**Don't Gamble with Your Output:
How to Use Microsoft Formats with ODS**

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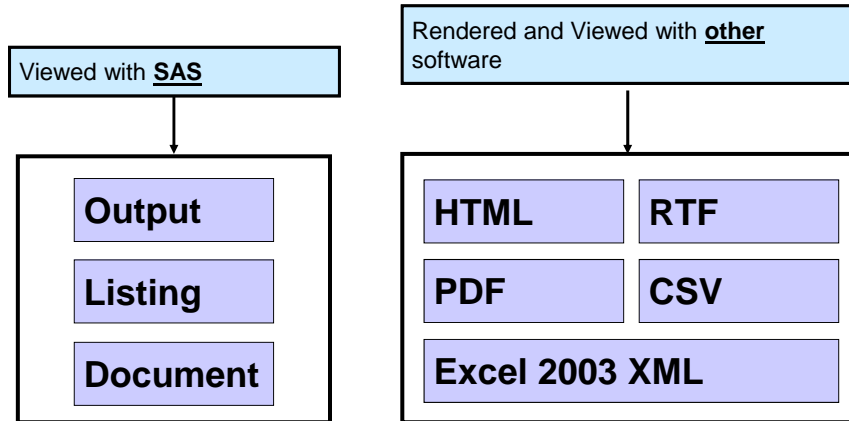SAS Institute

Today's Agenda

- Describe ODS Basics about methods to get your output from SAS to Excel.
- Describe common Excel formatting challenges.
- Illustrate how HTMLSTYLE= and TAGATTR= style attributes will send Microsoft formats to Excel.
- Show how to change cell and row attributes using STYLE= overrides.
- Zip file of programs available at:

  http://support.sas.com/rnd/papers

  rnd not md

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ODS Basics

The three main ODS destinations are: RTF, PDF, and HTML. Other ODS destinations are: PRINTER, MSOFFICE2K, CSVALL, CSV,TAGSETS.EXCELXP, LaTeX and more.

Viewed with **SAS**

Rendered and Viewed with **other** software

Output	HTML	RTF
Listing	PDF	CSV
Document	Excel 2003 XML	

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ODS "Sandwich" Invocation

Basic ODS invocation is a "sandwich" technique, similar to using PROC PRINTTO in the "old" days.

```
ODS destination FILE='file-name.ext'
                STYLE=style-name;

  SAS code to generate a report

ODS destination CLOSE;
```

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Markup Output Files That Excel Can Open

There are many *flavors* of Markup Language output files that Excel can open and render. Some of them are:

Delimited files (such as CSV or tab-delimited files produced in SAS 8 and SAS®9)

HTML 3.2 (SAS 8 and 9) and HTML 4.0 (produced in SAS®9)

2 flavors of Microsoft HTML (produced in SAS®9)

Microsoft 2003 Spreadsheet Markup Language XML

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Microsoft Markup Language Specification

ODS can create standard W3C HTML and it can create Microsoft-specific HTML and XML output files.

Microsoft HTML:
ODS MSOFFICE2K and
ODS TAGSETS.MSOFFICE2K_X

Microsoft 2003 Spreadsheet Markup Language XML:
ODS TAGSETS.EXCELXP

None of these methods create true, binary Excel files.

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Sample Code

ODS MSOFFICE2K and ODS TAGSETS.EXCELXP were designed to conform to Microsoft specifications for HTML and XML respectively.

```
ods html file='toExcel_ht4.html' style=sasweb;
ods msoffice2k file='toExcel_mso.html'
    style=sasweb;
ods tagsets.excelxp file='toExcel_xp.xml'
    style=sasweb;
ods csvall file='toExcel_comma.csv';

<additional SAS statements>

ods _all_ close;
```

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Style Rendering by Excel

Compare how ODS style information is used differently by Excel.

ODS HTML (HTML 4.0) Output Rendered in Excel
This type of HTML is better suited for web pages and not Excel.

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Compare Different HTML Output Files

Compare how ODS style information is used differently by Excel.

ODS HTML Output Rende...

