Combining RTF files from Different Sources

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ABSTRACT

Statistical output in the form of Rich Text Format files has superior utility over plain text output. SAS ® programmers have generated RTF using their own SAS software tools and more recently, SAS ODS. The problem of combining independent RTF files into a master document is solved by removing the document header and closing brace (}) for component files before combining. A unique problem exists with SAS ODS RTF output where section breaks are used in place of simple page breaks. This problem is solved by removing section breaks along with redundant section-related tags before independent RTF files are concatenated. This poster describes combining both types of RTF files into the same master documents.

INTRODUCTION

SAS software has long provided the capacity to produce output in Rich Text Format (RTF) files that are compatible with word processing applications like MS® WORD. The capability to output statistical displays in this file format has obvious utility: Statistical output that already conforms to desktop publishing standards is easier to integrate into written reports and can take advantage of features like varying fonts, color, and other aspects of page layout automatically performed by word processing programs.

The superiority of RTF output over plain ASCII text files led many programmers and statistical support groups to develop SAS-to-RTF interfaces before SAS ODS-generated RTF became available. One such software tool is a system of SAS software macros developed by George DeMuth (Macro Profile System (MPS) (Iwaniszek, 2006)) that construct complete RTF files that contain statistical tables, listings, and subject profiles. These files were created as stand-alone documents, but they were also combined into master documents by a simple concatenation technique. When SAS ODS-generated RTF files were available it became obvious that combining native RTF files with those produced by SAS software would capitalize on the mutual strengths of the enterprise-produced reporting system and the content provided from SAS ODS.

This paper will describe a method for combining RTF files into a single document. It will also identify structural elements in SAS ODS-generated RTF that may cause problems in a concatenated master document, and describe a strategy for avoiding or removing them from the raw SAS ODS RTF code. This paper is not intended to be a tutorial on the arcana of RTF and will be only a general discussion of the internal functioning of RTF. It will also describe a strategy for bundling multiple RTF files into a single document file. The reader is encouraged to consult the references to learn more about RTF code details.

Other programmers have provided detailed steps to accomplish both of these goals. See (Newcomer, 2006) in particular. The approach described below is a wholly SAS software based solution but follows a different file management strategy than that used by Newcomer.

THE ANATOMY OF AN RTF FILE

RTF is a type of markup language that is used to create word-processing compliant files that are transportable between computer platforms and applications. They are text files that contain codes and control words that common word-processing packages can interpret and render as fully compatible word-processing documents like the familiar *.DOC files produced by MS Word. The MPS macros generate RTF code that follows a particular model parallel to the model used by MS Word and has been robust for approximately 10 years. Excellent references exist that provide a basic understanding of the structure of RTF files (Burke, 2003) and detailed syntax (Microsoft, 1999). The following is intended to give a general description about regions of a typical RTF document file as generated with MPS software and SAS ODS.

Two detailed examples of RTF files are included at the end of this paper. The detailed examples will provide broader context for the specific RTF commands discussed below. Example 1 was produced using MPS and is a simple demographics table, and Example 2 was produced using SAS ODS and PROC REPORT where a page break was forced using the PROC REPORT BREAK AFTER *var* / PAGE command.

The basic structure of the typical RTF file is composed of words, text strings, and numbers contained in constructs like sentences, paragraphs, table cells, pages, sections, and files. Properties like color, font, font size, cell and page positioning are all applied as options or general properties of all members of the file. The basic components of an RTF file are:

- **File Header** (See green section in RTF examples below). File headers contain version number, font table, heading table, color table, and the information section.

- **Page/Section Set-up** (See yellow section in RTF examples below). This part contains instructions for page orientation, margins, and section definitions (`\sectd` in examples).

