftCrosstab object, multi-select the fact cells and crosstab node members above the fact cells. In this example, select the **Quantity** fact cells and the **Year** and **Order method type** crosstab node members, and the as shown in Illustration 2.

Illustration 2: leftCrosstab object with columns and fact cells selected

Quantity		<#Year#>		<#Year#>	
<#Product line#>	<#Product type#>	<#Order method type#>	<#Order method type#>	<#Order method type#>	<#Order method type#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>
<#Product line#>	<#Product type#>	<#1234#>	<#1234#>	<#1234#>	<#1234#>

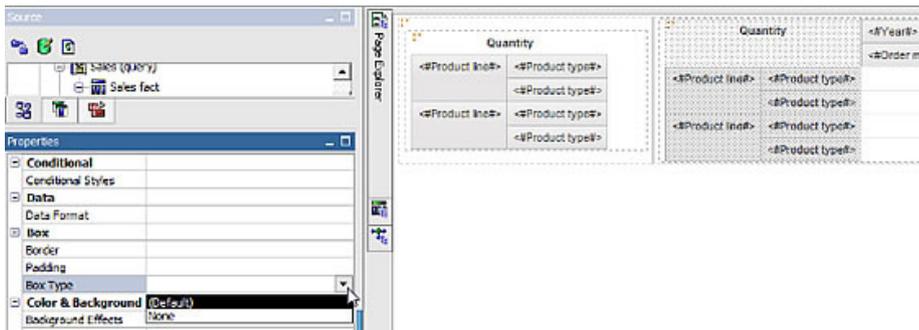
12. In the Properties pane change the **Box Type** property to **None**. This setting will hide those objects. To see the objects in the design UI again, in the **View** menu, navigate to **Visual Aids** and then select **Show Hidden Objects**.
13. In the leftCrosstab object, select the **Product line** and **Product type** crosstab node members , and then in the Properties pane, change the **White Space** property to **No wrap** as shown in Illustration 3.

Illustration 3: leftCrosstab object with White Space property set to No Wrap



- In the rightCrosstab object, select the row crosstab node members and crosstab corner and change the Box Type property to **None**. In this example select the **Product line** and **Product type** crosstab node members, and the **Quantity** crosstab corner as shown in Illustration 4.

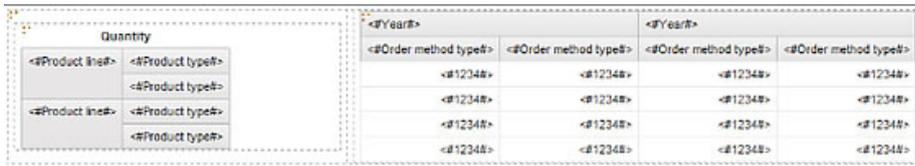
Illustration 4: rightCrosstab object with rows and crosstab corner selected



as in Illustration 5.

The two crosstabs appear

Illustration 5: leftCrosstab and rightCrosstab objects after hiding respective columns, row and crosstab corner

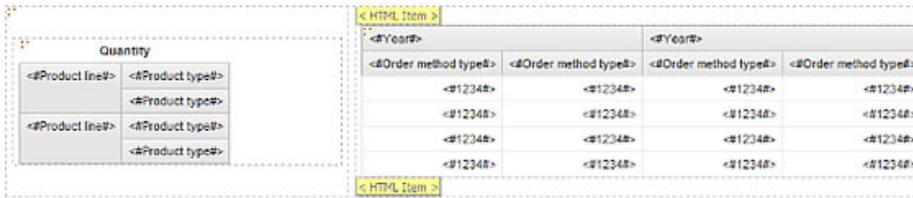


Now, we need to set the

size of the scrollable block for the the right side crosstab.

- From the Toolbox tab, add an **HTML Item** above and below the right Block object. If you have difficulty placing the HTML Items, you can use the **Page Structure** option under the **View** menu to navigate to the correct locations.

