SAS® Global Forum 2014

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SAS® ENTERPRISE GUIDE® YOUR GATEWAY TO SAS®

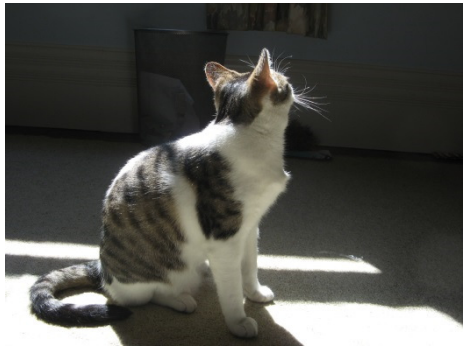
Dave Shea, Skylark Limited, Wellington, New Zealand

Who is this Dave Shea ?

- Not the announcer for the Boston Bruins
- SAS user from Wellington, New Zealand
- A member of SAS Partner knoware
  The Knowledge Warehouse Limited

Where is this Dave Shea ?

- Downunder_Dave at the SAS Community site
- www.sascommunity.org/wiki/User:Downunder_Dave
- Google **`SASCommunity Downunder_Dave`**



What are we going to look at ?

- Enterprise Guide – It's in the way that you use it
- Enterprise Guide – It's still SAS under the hood
- Enterprise Guide – The users. Who are they ?
- Enterprise Guide – As a business tool
- Enterprise Guide – As a learning environment for all

How are we going to do that ?

- A mixture of a few Powerpoint slides and some chat
- A walk-through demonstration of some topics
- Silence may be golden, but not from the audience
- No intention to read out the paper line by line

Enterprise Guide
It's in the way that you use it

- A point-and-click way of constructing SAS code
- A place to work, explore, learn and play

Enterprise Guide – It is still SAS under the hood

- An alternative way of writing your program
- It's not magic, just quite clever
- SAS and SQL – The love that dare not speak its name

Enterprise Guide – Two Camps

- I love it !
- Doh !

Enterprise Guide – Three Groups

- I can use a mouse and I know what I want to do
- I've used SAS before and now with Enterprise Guide, I love it !
- I've used SAS before and now my company have done something really stupid…..

Enterprise Guide as a Business Tool

- A great place to start using SAS from the ground up
- A blank canvas with helpful Wizards where required
- Does not require you to actually know any SAS
- Lets new users get up and running quickly

Enterprise Guide as a learning environment for new SAS users.

- Not *everyone* wants to learn a programming language
- Point and click is a familiar technique to most users
- Point and click gets results, quickly
- The focus is on the results, not the method

Enterprise Guide as a learning environment for experienced SAS users.

- Experienced users, learning stuff ? Yes
- When we stop learning, we stop living
- There is always something new to learn
- There is always something to re-visit to keep us fresh

Enterprise Guide – I'll Do It My Way

- Who's taken my Display Manager away ?
- My beloved semi-colon…….. ;
- *Mea culpa* – It was me too
- The SAS Code Node in Enterprise Guide

My SAS Nemeses: Tabulate, Graph and ODS.

- Tabulate Very powerful but sometimes at a price
- Tabulate Percentages……!
- Graph Enormously rich set of tools, but at a price
- Graph Mid-points ? What ?
- ODS Tagsets, Templates, Styles, Over-rides?

Making your Enterprise Guide life easier

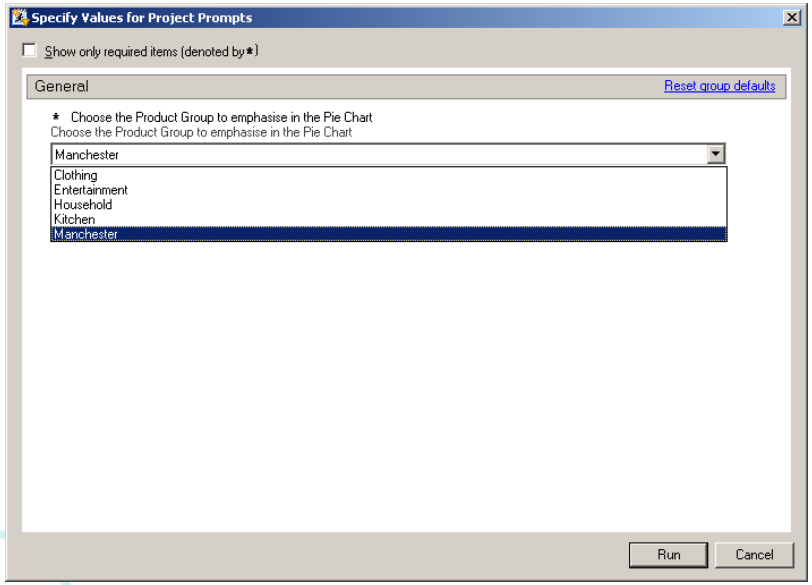
- Use the Project Log
- Which Task uses which Proc ?
- Control how your Project runs

