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What's New in SAS® Add-In 4.2 for Microsoft Office

Tim Beese

ABSTRACT

SAS® Add-In 4.2 for Microsoft Office offers several new features for users that make data analysis and reporting in Microsoft Office easier and more powerful than in previous releases. In this release, the SAS® add-in is better integrated with Office 2007 and blends seamlessly with the Office 2007 Ribbon. The SAS® add-in is also integrated with SAS® Enterprise Guide and SAS® Web Report Studio, allowing the user to open reports from either application into Microsoft Office. When opening reports, the user is able to choose specific elements within the report to display. The SAS® add-in also has improved support for OLAP cubes, including calculated members and calculated measures as part of a PivotTable. For administrators, the SAS® add-in supports the same role-based architecture as other business intelligence applications from SAS®. This allows the administrator to control which users have access to different functions of the application. These are just a few of the features that make SAS ® Add-In 4.2 for Microsoft Office a more powerful application.

INTRODUCTION

There are many new features in SAS Add-In 4.2 for Microsoft Office that build upon the previous release, enhancing features that were already available, as well as adding new features that were not provided by the previous release. This paper will take a closer look at the new features in this release of the SAS add-in, examining why the changes were necessary and how the changes will benefit the user.

This paper is for anyone who has used SAS Add-In 2.1 for Microsoft Office, or for anyone who is an Office user interested in using SAS analytics in the Office environment. On finishing this paper, you will be familiar with the new features of the product and will be able to use them productively.

INTEGRATION WITH THE OFFICE 2007 RIBBON

SAS Add-In 2.1 for Microsoft Office was released before Office 2007. The user interface for Office 2007 was a complete change from previous releases of Office. When the SAS add-in was loaded with Office 2007, the **SAS** menu and toolbars were simply put onto an **Add-Ins** tab, where they looked completely out of place with the rest of the Office 2007 Ribbon.

In 4.2, the user interface for the SAS add-in has been designed with the Ribbon in mind. There is a **SAS** tab on the Ribbon, and all of the SAS functionality is available from there. This provides an integrated look and feel for the SAS add-in. Users who have Office 2007 will find the **SAS** tab much easier to use than the menu and toolbars that made up the user interface for previous releases of Office.

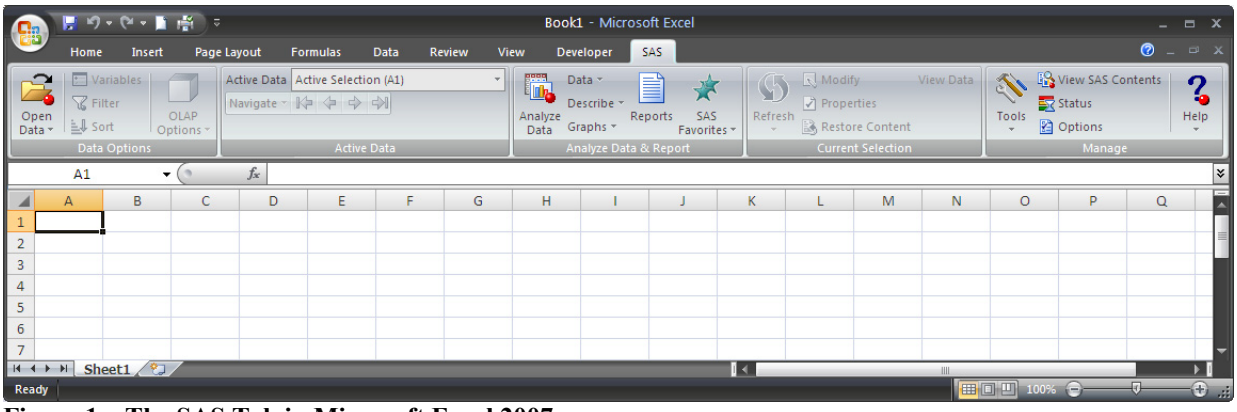

Figure 1 – The SAS Tab in Microsoft Excel 2007

SHARED COMPONENTS WITH SAS ENTERPRISE GUIDE 4.2

One of the main goals with the new release of the SAS add-in was to share common components with SAS Enterprise Guide. Many users are familiar with both products and do similar tasks with them. The user should not have to do these tasks in different ways.

The first shared piece to mention is the Profile Manager. In 2.1 of the SAS add-in, the way that the user managed their profile was completely different from the way SAS Enterprise Guide let the user manage this information. If you changed the connection information for one application, you had to go and enter the same information again for the other application. In SAS Add-In 4.2 for Microsoft Office and SAS Enterprise Guide 4.2, both products share the connection information.

