

# ODS tricks to create ready to use Excel output

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# Agenda

- Ways to create Excel output in SAS
- Benefits of ODS
- Enhancing excel output within SAS using ODS HTML
- ODS and the ExcelXP tagset
- Creating multi-sheet excel output
- Conclusion

# Ways to create Excel output in SAS

**UNFORMATTED**

**FORMATTED**

PROC EXPORT

ASCII, CSV FILE

DATA STEP

XLS LIBNAME ENGINE

ODS HTML, HTML3

ODS TAGSET.EXCELXP  
(SAS 9)

# Benefits of ODS

- Optimize output from SAS Procs & data step
- Wide range of formatting options
- Flexibility to generate & reproduce SAS output
- Create multiple output destinations  
(html,rtf,pdf,xml,etc) from single source
- Styles to control appearance of output
- Reduce or eliminate need for manual formatting

# Ex 1: Basic enhancements

```
ods listing close;  
ods html3 body = 'F:\SUGI\ex_1.xls';  
ods noresults;  
title "Example 1 - Simple ODS inspired output";  
data _null_;  
  set sasuser.admit;  
  file print  
  ods=(var=(id name sex age fee));  
  put id name sex age fee;  
run;  
ods html3 close;  
ods listing;  
ods results;
```



# Ex 1: Basic Excel Output

	A	B	C	D	E
1	<b>Example 1 - Simple ODS inspired output</b>				
2					
3					
4	ID	Name	Sex	Age	Fee
5	2458	Murray, W	M	27	85.2
6	2462	Almers, C	F	34	124.8
7	2501	Bonaventure, T	F	31	149.75
8	2523	Johnson, R	F	43	149.75
9	2539	LaMance, K	M	51	124.8
10	2544	Jones, M	M	29	124.8

# Ex 2: Further enhancements

```
ods listing close;  
ods html3 body = 'F:\SUGI\ex_2.xls' style = statdoc;  
ods noresults;  
title c=brown j=2 "Example 2 - Enhanced output using ODS";  
data _null_;  
set sasuser.admit;  
label name = 'Name of Student'  
      sex = 'Gender'  
      fee = 'Fee in dollars' ;  
format fee dollar5.;  
file print ods=(var=(id name sex age fee));  
put id name sex age fee _ods_;  
run;  
ods html3 close;  
ods listing;  
ods results;
```



# Ex 2: Further enhancements

	A	B	C	D	E
1	<i>Example 2 - Enhanced output using ODS</i>				
2					
3					
4	ID	Name of Student	Gender	Age	Fee in dollars
5	2458	Murray, W	M	27	\$85
6	2462	Almers, C	F	34	\$125
7	2501	Bonaventure, T	F	31	\$150
8	2523	Johnson, R	F	43	\$150
9	2539	LaMance, K	M	51	\$125
10	2544	Jones, M	M	29	\$125



# ODS tagsets.ExcelXP

- New feature in SAS 9
- Further enhancement & control within SAS
- Generates XML which opens in Excel 2002+
- Key features: Reduce post-processing with
  - Creation of automatic multi sheet output
  - Formatting options (autofilter, subtotals, sheet-name, frozen\_headers, subtotals, Orientation, etc)

# Ex 3: Creating multi-sheet output

```
ods listing close;
```

```
ods tagsets.ExcelXP path='F:\SUGI\' file='ex_3.xls' style=statdoc  
options(doc='help');
```

```
ods noresults;
```

```
title "Example 3 - Enhanced output creating Multiple sheets in Excel";
```

```
proc sort data=sasuser.admit; by sex;run;
```

```
Proc print data=sasuser.admit noobs label;  
var id name sex age fee;  
by sex;
```

```
label name = 'Name of Student'
```

```
sex = 'Gender'
```

```
fee = 'Fee in dollars' ;
```

```
format fee dollar5.;
```

```
run;
```

```
ods tagsets.ExcelXP close; /* must close tagsets.ExcelXP here*/
```

```
ods listing; ods results;
```



# Ex 3: Creating multi-sheet output

	A	B	C	D	E	F
1	ID	Name of Student	Gender	Age	Fee in dollars	
2	2462	Almers, C	F	34	\$125.00	
3	2501	Bonaventure, T	F	31	\$150.00	
4	2523	Johnson, R	F	43	\$150.00	
5	2552	Reberson, P	F	32	\$150.00	
6	2568	Eberhardt, S	F	49	\$125.00	
7	2571	Nunnely, A	F	44	\$150.00	
8	2572	Oberon, M	F	28	\$85.00	
9	2575	Quigley, M	F	40	\$125.00	
10	2584	Takahashi, Y	F	43	\$125.00	
11	2588	Ivan, H	F	22	\$85.00	
12	2589	Wilcox, E	F	41	\$150.00	
13						
14						
15						

By 1 Gender=F - Data Set SASUSE | By 2 Gender=M - Data Set SASUSE

# Conclusion

- ODS is powerful tool to create formatted XLS output using:
  - ODS HTML sent to XLS file
  - ODS TAGSETS.EXCELXP
- Help to reduce post-processing in XLS
- Just the tip of the iceberg!
- Many ODS formatting options available

# References

- Paper 106-31: SAS to Publishable Excel Seamlessly – Using ODS, XML & Other Tricks
- Paper 115-31: Creating and importing multi-sheet Excel Workbooks the Easy Way with SAS
- SAS ODS Markup resources:  
<http://support.sas.com/rnd/base/topics/odsmarkup>
- Updated ExcelXP Source code  
<http://support.sas.com/saspresents>