Making your Enterprise Guide life easier

- Organise your Project and Process Flows
- Keep your Process Flows tidy
- Using Prompts at run time

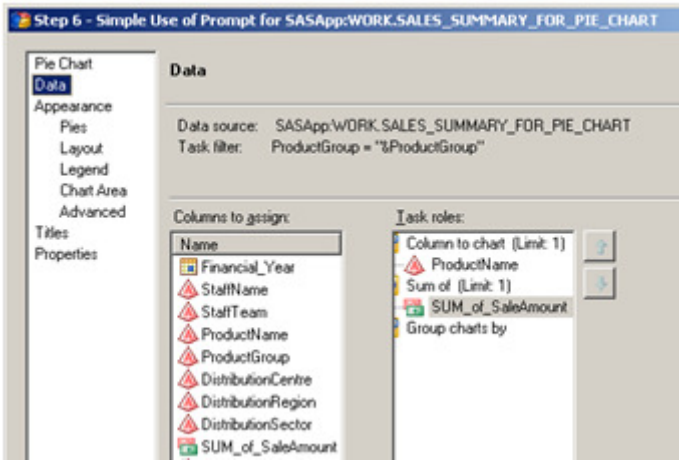
Using Prompts in Tasks

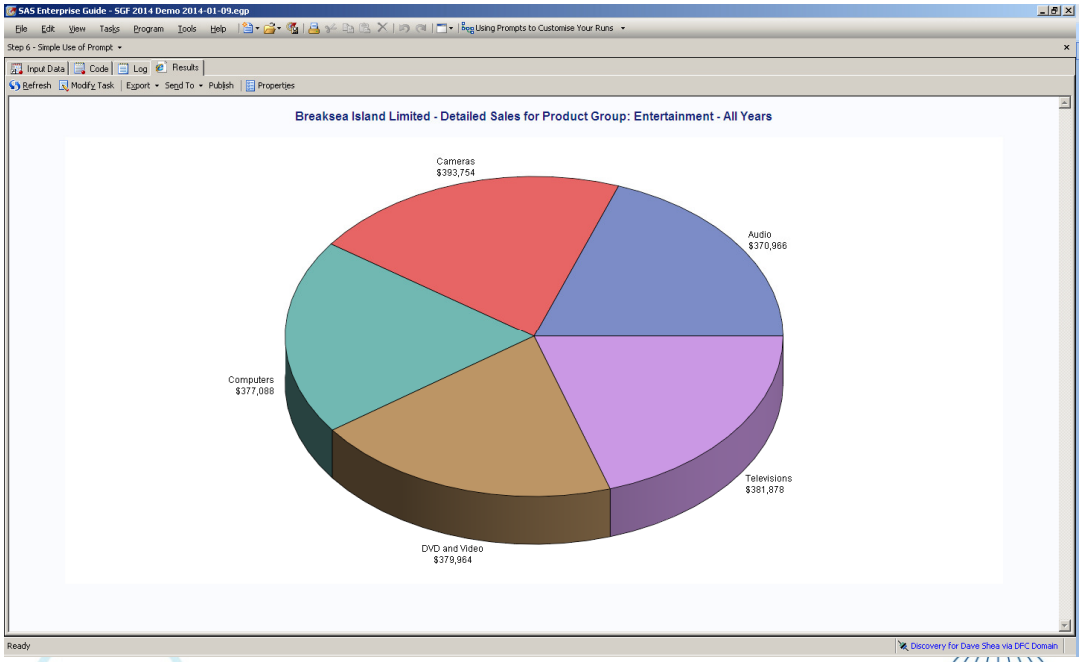
- Prompts ask the user a question at run time.
- In this case “What Product Group do you want us to analyse in more detail for this run ?”