ODS MSOFFICE2K Output Rendered in Excel

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Comma Separated Values

Comma-separated values are rendered without any style by Excel because ODS does not write any style information in the CSV file.

```
toExcel_comma.csv - Notepad
File  Edit  Format  View  Help
PROC PRINT

"Obs","Region","Product","Subsidiary","Stores","Sales","Inventory","Returns"
"1","Africa","Boot","Addis Ababa",12,"$29,761","$191,821","$769"
"2","Africa","Men's Casual","Addis Ababa",4,"$67,242","$118,036","$2,284"
"3","Africa","Men's Dress","Addis Ababa",7,"$76,793","$136,273","$2,433"
"4","Africa","Sandal","Addis Ababa",10,"$62,819","$204,284","$1,861"
"5","Africa","Slipper","Addis Ababa",14,"$68,641","$279,795","$1,771"

PROC FREQ

"Product","Frequency","Percent","Cumulative Frequency","Cumulative  Percent"
"Boot",52,13.16,52,13.16
"Men's Casual",45,11.39,97,24.56
"Men's Dress",50,12.66,147,37.22
"Sandal",49,12.41,196,49.62
"Slipper",52,13.16,248,62.78
"Sport Shoe",51,12.91,299,75.70
"Women's Casual",45,11.39,344,87.09
"Women's Dress",51,12.91,395,100.00
```

ODS CSVALL Output Viewed in Notepad

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Comma Separated Values

Comma-separated values are rendered without any style by Excel because ODS does not write any style information in the CSV file.

ODS CSVALL Output Rendered in Excel

Spreadsheet Markup Language XML

The type of XML created by TAGSETS.EXCELXP allows Excel to render ODS output as multi-sheet workbooks.

Sheet1

Sheet2

Microsoft Excel and HTML

Starting with Microsoft Office 97, Microsoft Word and Microsoft Excel could read HTML tags. Word and Excel would both open HTML files and display them appropriately, using the HTML tags and styles for the display of the information.

Display LIKE Word doc; save as HTML by default

HTML 3.2 file: REPFILE.HTML

Office 97

Display LIKE spreadsheet; save as HTML by default

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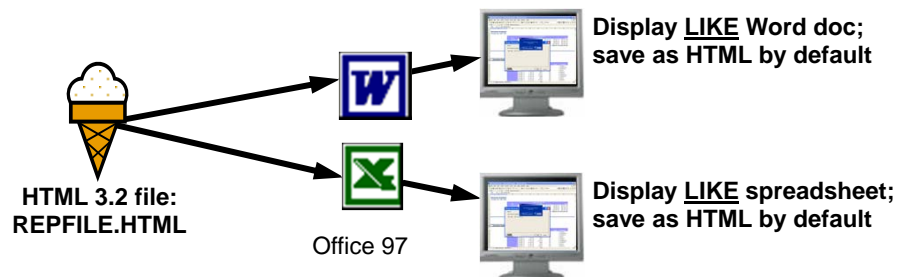
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ODS and Excel

How do you decide what flavor of ODS Markup to use?

HTML Flavor		Open With	Notes
ODS CSV ODS CSVALL		Office 97 and higher	You want procedure output with no style formatting.
Microsoft HTML ODS MSOFFICE2K		Office 2000 and higher	Microsoft Excel will open this HTML file and use style specifications.
Microsoft HTML + XML ODS TAGSETS.MSOFFICE2K_X		Office 2000 and higher	You can specify multiple HTML files to be joined into one workbook with this destination.
Microsoft XML ODS TAGSETS.EXCELXP		Office 2002 and higher	You can automatically create and name multi-sheet workbooks using Spreadsheet Markup Language XML.

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ODS and Style Specifications

Template Store	Result Types
Graph Templates	RTF File
Table Templates	Printer, PDF, or PS File
Style Templates	-----------------------
	HTML4 File, HTML3 File
	MSOFFICE2K File
	TAGSETS.MSOFFICE2K_X File
Tagset Templates	TAGSETS.EXCELXP File
	TAGSETS.RTF File

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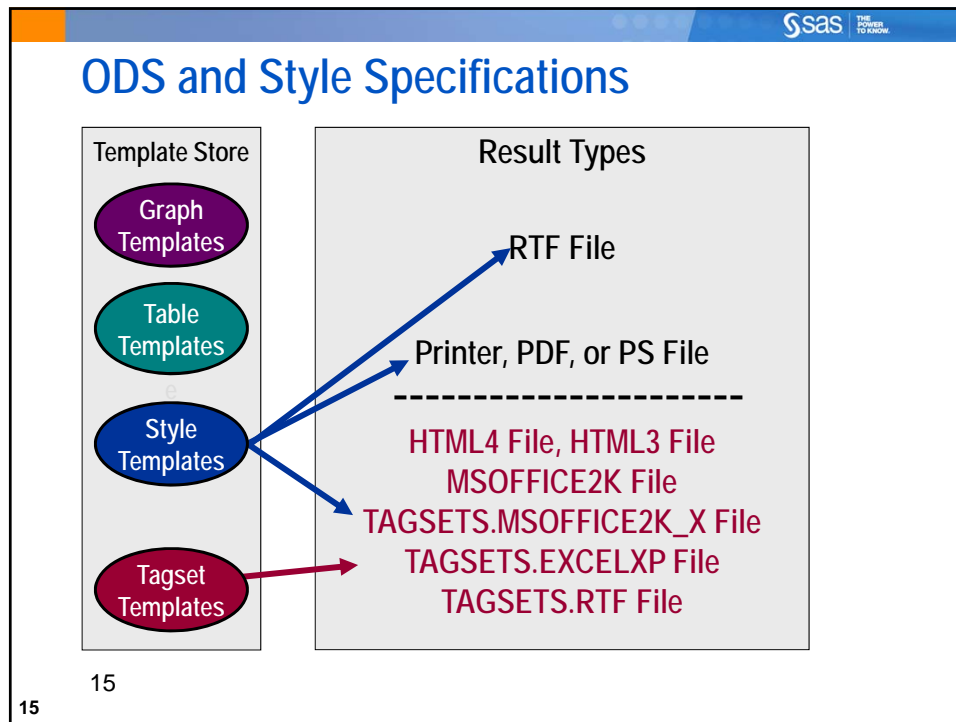
Other Ways to Impact Style

