

What's New in the 4.2 releases of SAS® Enterprise Guide® and the SAS® Add-In for Microsoft Office

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ABSTRACT

SAS® Enterprise Guide®, the SAS® Add-In for Microsoft Office for SAS® 9.2, and SAS® Enterprise BI Server 4.2 provide many new enhancements to help SAS programmers, business analysts, and other business users become more productive with SAS. This presentation will introduce you to some of the highlights, including a revamped user interface (UI) in SAS Enterprise Guide, the ability to open SAS Reports from the SAS Add-In, a new PROC REPORT-based wizard, and much more. We will give you a broad overview of the products and enhancements and point you to some of the other SAS Global Forum presentations that cover some of the specific enhancements in greater depth. You will find many reasons to upgrade to the new releases or to become a new SAS user.

INTRODUCTION

This paper accompanies our SAS Global Forum presentation and provides an overview of new features in the 4.2 releases of SAS® Enterprise Guide® and the SAS® Add-In for Microsoft Office. We assume that some of you are familiar with at least one previous release, while others might not have ever used this software. But if you are doing data manipulation, analysis, or reporting, you should find something of interest and value in the enhancements and new functionality in the following areas:

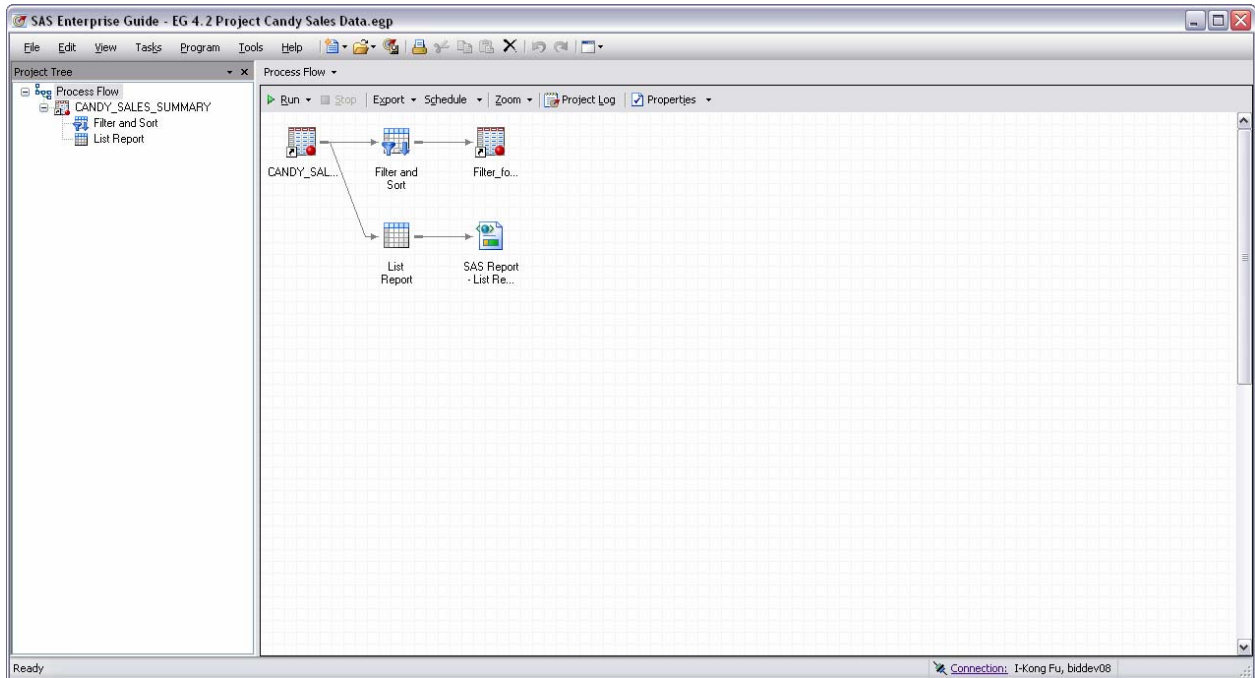
- the Enterprise Guide UI
- administration and configuration
- data access and manipulation
- data analysis and reporting using SAS tasks that are available in both the Enterprise Guide and the Add-In
- Office integration between both products and specific to the SAS Add-In for Microsoft Office.

SAS ENTERPRISE GUIDE USER INTERFACE

The UI has been enhanced to make familiar tasks more accessible and easier to perform. More functionality is available in the context of the specific tasks you need to do. New options allow an administrator to configure the interface and tailor it to different users' roles.

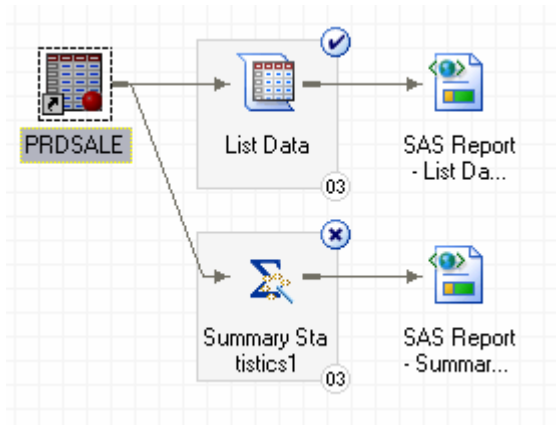
ENHANCEMENTS TO THE USER INTERFACE

The new user interface has streamlined top-level menus and better contextual menus that help you find functions more easily and maximize your screen real estate. For example, when you are opening data, a contextual toolbar appears with actions specific to viewing, manipulating, or analyzing data. When you are opening other items, such as SAS programs, other appropriate actions and buttons appear in the contextual toolbar. The top level menus and toolbars have been collapsed to save space and reduce searching time. All of the functions can, however, still be found in the contextual toolbars. The Project Tree (previously known as the Project Explorer) has also been streamlined for less clutter. A tools window that contains the server view, folder view, and task view in one pane is available. The window has buttons to toggle from view to view.



CONDITIONAL LOGIC NODES

Conditional logic nodes provide a graphical way to represent if-then-else logic and a wizard to create this logic. For example, you can set up prompts using macro variables, then execute different branches in your Process Flow depending on the answers to the prompts.



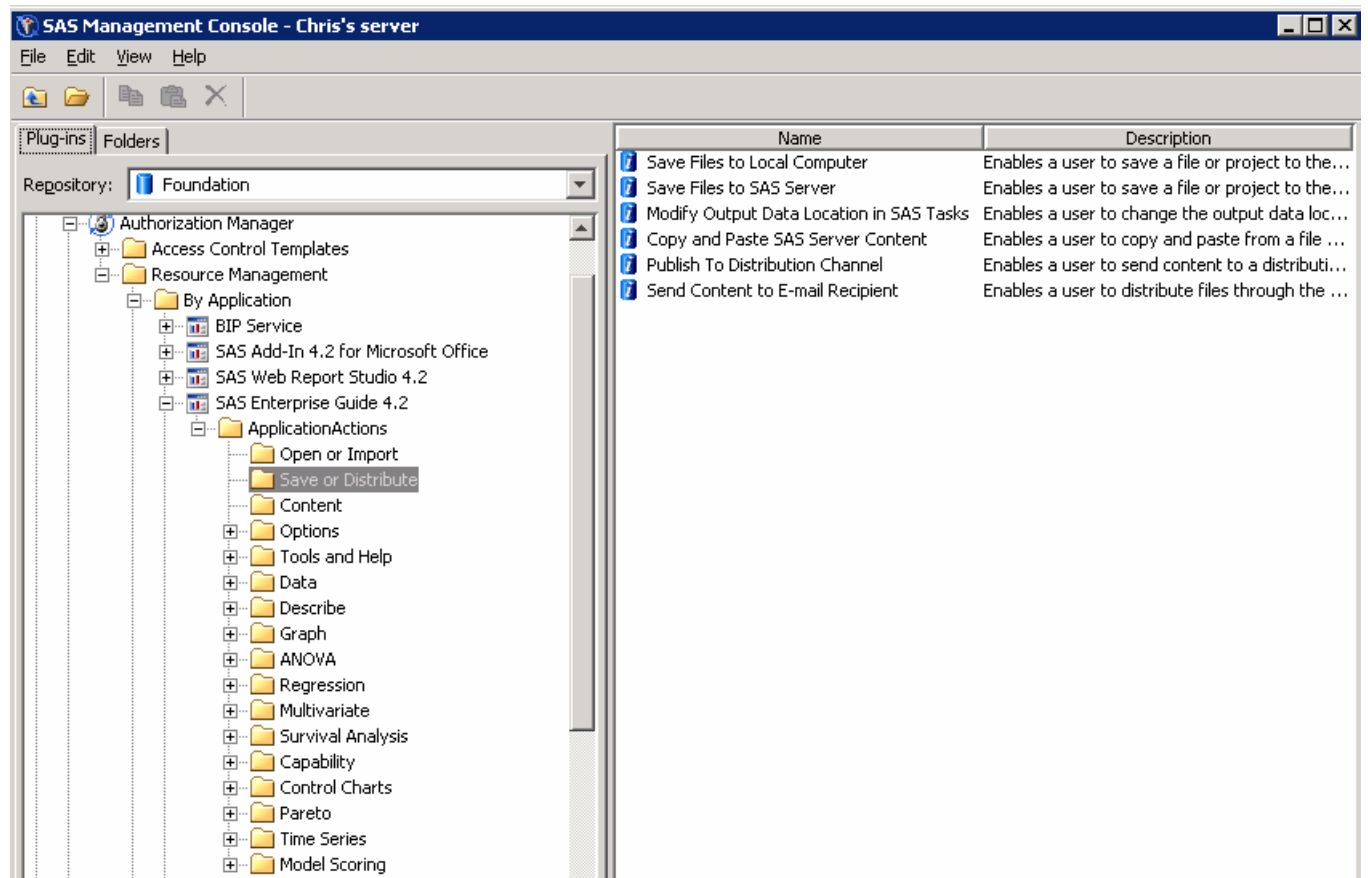
ADMINISTRATION AND CONFIGURATION

There are several new features that take advantage of significant enhancements available in SAS 9.2.