Using Prompts in Tasks

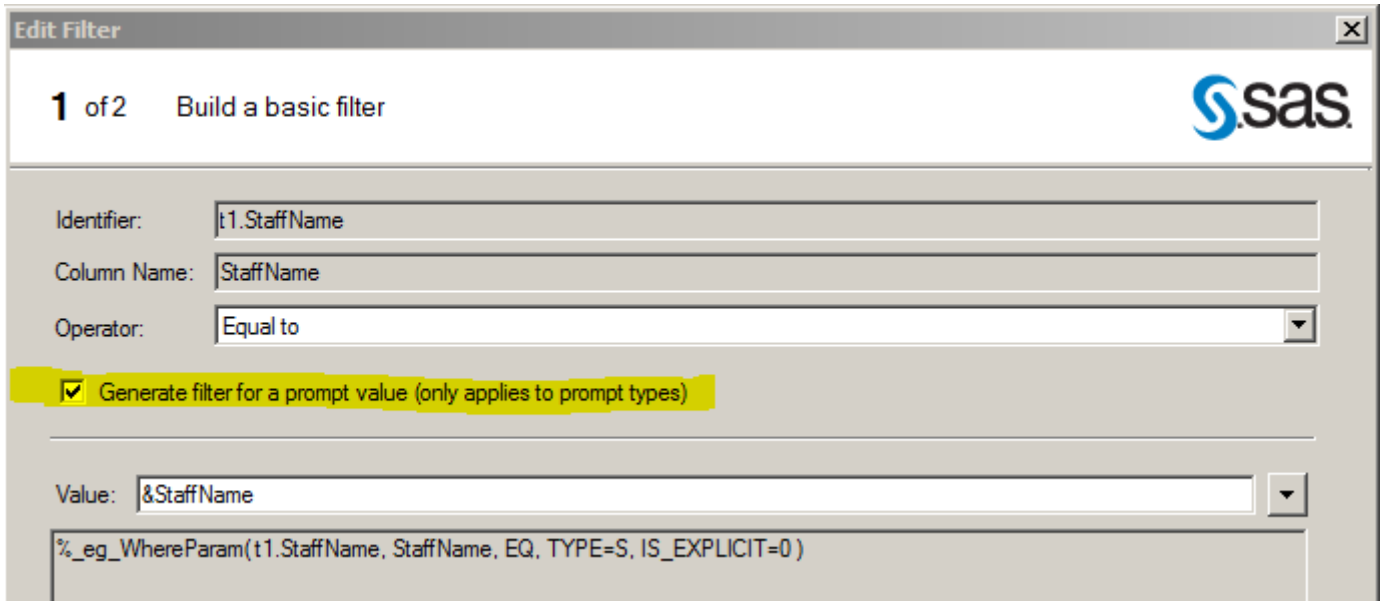
- The Prompt is represented as a macro variable reference, **`&ProductGroup`**





Using Prompts in Query Builder Filters

- If using a Prompt as part of a Query Builder filter, make sure you put a tick in the box highlighted below.



Making your Enterprise Guide life easier

- Document as you go
- Label your Task nodes
- Name and Label your Query Builder output datasets
- Add Note nodes to your Process Flows
- Use Enterprise Guide automatic macro variables

SASLOG – Automatic Macro Variables

```
1          ;*';*";*/;quit;run;
2          OPTIONS PAGENO=MIN;
3          %LET SYSLAST=WORK.BREAKSEA_SALES_DETAILS;
4          %LET _CLIENTTASKLABEL='Adjustment to Base Data';
5          %LET _CLIENTPROJECTPATH='C:\Userfile\SASProjects51\SGF 2014 Demo 2014-03-05.egp';
6          %LET _CLIENTPROJECTNAME='SGF 2014 Demo 2014-03-05.egp';
7          %LET _SASPROGRAMFILE=;
8
9          ODS _ALL_ CLOSE;
10         OPTIONS DEV=ACTIVEX;
11         GOPTIONS XPIXELS=0 YPIXELS=0;
12         FILENAME EGSR TEMP;
13         ODS tagsets.sasreport13(ID=EGSR) FILE=EGSR STYLE=HtmlBlue
13       ! STYLESHEET=(URL="file:///C:/Program%20Files/SASHome/SASEnterpriseGuide/5.1/Styles/HtmlBlue.css") NOGTITLE NOGFOOTNOTE
13       ! GPATH=&sasworklocation ENCODING=UTF8 options(rolap="on");
NOTE: Writing TAGSETS.SASREPORT13(EGSR) Body file: EGSR
14
15         GOPTIONS ACCESSIBLE;
16         OPTIONS LINESIZE=145;
17         ************************************************************************************************************************************************************;
18         *Adjust the base data to remove known errors.                                                                                                              ;
19         ************************************************************************************************************************************************************;
20         Data SALES_DETAILS(Label="Breaksea Island Trading Limited - Sales Details - Adjusted");
21          Set BREAKSEA_SALES_DETAILS;
22
23         ************************************************************;
24         *Determine the Financial Year for each Sale using a standard  ;
25         *Apr-Mar Financial Year but with the ability to amend this.   ;
26         ************************************************************;
27         Financial_Year    =    IntNx("YEAR.4",SalesDate ,1)-1;
28
```

