

PROC PRESENT: Write Your Presentation in SAS® in as Few as Five Easy Steps

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ABSTRACT

There is no reason to wait for SAS® Version 9.x and ODS PPT to create your presentations in SAS. Harness the power of ODS PDF, PROC TEMPLATE and PROC REPORT (as well as any graphic producing procedure) in SAS 9.2 to create eye-popping and easy presentations, without ever leaving your SAS program! The presentation of the paper will be written in SAS.

INTRODUCTION

SAS provides many tools for customizing SAS output. Although the use of SAS to create a presentation is somewhat unusual, this methodology provides a brief look at some tools that can be used to enhance your programming output, and demystify some procedures that might seem scary (i.e. PROC TEMPLATE!) All code was run using PC SAS 9.2 Maintenance Release 3.

THE BACKGROUND GRAPHIC(S)

The choice of background graphics is an important one when created presentations in SAS as well as in PowerPoint presentations. These backgrounds can be one and the same. Most presentations are in 8 ½ by 11 landscape format, thus, it is important to use a background graphic as close to this size and orientation as possible. Many software packages allow you to export JPEGs, and you can use existing JPEGs as backgrounds as well. For example, if there is a PowerPoint presentation template, you can export the relevant page (empty) to a JPEG and use that for your PDF presentation.

For this presentation, I created my background graphics using existing JPEGs and Microsoft Visio, exporting the finished products to JPEGs.



The JPEG shown above is one of the samples provided in the zip file in the proceedings and is the background for page 1 of the example the sample program creates. I created numbered templates to use with identically numbered text fields.

THE PRESENTATION CONTENTS

Presentations generally consist of text, often bulleted or numbered, and graphics. Those in the “PowerPoint zone” may add features such as links, notes, embedded sound, and animations. This paper will primarily address text and graphics.

CREATING “PARAGRAPHS” IN SAS

SAS makes a very powerful and flexible desktop publisher. It is possible to construct very wide variables, so that paragraphs can be created by concatenating text fields or variables using the CATT function. I use the CATT function (which eliminates trailing blanks) so that I can string “sentences” together with a leading blank. I use the escapechar n function to create line feeds. In the example below, the paragraphs are created in a data step, but you could also import a file with existing fields. I label the variables using the “hidden dragon” (ALT+255), which suppresses the printing of the label or variable name. The paragraphs can be printed using PROC REPORT with a template without borders (and the special backgrounds we created above).

```
data test;
    length text1 ... text11 text12 $ 500;
    blank = '          ';
    text1a = '^n^TWas brillig, and the slithy toves';
    text1b = '^nDid gyre and gimble in the wabe:.';
    text1c = '^nAll mimsy were the borogoves,.';
    text1d = '^nAnd the mome raths outgrabe.';
    text1=catt(text1a,text1b,text1c,text1d);
    ...
    label blank = " " text1 = " " ...;
run;
```

CREATING GRAPHICS IN YOUR PRESENTATION

There are many graphic producing procedures in SAS. SAS/GRAPH, the new SG Procedures, and statistical graphs can all create images which can be directly inserted in your presentation, or imported into text fields and output using ODS ESCAPECHAR, ODS TEXT, TITLE and FOOTNOTE statements, and some procedural statements.

MODIFYING A STYLE TEMPLATE

The choice of background graphics is an important one when created presentations in SAS as well as in PowerPoint presentations. The example below demonstrates creating separate templates for each page in a macro, using different graphics files as the background for each template. In order to get the correct “margins” for the template, it was necessary to play around a little with the margins to get a full screen. As you can see, the “parent” for the templates is the “noborder” template (code shown directly below), which does not include any lines in the output. This template is useful for many purposes.

```
/* the noborder template */
proc template;
  define style styles.noborder;
    parent=styles.minimal;
    style Table /
      rules = NONE
      frame = VOID
      cellpadding = 0
      cellspacing = 0
      borderwidth = 0;
  end;

run;

/* macro to create multiple style templates with different graphic backgrounds */
options orientation=landscape
nodate nonumber nocenter
leftmargin=.01in rightmargin=.01in
topmargin=.00001in bottommargin=.01in;
run;

ods listing close;
%macro maketem(num);
proc template;
define style styles.alice&num.;
parent=Styles.noborder;
class Body / backgroundimage="alice&num..jpg";
end;
run;
%mend;
```

PUTTING IT ALL TOGETHER



Tw'as brillig, and
the slithy toves
Did gyre and
gimble in the wabe:
All mimsy were the
borogoves,
And the mome
raths outgrabe.

Using the style templates created above with the different backgrounds, I used PROC REPORT to print a blank column (where the black background with the picture is) and a second column that prints in black type on the pink background. The paragraph “wraps” in this second column. Note that you must use OPTIONS ORIENTATION=LANDSCAPE to get the proper orientation on the page.

```
%macro rptit(num);
ods pdf style=styles.alice&num.;
proc report nowd data=test
  style(report)=[cellpadding=3pt vjust=b]
  style(header)=[just=center font_face='New Century Schoolbook'
    font_weight=bold font_size=10pt]
  style(lines)=[just=left font_face='New Century Schoolbook'] ;
columns blank text&num ;
define blank / style(COLUMN)={just=1 font_face='New Century Schoolbook'
  font_weight=bold
  font_size=36pt cellwidth=600 }
  ;
```

```
        define text&num / style(COLUMN)={just=1 font_face='New Century Schoolbook'
            font_weight=bold font_size=36pt cellwidth=800 }
        ;
run;
%mend;

ods pdf file='testalice.pdf' notoc ;
ods escapechar='^';

%rptit(1);
%rptit(2);
%rptit(3);
%rptit(4);
%rptit(5);
%rptit(6);
%rptit(7);
%rptit(8);
%rptit(9);
%rptit(10);
%rptit(11);
%rptit(12);

ods pdf close;
quit;
```

DISPLAYING THE PRESENTATION

A presentation created in SAS for the PDF destination can be viewed with Adobe Reader®, which is free and readily available for many platforms. Once the presentation has been opened in Reader, choose View->Full Screen Mode (CNTL-L) and move about the presentation as if you were in a Powerpoint presentation.

CONCLUSION

SAS provides us with a wide variety of tools and output destinations so that we can create exactly the output we need for a given task. Using PROC TEMPLATE, PROC REPORT, and the ODS PDF destination presentations can be written entirely in SAS. These same techniques can be used for a variety of purposes.

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REFERENCES AND RECOMMENDED READING

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Hadden, Louise S. "Behind the Scenes with SAS®: Using Custom Graphics in SAS® Output." Proceedings of SAS Global Forum 2009 Conference. April 2009.

Huntley, Scott. "Let the ODS Printer Statement Take Your Output into the Twenty-First Century." Proceedings of the Thirty-First Annual SAS® Users Group International Conference. March 2006.

Huntley, Scott. "How to Add a Little Spice to your PDF Output." Proceedings of SAS Global Forum 2008 Conference. March 2008.

Pass, Ray and McNeill, Sandy. "PROC REPORT: Doin' It in Style!" Proceedings of the Twenty-Eighth Annual SAS® Users Group International Conference. April 2003.

Zender, Cynthia. "Funny ^Stuff~ in My Code: Using ODS ESCAPECHAR." Proceedings of SAS Global Forum 2007 Conference. April 2007.



CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

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Code samples are available upon request, and a zip file with a program and graphics to create a PDF presentation are included in the proceedings.

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