

Potential
of One

Power
of
All

Absolute_Pixel_Width?

Taming Column Widths in the ExcelXP Tagset

```
WIDTH_POINTS = '12'
```

```
WIDTH_FUDGE  = '.0625'
```

```
ABSOLUTE_COLUMN_WIDTH  
= '<col widths in pixels>'
```

ExcelXP Tagset version: 1.130 (released 08/02/2013)



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Dylan Ellis, Mathematica Policy Research

Column Width Options in the ExcelXP Tagset

In his 2011 paper, "Creating Stylish Multi-Sheet Microsoft Excel Workbooks the Easy Way with SAS", Vince DelGobbo describes three parameters that control column widths in the ExcelXP tagset: WIDTH_POINTS, WIDTH_FUDGE, and ABSOLUTE_COLUMN_WIDTH.

- WIDTH_POINTS – point size from the data or header style elements
- WIDTH_FUDGE – uniform scale factor for column widths
- ABSOLUTE_COLUMN_WIDTH – width in characters of the longest value

Column widths are computed using the following formula:

ColumnWidth = **WIDTH_POINTS** * **WIDTH_FUDGE** * **ABSOLUTE_COLUMN_WIDTH**

New Option: ABSOLUTE_PIXEL_WIDTH

We can fix the first two parameters such that the third represents the number of pixels displayed in Excel. The ABSOLUTE_COLUMN_WIDTH then essentially becomes an ABSOLUTE_PIXEL_WIDTH. The necessary parameter values are:

WIDTH_POINTS = '12'

WIDTH_FUDGE = '.0625'

ABSOLUTE_COLUMN_WIDTH = '<column widths in pixels>'

For example, if we want the variable Region to be displayed in a column 204 pixels wide, we could specify ABSOLUTE_COLUMN_WIDTH = '204'.

A1		Width: 28.43 (204 pixels)	
	A	B	C
1	Region	Product	Subsidiary
2	United States	Boot	Chicago
3	United States	Men's Casual	Chicago

*Note: these parameter values may change with new versions of the tagset.

PROC PRINT of SASHELP.SHOES: Default column widths, as based on font size metrics and value lengths.

1	Region	Product	Subsidiary	Store	Sale	Inventory	Return
2	United States	Boot	Chicago	16	\$82,483.00	\$305,061.00	\$3,735.00
3	United States	Men's Casual	Chicago	26	\$408,978.00	\$831,672.00	\$17,907.00
4	United States	Men's Dress	Chicago	28	\$261,607.00	\$824,485.00	\$8,915.00
5	United States	Sandal	Chicago	2	\$601.00	\$17,121.00	\$35.00
6	United States	Slipper	Chicago	13	\$329,235.00	\$1,049,530.00	\$10,654.00
7	United States	Sport Shoe	Chicago	17	\$17,347.00	\$74,605.00	\$684.00
8	United States	Women's Casual	Chicago	11	\$172,021.00	\$474,524.00	\$5,399.00
9	United States	Women's Dress	Chicago	37	\$293,313.00	\$754,157.00	\$10,194.00
10	United States	Boot	Los Angeles	14	\$85,932.00	\$347,252.00	\$3,283.00
11	United States	Men's Casual	Los Angeles	9	\$177,010.00	\$401,199.00	\$6,336.00
12	United States	Men's Dress	Los Angeles	15	\$147,670.00	\$348,869.00	\$4,962.00
13	United States	Sandal	Los Angeles	2	\$737.00	\$20,838.00	\$38.00
14	United States	Slipper	Los Angeles	11	\$98,866.00	\$330,743.00	\$3,457.00
15	United States	Sport Shoe	Los Angeles	19	\$16,307.00	\$98,221.00	\$601.00
16	United States	Women's Casual	Los Angeles	6	\$62,661.00	\$231,285.00	\$2,346.00
17	United States	Women's Dress	Los Angeles	16	\$148,129.00	\$452,383.00	\$4,289.00
18	United States	Boot	Minneapolis	16	\$111,940.00	\$615,489.00	\$4,475.00
19	United States	Men's Casual	Minneapolis	16	\$263,712.00	\$564,741.00	\$9,991.00
20	United States	Men's Dress	Minneapolis	22	\$235,842.00	\$623,645.00	\$7,344.00

There is no autofit_width option in the ExcelXP tagset. However, if you manually autofit column widths in Excel, the resulting widths in pixels can be specified in the ABSOLUTE_COLUMN_WIDTH option.

```
ODS tagsets.ExcelXP Options( WIDTH_POINTS = "12" WIDTH_FUDGE = ".0625"  
ABSOLUTE_COLUMN_WIDTH = "204, 129, 126, 70, 117, 117, 95");
```

PROC PRINT of SASHELP.SHOES: Using above tagset options to mirror autofit column widths in Excel.

1	Region	Product	Subsidiary	Store	Sale	Inventory	Return
2	United States	Boot	Chicago	16	\$82,483.00	\$305,061.00	\$3,735.00
3	United States	Men's Casual	Chicago	26	\$408,978.00	\$831,672.00	\$17,907.00
4	United States	Men's Dress	Chicago	28	\$261,607.00	\$824,485.00	\$8,915.00
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15	United States	Sport Shoe	Los Angeles	19	\$16,307.00	\$98,221.00	\$601.00
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Managing Strings of Column Widths

The ABSOLUTE_COLUMN_WIDTH list can be cumbersome to manage, particularly when creating multiple reports using the same data set. Reordering columns, or simply expanding a column to accommodate a currency symbol, requires adjusting the correct values in the string.