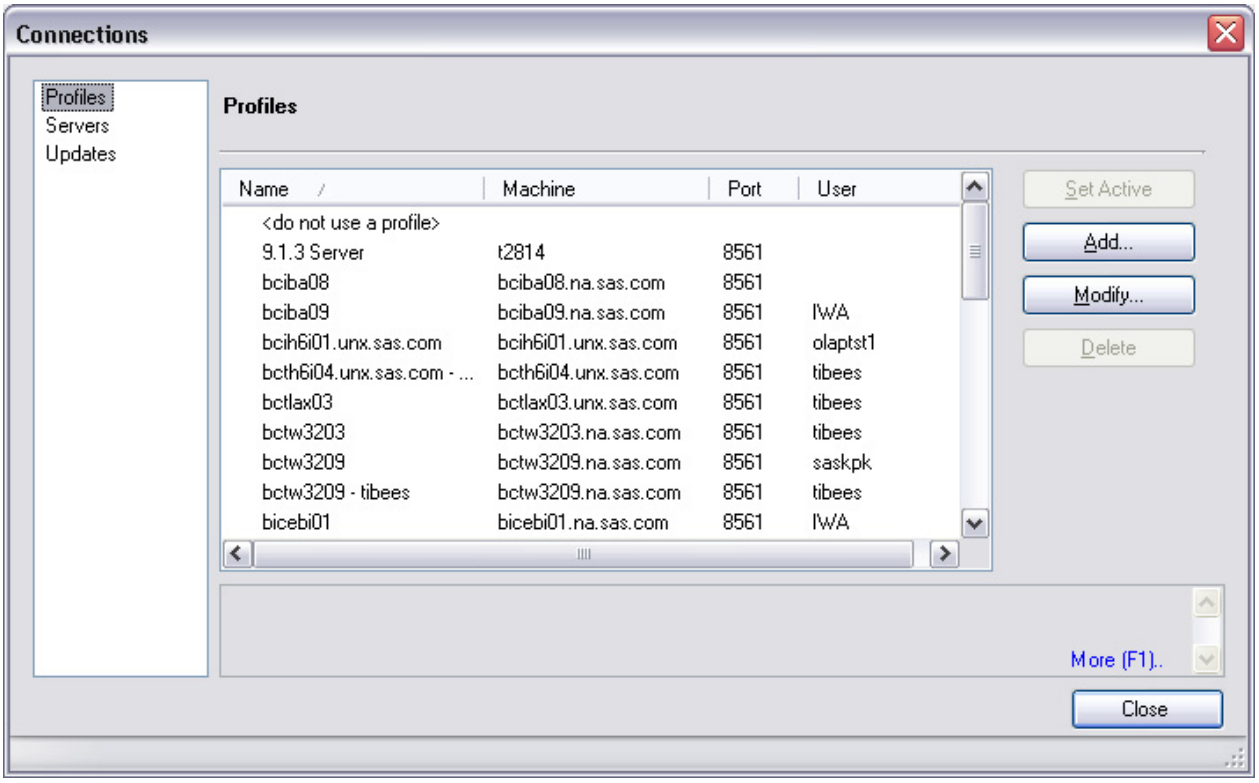

Figure 2 – The Connections Dialog Box in the SAS Add-In and SAS Enterprise Guide

From the Connections dialog box, the user is able to manage all of the different profiles that they might have, and easily change between them. These changes will be reflected in both the SAS Add-In for Microsoft Office and SAS Enterprise Guide.

Another integration point between the two products is how the user browses for SAS content to insert into their application, such as viewing a data set or running a stored process. Inserting SAS content is something that is commonly done with both the SAS add-in and SAS Enterprise Guide. In 4.2, both products will use the same open dialog box. This gives users a consistent way to browse for data, reports, and stored processes, regardless of which application they are using.