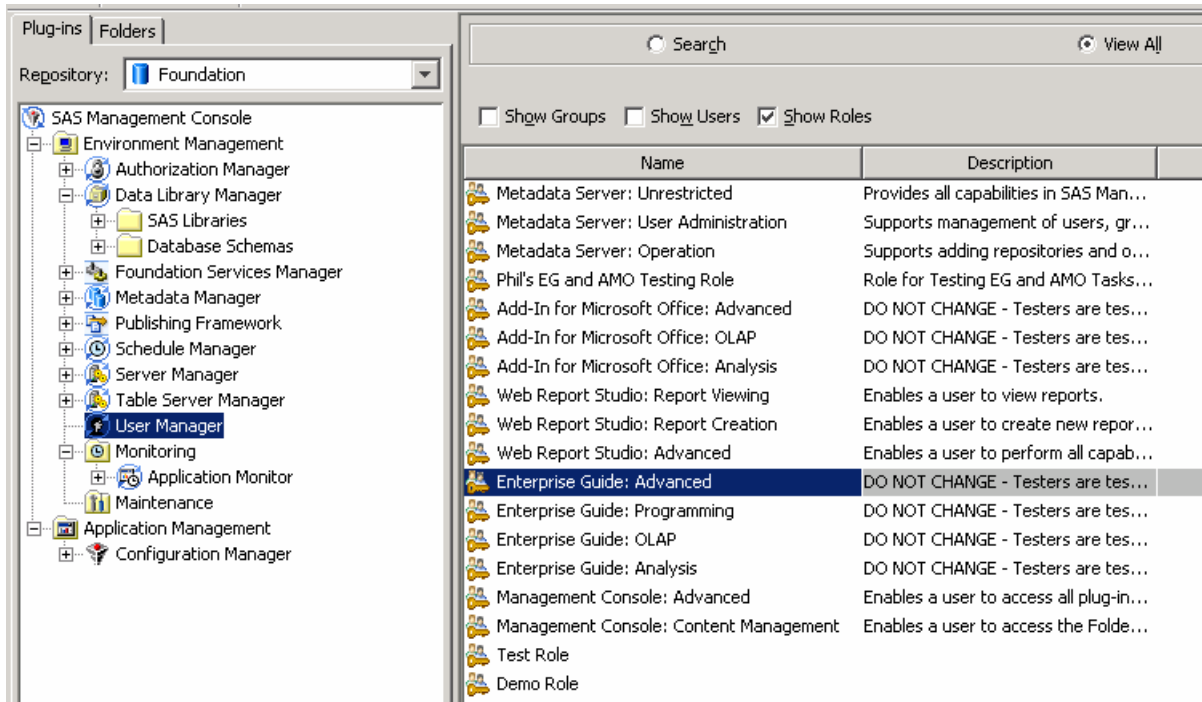
ROLE-BASED UI AND ADMINISTRATION (UI, ADMINISTRATION AND CONFIGURATION)

Using the SAS® Management Console, administrators can set up SAS Enterprise Guide, the SAS Add-In for Microsoft Office, and SAS® Web Report Studio to surface different capabilities to individuals or groups of users in different roles. This new feature allows different users to customize the application UIs to reflect their individual work styles and needs. For example, many users have asked for the ability to turn off certain SAS tasks that they do not use. By putting these tasks under role-based administration, administrators can streamline the UI further for these users, or they can steer users to more appropriate or frequently used tasks.

Actions for different roles are set in the SAS Management Console.



You can use the out-of-the-box (predefined) roles, or you can create your own.



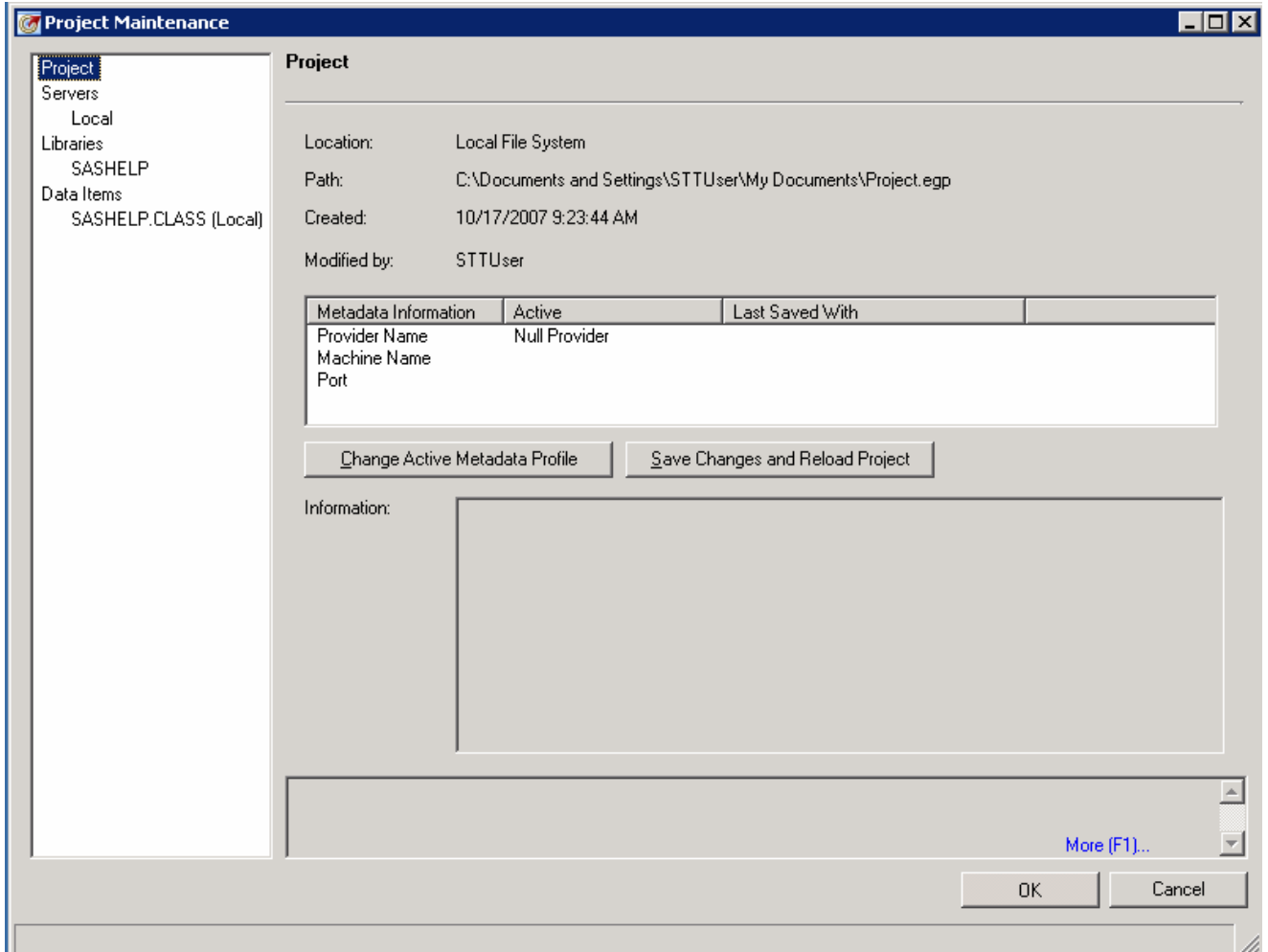
PROJECT LOG

SAS programmers might already appreciate the Project Log, which was first available in version 4.1 and allows users to log all SAS programs and generate SAS code in the entire Project. The Project Log was difficult to find before, and some users might not have known about it. It is now easy to find in the contextual toolbar for the Process Flow. By default, the Project Log is turned off, but clicking on the toolbar button allows you to turn it on with one more click.

