

Making an RTF file Out of a Text File, With SAS

Paper CC13

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While you are waiting, some trivia
“Q” is the only letter in the alphabet that does
not appear in the name of any state of the
United States.

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Introduction



- Motivation: a simple tool that would convert a ASCII Text output to RTF, regardless of where SAS is run
- Paper looks at a SAS macro that converts output generated in ASCII Text format and converts it into a RTF format file, inside a single datastep
- Most in-house tools either use a VBA, VB Script or a SAS macro that uses ODS RTF to read in the text file and convert it to an RTF (or MS Word file)
- A SAS macro that takes an ASCII generated text file, adds a “wrapper” around the text and the output is RTF
- RTF can be read in MS Word, OpenOffice, WordPerfect, Lotus Symphony, etc.

What is RTF?



- Example of RTF, Hello World:

```
{\rtf1\ansi\ansicpg1252\deff0\deflang1033
{\fonttbl{\f0\fmodern\fprq1\fcharset0 Courier New;}}
\viewkind4\uc1\pard\f0\fs20 Hello World!\par
}
```

- This text does look daunting, but the text up to the point of the "Hello World!" is just the header text which contains the signal that it is an RTF file, ASCII format, code page and language information, the font that is being used, and the font size. The '\par' is in effect a carriage return, and the final '}' closes the file.

The Macro I

- What parameters should be in the macro:
 - paper size and orientation
 - margin size
 - font size
 - line height
- There should be two more – the location and name of the input and output files



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```
01 %macro txt2rtf(_txtfn= /*Text file to convert to RTF*/  
02     ,_rtffn= /*Output RTF file name*/  
03     ,_pgwh=15840 /*Page width in twips*/  
04     ,_pght=12240 /*Page height in twips*/  
05     ,_mgns=1440 /*Margin width in twips*/  
06     ,_lspe=%str(\landscape)  
           /*If landscape, add this value*/  
07     ,_fnsz=8 /*Font point size - integer*/  
08     );
```

Important conversion: 1440twips=1in and 567twips=1cm

The Macro II



```
09 data _null_;
10   infile "&_txtfn" end=eof;
11   length _txt $200; input;
12   file "&_rtffn";
13   if _n_ = 1 then do;
14     put '{\rtf1\ansi\ansicpg1252\deff0\deflang1033 ' /
15         '{\fonttbl{\f0\fmodern\fprq1\fcharset0 ' /
16         'Courier New;}}{\colortbl \red0\green0\blue0;}' /
17         "\paperw&_pgwh.\paperh&_pght.\margl&_mgns." /
18         "\margr&_mgns."\margt&_mgns.\margb&_mgns.&_lspe." /
19         "\viewkind4\uc1\pard\ql\fi0\li0\ri0\sb0\sa0" /
20         "\sl-%eval(&_fnsz*20)\cf0\f0\fs%eval(&_fnsz*2) "
21     _infile_; end;
22   else do;
23     if substr(_infile_,1,1)=byte(12) then do;
24       _txt='\page '||substr(_infile_,2);
25       put _txt; end;
26     else if ^eof then put '\par ' _infile_;
27     else if eof then put '\par ' _infile_'}'; end;
28 run; %mend;
```

Page and Linesize Settings

- The hardest part when setting up the macro is the settings to use when setting up your text output linesize and pagesize settings. As a guide, refer to the following table (margin size is set to 1 inch and Courier New font is used):

Paper Size	Font Size	PAGESIZE	LINESIZE
LETTER	8	58	134
LETTER	9	52	119
LETTER	10	46	104
A4	8	49	145
A4	9	44	129
A4	10	39	116



- If other margin or font sizes or fonts are needed then attempt to get the pagesize and linesize values within your word processor by finding the maximum number of characters per line and per page it is possible to fill.

Enhancements



- One version replaced the `_pght` and `_pgwh` parameters with page sizes, e.g. values such as A4 and LETTER.
- Another enhancement was to allow for half point sizes, e.g. 8.5, but the gains from this were minimal and added an extra step where the calculation for the line spacing and font size had to be done before the step that actually did the conversion.
- A recent enhancement was one where it had to handle situations where the file was an old IBM style file which contained control characters in the first column, e.g. 1 for page break and 0 for a blank line.

Questions and Contact Information

Questions?

Contact Information

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