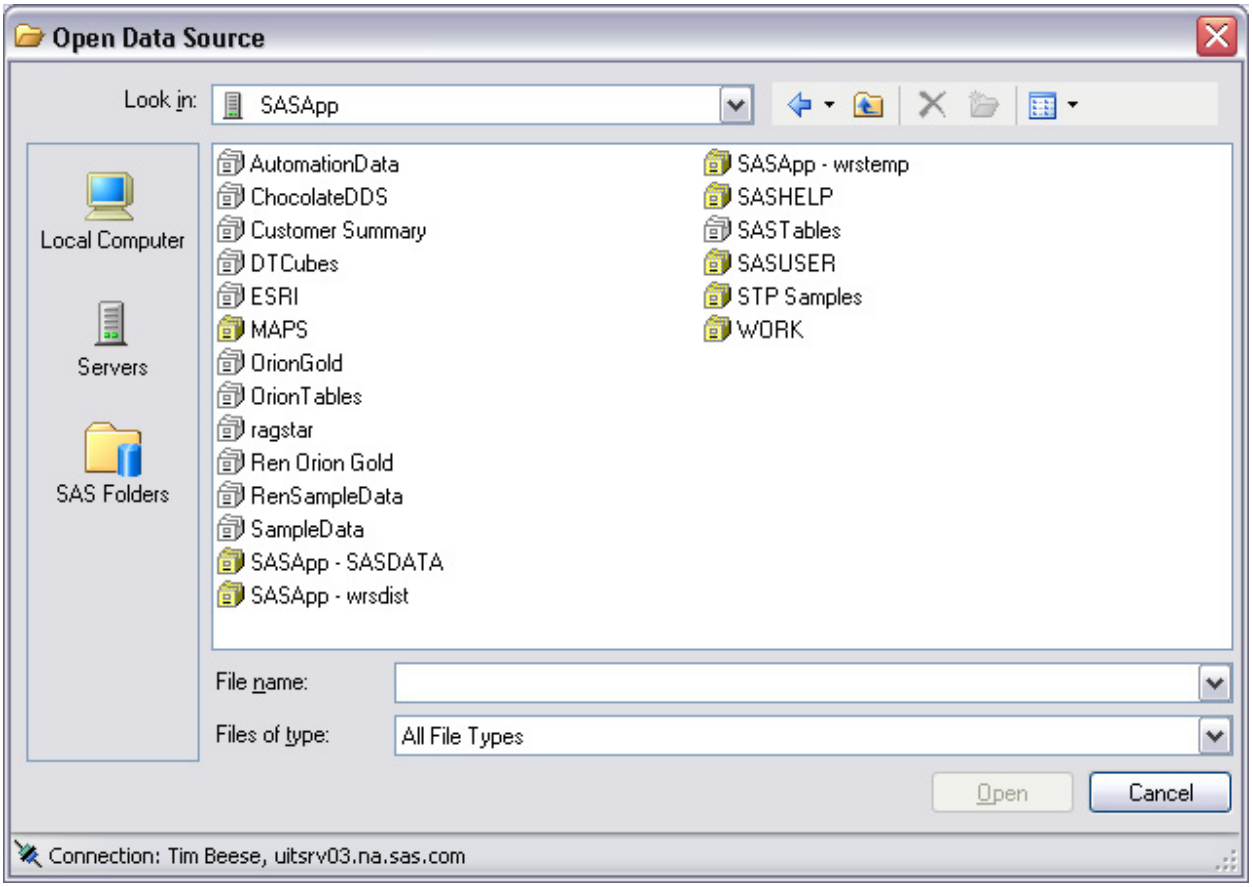

Figure 3 – A Shared Open Dialog Box

TASK TEMPLATES

Many users of both the SAS add-in and SAS Enterprise Guide have asked for a way to save their task settings so that they can use them repeatedly, instead of having to apply the settings each time they want to run a similar report.

For example, if you constantly run Bar Chart tasks, and want vertical colored bars that are 3D cylinders colored red and white, with black reference lines, you don't want to have to set each of those options every time you start the task. With this release, you can save your task settings as a task template. When you run your task template, your task will start with all of these settings as the default values.

This feature is new for both the SAS add-in and SAS Enterprise Guide. Regardless of which application you are using; you are able to create, manage, and delete templates. Also, templates that were created in SAS Enterprise Guide can be used in the SAS add-in and vice versa.

ROLE-BASED SETTINGS

With this release of the SAS Add-In for Microsoft Office and SAS Enterprise Guide, both applications are role-based. This means that an administrator can set up which groups of users have certain features turned on or off in each application. Users who are not intended to run certain tasks will not have those tasks available in the application. If administrators do not want their users to perform certain actions, such as modifying options, changing e-mail settings, or publishing their documents to the repository; they can disable those actions so that they are not available to the end user. These role-based settings give administrators better control over what functionality is available to their users. It is also useful for users who will not be burdened with extra features that they have no need to use. The user interface will hide the menu items for the actions that are unauthorized, resulting in a cleaner look for the user.

SENDING CONTENT FROM SAS ENTERPRISE GUIDE TO MICROSOFT OFFICE

SAS Add-In 4.2 for Microsoft Office greatly expands the ability to open reports from different sources. The SAS add-in is now able to open reports that are saved on the local machine. The SAS add-in is also able to open reports that are inside of a SAS Enterprise Guide project. After a report is generated in SAS Enterprise Guide, one of the options available for the report is to send the content to different locations. In prior releases of SAS Enterprise Guide, SAS Reports were not able to be sent to Microsoft Office, since Office doesn't understand the format. In SAS Enterprise Guide 4.2, SAS Report is the default results format, and any SAS Report result can be sent to Microsoft Excel, Word, or PowerPoint, using the SAS add-in. SAS Enterprise Guide will send the file to the SAS add-in, which will display a snapshot of the report in Office the same way as if the SAS add-in had generated the report itself.

OPENING SAS WEB REPORT STUDIO REPORTS

In addition to being able to open reports from the local machine or from a SAS Enterprise Guide project, the SAS add-in is able to open reports that are generated by SAS Web Report Studio. These reports are defined in metadata and can be opened through the Reports dialog box, the same way that the user would open a stored process. This dialog box lets the user browse through metadata to find the report that they want to open.

Unlike the static reports that we get from SAS Enterprise Guide, these reports are dynamic. The reports can have prompts associated with them, allowing the SAS add-in to prompt the user for certain values before the report is generated. Once the report is opened into Office, the user can refresh it to make sure that report is up-to-date. Or, the user could choose to modify the results and the SAS add-in will re-prompt the user, allowing them to change their prompt values for the updated report.