OTHER ADMINISTRATIVE ENHANCEMENTS

Other administrative or configuration enhancements include batch project migration, project recovery (including auto-save), and single sign-on that is based on Integrated Windows Authentication. Other enhancements were made to support the new folder-based SAS repositories that no longer use the dependent scheme of previous releases.

The project maintenance tool can be used for batch project migration:

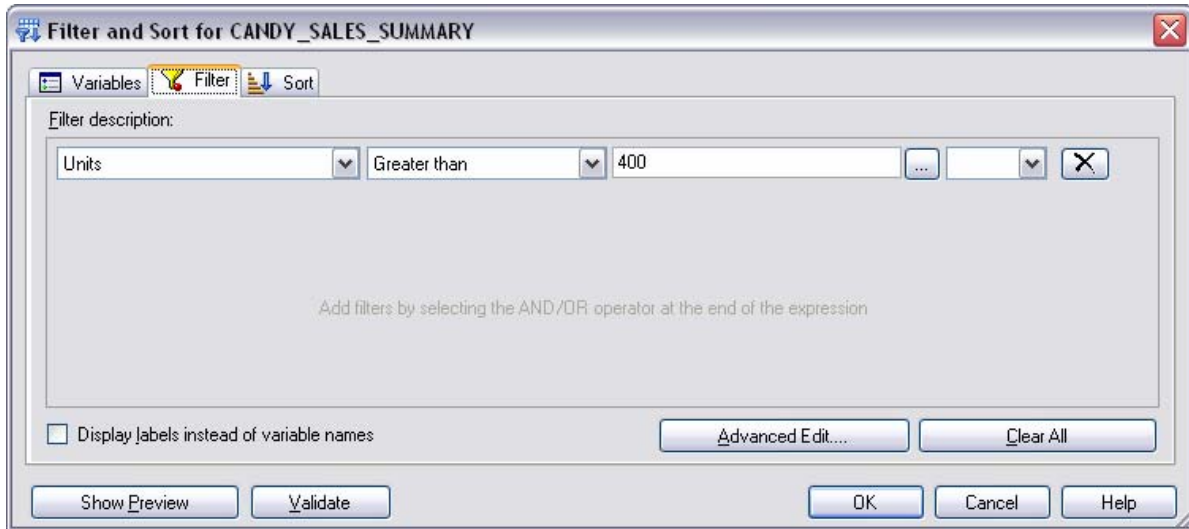


DATA ACCESS AND MANIPULATION

After you or your administrator has configured SAS Enterprise Guide, you will probably start your project with data access and manipulation. There are several enhancements in this area to make your job easier.

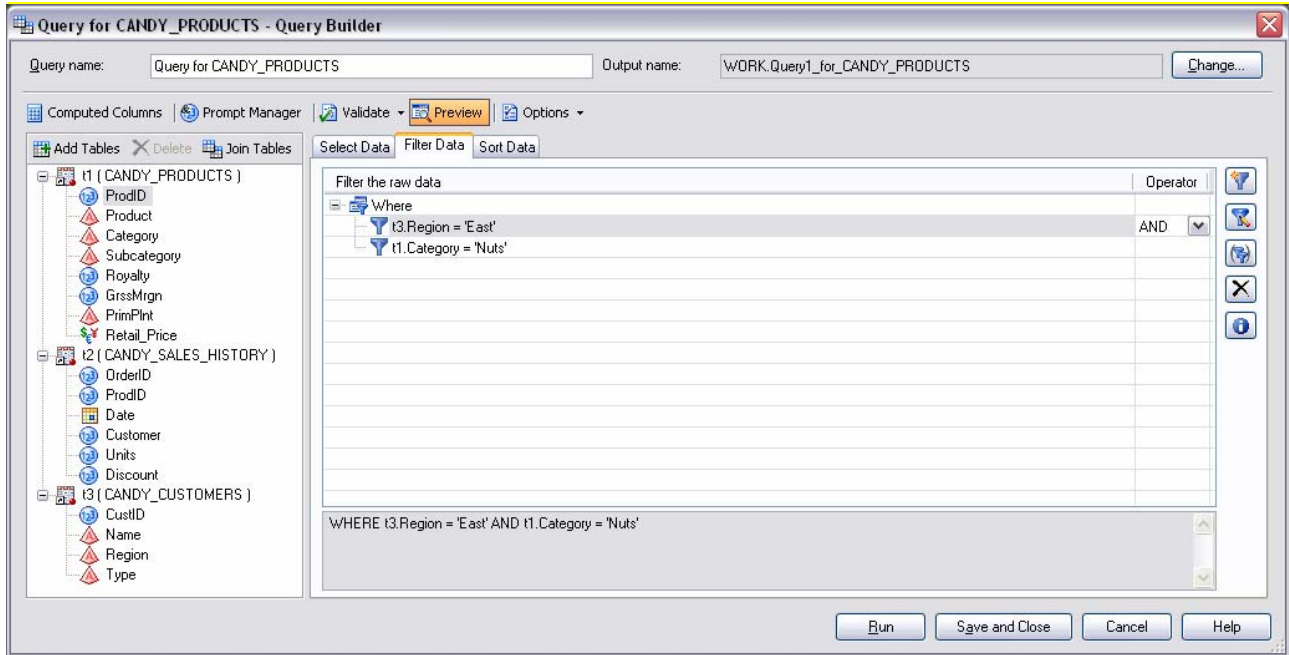
FILTER AND SORT

Users who are familiar with the SAS Add-In for Microsoft Office might recognize this familiar dialog box. Enterprise Guide now has multiple options to allow you to set filters more easily from various tasks. The first addition is a filter and sort task available when you are viewing data or from the top-level menu. Users who do not need the full power of the Query Builder might prefer this approach. Also, administrators who set role-based actions might steer some groups of users this way, for example, by disabling the join interface or the Query Builder itself.



QUERY BUILDER

The Query Builder is used extensively for data access, manipulation, and preparation, which is usually 80% of a data analysis project. One of the many enhancements to the Query Builder is a new wizard for calculated or computed columns. This wizard includes an easier method to recode values, better support for detecting pre-existing aggregations, improved find ability of the new columns, an improved expression builder, a direct method to combine or change filter operations (shown below), and verification of implicit SQL pass-through using SAS/ACCESS features.