Changing the ODS style template or using STYLE= overrides is one way to impact the overall look and feel of your ODS output when opened in Excel. Some key points to remember:

- Excel does not always respect HTML style attributes the same way a browser does.
- Excel does not always respect SAS formats for such items as variable values with leading zeroes, date values, decimal points, percent signs.

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Character Value Treated as Numeric

In this SAS dataset, the ISBN variable is a character variable:

Obs	book	isbn	price
1	Book1	978-1577314059	23.95
2	Book2	978-0-14118-311-4	20.28
3	Book3	9780142000083	23.99
4	Book4	ISBN 978-0801881855	26.34

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Character Value Treated as Numeric

In this SAS dataset, the ISBN variable is a character variable:

Obs	book	isbn	price
1	Book1	978-1577314059	23.95
2	Book2	978-0-14118-311-4	20.28
3	Book3	9780142000083	23.99
4	Book4	ISBN 978-0801881855	26.34

demo01_default_mso.xls

	A	B	C	D
1		1) Default All Destir		
2				
3	book	isbn	price	
4	Book1	978-1577314059	23.95	
5	Book2	978-0-14118-311-4	20.28	
6	Book3	9.78014E+12	23.99	
7	Book4	ISBN 978-0801881855	26.34	

HTML output viewed in Excel

demo01_default_xp.xls

	A	B	C
1	book	isbn	price
2	Book1	1577314059	23.95
3	Book2	311-4	20.28
4	Book3	9.78014E+12	23.99
5	Book4	0801881855	26.34
6			

XML output viewed in Excel

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Use Microsoft Format for Text

Send Microsoft Excel a **Microsoft** format instruction that tells it to treat the value as a TEXT column:

```
ods msoffice2k file='c:\temp\demo01_MSO.xls' style=sasweb;
proc report data=mom_and_pop_books nowd;
   . . . More code . . .
   define isbn / display
      style(column)=
         {htmlstyle="mso-number-format:'\@';width:'190pt'"};
run;
ods _all_ close;

ods tagsets.excelxp file='c:\temp\demo01_XP.xls' style=sasweb
      options(absolute_column_width='12,20,12');
proc report data=mom_and_pop_books nowd;
   . . . More code . . .
   define isbn / display
         style(column)={tagattr='Format:Text'};
run;
ods _all_ close;
```

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Results

The results viewed in Excel show the increased column width and the full ISBN variable value.

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Excel Slightly Unhappy

Excel considers a number stored as text to be an error condition. Your only choice to avoid this "green triangle" is to select "Ignore Error" choice or pre-process the data to ensure it is treated as character data.
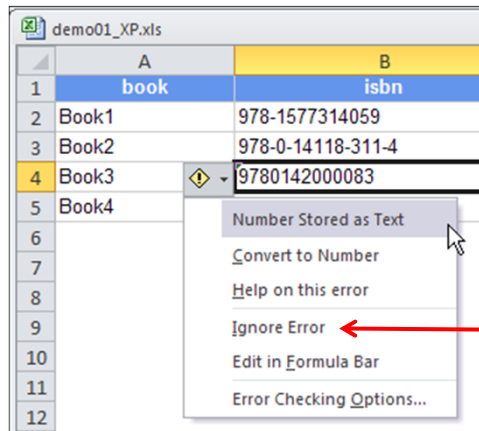
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Leading Zeroes Ignored

In this SAS dataset, the TRANSID field is numeric and formatted with the *Zw.d* format. Another version of the value is stored as a character string with leading zeroes as the CHAR_TRANSID variable.