PREVIEWING SAS REPORTS

Whenever a report is opened into Microsoft Office, the SAS add-in provides the option to preview the report before it is rendered. This way, you get a chance to view the content ahead of time. From this preview, you have the ability to pick and choose which items will be rendered into Microsoft Office. You can choose to insert all of the content, or pick and choose each title, table, image, or graph that you want to display in your report.

The preview dialog boxes are turned off by default, but can easily be enabled by going to the SAS Options dialog box, and checking the **Show Preview Changes dialog box** option on the **Results** tab.

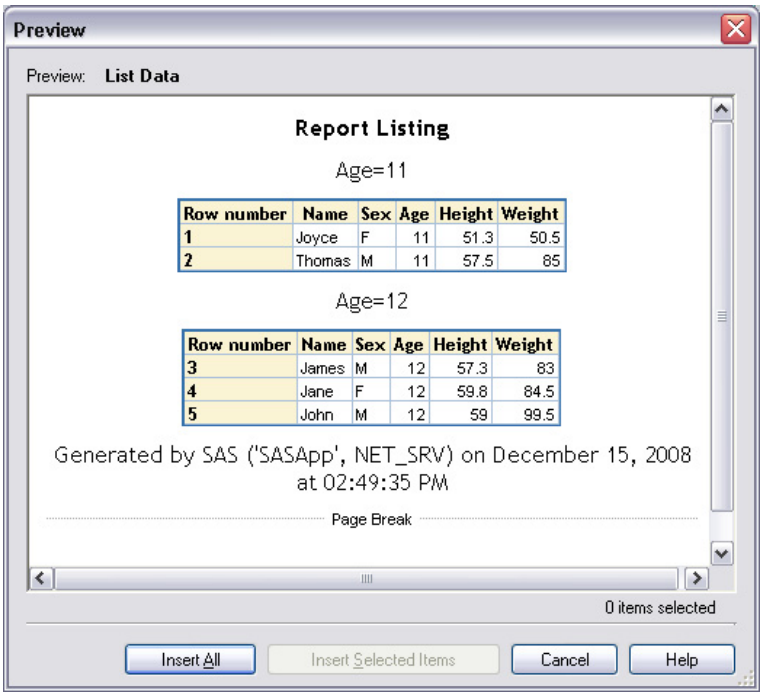

Figure 4 – The Preview Dialog Box

In the previous release of the SAS add-in, the entire report was always inserted into Office. Once it was there, the user was able to go through and remove any parts of the report they chose not to display. During a refresh, those pieces were not recreated. The same holds true for items that are not inserted from the preview dialog box. When the results are refreshed, the SAS add-in will not attempt to render the pieces of content that have been specifically excluded from the results.

PREVIEWING CHANGES

As results are refreshed, there is always the possibility that the layout of the report could change. New tables or graphs might be generated, or graphs that used to exist might no longer be included. Whatever the reason, if the structure of the report changes, the user needs to know that something is fundamentally different with their report since the last time that it was updated.

In the previous release of the SAS add-in, new results were simply inserted into the document, and removed results were deleted without warning. The user might not even be aware that these changes were made. In 4.2, the SAS add-in will prompt the user when parts of a report are added or removed. This way, the user can see exactly what is changing as a part of the report, and choose whether to insert those results.

The dialog box has two tabs, one for items that are new to this report, and one for items that were not generated since the previous time the report was opened. On the tab for the new items, the user can choose which new items they want to insert into Office, just like they would if this was the first time they had opened the report. On the tab that shows the removed items, it is simply a list to show the user what will be removed once the report is refreshed. If this isn't what the user wants to do, they can cancel from this dialog box and the content in Office will not be modified.