- **Document Header and Footer Definitions** (See blue section in detailed RTF examples below). These definitions deploy running headers (`\header`) and footers (`\footer`), and can be used to capitalize on Automatic Pagination (`{{Page} {\field{\*\fldinst { PAGE }}}\~{of}\~{\field {\*\fldinst{ SECTIONPAGES }}})`. Bookmarks (`\*\bkmkstart IDX1}{\*\bkmkend IDX1}`) are also conveniently located in Header or Footer definitions.

- **Document Body** (See white section in RTF examples below. Note that the document bodies have been abbreviated to shorten the examples). Contains all displays including paragraph text in open or tabular format. Also included are specific properties of font and page-positioning settings using RTF tags and commands.

- **Closing** (See purple section in RTF examples below). This is the final closing brace of the file, matching with the very first brace in the file header. Two outer braces encapsulate the entire file. Everything in the RTF file contained between the very first opening brace in front of the version number (`{\rtf1\ansi`) to the very last closing brace (`}`) is a self contained entity. It is not possible to concatenate two of these files together unless the file header is removed from one and the closing brace is removed from the other.

COMBINING RTF FILES INTO A SINGLE CONCATENATED DOCUMENT – SIMPLE CONCATENATION

RTF files are by design independent files. Their independence is enforced by a matching set of delimiters, and they also contain document specific property information.

Multiple RTF documents may be combined into a single cohesive RTF document by processing each of the multiple files to remove the file header and the closing brace. The processed files can then be output as a single file with a single common file header and a single closing brace. It is necessary that the individual files have robust formatting code-conventions that preserve the original structures of the displays the files individually contained. The simplest way to do this is to render each file as its own section. This may be a standard enforced by the software that produces the original RTF code. If not then the RTF source-code will have to be parsed and edited to make it conform to this basic design requirement.

The strategy for combining independent RTF files into a single master document involves the following steps:

- Produce RTF output.

- Groom RTF to remove file header and closing.

- Groom RTF to remove incompatible elements and enforce conformity to single-section-per-file standard.

- Concatenate groomed RTF into a single file.

- Attach common file header and final closing brace.

The example files below were produced using MPS and SAS ODS. They have many features in common and simply removing the document header and closing brace and concatenating them into a single file with a common document header is sufficient to produce a working master document. This would be true for the vast majority of RTF files of these types, with one notable exception: RTF produced by SAS ODS where a page break is forced does not use a simple `\column` tag to create a hard page break. Instead, SAS ODS uses a section break (**\sect\sectd**) and repeats the entire document and header section (see second blue section in Example 2). This produces an RTF file that contains more than one independent section, each with their respective section formatting. This is a condition that interferes with "page x of y" pagination and may introduce other irregularities in the master document.

The following is an example of a SAS data step that reads in an RTF file and identifies key regions of the input RTF file with flags and line-counters to prepare it for grooming and ultimate concatenation into the master document.

GROOM RTF 1: SAMPLE SAS CODE TO READ AND ANALYZE AN RTF FILE

The following SAS code reads in an RTF file named "&infile...&_ref..rtf" and strategically marks general sections with counters and flags. The retained variable `first_head` is an efficient tag for identifying the individual file header. A

subsequent data step is used to delete the header from the file before concatenating the individual file into the master file. Note that this code was developed to read and modify RTF code generated by SAS ODS and PROC REPORT and opportunistically makes use of landmarks provided within the RTF code emitted by the SAS system.

```
data
   inrtf( compress = yes)
   ;
   infile
          "&infile...&_ref..rtf"  length = ll end = last   lrecl=3000
          ;
   ll = ll+5;

   /* Read each line of RTF from individual source file named "&infile...&_ref..rtf"  */
   input
          @1 inline $varying30000. ll
          ;
   retain
          first_head (0)
          head_foot_count  (0)
          head_foot (0)
          foot_line (.)
          ;
   end_of_file = last;
   line_length = ll;

   /* identify start of footer and count lines down from footer  */
   if index( inline, '\footer')>0 then foot_line=0;
   if foot_line>. then do;
          foot_line+1;
   end;

   /* delimit document header section for deletion  */
   if index( inline, '\header')>0 and index( inline, '\sectd')=0  then first_head=1;

   /* identify and label each header/footer/section instance  */
   if index( inline, '\header')>0 and index( inline, '\sectd')=0  then head_foot_count+1;
   if index( inline, '\header')>0 and index( inline, '\sectd')=0  then do;
          head_foot=head_foot_count;
   end;
   if index( inline, '\sect\sectd')>0 then do;
          section_mark = 1;
   end;
   if index( inline, '\pard}}{\*\bkmkstart IDX')>0   then do;
          head_foot=0;
          book_mark=1;
   end;
run;
```