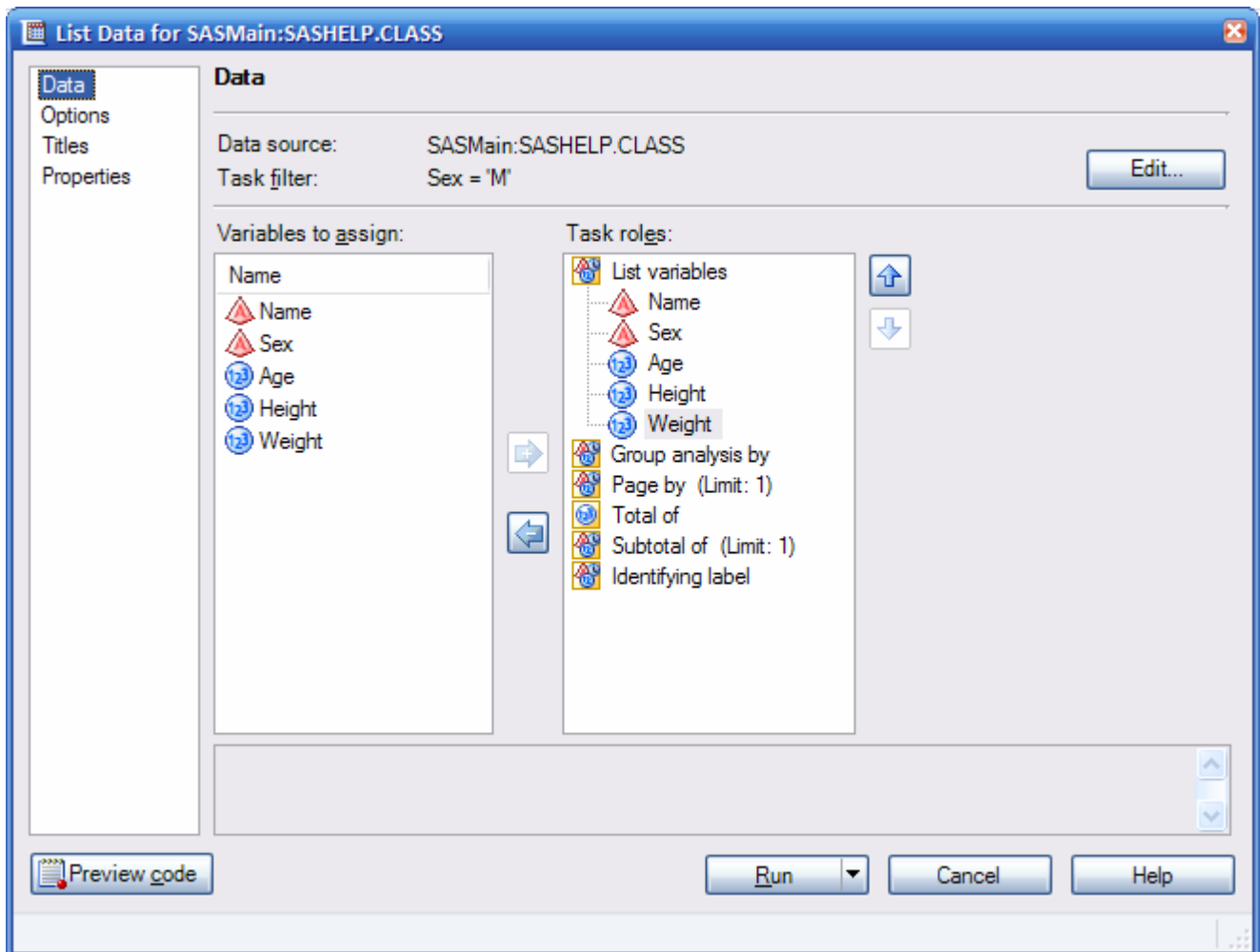


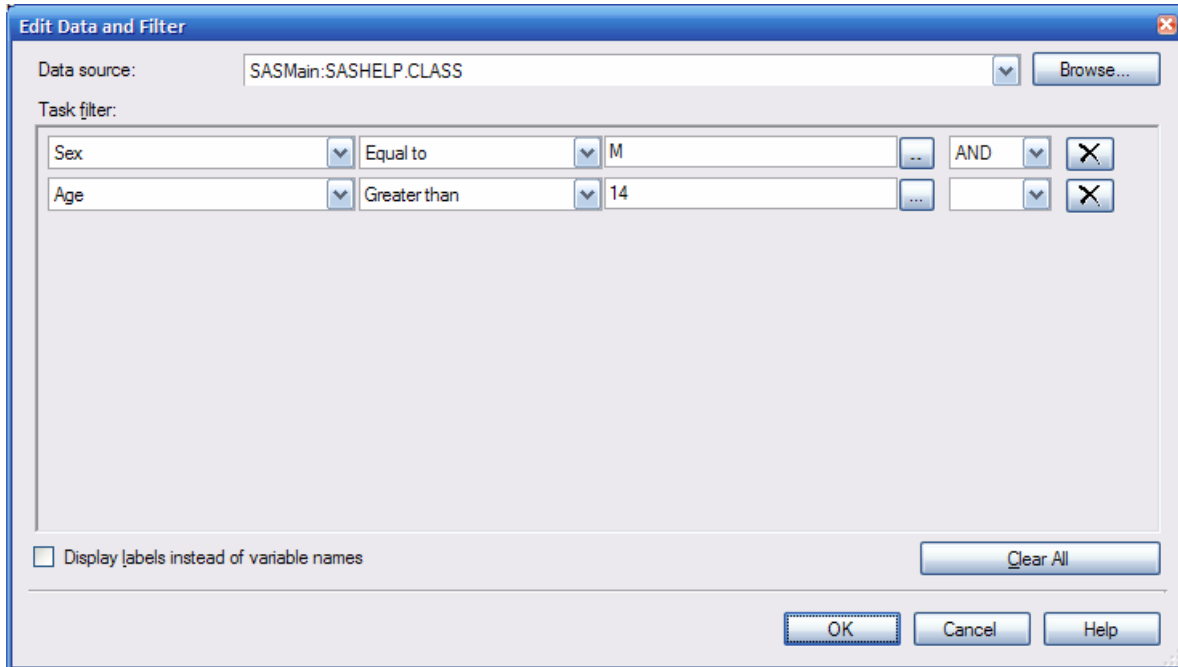
IMPORT DATA WIZARD

The import data wizard has also been reworked to improve performance by using Excel and SAS/ACCESS when possible.

SELECT AND FILTER DATA FROM MOST TASKS

In addition to the new filter and sort task, you can also select and filter data from the dialog boxes of most other SAS tasks. This way, you do not have to exit the dialog to apply a filter or change your data selection. You can also use a special macro variable, `_CLIENTTASKFILTER`, in titles and footnotes to refer back to this filter in your output.

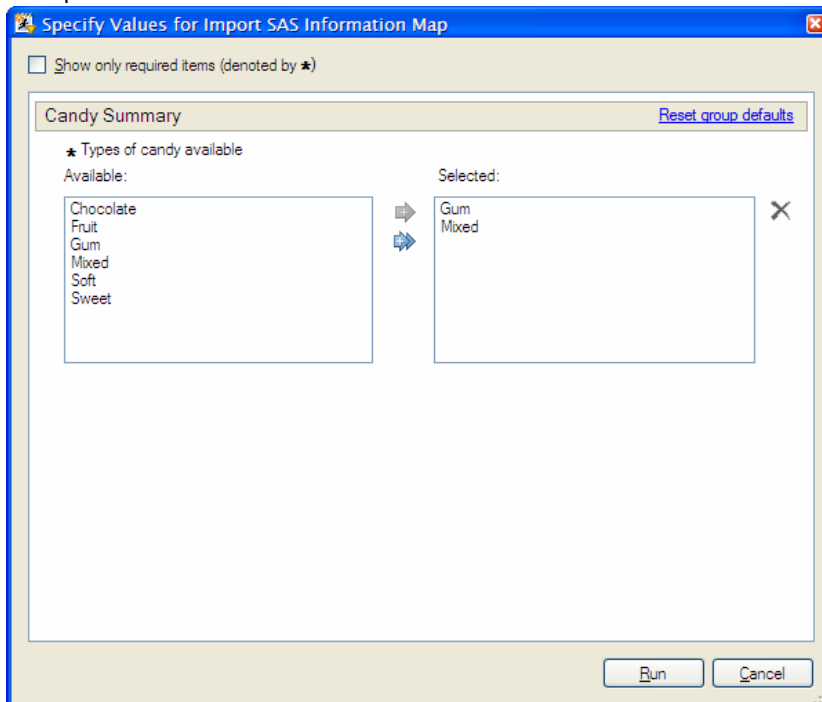




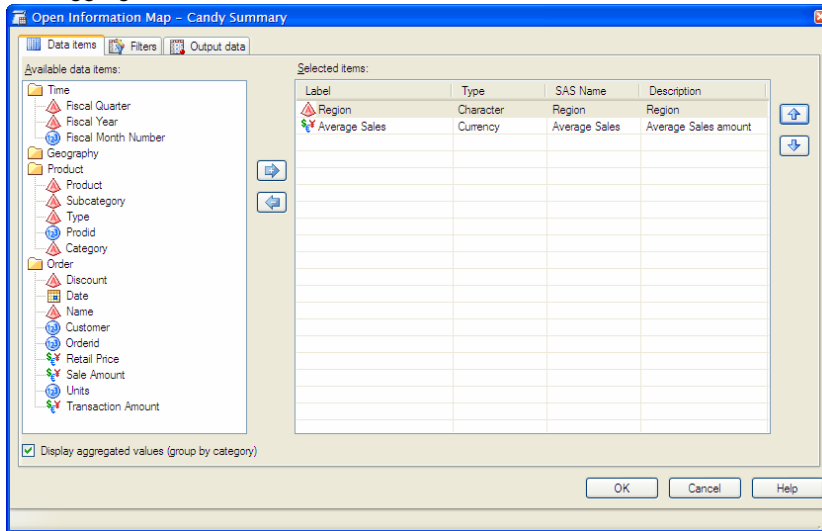
INFORMATION MAPS

Information maps are an important data source type for reporting and integration with SAS BI. Information maps in both the SAS Add-In for Microsoft Office and SAS Enterprise Guide now support prompted filters as well as aggregations if they exist on the map. These enhancements are based on the underlying Information Maps LIBNAME Engine (IMLE) that also provides support for Base SAS.