LET'S DEMONSTRATE !

- We will use Sales Data from Breaksea Island Limited
- A single dataset where each row shows an item sold by a Staff Member in a phone and web based sales system
- Each Product belongs to a Product Group
- Each item is delivered through a distribution hierarchy of centre's, regions and sectors.
- Each sale record has a date, an amount, a product, a salesperson and a distribution centre.

LET'S DEMONSTRATE !

- Breaksea Island Limited provided this sales data as an Excel workbook
- Some of the supplied data needs to be cleaned
- Some features of the supplied data need to be added such as the Financial Year information for each sale

Please wait while we ALT-TAB…….

Tabulate 01 via Wizard

```
PROC TABULATE
DATA=WORK.SALES_DETAILS(FIRSTOBS=1 )

    FORMAT=Dollar16.
    ;

    VAR SaleAmount;
    CLASS Financial_Year /  ORDER=UNFORMATTED MISSING;
    CLASS ProductGroup /    ORDER=UNFORMATTED MISSING;
    TABLE
        /* ROW Statement */
        ProductGroup
        all = 'Total Sales'  ,
        /* COLUMN Statement */
        Financial_Year *(SaleAmount * Sum=' ' )
        all = 'Total Sales' *(SaleAmount * Sum=' ' )        ;
    ;

RUN;
```

Tabulate 02 via Advanced View

```
PROC TABULATE
DATA=WORK.SALES_DETAILS(FIRSTOBS=1 )
        FORMAT=Dollar16.

    ;

    VAR SaleAmount;
    CLASS Financial_Year /  ORDER=UNFORMATTED MISSING;
    CLASS ProductGroup /    ORDER=UNFORMATTED MISSING;
    TABLE /* Row Dimension */
ProductGroup
ALL={LABEL="Total Sales"},
/* Column Dimension */
Financial_Year*
  SaleAmount={LABEL="Sales ($)"}*
    Sum={LABEL=" "}
ALL={LABEL="Total Sales"}*
  SaleAmount={LABEL=" "}*
    Sum={LABEL=" "}          ;
    ;

RUN;
```

Tabulate 03 via Advanced

```
PROC TABULATE
DATA=WORK.SALES_DETAILS(FIRSTOBS=1 )
        FORMAT=Dollar16.

    ;

    VAR SaleAmount;
    CLASS Financial_Year /  ORDER=UNFORMATTED MISSING;
    CLASS ProductGroup /    ORDER=UNFORMATTED MISSING;
    TABLE /* Row Dimension */
ProductGroup
ALL={LABEL="Total Sales" STYLE={FONT_WEIGHT=BOLD FONT_STYLE=ITALIC}}*{STYLE={FONT_WEIGHT=BOLD FONT_STYLE=ITALIC}},
/* Column Dimension */
Financial_Year*
  SaleAmount={LABEL=" Sales ($)"}*
    Sum={LABEL=" "}
ALL={LABEL="Total Sales" STYLE={FONT_STYLE=ITALIC}}*
  SaleAmount={LABEL=" "}*
    Sum={LABEL=" "}*{STYLE={FONT_STYLE=ITALIC}}          ;
    ;

RUN;
```

