

## Paper 184-27

## Tips and Tricks for Easier Reporting

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**ABSTRACT**

This Hands-On workshop focuses on report writing issues you may have encountered, and solutions to make your programming life easier. It introduces features that

- enable you to better control the order of class variables in tabular reports
- utilize user-defined formats, and PROC FORMAT options to control ordering in reports
- take advantage of the MULTILABEL option to avoid creating additional variables
- produce Microsoft Excel spreadsheet results, using easy-to-code SAS® statements.

Additional Tips are shared to make your reporting easier!

**INTRODUCTION**

Producing a report to exact specifications can be frustrating since there are many default software options that produce output different than desired. By understanding how to override defaults, and by learning a few tricks, your reports can be closer to your desired end result the first time.

This workshop is appropriate for beginning and intermediate SAS Users who need to produce reports but may have encountered problems along the way. This [overview](#) paper provides a snapshot of the concepts presented in the hands-on workshop.

**USING THE MULTILABEL OPTION**

Reports often require different views, or summaries, based on a column such as date or month. For example, providing both quarterly summaries and half-year summaries within a report. The typical approach to this problem is creating a duplicate variable (e.g.: month and month2) and then creating a format for each variable to provide the desired grouping.

An alternate solution uses the MULTILABEL option enabling you to specify multiple levels for values of a [single variable](#) when you create a format. For example, January would fall into "Quarter 1" and would also be placed in "First Half of Year". Use the MULTILABEL option on the VALUE statement in PROC FORMAT and then use the MLF option on the CLASS statement in PROC TABULATE, MEANS, etc. This alternate solution avoids the need to read the data set an extra time to create duplicate variables.

**ORDERING FORMATTED VALUES**

Despite your best attempts to order a report in a logical fashion, default ordering frequently produces alphabetical ordering. Consider survey data with E, G, F, P representing Excellent, Good, Fair, and Poor. You desire to summarize the results in the order specified, but they end up in alphabetic order as E, F, G, P.

A typical solution is to add sequence numbers to the formatted values, so the formatted value ordering is forced by the sequence numbers. For example: "1.Excellent", "2.Good", and so on. While this approach can work, the sequence numbers are often not desirable in the output.

An alternate solution uses the NOTSORTED option on the VALUE statement to store the values in the order they are listed in the VALUE statement. Then, use the PRELOADFMT and

ORDER=DATA options on the CLASS statement to force the class values into the desired order.

**PRODUCING EXCEL RESULTS EASILY**

Chances are good that you have been asked to produce your results in Excel! Many SAS programmers have opted for writing to a CSV file or using VIEWTABLE to export data to Excel. Neither solution produces the elegant formatting, and ease of results that is desired.

If you creatively use ODS (Output Delivery System) statements, you can route your listing directly to an Excel Spreadsheet. While the default output will often suffice, ODS enables styles and other features to make the Spreadsheet ready without further alteration.

To write the result of a PROC REPORT step directly to XLS, use:

```
ods html file='c:\FlowReport.xls';
proc report step. . . ;
run;
ods html close;
```

**PRODUCING RTF OUTPUT**

While HTML output is sometimes desirable, RTF (Rich Text Format) output is often required for ease of document preparation. ODS facilitates easily producing RTF output files. The trick is often using the right combination of options to get the desired appearance.

To write the result of a PROC REPORT step directly to RTF, use:

```
ods rtf file='c:\FlowReport.rtf';
proc report step. . . ;
run;
ods rtf close;
```

Additional options and features are available to enhance the appearance of the results, and enable better readability within the resulting Document.

**CONCLUSION**

The end result of most programming tasks is some form of report. Unfortunately, the majority of a programmer's time is often spent trying to produce the desired report format. The tricks and tips presented in this workshop focus on solutions to some of the common problems encountered in reporting.

**CONTACT INFORMATION**

A [detailed Hands-On Workshop handout](#) is available at the scheduled presentation, or by contacting the authors:

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