

# From DDE to ODS (Excel)

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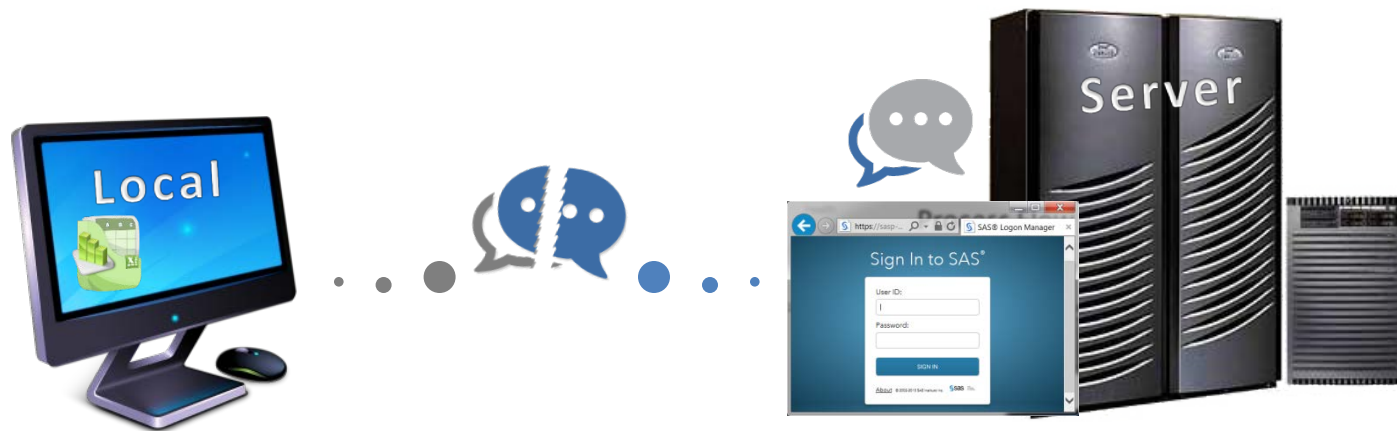
# *Dynamic Data Exchange (DDE)*

First released in 1987 along with Windows 2.0 as a method of inter-process communication between two different programs on the same computing platform.

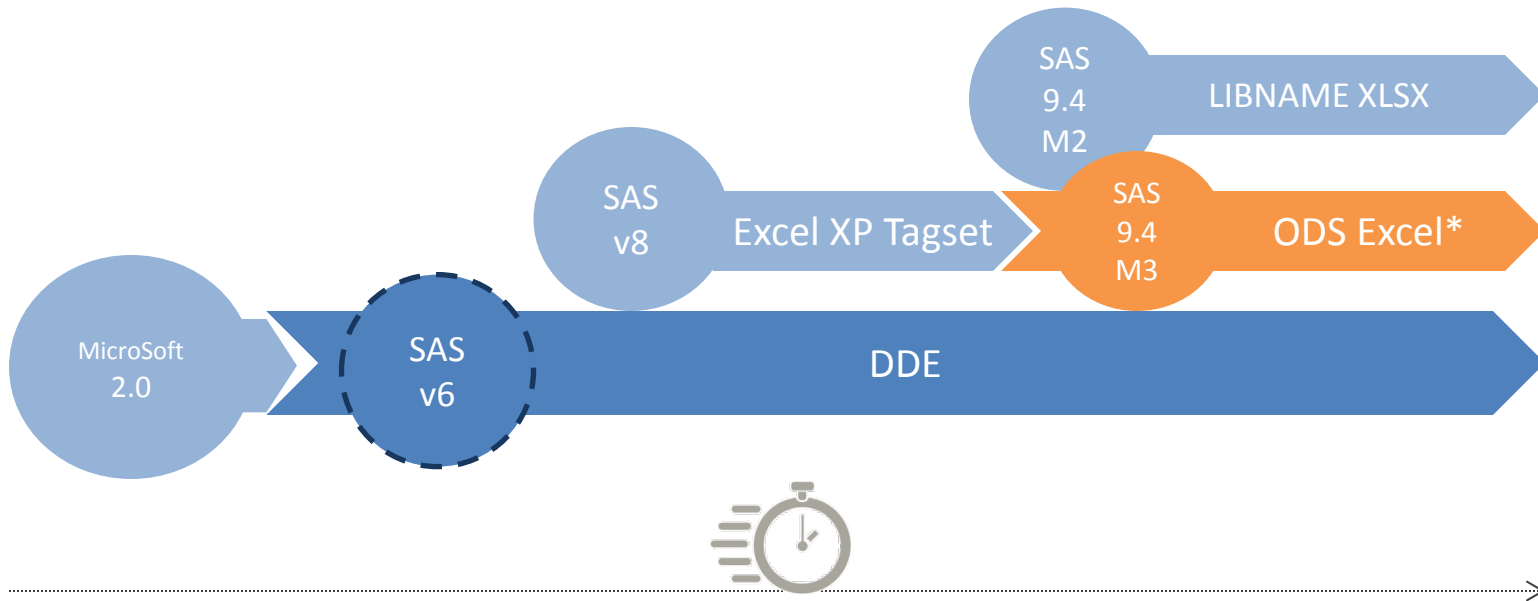
DDE is widely used in the SAS programming language for manipulating Excel and transferring data between SAS and Excel.