Report A: PROC PRINT of SASHELP.SHOES, displaying all variables.

Region	Product	Subsidiary	Store	Sale	Inventory	Returns
United States	Boot	Chicago	16	\$82,483.00	\$305,061.00	\$3,735.00
United States	Men's Casual	Chicago	26	\$408,978.00	\$831,672.00	\$17,907.00
United States	Men's Dress	Chicago	28	\$261,607.00	\$824,485.00	\$8,915.00
United States	Sandal	Chicago	2	\$601.00	\$17,121.00	\$35.00
United States	Slipper	Chicago	13	\$329,235.00	\$1,049,530.00	\$10,854.00
United States	Sport Shoe	Chicago	17	\$17,347.00	\$74,605.00	\$684.00
United States	Women's Casual	Chicago	11	\$172,021.00	\$474,524.00	\$5,399.00
United States	Women's Dress	Chicago	37	\$293,313.00	\$754,157.00	\$10,194.00
United States	Boot	Los Angeles	14	\$85,932.00	\$347,252.00	\$3,283.00

Report B: Tabulation of SASHELP.SHOES, summarized by Region.

Region	Subsidiary	Stores	Sales	Inventory	Returns
Africa	Addis Ababa	65	\$467,429.00	\$1,356,501.00	\$13,370.00
	Algiers	101	\$395,600.00	\$1,212,116.00	\$12,763.00
	Cairo	88	\$738,198.00	\$2,245,536.00	\$22,477.00
	Johannesburg	51	\$113,008.00	\$375,534.00	\$3,962.00
	Khartoum	71	\$186,592.00	\$588,019.00	\$7,051.00
	Kinshasa	56	\$196,816.00	\$591,284.00	\$5,582.00
	Luanda	30	\$138,115.00	\$436,277.00	\$4,328.00

Report C: Summary of SASHELP.SHOES by product.

Product	Sales	Inventory	Returns
Boot	\$2,350,543.00	\$9,724,671.00	\$98,622.00
Men's Casual	\$7,933,707.00	\$17,085,253.00	\$311,035.00
Men's Dress	\$5,507,243.00	\$14,507,340.00	\$164,099.00
Sandal	\$868,436.00	\$3,232,275.00	\$38,170.00
Slipper	\$6,175,834.00	\$22,231,380.00	\$209,940.00
Sport Shoe	\$651,467.00	\$3,322,702.00	\$25,179.00
Women's Casual	\$4,137,861.00	\$9,696,651.00	\$131,394.00

```
Data Column_Widths_Excel;  
Length Varname $ 32;  
Input Varname $  
Report_A_Order Report_A_Width  
Report_B_Order Report_B_Width  
Report_C_Order Report_C_Width;
```

```
Datalines;  
Region 1 204 1 180 . .  
Product 2 129 . . 1 200  
Subsidiary 3 126 2 150 . .  
Stores 4 70 3 120 . .  
Sales 5 117 4 120 2 150  
Inventory 6 117 5 120 3 150  
Returns 7 95 6 120 4 150  
;
```

```
Run;
```

```
Proc SQL noprint;
```

```
Select Report_A_Width  
into: col_widths_A  
separated by ", "  
  
From Column_Widths_Excel  
Where not missing(Report_A_Width)  
Order By Report_A_Order  
;
```

```
Quit;
```

```
%put &col_widths_A. ;  
204, 129, 126, 70, 117, 117, 95
```

Using a Metadata Data Set

Rather than manually scanning the list of column widths to identify the values that need to be changed or reordered, we can manage the list by employing a metadata data set. For example, the DATALINES at left construct a data set that lists each variable in our report data, and has variables for the desired order and column width in each report.

Using PROC SQL, we can pull the correct width values for each report and assign them – in the correct order – to a macro variable. The macro variable would then be used in the tagset option instead of the individual widths:

```
ABSOLUTE_COLUMN_WIDTH = "&col_widths_A."
```

Updating widths in the metadata is trivial, as we may look up report items by the name of the corresponding variable. Order is also made explicit, so inserting a new column only requires updating the order variable for that report.

The metadata data set could be maintained in Excel and imported into SAS. There are many papers on managing report metadata in Excel, which could also include labels and column formats for report items.

References:

- DelGobbo, Vince. 2011. "Creating Stylish Multi-Sheet Microsoft Excel Workbooks the Easy Way with SAS." *Proceedings of the SAS Global Forum 2011 Conference*.
- Zender, Cynthia. 2010. "How to autofix cell width with ExcelXP tagset?" SASCommunity.org.



Washington, D.C.
March 23–26, 2014

Sessions on Reporting with the ExcelXP Tagset:

SAS050 - Creating Multi-Sheet Microsoft Excel Workbooks with SAS®: The Basics and Beyond Part 1 [*Hands-On Workshop*]

Vincent DelGobbo - Sr Software Developer, SAS

Tuesday, Mar 25, 10:00 AM - 12:00 PM – National Harbor 10-11

1854 - Exporting Formulas to Microsoft Excel Using the ODS ExcelXP Tagset [*Quick Tip*]

Joseph Skopic - Budget Analyst, Federal Government

Tuesday, Mar 25, 2:00 PM - 2:10 PM – National Harbor 6-7

SAS177 - Secrets from a SAS® Technical Support Guy: Combining the Power of the Output Deliver System with Microsoft Excel Worksheets [*Breakout*]

Chevell Parker - Sr Principal Technical Support Analyst, SAS

Wednesday, Mar 26, 12:00 PM - 12:50 PM – Potomac 1-4