The SAS data step above attaches simple codes to the records of the input RTF file that identify regions of the input file for deletion, editing, or verbatim pass-through. This process is not required for files produced by the MPS since the MPS creates parallel output files: a stand-alone RTF file and another file with no file header or closing brace. This file is called a "component file".

The MPS stores component files as *.COMP files in parallel with the stand-alone RTF files it produces. The data step above helps to create *.COMP from the RTF files produced using SAS ODS. Component files may be stored as text files or temporary or permanent SAS data sets.

GROOM RTF 2: REMOVE HEADER, CLOSING BRACE, EXCESS SECTION BREAKS

The following data step takes the data set produced by the data step in the earlier example and removes the file header, redundant header and footer declarations, and revises all section breaks (within an input RTF file) into page breaks. The process may also require some fine-tuning to remove and alter elements of the input RTF file that are incompatible with other members of the master document. The example produces a text file "&outfile", but the output file could also be a SAS data set to be used later.

```
/* output comp file
*/
data
  _null_
  ;
  file
        "&outfile" lrecl=3000
         ;
  set
      inrtf
       ;
  /* remove document header    */
  if first_head = 0 then delete;

  /* revise extraneous \par from bottom of header    */
  if first_head=1 and strip( inline) = '\pard{\par}}}' then inline = '{\fs2\pard\par}}}';

  /* remove extraneous \par from top of footer    */
  if foot_line = 2 and index( inline,  "{\par}") = 1 then do;
        inline = substr( inline, 7);
  end;

  /* remove excess footers and headers    */
  if head_foot>1 then delete;

  /* remove end of footer group and excess bookmarks    */
  if index( inline, '\pard}}{\*\bkmkstart IDX')>0 and head_foot_count>1   then do;
        inline = scan( inline, 4, '}');
  end;

  /* convert section breaks to page breaks    */
  if section_mark = 1 then do;
        inline = '{\fs2\par\page\par}';
  end;

  /* remove final curly bracket    */
  if end_of_file then inline = '\pard';

  /* output record to file    */
  put
        inline
        ;

run;
```

CONCATENATE MULTIPLE COMPONENTS TO FORM A SINGLE RTF FILE

The process for concatenating RTF files that have been converted to component files can be stated schematically in terms of a very simple data step:

```
data
  _null_
  ;
  set
        header
        component_file01
        component_file02
        .
        .
        .
        closing_brace
        ;
  file
        "&outfile" lrecl = 3000
        ;
  put
        inline
        ;
run;
```

The Standard header is stacked on to of the tables and listings stored as component files and the closing syntax (often just a closing brace) is at the bottom of the stack. The master file is a simple text file ("&outfile" in the example above). The variable inline is a very wide text field containing the lines of RTF code to be laid down in the master RTF document. The resulting text file will open as a word processing compliant document in MS Word. The

following flow chart describes the overall process in schematic form, and several different approaches may be followed to produce the same outcome.

- Produce tables and listings: Tables and listings are written as independent RTF files and component files are stored in parallel as text files. Alternatively they may be created in a batch process that grooms all of the input RTF files into components at once.