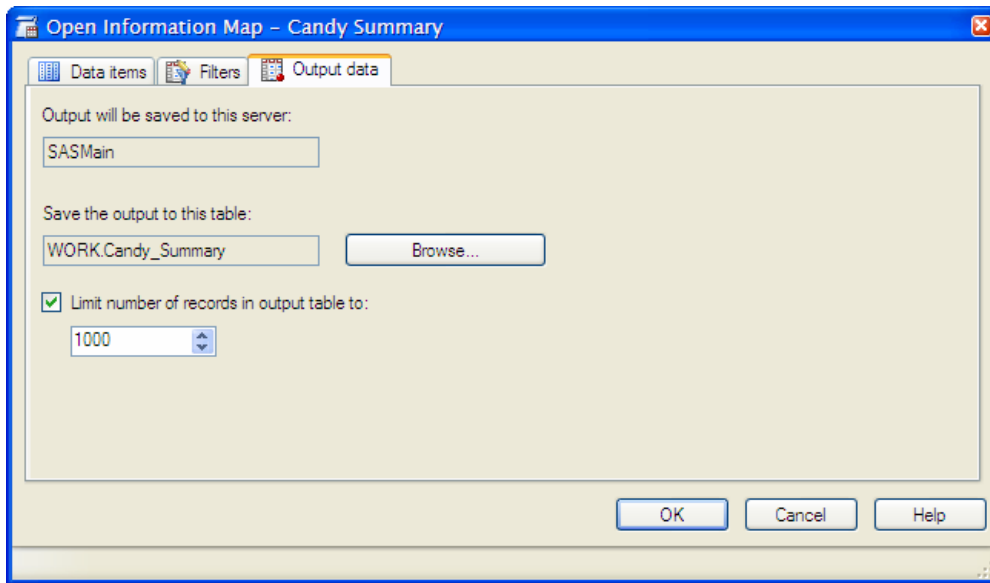
Prompted Filters:



Use aggregations:

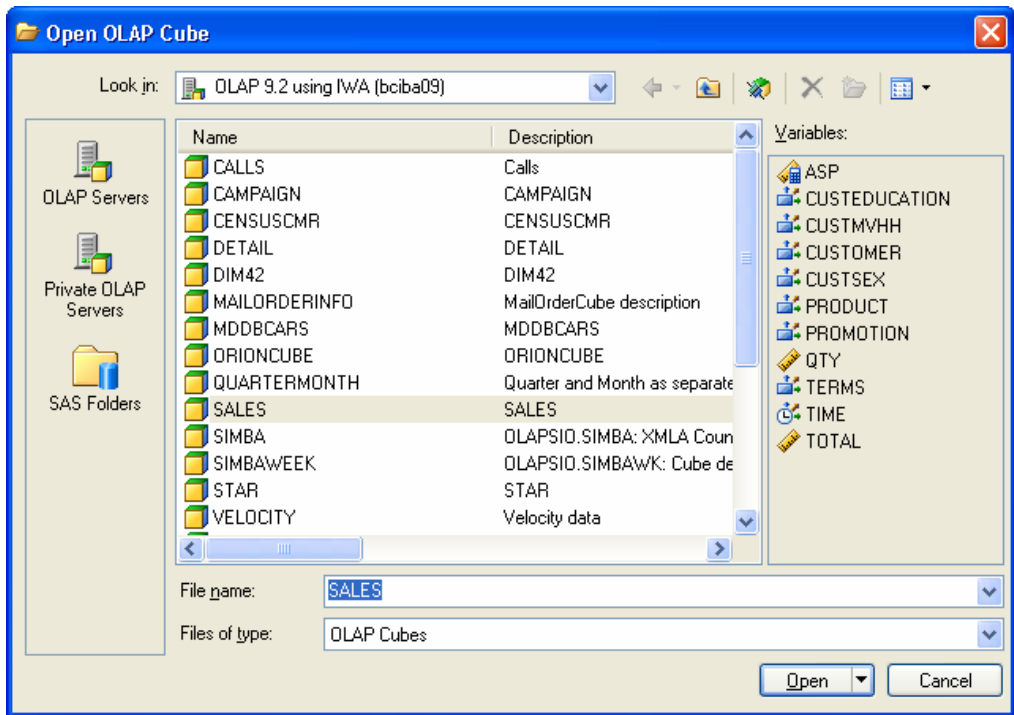


Limit number of records:

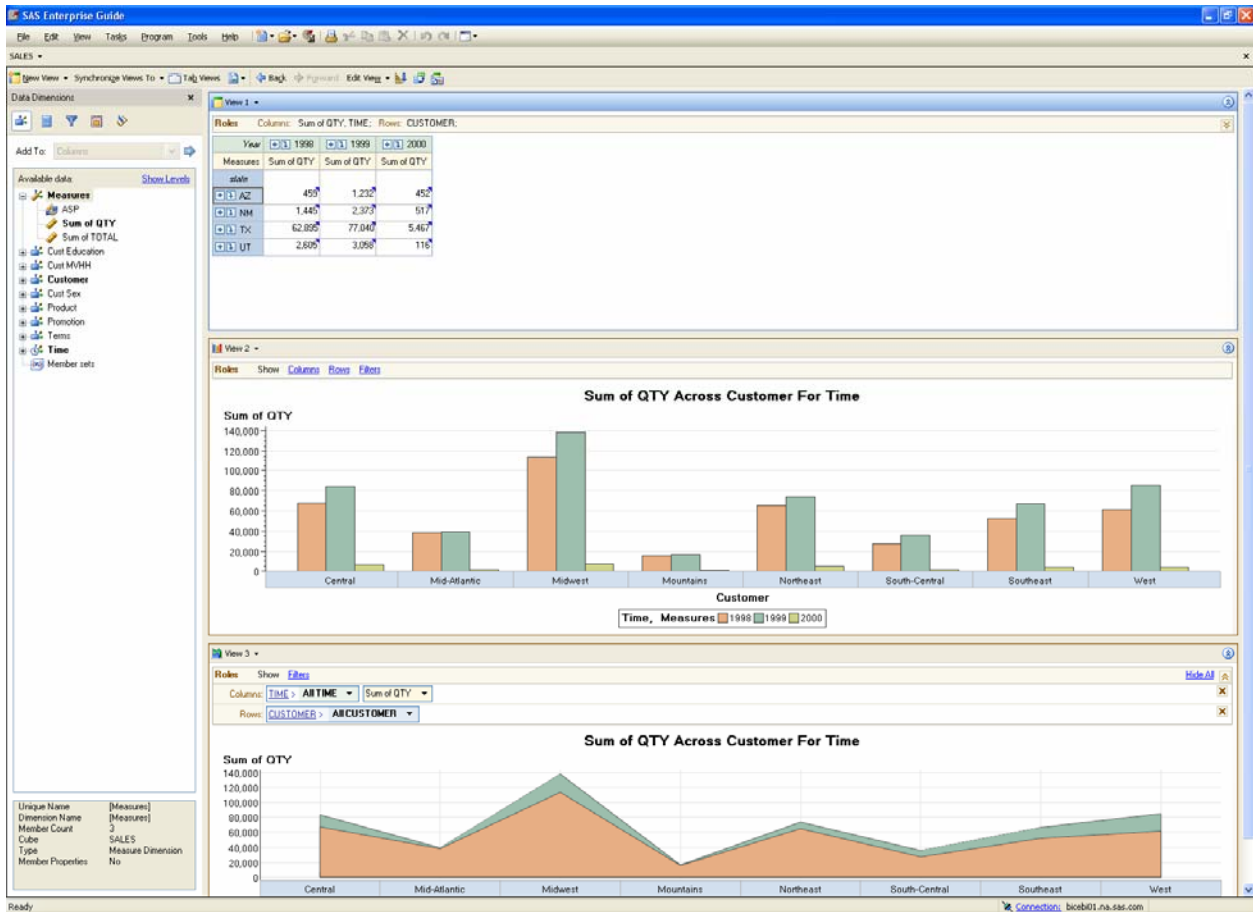


NEW OLAP ANALYZER

The OLAP Analyzer interfaces have been completely redesigned to enhance OLAP exploration and ad hoc reporting capabilities. Users can now access SAS OLAP cubes directly from the metadata definition; and they can preview each cube's dimensions, measure its contents, and override the default view before accessing the cube.



The new user interface allows for multiple views on the cube. You can link these views with synchronized queries, delink them with independent queries, and synchronize any view with other views at any time. Support for dynamically calculated totals, subtotals, and percentages allows additional analysis of cube data. Enhanced filtering dialogs allow you to define dependant and independent filters that provide the capability of answering complex business questions in an easy-to-use interface.