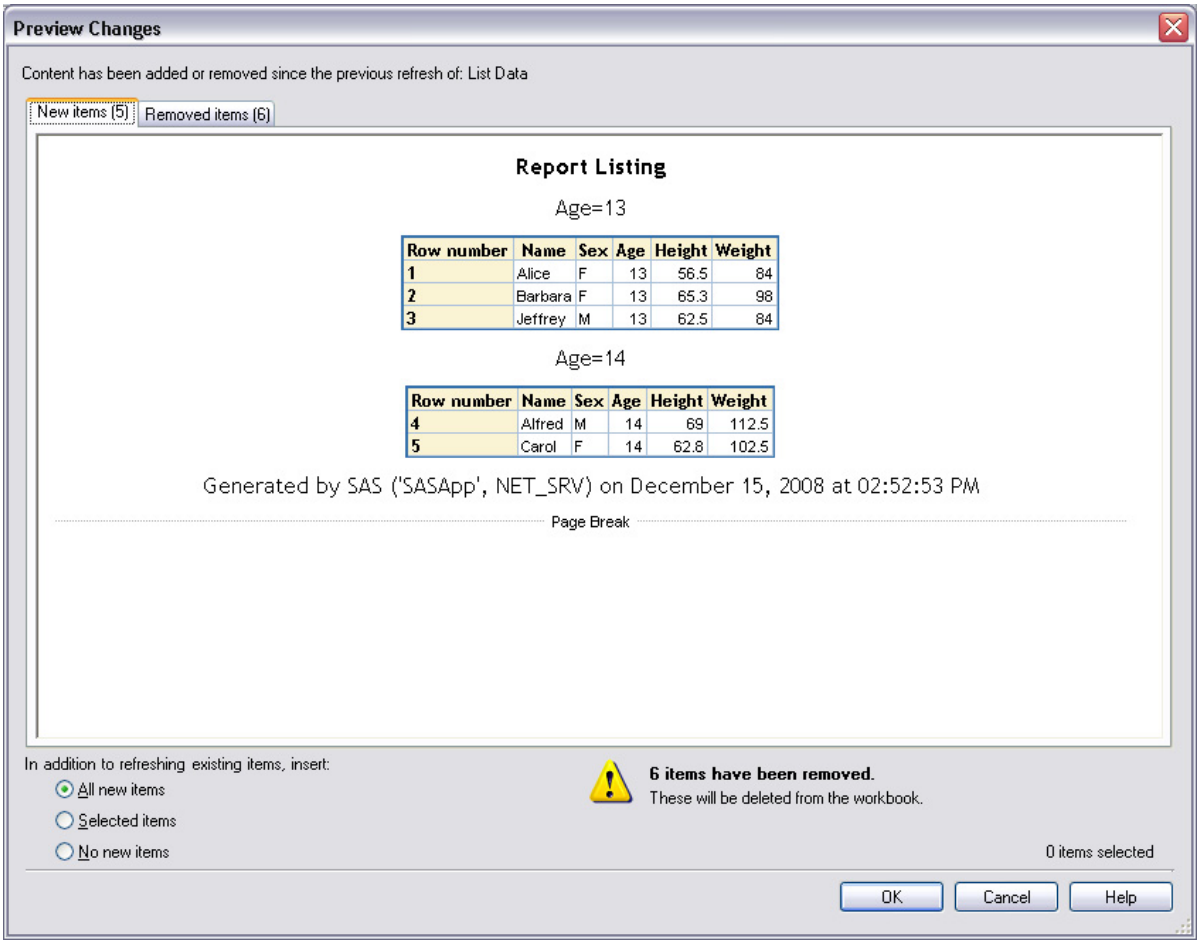

Figure 5 – The Preview Changes Dialog Box

RESTORE CONTENT

Once you have opened a report and chosen which content you wanted to insert, it is always easy to go back and get the content that wasn't initially selected in the Preview dialog box. This functionality is called Restore Content and is available on the **SAS** tab or **SAS** menu in Microsoft Office.

The purpose of this is to let the user go back and essentially open the original results again, this time choosing to insert additional content. In addition to inserting content that was not originally selected, it will let you get back content that you might have deleted through Microsoft Office.

This is not the same as refreshing the content, when you restore content you are re-opening what was generated previously. This is useful as it lets you manage the different parts of your report and get it laid out correctly. Once that is done, refreshing is simple to get the report updated.

For example, if you ran a task that created two tables, but you only chose to insert one of them, you could use the Restore Content dialog box to go back later and insert the second table. Also, if you manually deleted one of the tables or titles from your Microsoft Office document, you will be able to restore it from this dialog box.