- Convert to .COMP files: As noted above, component files may be stored simultaneously with the stand-alone RTF files containing the tables and listings, or they may be processed in batch immediately prior to concatenation

- Combine file header, components, and closing brace: A standard file header from some source may be stored as a permanent SAS data set in a format that conforms to the SAS data set used to store the component files. Sources for standard file headers include a dedicated macro or other program that can be developed to write appropriate RTF code to produce a file header. Another alternative is to produce a standard header using MS Word and storing the sample RTF code in text or SAS data set form. The closing brace is merely the right brace (}) stored in a text field.

- Output to master document file: All RTF necessary for producing a word processor compliant file is contained in the data records of the SAS data set where the file header, component files, and closing brace are stored. All that is needed at this point is to output the final text file in the manner described in the example data step above.
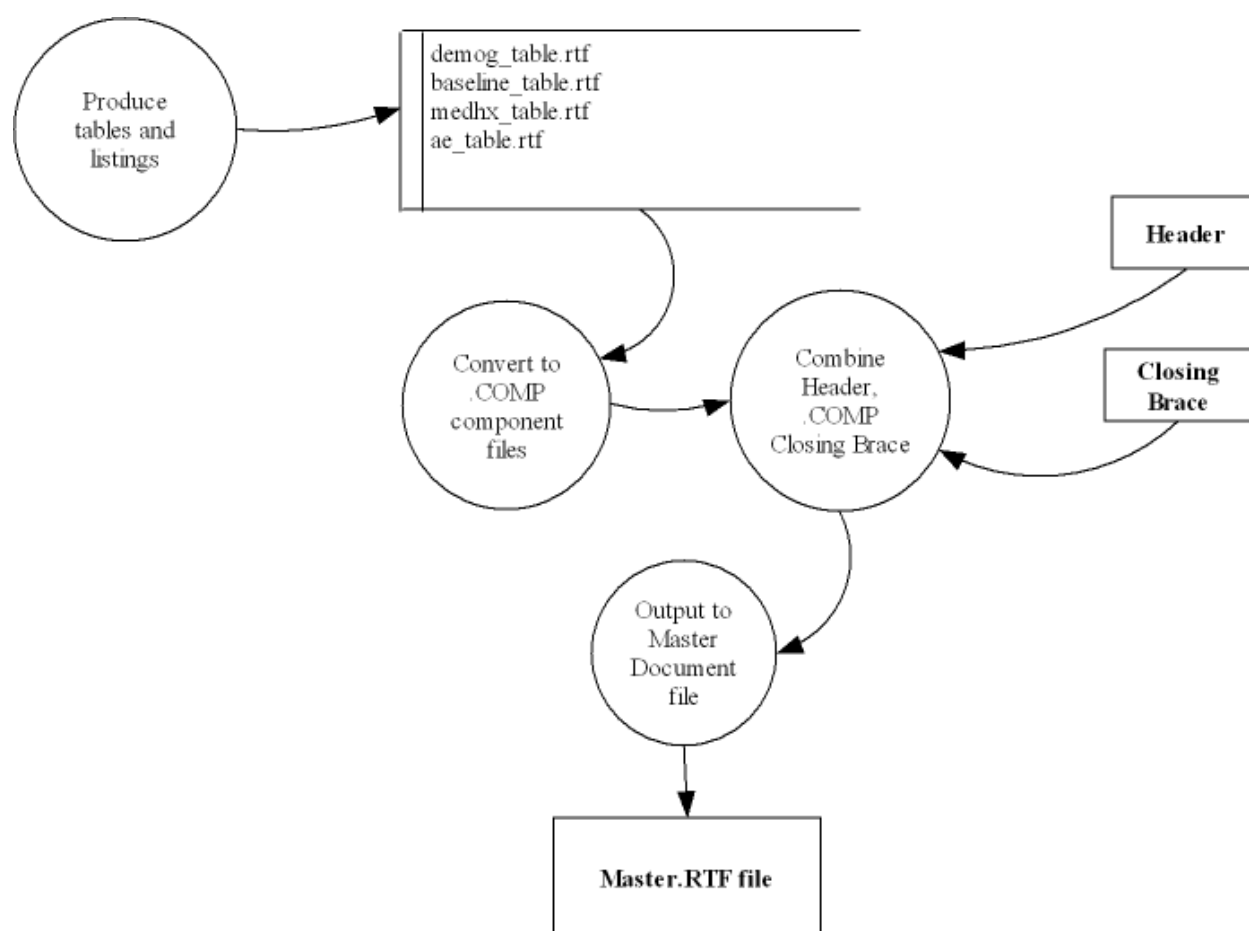