Obs	dest	trans ID	char_ transID	amt	profit
1	CHICAGO	00010	00010	100	10.0%
2	CHICAGO	00222	00222	200	15.0%
3	GENEVA	00330	00330	300	12.5%
4	GENEVA	00444	00444	-400	17.5%
5	LONDON	00550	00550	500	20.0%
6	LONDON	06000	06000	600	22.0%
7	LONDON	00777	00777	700	24.0%
8	PARIS	00088	00088	800	26.0%
9	PARIS	00990	00990	900	27.0%

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Leading Zeroes Ignored

Obs	dest	trans ID	char_ transID	amt	profit
1	CHICAGO	00010	00010	100	10.0%
2	CHICAGO	00222	00222	200	15.0%
3	GENEVA	00330	00330	300	12.5%
				00	17.5%

demo02_default_mso.xls

	A	B	C
1	1) Default for Lead		
2			
3	dest	transID	char_transID
4	CHICAGO	10	10
5	CHICAGO	222	222
6	GENEVA	330	330
7	GENEVA	444	444
8	LONDON	550	550
9	LONDON	6000	6000
10	LONDON	777	777
11	PARIS	88	88
12	PARIS	990	990

HTML output viewed in Excel

demo02_default_XP.xls

	A	B	C	D	E
1	dest	transID	nsID	amt	Pct Profit
2	CHICAGO	10	10	100	0.1
3	CHICAGO	222	222	200	0.15
4	GENEVA	330	330	300	0.125
5	GENEVA	444	444	-400	0.175
6	LONDON	550	550	500	0.2
7	LONDON	6000	6000	600	0.22
8	LONDON	777	777	700	0.24
9	PARIS	88	88	800	0.26
10	PARIS	990	990	900	0.27

XML output viewed in Excel

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Use Microsoft Format for Leading Zeroes

Use the HTMLSTYLE= attribute to specify a format for HTML-based output and the TAGATTR= attribute to specify a format for XML-based output:

ODS MSOFFICE2:
```
define transID /
      style(column)={htmlstyle="mso-number-format:'00000'"};
define char_transid / display
      style(column)={htmlstyle="mso-number-format:'00000'"};
```

ODS TAGSETS.EXCELXP:
```
define transID     / style(column)={tagattr='00000'};
define char_transID / style(column)={tagattr='00000'};
```

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HTML Results

When the HTML results are viewed in Excel, the Microsoft format for leading zeroes is used.

demo02_MSO.xls

	A	B	C	D	E
1			2) Using HTMLSTYLE		
2					
3	dest	transID	char_transID	amt	Pct Profit
4	CHICAGO	00010	00010	100	10.0%
5	CHICAGO	00222	00222	200	15.0%
6	GENEVA	00330	00330	300	12.5%
7	GENEVA	00444	00444	-400	17.5%
8	LONDON	00550	00550	500	20.0%
9	LONDON	06000	06000	600	22.0%
10	LONDON	00777	00777	700	24.0%
11	PARIS	00088	00088	800	26.0%
12	PARIS	00990	00990	900	27.0%
13					

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HTML output viewed in Excel

XML Results

When the XML results are viewed in Excel, the Microsoft format for leading zeroes is used.

demo02_XP.xls

	A	B	C	D	E
1	dest	transID	char_transID	amt	Pct Profit
2	CHICAGO	00010	00010	100	10.0%
3	CHICAGO	00222	00222	200	15.0%
4	GENEVA	00330	00330	300	12.5%
5	GENEVA	00444	00444	-400	17.5%
6	LONDON	00550	00550	500	20.0%
7	LONDON	06000	06000	600	22.0%
8	LONDON	00777	00777	700	24.0%
9	PARIS	00088	00088	800	26.0%
10	PARIS	00990	00990	900	27.0%

XML output viewed in Excel

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HTMLSTYLE and TAGATTR Attributes

The HTMLSTYLE attribute uses the CSS
"mso-number-format" style property:

```
style(column)=
    {htmlstyle="mso-number-format:'00000'"};
style(column)=
    {htmlstyle="mso-number-format:'###.0%'"};
```

The TAGATTR attribute uses a similar format value, but
the XML does not require "mso-number-format":

```
style(column)={tagattr='00000'};
style(column)={tagattr='format:00000'};
style(column)={'format:###.0%'};
```

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More About Microsoft Formats

The Microsoft documentation outlines the ways in which a
custom format can be designed:

Positive Number   Format Zero

$#,##0.00;[Red]$#,##0.00;[Blue]0.00;"abcdefg"@

Negative Number   Format Text
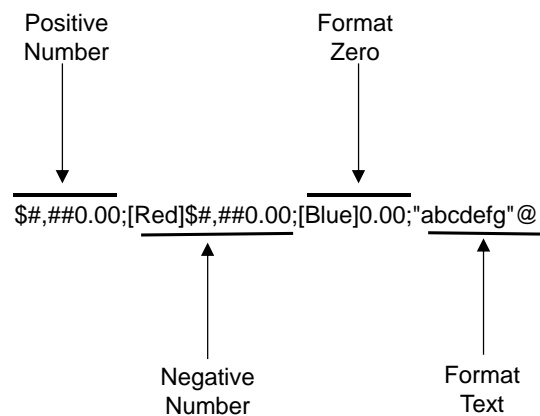
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Common Microsoft Formats

Table A-1. Commonly encountered values for mso-number-format.
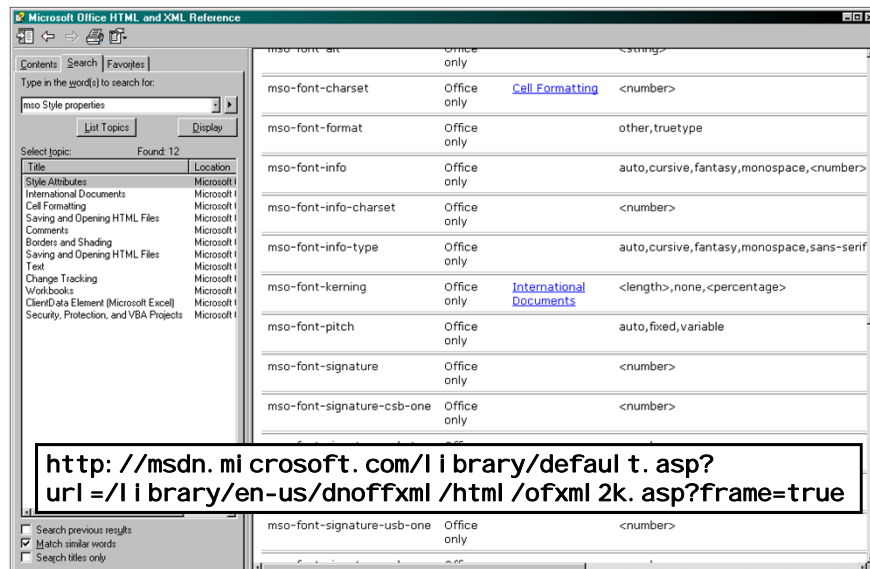
SAS Data Value	mso-number-format
1234567890.1230	\#\#\#\#\#\#\#\#\#\#\#\#\#\#\#\#\.0000
1,234,567,890.1230	\#\,\#\#\#\,\#\#\#\,\#\#\#\.0000
1.234.567.890.1230	\#\.\#\#\#\.\#\#\#\.\#\#\#\.0000
$1,234,567,890.30	\$\#\,\#\#\#\,\#\#\#\,\#\#\#\.00
$1.234.567.890,30	\$\#\.\#\#\#\.\#\#\#\.\#\#\#\,00
01340	00000
(919) 677-8000	'\[<=9999999\]\#\#\#\-\#\#\#\#\;\(\#\#\#\\)\ \#\#\#\#\\-\#\#\#\#\#'
919-677-8000	\[<=9999999\]\#\#\#\-\#\#\#\#\;\#\#\#\-\#\#\#\-\#\#\#\#
919.677.8000	\[<=9999999\]\#\#\#\.\#\#\#\#\;\#\#\#\.\#\#\#\.\#\\#\#\#
16/03/02	dd\/mm\/yy
16/03/2002	dd\/mm\/yyyy
16-03-02	dd\-mm\-yy
16-03-2002	dd\-mm\-yyyy
16.03.02	dd\.mm\.yy
16.03.2002	dd\.mm\.yyyy
03/16/02	mm\/dd\/yy
03/16/2002	mm\/dd\/yyyy
03.16.02	mm\.dd\.yy
03.16.2002	mm\.dd\.yyyy

Note: The letter V does not appear in any of the mso-number-format definitions. What you see that resembles a V is a backslash (\) and a forward slash (/) next to each other.

from: http://www2.sas.com/proceedings/sugi28/052-28.pdf

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Refer to Microsoft Documentation

http://msdn.microsoft.com/library/default.asp?
url=/library/en-us/dnoffxml/html/ofxml2k.asp?frame=true

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Advanced Example

This SAS dataset contains negative numbers and zeroes for the AMT variable value.