Illustration 6: HTML Items added above and below the right side Block object



16. Double-click the top **HTML Item**, and then copy the following HTML code into the dialog box.

```
<div id="freeze" style=" overflow:auto; overflow-y: hidden; white-space:nowrap; width:375px;">
```

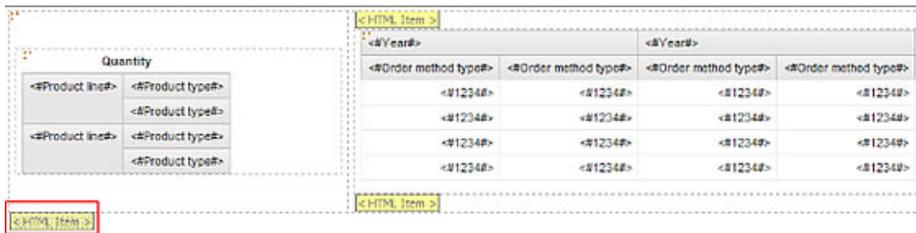
You need to replace the number 375 with the width in pixels you want. Try to set the width such that the whole crosstab fits the width of the desired area.

17. Double-click the bottom HTML Item, and then copy the following HTML code into the dialog box.

```
</div>
```

18. Select the right **Block** object, in the Properties pane, open the **Padding** dialog, and set the bottom padding to **14 px**. This will ensure the scrollbar under the crosstab does not obstruct any of the data.
19. Add an **HTML Item** below the table as shown below in Illustration 7.

Illustration 7: HTML Item added below the table



The next step will add JavaScript to account for changes in screen resolution for consumers' machines. In the first HTML code added in this example, the width of the right block was set to a specific size in pixels in a <div> tag. To adjust this width based on the user's screen resolution, the following JavaScript code is used.

20. Double-click the **HTML Item** below the table, and then add the following JavaScript code.

```
<script>
var original_width = 1280; // Original screen width in which report was developed
var current_width = screen.width; // Detects width of the screen
if(current_width != original_width)
{
//Get width of the 'right' block
var set_width = parseInt(document.getElementById("freeze").style.pixelWidth);
if ((set_width + current_width - original_width) > 0)
{
//Add the difference of current screen width and
// original screen width to adjust the block size
set_width = (set_width + current_width - original_width) +"px";
document.getElementById("freeze").style.width = set_width;
}
}
</script>
```

You need to change the number '1280' with width of your design screen resolution.

21. Select the left table cell, in the Properties pane, open the **Size & Overflow** dialog and set the width to **1%**.
22. You will need to change the height of the Crosstab corner of the leftCrosstab object to set the alignment of both the Crosstabs. In this example, **43 px** was used.
23. Run the report. It appears with a scroll bar below the Crosstab columns, as shown in Illustration 8, which allows the user to vertically scroll through the columns without affecting the position of the Crosstab rows.

Illustration 8: Crosstab report with scroll bar below columns

Quantity		2004						
		Telephone	Fax	Mail	E-mail	Special	Web	Sales visit
Camping Equipment	Cooking Gear	742,989	110,593	81,983	339,574	45,317	1,051,138	533,526
	Lanterns	304,218	25,353	29,338	156,175	14,626	375,328	205,139
	Packs	140,259	11,473	16,401	76,816	8,902	201,801	90,251
	Sleeping Bags	177,625	19,797	20,132	86,446	10,420	241,481	112,618
	Tents	153,791	22,132	17,334	74,300	12,709	256,573	128,495
Golf Equipment	Golf Accessories	184,494	20,717	26,950	117,044	17,181	196,957	49,968
	Irons	22,996	3,120	4,288	14,105	2,284	25,954	6,162
	Putters	116,117	13,922	16,083	64,648	4,620	103,523	27,459
	Woods	14,790	2,316	3,262	10,989	1,336	17,449	4,248
Mountaineering Equipment	Climbing Accessories							
	Rope							
	Safety							
	Tools							
Outdoor Protection	First Aid	114,088	15,281	14,260	54,115	10,591	164,954	77,689
	Insect Repellents	569,000	127,115	120,823	289,004	79,953	1,118,605	560,088
	Sunscreen	538,814	83,988	83,060	276,557	47,833	882,637	385,901
Personal Accessories	Binoculars	41,729	7,875	5,270	18,359	2,830	131,885	34,285
	Eyewear	363,265	106,029	5,294	182,579	14,925	3,376,414	17,904
	Knives	271,528	76,824	32,282	112,351	50,621	872,611	310,873
	Navigation	110,036	16,089	8,066	53,910	10,516	221,865	75,228

About the authors

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