Figure 1: Flow Chart for Combining RTF component files into Master Document

CONCLUSION

Producing statistical output in the form of RTF files is desirable from a SAS programming perspective as well as the all-important end-user perspective. The flexibility provided by interfacing SAS output with powerful desktop publishing principles and features opens a new world to statisticians and programmers working to produce attractive, informative, and cost-effective displays. Home-grown applications, like the MPS alluded to above and SAS ODS, provide reasonably compatible approaches to creating RTF output.

A persistent problem in handling large or small numbers of independent RTF files is that they are not conveniently combined into a single master document. This paper described a method and strategy for dealing with this problem. It is necessary to groom the individual RTF files before combining them, but this is not inordinately difficult given a good understanding of the distinct regions of the typical RTF file. RTF architecture is simple in concept, but it can be quite confusing due to the many RTF tags and the redundancy of RTF structures in the bare files.

This paper tried to explain the structure of RTF in general terms at a level which is necessary to edit and combine files. It did not get into syntactical details of text and table formatting, but showed how to work with RTF files as distinct entities. It is hoped that the framework described here is of use to programmers when designing systems to manage multiple outputs and compiling them into larger master documents.

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Web: www.Stattechservices.com

EXAMPLE 1 (TABLE 1 – DEMOGRAPHIC AND BASELINE CHARACTERISTICS): MPS-GENERATED RTF EXAMPLE

```
{\rtf1\ansi
\deff {\fonttbl
\f1\ffmodern\charset0\fprq2 SAS Monospace;
\f2\ffroman\charset0\fprq2 Times New Roman;
\f3\ffswiss\charset0\fprq2 Arial;
\f4\fftech\charset0\fprq2 Symbol;
{\stylesheet
{\s1 \q1\widctlpar heading 1;} {\s2 \q1\widctlpar heading 2;} {\s3 \q1\widctlpar heading 3;}}
{\colortbl;\red0\green0\blue0;\red0\green0\blue255;\red0\green255\blue255;
\red0\green255\blue0;\red255\green0\blue255;\red255\green0\blue0;\red255\green255\blue0;
\red255\green255\blue255;\red0\green0\blue128;\red0\green128\blue128;\red0\green128\blue0;
\red128\green0\blue128;\red128\green0\blue0;\red128\green128\blue0;\red128\green128\blue128;
\red192\green192\blue192;}
}
{\info
}
\paperw15840\paperh12240\widowctrl\ftnbj \fet0\sectd \lndscpsxn\linex0
\margl1440\margr1440\margt1440\headery1440\margb1440\footery1440
{\header
\trowd\tgraph100\trqc
\cellx5040\cellx7920\cellx12960\pard
\q1\widctlpar\intbl\li0 \fi0 \f3\fs22 BigPharm\cell\pard\pard