Obs	trans ID	dest	type	amt
1	1	CHICAGO	TEL	1100
2	2	CHICAGO	TEL	2200
3	3	GENEVA	WEB	3300
4	4	GENEVA	WEB	-4400
5	5	LONDON	TEL	0

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Advanced Example

Using the custom format, note that special characters must be "escaped" using a backslash for the HTML output:

ODS MSOFFICE2K:
```
define amt /
  style(column)=
  {htmlstyle="mso-number-format:
'\0022$\0022\#\,\#\#0\.00\;\[Red\]\(\0022$\0022\#\,\#\#0\.00\)\;
\[Blue\]0\.00'"};
```

ODS TAGSETS.EXCELXP:
```
define amt /
  style(column)=
  {tagattr='format:$#,##0.00;[Red]($#,##0.00);[Blue]0.00;'};
```

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Advanced Example

This SAS dataset contains negative numbers and zeroes for the AMT variable value.

	A	B	C
1	dest	transID	amt
2	CHICAGO	00001	$1,100.00
3	CHICAGO	00002	$2,200.00
4	GENEVA	00003	$3,300.00
5	GENEVA	00004	($4,400.00)
		00005	0.00

XML output viewed in Excel

	dest	transID	amt
3	dest	transID	amt
4	CHICAGO	00001	$1,100.00
5	CHICAGO	00002	$2,200.00
6	GENEVA	00003	$3,300.00
7	GENEVA	00004	($4,400.00)
8	LONDON	00005	0.00
9			

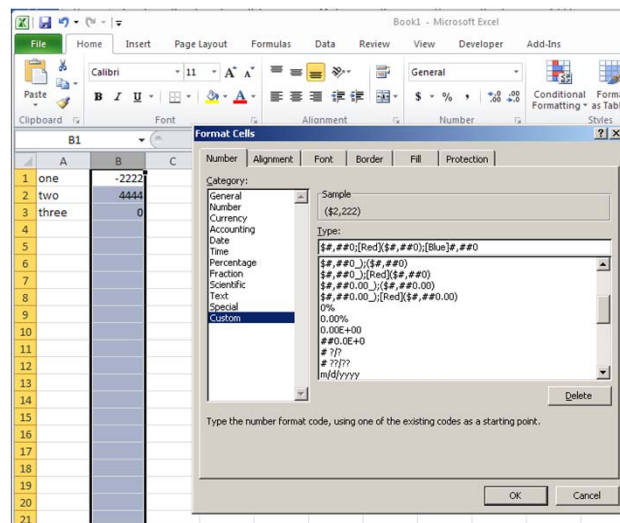HTML output viewed in Excel

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Microsoft Custom Format Window

To design your format in a test worksheet, use the Format Cells window:

Note that backslashes are not needed in the Excel window. To see the HTML or XML version of the custom format, save your test worksheet as either HTML or XML file format. Then open the test file with Notepad to see how Excel saved the custom format.

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SAS, Excel and Date Values

There's a difference between how SAS and Excel store date values:

- For Excel, there are NO valid dates which occurred before January 1, 1900. In Excel's date system the number 1 on Windows represents the date January 1, 1900 12:00:00 am. (For the Macintosh platform, the number 1 represents January 2, 1904 12:00:00 am).

- SAS dates span the whole range of the Gregorian calendar, starting in 1582. Negative numbers are dates that occurred before January 1, 1960.

- Excel does not recognize negative numbers as valid date values.

- Excel treated 1900 as a leap year, but it was not a leap year, so some dates in 1900 might be a day off from the SAS dates.

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60 Years More or Less

It is also possible that your dates could appear to be approximately 60 years "off". If this is the case, then you may have a SAS date value that Microsoft does not recognize as a date value because you did not use a SAS format for the variable.

Microsoft Internal Value SAS val + 21916	NO SAS Fmt for Shows Date is 60 yrs "off"	SAS Date9 Format Used Explicitly
11/15/1950	#################	11/15/1950
01/01/1960	01/00/1900	01/01/1960
11/29/1984	11/28/1924	11/29/1984
12/05/2005	12/04/1945	12/05/2005
01/20/2011	01/19/1951	01/20/2011

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Date Values in SAS

In this SAS dataset, only the SAS_DATE9 variable uses a SAS format:

```
transID      textdate              SAS_internal           MS_date_val    date    SAS_date9

    1    November 15, 1950    Internal Number: -3334          18582    -3334    15NOV1950
    2     January 1, 1960     Internal Number: 0              21916        0    01JAN1960
    3    November 29, 1984    Internal Number: 9099           31015     9099    29NOV1984
    4     December 5, 2005    Internal Number: 16775          38691    16775    05DEC2005
    5     January 20, 2011    Internal Number: 18647          40563    18647    20JAN2011
```

```
Alphabetic List of Variables and Attributes

#     Variable        Type      Len      Format

4     MS_date_val     Num        8
6     SAS_date9       Num        8       DATE9.
3     SAS_internal    Char      25
5     date            Num        8
2     textdate        Char      30
1     transID         Num        8
```

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Default Treatment of HTML Output

Notice how the SAS DATE9. format is respected by Excel when the HTML file is opened.