ANALYSIS AND REPORTING

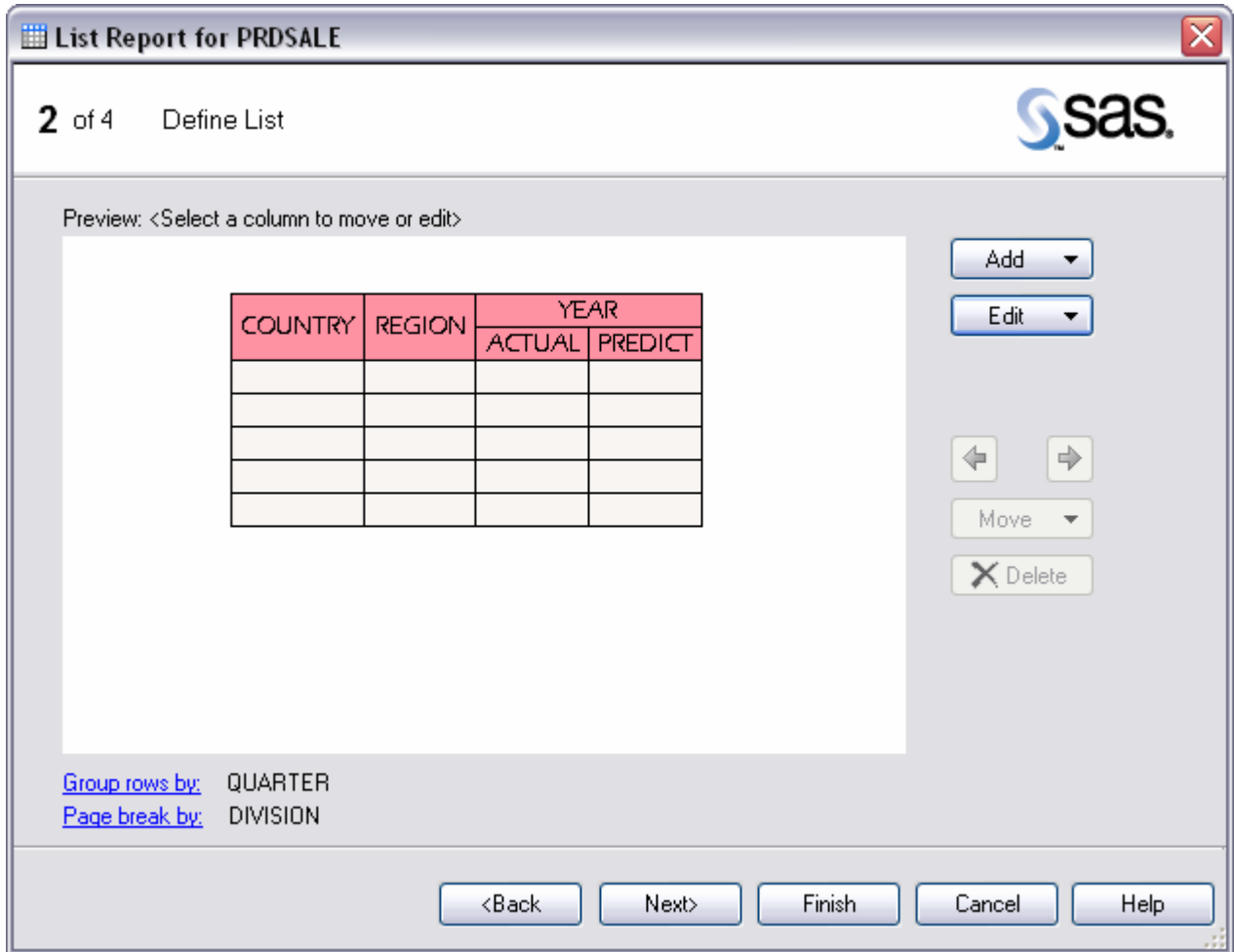
SAS tasks are found in both SAS Enterprise Guide and the SAS Add-In for Microsoft Office. The tasks, which offer a wide range of analysis and reporting options, have received extensive enhancements for the 4.2 releases. We mention a few of the highlights in this section.

TASK TEMPLATES (DATA MANIPULATION AND ANALYSIS – FILE UNDER ANALYSIS)

Task templates are a powerful new feature that enables you to customize your favorite or most frequently used tasks. You can now set your own default and save the task as your personalized template. This template eliminates the need to keep checking the same check boxes when you are repeatedly using the same task, which saves you a lot of time. For example, if you use Cluster Analysis and always check **K-means** as your preferred method, you can check the box, save your version of the task as a template, and use your version from now on for subsequent clustering.

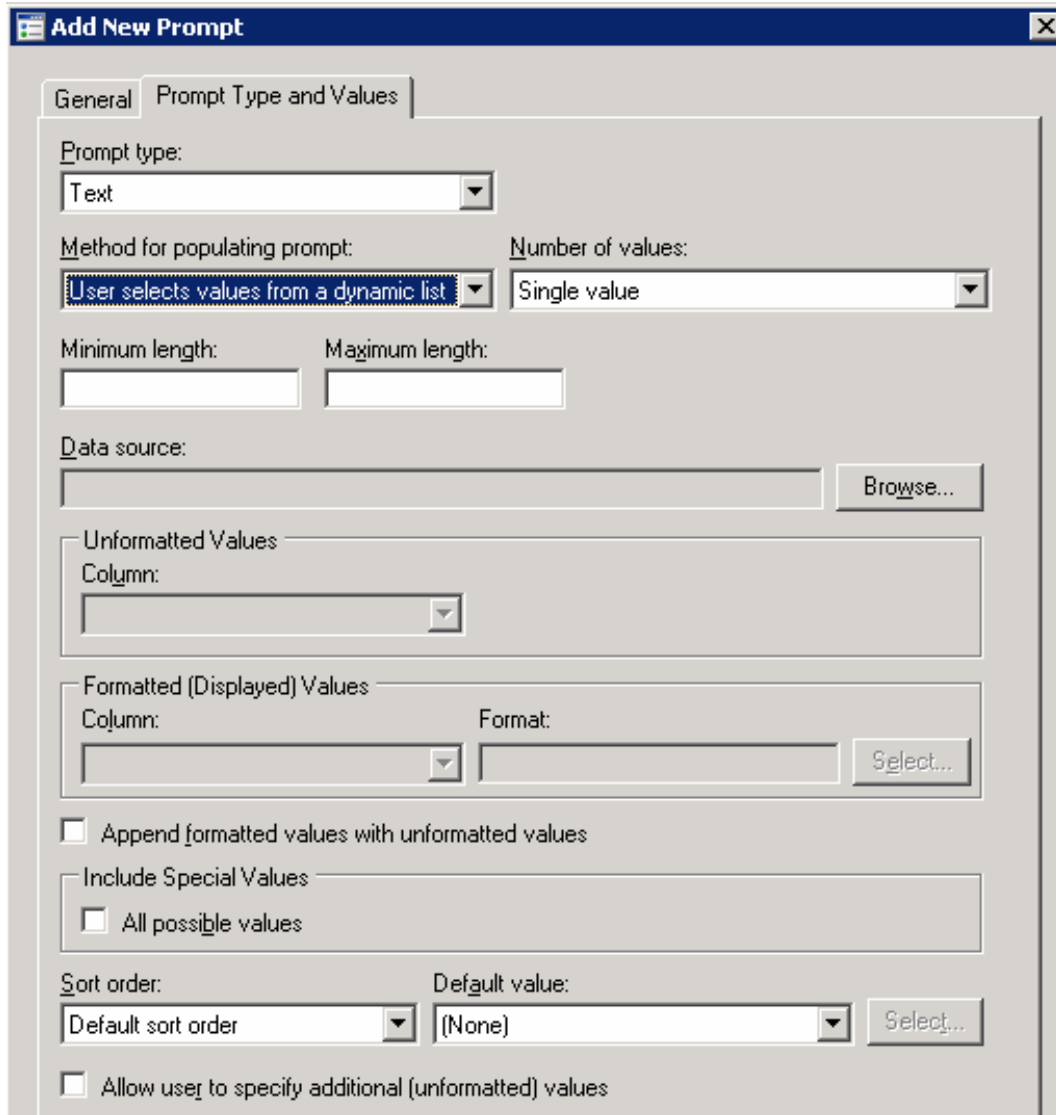
LIST REPORT WIZARD (PROC REPORT-BASED WIZARD)

You asked and we listened. Many users over the years have requested a PROC REPORT-based wizard. Both SAS Enterprise Guide and the SAS Add-In for Microsoft Office feature the List Report Wizard, which is based on PROC REPORT and has a graphical user interface to enable users to create reports. A screenshot from the wizard is shown below.