\qc\widctlpar\intbl\li0 \fi0 \f3\fs22 \cell\pard\pard
\qr\widctlpar\intbl\li0 \fi0 \f3\fs22 Data as of: 11/3/2009\cell\pard\row
\trowd\tgraph100\trqc
\cellx5040\cellx7920\cellx12960\pard
\q1\widctlpar\intbl\li0 \fi0 \f3\fs22 MBP0001\cell\pard\pard
\qc\widctlpar\intbl\li0 \fi0 \f3\fs22 \cell\pard\pard
\qr\widctlpar\intbl\li0 \fi0 \f3\fs22 {Page }{\field{\*\fldinst { PAGE }}{\fldrslt }}{ of
}{\field{\*\fldinst { SECTIONPAGES }}{\fldrslt }}\cell\pard
\pard
\qc\li0 \fi0 \f3\fs22 Table 2\par\pard
\pard
\qc\li0 \fi0 \f3\fs22 Demographic and Baseline Characteristics\par\pard
}
{\footer
\trowd\tgraph100\trqc\cellx8640\cellx10080\cellx12960\pard
\q1\widctlpar\intbl\li0 \fi0 \f3\fs22 \line Output file demog_ndw.tbl generated by
demog_pfl.sas on 22JAN10 : 10:53\cell\pard\pard
\qc\widctlpar\intbl\li0 \fi0 \f3\fs22 \cell\pard\pard
\qr\widctlpar\intbl\li0 \fi0 \f3\fs22 \cell\pard
\row
}
\qc\widctlpar\fi0\f1\fs2 \par
\trowd\trkeep\tgraph100\trqc\trhdr
\clbrdrt\brdrs\brdrw15\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\cellx4320
\clbrdrt\brdrs\brdrw15\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx
12960
\pard
\qc\widctlpar\intbl\fi0\f3\fs20 \cell\pard
\qc\widctlpar\intbl\fi0\f3\fs20 Treatment Group\cell\pard
\widctlpar\intbl \row \pard
\trowd\trkeep\tgraph100\trqc\trhdr
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\clvertal\cellx4320
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\clvertal\cellx6480
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\clvertal\cellx8640
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\clvertal\cellx10800
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\clvertal\cellx12960
\pard
\q1\widctlpar\intbl\fi-432\li432\f3\fs20 Summary\cell\pard
\qc\widctlpar\intbl\fi0\f3\fs20 Treatment A\cell\pard
\qc\widctlpar\intbl\fi0\f3\fs20 Treatment B\cell\pard
\qc\widctlpar\intbl\fi0\f3\fs20 Treatment C\cell\pard
\qc\widctlpar\intbl\fi0\f3\fs20 Treatment D\cell\pard
\widctlpar\intbl \row \pard
\trowd\trkeep\tgraph100\trqc
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx4320
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx6480
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx8640
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx10800
\clbrdrl\brdrs\brdrw15\clbrdrr\brdrs\brdrw15\clbrdrb\brdrs\brdrw15\cellx12960
\pard
```

```
\ql\widctlpar\intbl\fi-432\li432\f3\fs20  Total Subjects\cell\pard
\ql\widctlpar\intbl\fi0\f3\fs20  \tqdec\tx864 {600}\cell\pard
\ql\widctlpar\intbl\fi0\f3\fs20  \tqdec\tx864 {600}\cell\pard
\ql\widctlpar\intbl\fi0\f3\fs20  \tqdec\tx864 {600}\cell\pard
\ql\widctlpar\intbl\fi0\f3\fs20  \tqdec\tx864 {600}\cell\pard
\widctlpar\intbl\row\pard
```

[Gender, Ethnicity, Weight, Height summaries removed for brevity]

```
{\fs2\par}}
```