[https://en.wikipedia.org/wiki/Dynamic\\_Data\\_Exchange](https://en.wikipedia.org/wiki/Dynamic_Data_Exchange)

# Fail to Communicate




“Why your DDE programs don’t work anymore” by Hemedinger (2014).  
<https://blogs.sas.com/content/sasdummy/2014/10/14/dde-is-doa/>



For a review of SAS to Excel files solutions please read <https://blogs.sas.com/content/sasdummy/2012/02/11/export-excel-methods/>

\*ODS Excel experimental versions in M1 and M2.

# Solution Toolbox

Solution	Advantage	Limitation
DDE	Extensive control on format (with more programming efforts)	Not in SAS Studio
Proc Export dbms=xlsx	Simple code for 1 sheet	Complicated for multi-sheets
Libname XLSX	Multiple sheets	Format the template ahead of time
(Output Delivery System) ODS Excel XP Tagset	Multiple sheets; Flexible styles	Save as XML file first; File larger than DDE's
 ODS Excel*	Multiple sheets; File size comparable to DDE's; Maintain most of the legacy style; Can include graphics and formulas	Cannot password protect the workbook

\*Tips for Using the ODS Excel Destination (<https://blogs.sas.com/content/sgf/2017/02/20/tips-for-using-the-ods-excel-destination/#comment-382004>)

# ODS Destinations



## SAS Formatted:

- ✓ DOS document
- ✓ Output listing (by default)
- ✓ Dataset


## Third-Party Formatted:

- ✓ EPUB/EPUB2/EPUB3
- ✓ EXCEL
- ✓ HTML/HTML5
- ✓ MARKUP
- ✓ PowerPoint
- ✓ PRINTER
- ✓ RTF

1. SAS® 9.4 Output Delivery System: User's Guide, Fifth Edition

# ODS Excel

CODE LOG RESULTS



```
1 *ODS EXCEL to make excel file;  
2 ODS LISTING CLOSE;  
3 ODS EXCEL file= "&path./&excelfile..xlsx"  
4     style=demo;  
5     /*SAS code*/  
6     proc print data=&lib..&dt. noobs label; run;  
7 ODS EXCEL close;  
8 ODS LISTING;  
9
```



# ODS Destinations

CODE LOG RESULTS

Line #

```

1 *ODS EXCEL;
2 ODS LISTING CLOSE;
3 ODS EXCEL file= "&path./&output_file..xlsx"
4   style=demo;
5 /*SAS code*/ proc print data=&lib..&dt. noobs label; run;
6 ODS EXCEL close;
7 ODS LISTING;
8
9 *ODS PDF;
10 options nodate nonumber nocenter orientation=landscape;
11 ODS LISTING CLOSE;
12 ODS printer style=sasdocprinter file= "&path./&output_file..pdf";
13 /*SAS code*/ proc print data=&lib..&dt. noobs label; run;
14 ODS printer close;
15 ODS LISTING;
16
17 *ODS RTF;
18 ODS LISTING CLOSE;
19 ODS RTF file= "&path./&output_file..rtf";
20 /*SAS code*/ proc print data=&lib..&dt. noobs label; run;
21 ODS RTF close;
22 ODS LISTING;
  