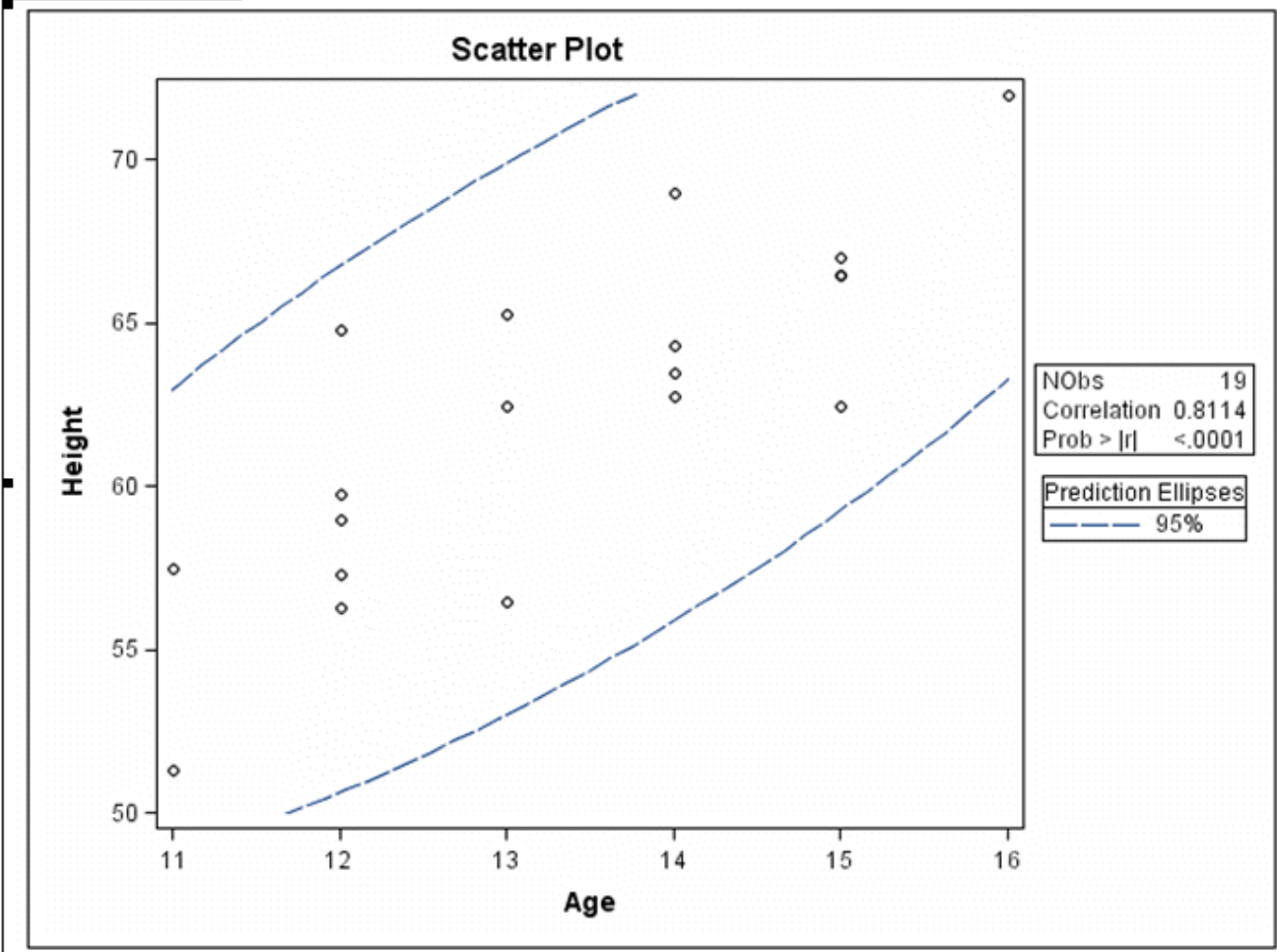
DYNAMIC AND CASCADING PROMPTS

SAS 9.2 now supports dynamic and cascading prompts. SAS Enterprise Guide supports the creation of these prompts. Dynamic prompts are available in both projects and stored processes, and cascading prompts are available for use with stored processes.

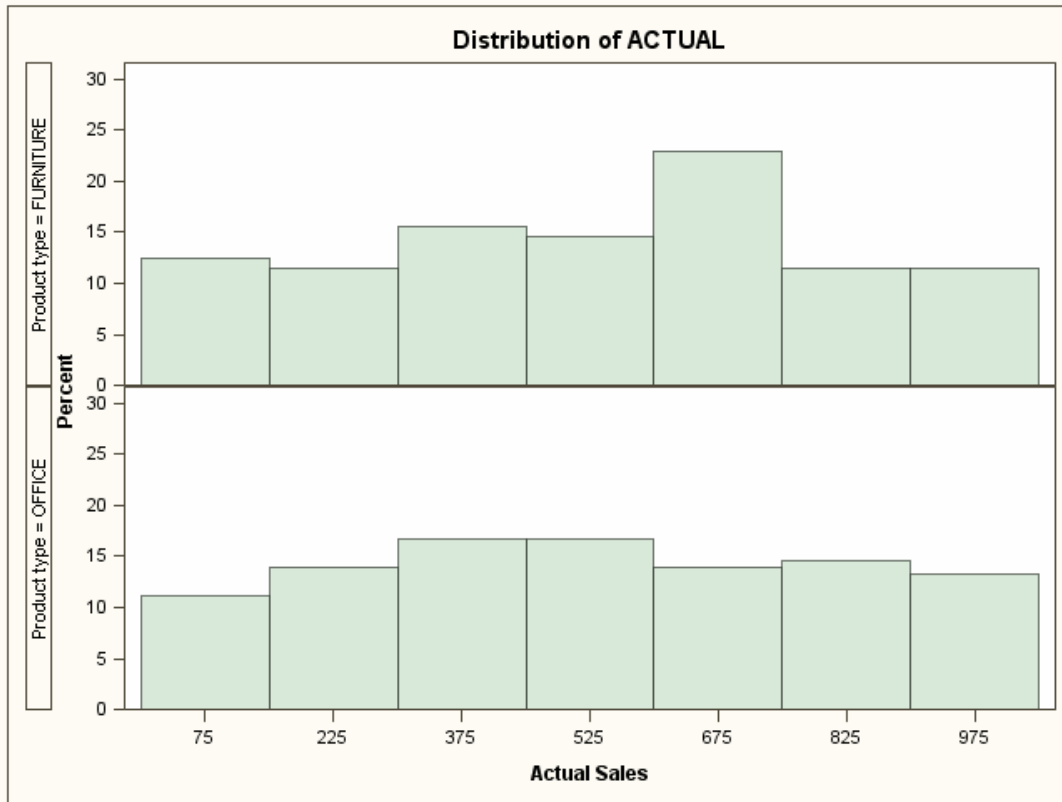


ODS GRAPHICS

In this release, SAS Enterprise Guide and the SAS Add-In for Microsoft Office take advantage of the new ODS Graphics in various tasks to provide better graphics and other analytical output. Below are two screenshots.



Summary Statistics
Histograms



Generated by the SAS System (SASApp, NET_SRV) on September 23, 2007 at 2:28 PM

CHARTS

There are also several new chart enhancements including the Tile Chart, additional lines in the Bar-Line Chart, and enhancements to Bar Charts such as support for multiple measures and more. An xample screenshot of a bar-line chart is shown below.

Bar-Line Chart



OFFICE INTEGRATION

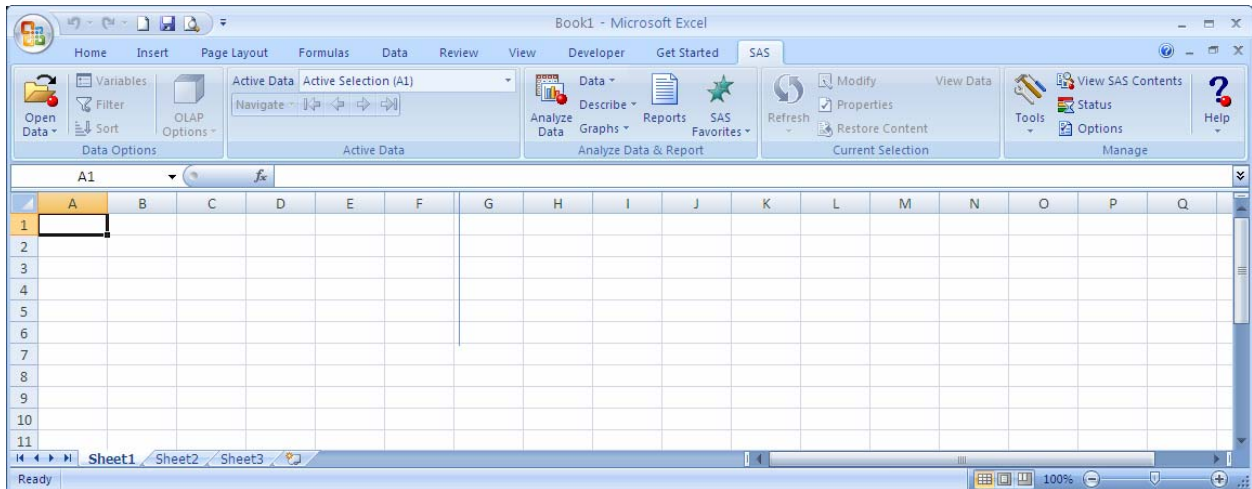
Office integration in SAS Enterprise Guide 4.2 takes advantage of the presence of both Excel and the SAS Add-In for Microsoft Office for both importing Excel data and sending content to Office. The Import Task mentioned above also uses Excel when it is available for importing Excel spreadsheet data. The Send To feature will use the Add-In when it is available to send the content to Office.

SAS ADD-IN FOR MICROSOFT OFFICE

The enhancements to the SAS tasks and role-based administration that were mentioned above apply to both SAS Enterprise Guide and the SAS Add-In for Microsoft Office. The following additional enhancements apply only to the 4.2 release of the SAS Add-In for Microsoft Office.