EXAMPLE 2 (LISTING 1 – DEMOGRAPHICS): SAS SOFTWARE-GENERATED RTF USING PROC REPORT

```
{\rtf1\ansi\ansicpg1252\uc1\deff0\deflang1033\deflangfe1033
{\fonttbl
{\f1\fnil\fprq0\fcharset0 SAS Monospace;}
{\f2\fswiss\fprq2\fcharset0 Arial;}
{\f3\froman\fprq2\fcharset0 Times New Roman;}
}{\colortbl;
\red0\green0\blue0;
\red0\green0\blue255;
\red0\green255\blue255;
\red0\green255\blue0;
\red255\green0\blue255;
\red255\green0\blue0;
\red255\green255\blue0;
\red255\green255\blue255;
\red0\green0\blue128;
\red0\green128\blue128;
\red0\green128\blue0;
\red128\green0\blue128;
\red128\green0\blue0;
\red128\green128\blue0;
\red128\green128\blue128;
\red192\green192\blue192;
}{\stylesheet{\widctlpar\adjustright\fs20\cgrid\snext0 Normal;}{\*\cs10\additive Default
Paragraph Font;}
}{\info{\title V9.1 SAS System Output}{\author SAS Version 9.1}{\operator SAS Version
9.1}{\version1}{\creatim\yr2010\mo2\dy24\hr10\min0\sec8}}
\widowctrl\ftnbj\aenddoc\formshade\viewkind1\viewscale100\pgbrdrhead\pgbrdrfoot\fet0\paperw158
39\paperh12240\margl1440\margr1440\margt1800\margb1440
\sectd\linex0\endnhere\pgwsxn15839\pghsxn12240\lndscpsxn\headery1800\footery1440\marglsxn1440\
margrsxn1440\margtsxn1800\margbsxn1440
{\header\pard\plain\qc{
\trowd\trkeep\trqc\trgaph10
\cltxlrtb\clvertalt\cellx6479
\cltxlrtb\clvertalt\cellx12958
\pard\plain\intbl\sb10\sa10\ql\f2\fs20\cf1{BigPharm\cell}
\pard\plain\intbl\sb10\sa10\qr\f2\fs20\cf1{Data as of: 11/3/2009\cell}
{\row}
\trowd\trkeep\trqc\trgaph10
\cltxlrtb\clvertalt\cellx6479
\cltxlrtb\clvertalt\cellx12958
\pard\plain\intbl\sb10\sa10\ql\f2\fs20\cf1{MBP0001\cell}
\pard\plain\intbl\sb10\sa10\qr\f2\fs20\cf1{{Page} {\field{\*\fldinst { PAGE }}}\~{of}\~{\field
{\*\fldinst{ SECTIONPAGES }}}\cell}
{\row}
\trowd\trkeep\trqc\trgaph10
\cltxlrtb\clvertalt\cellx12958
\pard\plain\intbl\keepn\sb10\sa10\qc\f2\fs20\cf1{Listing 2\cell}
{\row}
\trowd\trkeep\trqc\trgaph10
\cltxlrtb\clvertalt\cellx12958
\pard\plain\intbl\sb10\sa10\qc\f2\fs20\cf1{Demographics\cell}
{\row}
\pard{\par}}}
{\footer\pard\plain\qc{
{\par}\trowd\trkeep\trqc\trgaph10
\cltxlrtb\clvertalt\cellx12959
\pard\plain\intbl\sb10\sa10\ql\f2\fs20\cf1{demog_procrep_pagebrk.lis generated by
demog_ljl_pagebreak.sas on 24FEB10 : 10:00\cell}
{\row}
\pard}}{\*\bkmkstart IDX}{\*\bkmkend IDX}
{\tc\v Report \tcf67 \tcl1 }
{\tc\v Detailed and/or summarized report \tcf67 \tcl2 }
\trowd\trhdr\trqc\trgaph10
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx1445
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx2458
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx3903
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx4916
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx7801
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx8814
\clbrdrt\brdrs\brdrw15\brdrcf1\clbrdrb\brdrs\brdrw5\brdrcf1\cltxlrtb\clvertalb\cellx9832
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\pard\plain\intbl\keepn\sb80\sa80\qc\f2\fs20\cf1{\qc Weight{\line}