Tabulate 07 via Advanced

```
PROC TABULATE
DATA=WORK.SALES_DETAILS(FIRSTOBS=1 )
        FORMAT=Dollar16.

    ;

    VAR SaleAmount;
    CLASS Financial_Year /  ORDER=UNFORMATTED MISSING;
    CLASS ProductGroup /    ORDER=UNFORMATTED MISSING;
    CLASS ProductName / ORDER=UNFORMATTED MISSING;
    TABLE /* Row Dimension */
ProductGroup={STYLE(CLASSLEV)={BACKGROUND=#FFFF99}}*(
  ProductName
  ALL={LABEL="Product Group Sub-Total" STYLE={FONT_STYLE=ITALIC FOREGROUND=#000000 BACKGROUND=#FF8080}}*{STYLE={FOREGROUND=#000000 BACKGROUND=#FF8080}})
ALL={LABEL="Total Sales" STYLE={FONT_WEIGHT=BOLD FONT_STYLE=ITALIC}}*{STYLE={FONT_WEIGHT=BOLD FONT_STYLE=ITALIC}},
/* Column Dimension */
Financial_Year*
  SaleAmount={LABEL="Sales ($)"}*
    Sum={LABEL=" "}
ALL={LABEL="Total Sales" STYLE={FONT_STYLE=ITALIC}}*
  SaleAmount={LABEL=" "}*
    Sum={LABEL=" "}*{STYLE={FONT_STYLE=ITALIC}}         ;
    ;

RUN;
```

Please wait while we ALT-TAB…….2

HTML Demo - Tooltips for SASHELP CLASS

```
Data Student_Stats;
 Length HTMLText         $   200
        LilBit           $   200
        ;
 Set SASHELP.CLASS;

 If Sex="F" Then     LilBit="Female";
 Else                LilBit="Male";

 HWRatio=Put(Height/Weight, 5.3);

 HTMLText="'"||Trim(Name)||" is "||Trim(LilBit)||" with a Height/Weight Ratio of: "||HWRatio||"'>";

 StudentName="<p title="||Trim(HTMLText)||Trim(Name)||"</p>";

*************************************************************;
*Tidy-up as we go.                                          ;
*************************************************************;
Drop     HTMLText
         ;
Run;
```

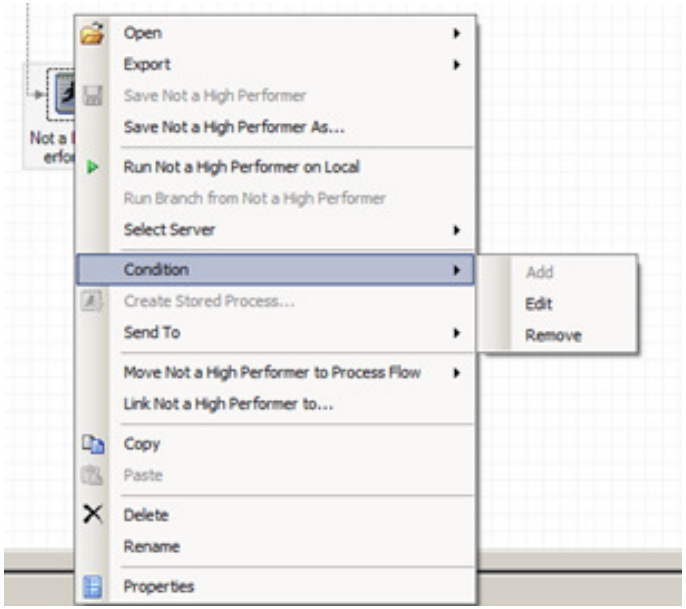
HTML Demo- Click Through Reports

```
*************************************************************************************************************************************;
*Assign the path-prefix to where all of our .html files will be sent. This prefix will be augmented with a filename in each step;
*************************************************************************************************************************************;
%Let HTMLRoot=C:\Temp\SGF HTML Demo;
*************************************************************************************************************************************;
*Create a column that is made up of text that HTML will recognise                                                                    ;
*************************************************************************************************************************************;
Data CLASSROOM_SUMMARY;
 Set CLASSROOM_SUMMARY;

 If Sex="F" Then    SexDesc="Female";
 Else               SexDesc="Male";

 LilBit         ="Click here to go to the detailed report for "||Trim(SexDesc)||" students.";
 Sex_Of_Student ="<A title='"||LilBit||"' HREF='file:///&HTMLRoot"||"\"||Trim(SexDesc)||" Students.html"||"'>"||Trim(SexDesc)||"</A>";

Drop    LilBit
        SexDesc
        ;


Run;
```