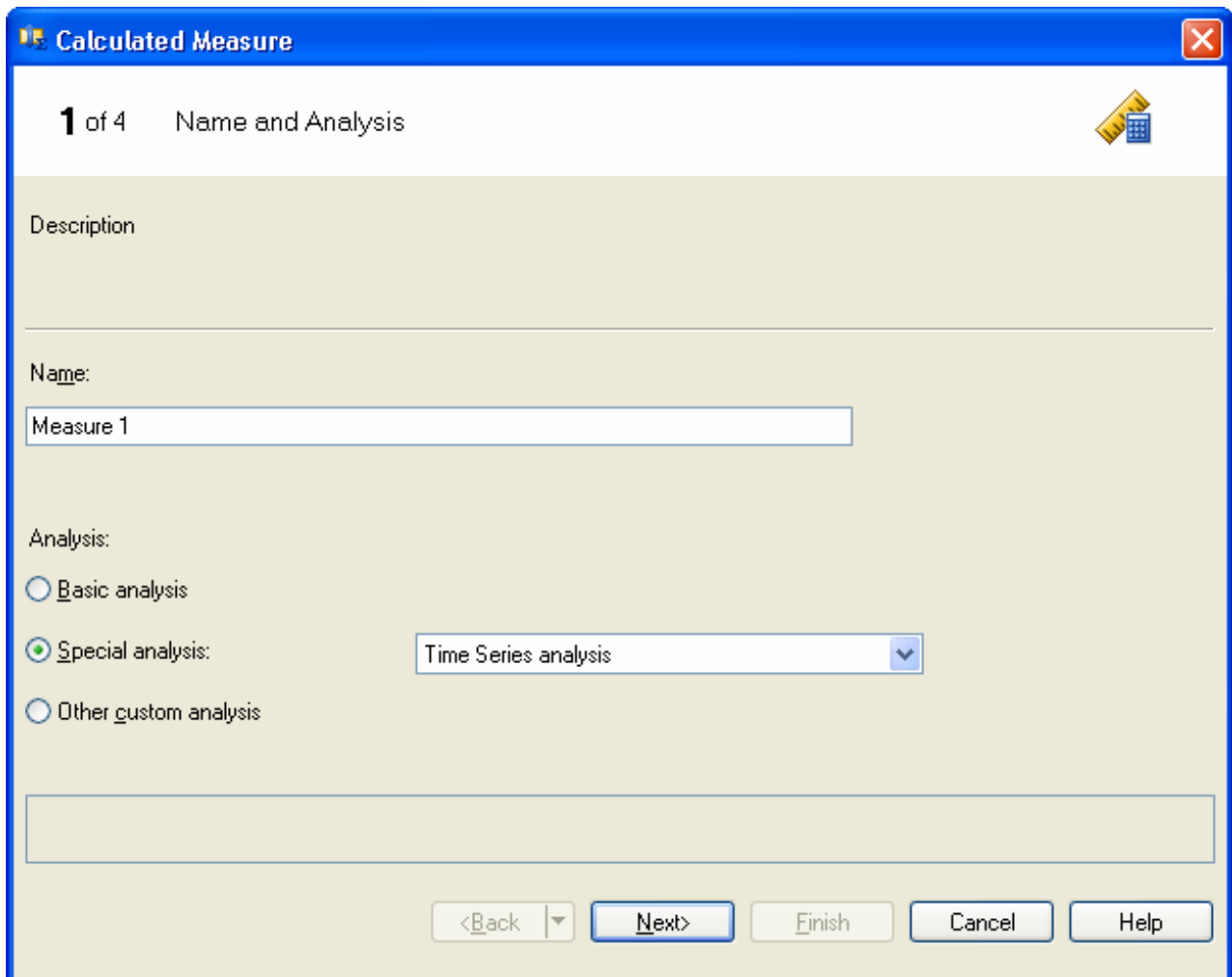
OFFICE 2007 RIBBON UI

The interface of the Add-In in Office 2007 takes advantage of the new ribbon UI approach, which allows more functionality to be available from one toolbar.



DATA EXPLORATION WITH SAS OLAP ENHANCEMENTS FOR EXCEL PIVOT TABLES

Support for pivot tables for SAS OLAP cubes has been enhanced to extend the SAS capabilities in Excel. You can now drill-through to the cube's detail data and save that data into a separate sheet. Additional functionality is added by two calculation wizards that allow you to create new cube measures and new calculated members dynamically from the Add-In.



Calculated Member [Close]

1 of 4 Name and Analysis [Help]

Description

Name:

Member 1

Parent hierarchy: Cust Education > CUSTEDUCATI [v]

Path: All CUSTEDUCATION [Edit...]

Analysis:

Aggregate across members

Other custom analysis

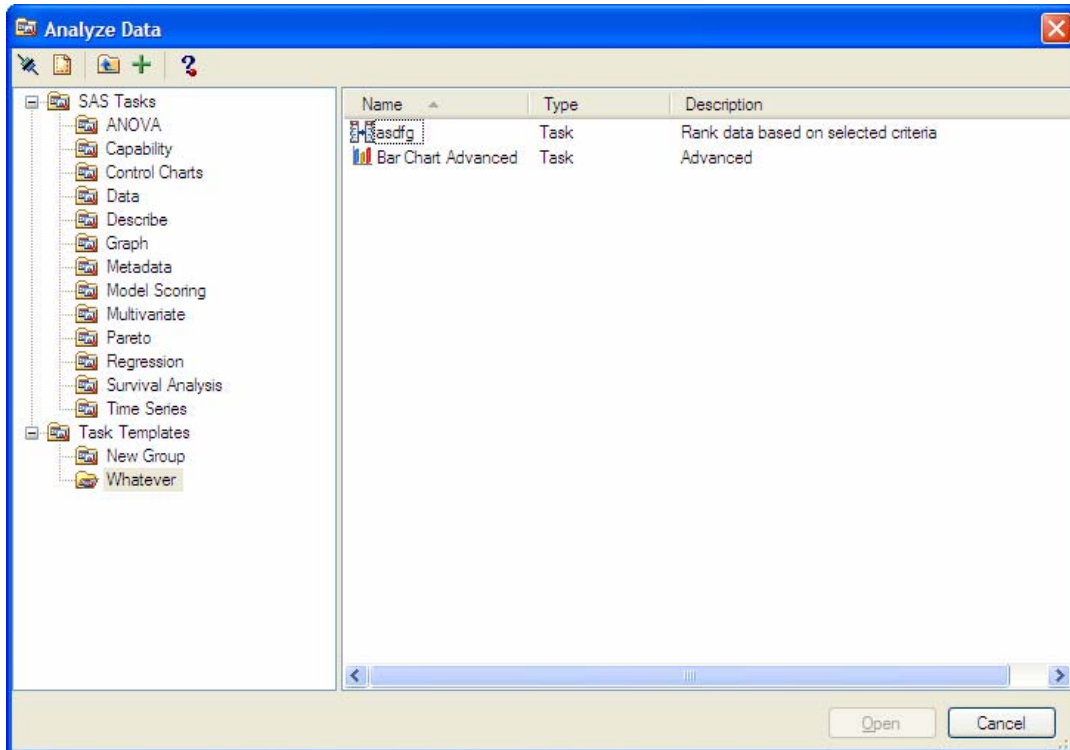
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<Back [Next> Finish Cancel Help

CREATING AND USING TASK TEMPLATES FOR ANALYSIS

We talked about creating task templates in the section above. You can also create task templates in the SAS Add-In for Microsoft Office or import and open task templates that your colleagues have created here or in SAS Enterprise Guide.

Opening a Task Template in the SAS Add-In for Microsoft Office:



OPENING SAS WEB REPORT STUDIO REPORTS

The SAS Add-In for Microsoft Office can now open SAS Reports from SAS Web Report Studio or SAS Enterprise Guide. This capability opens the integration up to more report authors, and it provides more Office integration with more SAS BI reporting formats than ever before.

USING DYNAMIC AND CASCADING PROMPTS FROM SAS STORED PROCESSES

In addition to the reporting integration, the Add-In supports the dynamic and cascading prompts now available in the 9.2 SAS Stored Processes. Cascading prompts allow levels of prompts to depend on the answers to the previous prompts, for example models of cars could depend on the answers for a prompt on selecting the make or brand of car.

CONCLUSION

We hope by the end of our presentation and paper you have a good idea of what's new in the 4.2 releases of SAS Enterprise Guide and the SAS Add-In for Microsoft Office, and that you are as excited as we are about this functionality. Whether you are doing data preparation for data mining, statistics, reporting, presentations, or all of the above through SAS programming, point-and-click, or Microsoft Office software, we think you will find some new capabilities that will help you generate additional business intelligence that will help you and your organization compete more effectively. We also invite you to attend our presentation at SAS Global Forum for more information, demonstrations, live Q&A, and follow-up discussions with the authors.

RECOMMENDED READING

McDaniel, Stephen, and Chris Hemedinger. 2007. *SAS for Dummies*. Hoboken, NJ: John Wiley & Sons, Inc.

Hemedinger, Chris, and Bill J. Gibson. 2008. "Find Out What You're Missing: Programming with SAS Enterprise Guide." *Proceedings of SAS Global Forum 2008*. Cary, NC: SAS Institute Inc.

SAS Institute Inc. 2007. *SAS® Add-In for Microsoft Office: Getting Started with Data Analysis*. Cary, NC: SAS Institute Inc.

SAS Institute Inc. SAS Online Resources for Statistics Education. Available at <http://support.sas.com/statlibrary>.

CONTACT INFORMATION

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