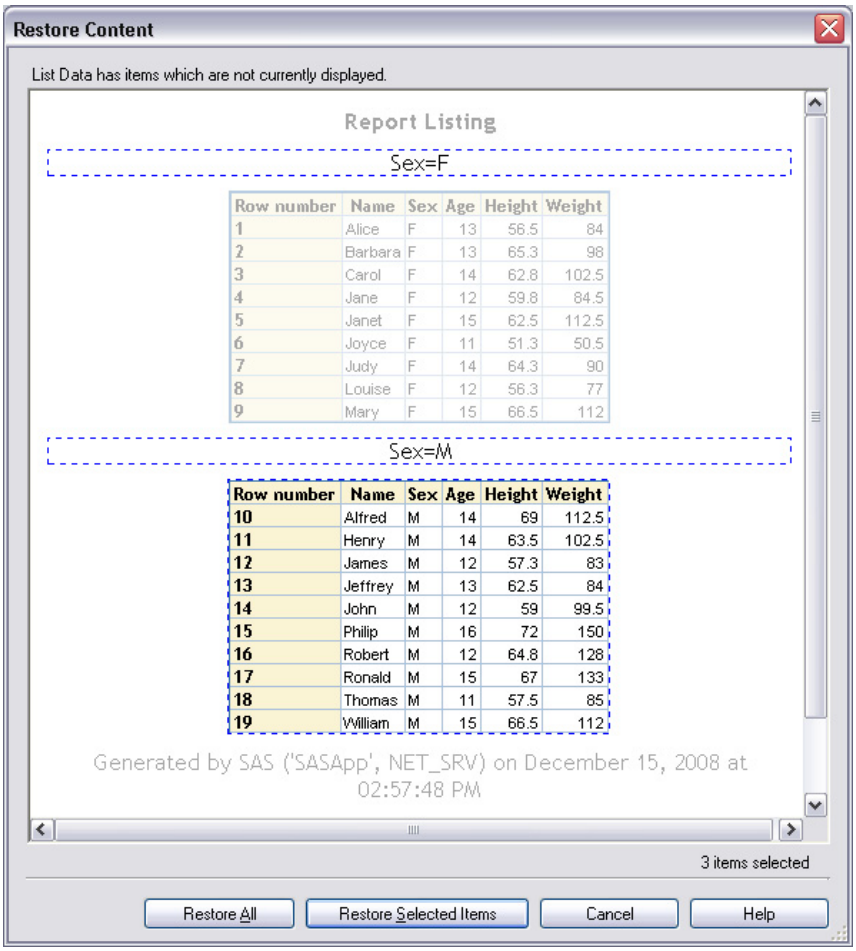

Figure 6 – The Restore Content Dialog Box

When the dialog box is displayed, items that are currently shown in Microsoft Office are grayed out. Items that are not shown in Office are enabled in the dialog box for you to select for insertion into the document.

In the previous release of the SAS add-in, the only way to get back content that you manually deleted was to find an obscure option in the Properties dialog box for some SAS content, and choose to put back all of the content that was deleted. If you had deleted 10 tables and only wanted to get one back, this was an inconvenient way to do things. Now, the user has the ability to control each piece of content and whether it is displayed.

AUTO-POPULATING PIVOTTABLES

In 4.2 of the SAS add-in, when the user opens an OLAP cube into a PivotTable, the PivotTable is automatically populated. This gives the user an instant view of the data that they are opening, rather than opening an empty table and forcing the user to set things up. The SAS add-in uses the same defaults as the OLAP Analyzer inside of SAS Enterprise Guide when choosing which fields to put in the row, column, and measure areas of the PivotTable.

DRILL-THROUGH TO DETAILS

One of the most common customer requests when working with PivotTables was to be able to drill-through to details. This is supported with Office 2007, but not with earlier release of Office. Now, in 4.2 of the SAS add-in, users can drill-through to details even when using an older release of Office. The SAS add-in will create an MDX query that will be executed on the OLAP server and the resulting data will be displayed in a new worksheet, the same way that it would if the user was running Office 2007.

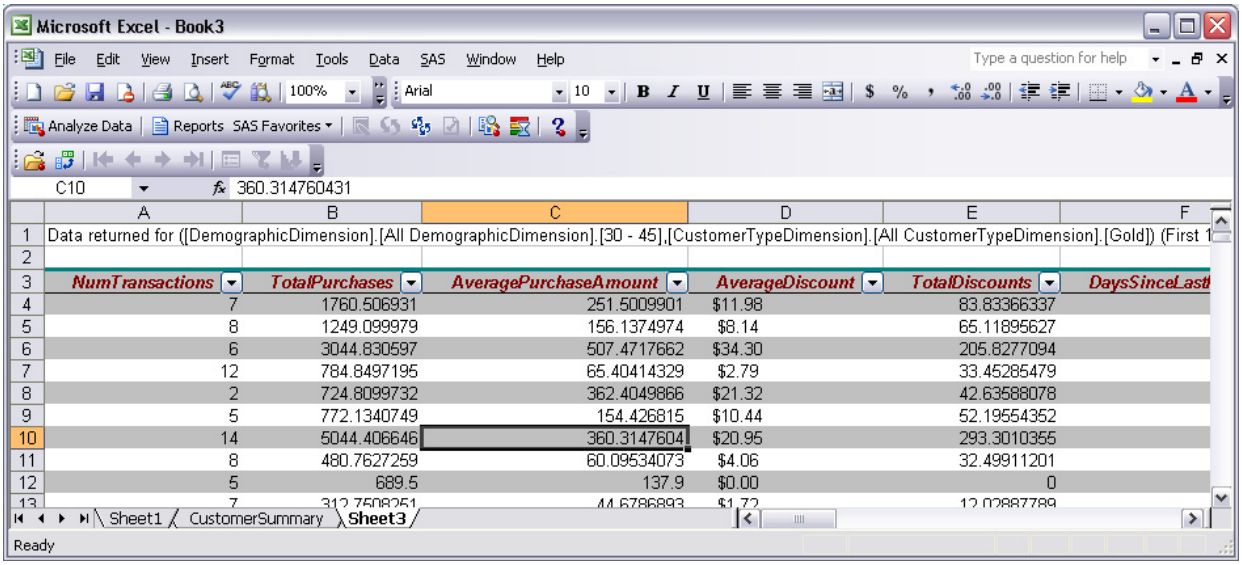

Figure 7 – Drilling Through to Details in Microsoft Excel 2003 Using the SAS Add-In

CALCULATED MEASURES

In 4.2 of the SAS add-in, the user can add calculated measures to their OLAP data. The SAS Add-In for Microsoft Office provides a wizard that guides the user through the process of adding the new measure.

The user can choose from several basic analyses, or they can pick from a list of special, more advanced analyses. The user even has the option of providing the MDX for a completely customized calculated measure. These measures can be added locally, so that only the user will see the new measure in their Excel workbook; or they can be added publicly, making the measure available to other users.