Please wait while we ALT-TAB…….3

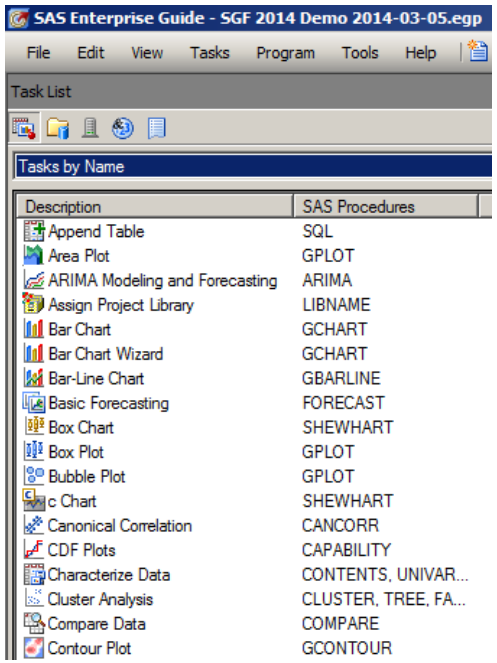
Adding a Condition to a Node

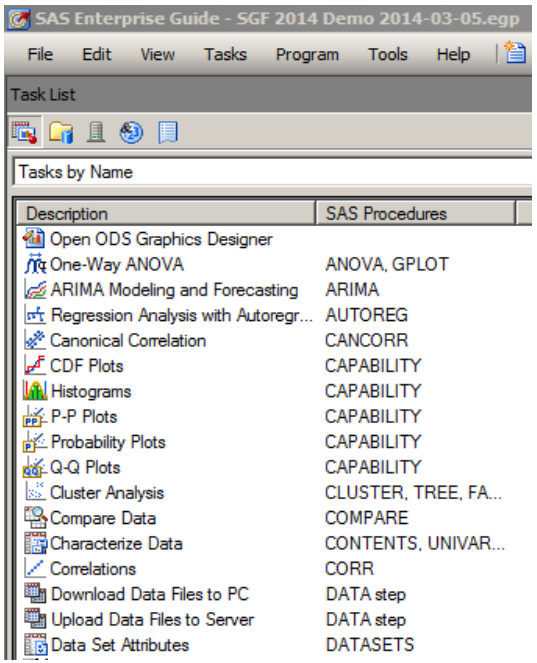
- Use the context menu on the node and select Condition



Tasks versus Procedures

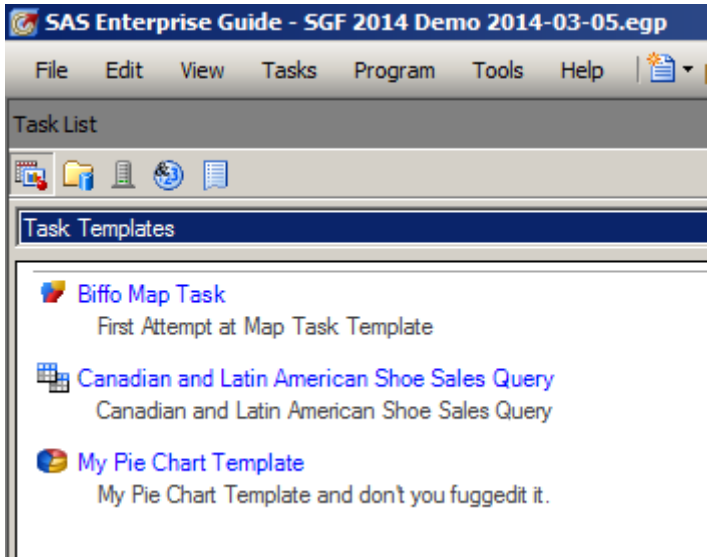
- Tasks Displayed by Task name and Procedure name





User defined Task Templates

- Prevent you always starting a Task from scratch
- User defined Task Templates are available across Projects
- Located in the Task List
- Task Template Manager via the Tasks menu allows you to Import and Export Task Templates



Wrapping Up and Thank You

- Please download the Enterprise Guide Project and the source data in Excel, shown today, from my SAS Community site home page.
- Download, play, experiment, improve and pass it on.
- www.sascommunity.org/wiki/User:Downunder_Dave
- Google **`SASCommunity Downunder_Dave`**

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