	A	B	C	D	E	F
1				1) Default for Dates		
2						
3	transID	Character Worddate	Stored in SAS	Microsoft Internal Value SAS val + 21916	NO SAS Fmt for Date Excel shows internal number	SAS Date9. Format Used Explicitly
4						
5	1	15-Nov-50	Internal Number: -3334	18582	-3334	15-Nov-50
6	2	1-Jan-60	Internal Number: 0	21916	0	1-Jan-60
7	3	29-Nov-84	Internal Number: 9099	31015	9099	29-Nov-84
8	4	5-Dec-05	Internal Number: 16775	38691	16775	5-Dec-05
9	5	20-Jan-11	Internal Number: 18647	40563	18647	20-Jan-11
10						

HTML output viewed in Excel

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Default Treatment of XML Output

Notice how the SAS DATE9. format is respected by Excel when the HTML file is opened.

	A	B	C	D	E	F
	transID	Character Worddate	Stored in SAS	Microsoft Internal Value SAS val + 21916	NO SAS Fmt for Date Excel shows internal number	SAS Date9. Format Used Explicitly
2	1	November 15, 1950	Internal Number: -3334	18582	-3334	15NOV1950
3	2	January 1, 1960	Internal Number: 0	21916	0	01JAN1960
4	3	November 29, 1984	Internal Number: 9099	31015	9099	29NOV1984
5	4	December 5, 2005	Internal Number: 16775	38691	16775	05DEC2005
6	5	January 20, 2011	Internal Number: 18647	40563	18647	20JAN2011

XML output viewed in Excel

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Formatting Dates for HTML Output

Send Microsoft Excel a **Microsoft** format instruction that tells it to treat the value as Date value:

```
define MS_date_val / 'Microsoft Internal Value/SAS val + 21916'
   style(column)={width=2in
                 htmlstyle="mso-number-format:mm\/dd\/yyyy"};
define textdate / 'Character Worddate'
   style(column)={htmlstyle="mso-number-format:\@"};
define date /display f=date9. 'With SAS Fmt for Date/Shows OK'
   style(column)={htmlstyle="mso-number-format:mm\-dd\-yyyy"};
define SAS_date9 /display f=date9. 'SAS Date9 Format/Used Explicitly'
   style(column)={width=2in htmlstyle="mso-number-format:mm\.dd\.yyyy"};
```

Note that backslashes are needed to "escape" any puncuation used for formatting dates for HTML output. It is also best to use a SAS format (such as DATE9.) for dates using SAS date values. You should not use a SAS format for Microsoft date values (such as that contained in the MS_DATE_VAL variable.

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HTML Results

The HTML results viewed in Excel show the appropriate formats (and punctuation) used for all variables.

transID	Character Worddate	Stored in SAS	Microsoft Internal Value	With SAS Fmt for Date	SAS Date9 Format
			SAS val + 21916	Shows OK	Used Explicitly
1	November 15, 1950	Internal Number: -3334	11/15/1950	11-15-1950	11.15.1950
2	January 1, 1960	Internal Number: 0	01/01/1960	01-01-1960	01.01.1960
3	November 29, 1984	Internal Number: 9099	11/29/1984	11-29-1984	11.29.1984
4	December 5, 2005	Internal Number: 16775	12/05/2005	12-05-2005	12.05.2005
5	January 20, 2011	Internal Number: 18647	01/20/2011	01-20-2011	01.20.2011

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Formatting Dates for XML Output

Send Microsoft Excel a **Microsoft** format instruction that tells it to treat the value as Date value:

```
define MS_date_val / 'Microsoft Internal Value/SAS val + 21916'
   style(column)={width=2in
                  tagattr="format:mm/dd/yyyy"};
define date / f=mmddyyd10. display
      'Variable use MMDDYYD10 SAS Format';
define SAS_date9 /display f=mmddyyp10.
      'SAS_DATE9 Variable Uses MMDDYYP10 SAS Format';
```

For XML output, the SAS format is respected by Excel because ODS TAGSETS.EXCELXP uses the SAS formats. Only Microsoft date values (such as MS_DATE_VAL need to use a TAGATTR override.

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XML Results

The XML results viewed in Excel show that the SAS date format was used to specify the XML for Excel to render.