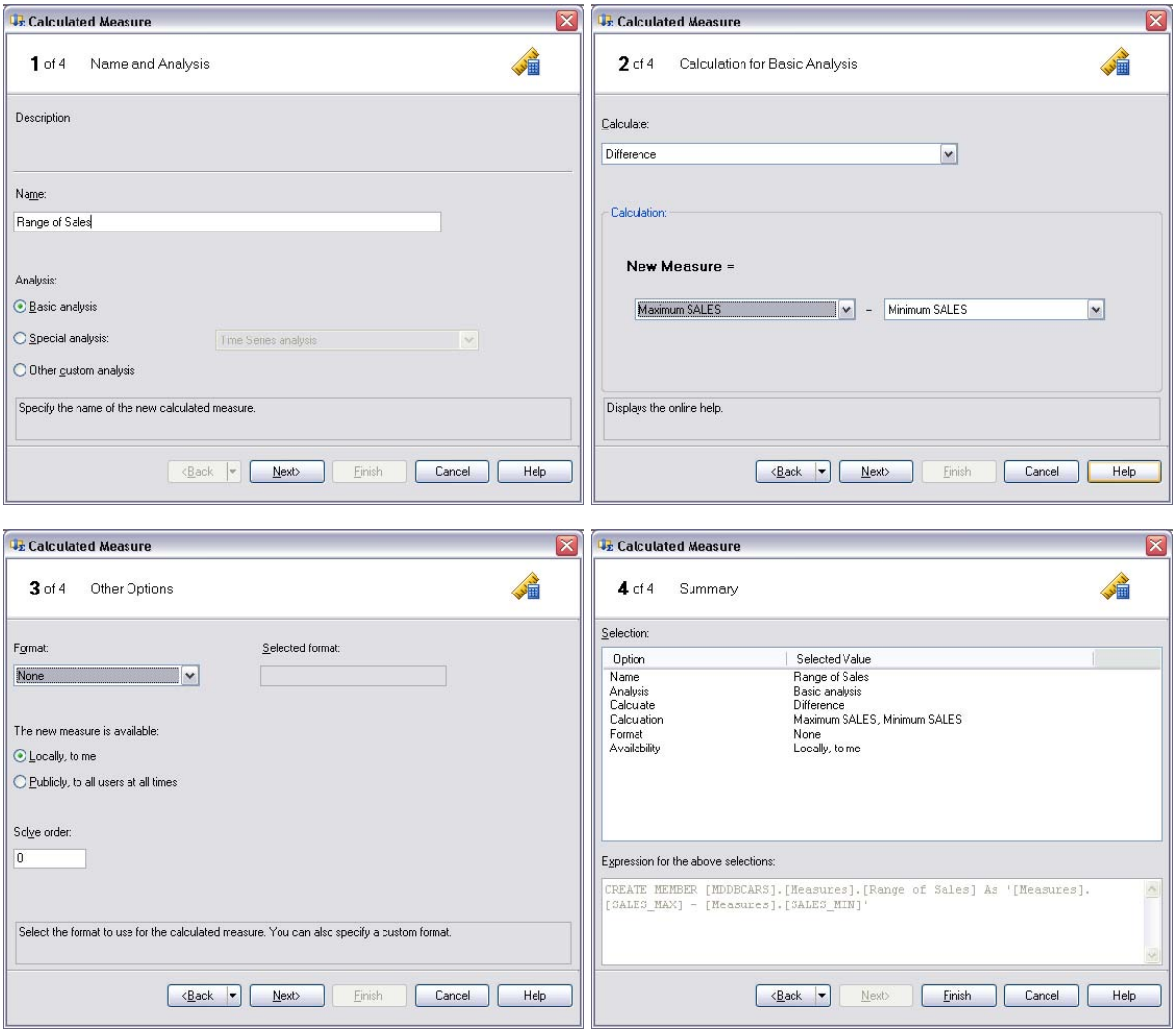

Figure 8 – Adding a New Calculated Measure

Once the user has created the new measure, the measure is automatically added to the PivotTable in the Excel worksheet. Editing the calculated measure is as easy as choosing the **Edit** menu item from the context menu on the PivotTable, the **SAS** tab on the Office 2007 Ribbon, or the **SAS** menu.

The user is also able to manage their calculated measures. From this dialog box, you can create new measures, duplicate or edit existing ones, and delete ones that you no longer need.