(lb)\cell}
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\cltxlrtb\clvertalt\cellx8814
\cltxlrtb\clvertalt\cellx9832
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\pard\plain\intbl\sb80\sa80\ql\f2\fs20\cf1{3007\cell}
\pard\plain\intbl\sb80\sa80\qc\f2\fs20\cf1{31JUL1975\cell}
\pard\plain\intbl\sb80\sa80\ql\f2\fs20\cf1{Male\cell}
\pard\plain\intbl\sb80\sa80\ql\f2\fs20\cf1{White\cell}
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**[Listing for subjects between Subject 3008 and 3016 removed
for brevity]**

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**[Listing for subjects after Subject 3016 removed
for brevity]**

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Table 1
Demographic and Baseline Characteristics

Summary	Treatment Group			
	Treatment A	Treatment B	Treatment C	Treatment D
Total Subjects	600	600	600	600
Gender				
Female	371 (100%)	374 (100%)	365 (100%)	366 (100%)
Male	0	0	0	0
Ethnicity				
White	332 (89%)	328 (88%)	321 (88%)	325 (89%)
Black/African American	28 (7.5%)	32 (8.6%)	32 (8.8%)	23 (6.3%)
Asian	3 (0.8%)	0	4 (1.1%)	5 (1.4%)
American Indian or Alaska Native	0	5 (1.3%)	1 (0.3%)	4 (1.1%)
Native Hawaiian or Pacific Islander	0	0	1 (0.3%)	0
Other	8 (2.2%)	8 (2.1%)	6 (1.6%)	8 (2.2%)
Weight(lb)				
N	370	372	365	364
Mean (Std)	158.9 (39.36)	160.8 (39.28)	157.3 (38.41)	157.9 (35.70)
Median	150.0	151.0	148.0	151.0
Min, Max	96.0, 452.0	98.0, 333.0	95.0, 318.0	94.0, 308.0
Height(in)				
N	371	372	365	365
Mean (Std)	64.4 (2.62)	64.4 (2.67)	64.6 (2.67)	64.5 (2.71)
Median	64.0	64.0	64.6	64.0
Min, Max	55.5, 71.0	56.0, 71.0	56.5, 73.0	56.0, 74.5

Listing 1
Demographics

Treatment Group	Subject	Date of Birth	Gender	Ethnicity	Height (in)	Weight (lb)
Treatment A	3007	31JUL1975	Male	White	64.0	165.0
	3008	05OCT1951	Female	White	63.5	140.0
	3009	19JAN1980	Male	Black/African American	71.0	165.0
Treatment B	3002	06MAR1951	Female	Other	61.0	135.0
	3006	17NOV1956	Female	White	67.0	232.0
	3010	16NOV1972	Female	White	68.0	155.0
	3012	30MAY1971	Female	White	67.0	124.0
Treatment C	3003	29NOV1976	Female	White	66.0	130.0
	3005	24NOV1953	Female	White	65.5	142.0
Treatment D	3001	25APR1983	Female	White	62.5	150.0
	3004	24DEC1948	Female	White	62.0	197.0
	3011	12AUG1946	Female	White	61.5	150.0

Listing 1
Demographics

Treatment Group	Subject	Date of Birth	Gender	Ethnicity	Height (in)	Weight (lb)
Treatment A	3016	06AUG1951	Female	White	62.0	130.0
	3017	31DEC1975	Female	White	68.5	165.0
	3018	15OCT1968	Female	White	65.0	165.0
Treatment B	3023	01JAN1972	Female	White	63.0	135.0
	3024	01FEB1983	Female	White	62.0	112.0
Treatment C	3013	08DEC1950	Female	White	67.5	132.0
	3014	24MAR1949	Female	White	67.0	138.0
	3021	12DEC1961	Female	White	60.0	150.0
	3022	28AUG1983	Female	White	68.0	117.0
Treatment D	3015	15NOV1954	Female	White	64.0	126.0
	3019	09FEB1956	Female	Black/African American	60.0	160.0
	3020	15AUG1967	Female	American Indian or Alaska Native	64.0	127.0
	3025	12MAY1958	Female	White	67.5	160.0