```

**EXCEL**

**PDF**

**RTF**

# ODS OUTPUT

EXCEL

	A	B	C	D	E
1	Fiscal_Year	Program_Type	Discipline_Orsg	Rcpt_Age_Grp	RCPT_GENDER_CODE
2	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	<1	F
3	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	1-4	F
4	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	5-9	F
5	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	10-14	F
6	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	15-19	F

PDF

Fiscal_Year	Program_Type	Discipline_Orsg	Rcpt_Age_Grp	RCPT_GENDER_CODE
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	<1	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	1-4	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	5-9	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	10-14	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	15-19	F

RTF

Fiscal_Year	Program_Type	Discipline_Orsg	Rcpt_Age_Grp	RCPT_GENDER_CODE
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	<1	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	1-4	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	5-9	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	10-14	F
2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	15-19	F

# Proc Template

```

CODE LOG RESULTS
1 *Set the style via "define";
2 proc template;
3 define style demo;
4 parent=Styles.Normal;
5 style header /
6 font_face="Arial, Helvetica, sans-serif"
7 fontsize=9pt
8 color=white
9 fontweight=bold
10 textalign=center
11 verticalalign=middle
12 backgroundcolor=#1F497D;
13
14 style data /
15 font_face="Arial, Helvetica, sans-serif"
16 fontsize=10pt
17 borderbottomcolor=black
18 textalign=left
19 verticalalign=middle;
20 end;
21 run;

```

	A	B	C	D	E
1	Fiscal_Year	Program_Type	Discipline_Orsg	Rcpt_Age_Grp	RCPT_GENDER_CODE
2	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	<1	F
3	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	1-4	F
4	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	5-9	F
5	2016/2017	BASIC ALLIED HEALTH	DENTIST-ORAL/MAX_SURGERY	10-14	F
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# ODS EXCEL - Pros and Cons



1. **Faster “data dump”** in SAS Studio than in SAS Classic.
2. EXCEL *Behind the scene*.
3. Add graphs/image/sheets.
4. Style through Proc template or Cascading Style Sheets (CSS).
5. Same SAS syntax -> different destinations.



1. May not have the exact formatting style as the legacy files.
2. Does not assign password to the file.
3. Does not automatically “drop off” in local machine.



<https://filezilla-project.org/>

# Post it



# A Few Resources

Chevell Parker, Paper SAS5642-2016. A Ringside Seat: The ODS Excel Destination versus the ODS excelXP Tagset  
<https://support.sas.com/resources/papers/proceedings16/SAS5642-2016.pdf>

Chevell Parker, Paper SAS177-2014. Secrets from a SAS Technical Support Guy: Combining the Power of the SAS® Output Delivery System with Microsoft Excel Worksheets. <http://support.sas.com/resources/papers/proceedings14/SAS177-2014.pdf>

Chris Hemedinger (2012). How do I export from SAS to EXCEL Files: Let me count the ways  
<https://blogs.sas.com/content/sasdummy/2012/02/11/export-excel-methods/>

Chris Hemedinger (2014). Experimenting with ODS EXCEL to create spreadsheets from SAS  
<https://blogs.sas.com/content/sasdummy/2014/08/29/experimenting-with-ods-excel-to-create-spreadsheets-from-sas/#prettyPhoto>

Chris Hemedinger (2014). “Why your DDE programs don’t work anymore”  
<https://blogs.sas.com/content/sasdummy/2014/10/14/dde-is-doa/>

Robert Allison (2016). Send your SAS Graphs to Excel, Directly to Excel...  
<http://www.dataarchitect.cloud/send-your-sas-graphs-to-excel-directly-to-excel/>

Romain Miralles, SGF 2011. Creating An Excel Report: A Comparison Of The Different Techniques.  
<http://support.sas.com/resources/papers/proceedings11/074-2011.pdf>