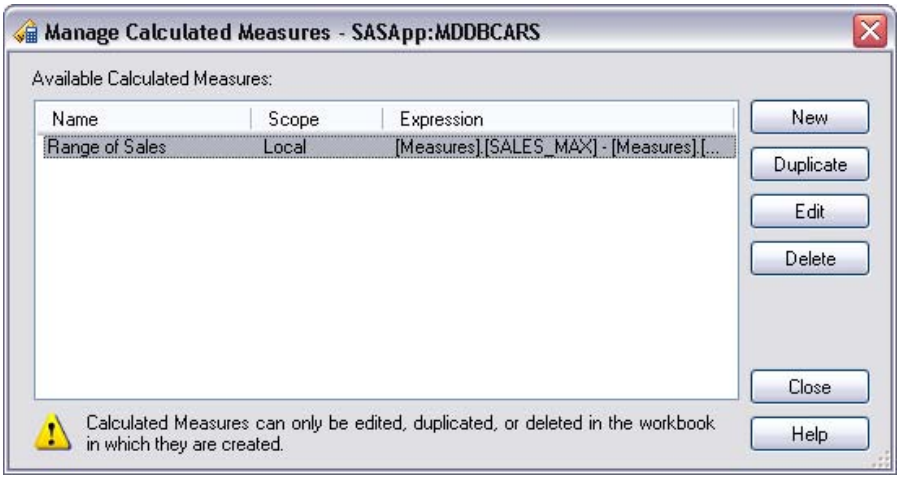

Figure 9 – Managing Calculated Measures

CALCULATED MEMBERS

Calculated members work much the same as calculated measures, with the difference being that you are creating a new member instead of a measure. You get presented with a similar wizard to guide you through the creation of the new member.

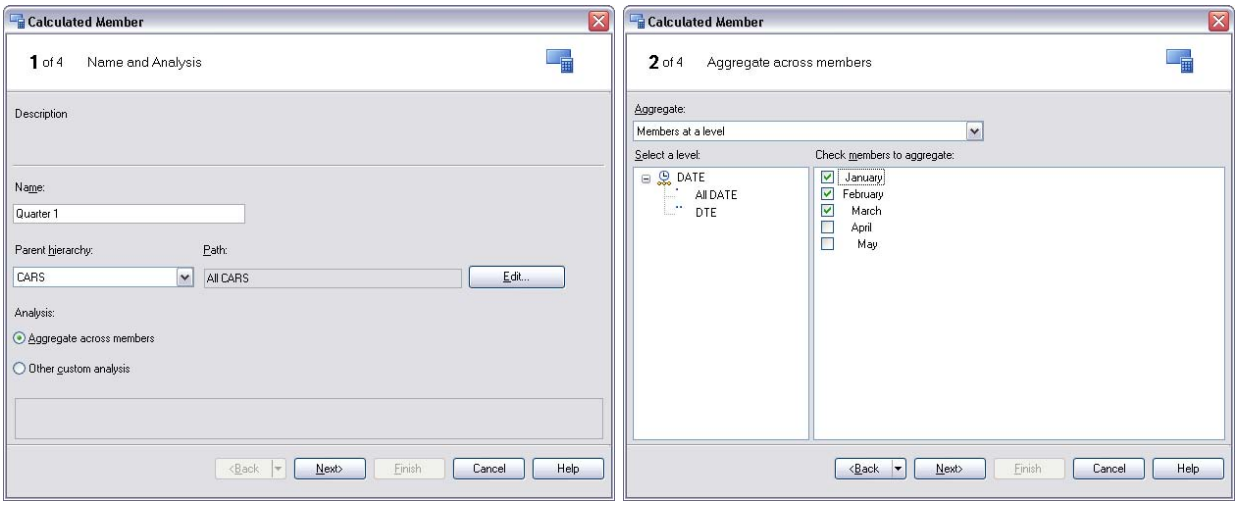

Figure 10 – Creating a Calculated Member

Just as with the calculated measure, new members can also be created locally or publicly, depending on if you want to share the member with others who might be viewing the same cube. Once the new member is added, the PivotTable is automatically updated to include the new member.

Also, just like with calculated measures, you can edit a member once it has been created, and go through a similar dialog box to manage your calculated members with the same options that are available for calculated measures.

PRIVATE OLAP SERVERS

Also new in 4.2 of the SAS add-in is the ability to define private OLAP servers. A private OLAP server is a direct connection to an OLAP server, rather than choosing one that is defined in metadata. The SAS Add-In for Microsoft Office now supports connecting to third-party OLAP providers, such as Microsoft Analysis Services or SAP BW, or any other vendor that defines an OLE DB compatible provider.

This is useful for users who have already invested in an OLE DB provider for OLAP. Now it is possible to use SAS to view and analyze that data. In SAS Add-In 2.1 for Microsoft Office, this was not allowed; the SAS add-in was able to connect to only a metadata-defined OLAP provider.

Once the user has opened the cube into the PivotTable, it works the same as any other PivotTable. The user has the full breadth of functionality available to them, such as drill-through, and adding calculated measures and members.

CONCLUSION

SAS Add-In 2.1 for Microsoft Office was an extremely powerful tool for the Office user, bringing the power of SAS analytics directly into the most popular office productivity software. Now, in SAS Add-In 4.2 for Microsoft Office, the user has much tighter control over the reports that they can create and the data that they want to view. By providing access to SAS from a well known environment such as Microsoft Office, users are able to harness the power of SAS without having to leave the Office applications that they are most comfortable with.

CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author:

Tim Beese
SAS Institute, Inc.

Work Phone: 919-531-5836
E-mail: tim.beese@sas.com