	A	B	C	D	E	F
1	transID	Character Worddate	Stored in SAS	Microsoft Internal Value SAS val + 21916	Variable use MMDDYYD10 SAS Format	SAS_DATE9 Variable Uses MMDDYYP10 SAS Format
2	1	November 15, 1950	Internal Number: -3334	11/15/1950	11-15-1950	11.15.1950
3	2	January 1, 1960	Internal Number: 0	01/01/1960	01-01-1960	01.01.1960
4	3	November 29, 1984	Internal Number: 9099	11/29/1984	11-29-1984	11.29.1984
5	4	December 5, 2005	Internal Number: 16775	12/05/2005	12-05-2005	12.05.2005
6	5	January 20, 2011	Internal Number: 18647	01/20/2011	01-20-2011	01.20.2011

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More About Formatting Cells

Excel allows you to specify cell styles from the Cell Styles pulldown menu:
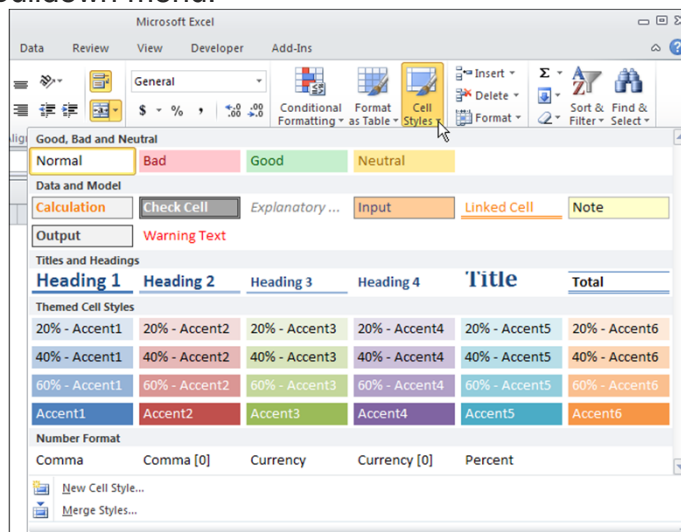
44

Using Other STYLE= Overrides

You can perform trafficlighting, or row highlighting using STYLE= overrides (XML output shown, but HTML results use the same syntax):

	A	B	C	D	E	F	G	H
1			2001		2003		2002	
2	Grade		#	%	#	%	#	%
3	4	2	24	2.10%	43	8.20%	23	9.90%
4	3	4	32	7.90%	32	6.90%	32	8.90%
5	2	3	32	7.90%	32	6.90%	32	8.90%
6	1	2	24	2.10%	43	8.20%	23	9.90%

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More About Formatting Tables

Excel also allows you to specify table styles from the Format as Table pulldown menu:
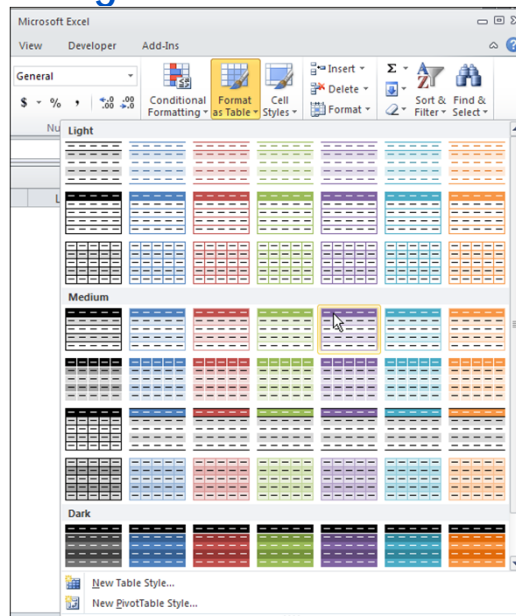
46

Row-Level Highlighting

You can also perform single row highlighting or multiple row highlighting using STYLE= overrides. (HTML output is shown, but same syntax works for XML output, too):

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Steps to Apply Microsoft Formats

1. Understand the Microsoft format that you want to use.
2. Decide on the tagset that you want to use.
3. With MSOFFICE2K or MSOFFICE2K_X tagsets, use the HTMLSTYLE attribute to pass style or format information to Excel. With TAGSETS.EXCELXP, use the TAGATTR attribute to pass style or format information to Excel.
4. Specify the HTMLSTYLE attributes in a STYLE= override with PROC PRINT, PROC REPORT, or PROC TABULATE (or in a custom TABLE or STYLE template).

The SGF paper has several job aids, one of which shows how to "reverse engineer" the Microsoft custom format from a test worksheet.

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