Better Decision Making with SAS® Enterprise Business Intelligence and Microsoft Outlook

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ABSTRACT

The SAS® Add-In for Microsoft Office has new Microsoft Outlook integration capabilities that enable better decision-making, increase productivity and decrease cost by taking full advantage of SAS Enterprise Business Intelligence through the Microsoft Outlook environment. This integration of SAS® Business Intelligence and Microsoft Outlook increases informed decision making by giving users intuitive access to reports, stored processes, and dashboards. These capabilities reduce the user learning curve and improve productivity, thereby increasing the return on investment of business intelligence implementations. Users obtain contextual information from SAS Business Intelligence while performing daily tasks in Microsoft Outlook. The SAS Add-In for Microsoft Office user interface seamlessly integrates with the Microsoft Outlook look and feel. By leveraging the widely used Microsoft Outlook environment, SAS BI Outlook integration can make the rich functionality of the SAS® Enterprise Business Intelligence server, reporting, and analytics available to all employees within an organization.

INTRODUCTION

Most users in your organization, from executives to managers to analysts, likely use Microsoft Outlook. According to a Forrester Research study, e-mail applications are the first application most users open at the beginning of their day and the desktop application that stays open and in use for the longest periods. As the leading e-mail client, Microsoft Outlook is an interface most users are already very familiar with. The SAS Add-In for Microsoft Office has already been bringing the power of SAS® to Microsoft Excel, Word, and PowerPoint. Now, the SAS Add-In for Microsoft Office introduces new Microsoft Outlook (2007 and higher) integration capabilities that enable better decision-making, increase productivity and decrease cost by taking full advantage of SAS Enterprise Business Intelligence through the Microsoft Outlook environment. This integration of SAS BI and Microsoft Outlook increases informed decision-making by giving users intuitive access to reports, stored processes, and dashboards, all within an interface they're familiar with and use for most of their day. This paper will describe how users can view live reports, stored processes, and dashboards all within Outlook.

The typical workflow today is usually as follows: an author creates a report; users export it to Excel; then if they wish to share it, they might post it to a public drive or e-mail links or attachments to colleagues. This workflow requires recipients to open and save the report elsewhere. The reports are then out of sync with the live reports on the server, the Exchange Server gets filled up, and the recipient must launch a browser and log in again. The new Outlook integration from SAS eliminates these steps so that you get reports, stored processes, and dashboards within Outlook, using the SAS Metadata logins and permissions, without clogging Exchange Server, and incorporating single sign-on between your Windows account, SAS Metadata and your SAS BI applications such as SAS® Web Report Studio.

In this paper, we'll show you how this application enables you to view dashboards, reports, and stored processes all within Outlook.

FAMILIARITY

Like all of the add-ins in The SAS Add-in for Microsoft Office, the Outlook add-in integrates with a very familiar interface using the same types of behaviors expected in the application. Reports, stored processes, and dashboards are accessible from folders, similar to e-mail, organized under a special folder called SAS Central. Let's look at access for BI Dashboards, SAS Reports, and SAS Stored Processes.

BI DASHBOARDS

In Figure 1 below, we have an example dashboard. An executive might look at this dashboard to review overall key performance indicators every morning. This Dashboard has the full interactivity provided by the new Flash-based 4.3 version of the SAS® BI Dashboard.
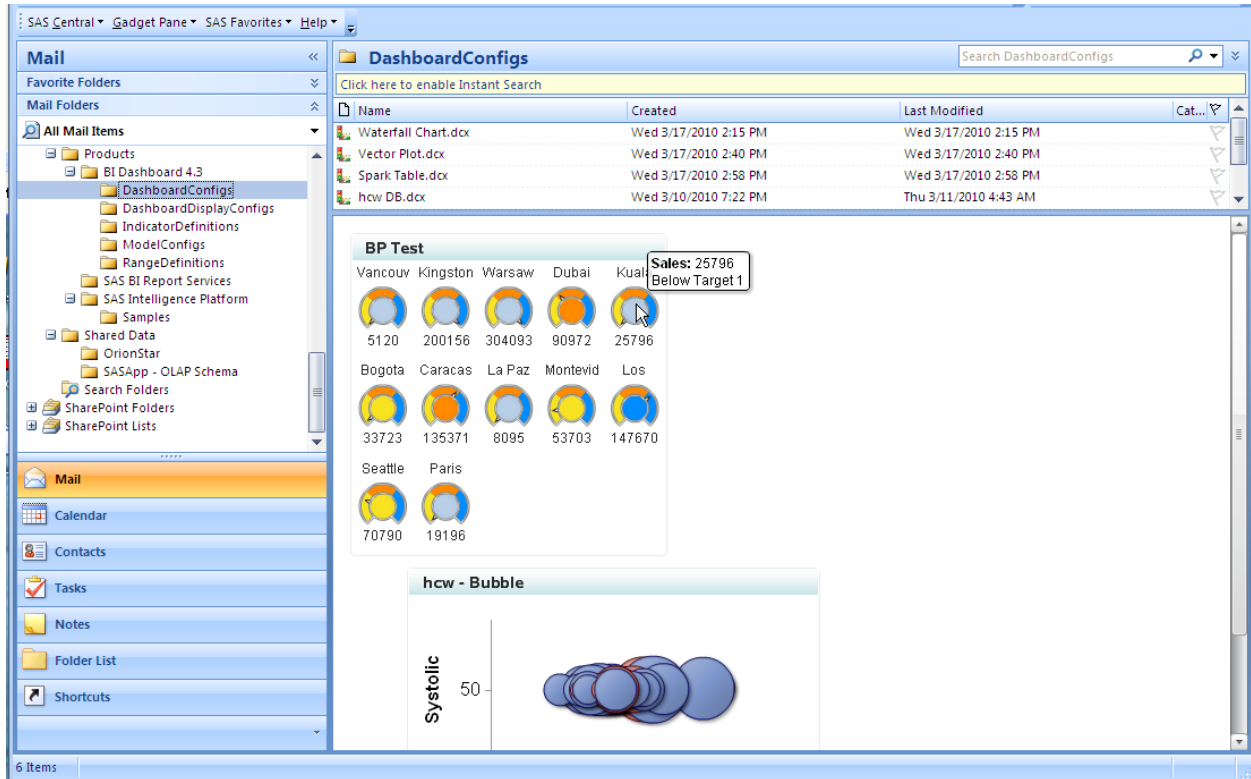

Figure 1. Example Dashboard – mouse rollovers and other interactivity is enabled via Flash

She has the same information available in this BI Dashboard as in her web dashboard. However, she can take a quick look in the Outlook reading pane. After checking for new e-mails she hasn't seen while using her mobile device over breakfast that morning, she notices an issue on the dashboard and asks a manager to look into it further. The manager then reviews more in-depth reports from Web Report Studio and SAS® Stored Processes. This overall flow follows a Notice-Focus-Investigate-Act flow in which she notices something first in the BI Dashboard within Outlook, focuses in on a particular key performance indicator, and acts by sending an e-mail to ask the managers to investigate. We now turn to the SAS Report and SAS Stored Process integration.

SAS REPORTS AND SAS STORED PROCESSES

The manager receives an e-mail, phone call, or instant message from the executive and decides to examine some of the related reports a SAS programmer/analyst has recently created. Below in Figure 2, we see an example of one of these reports.
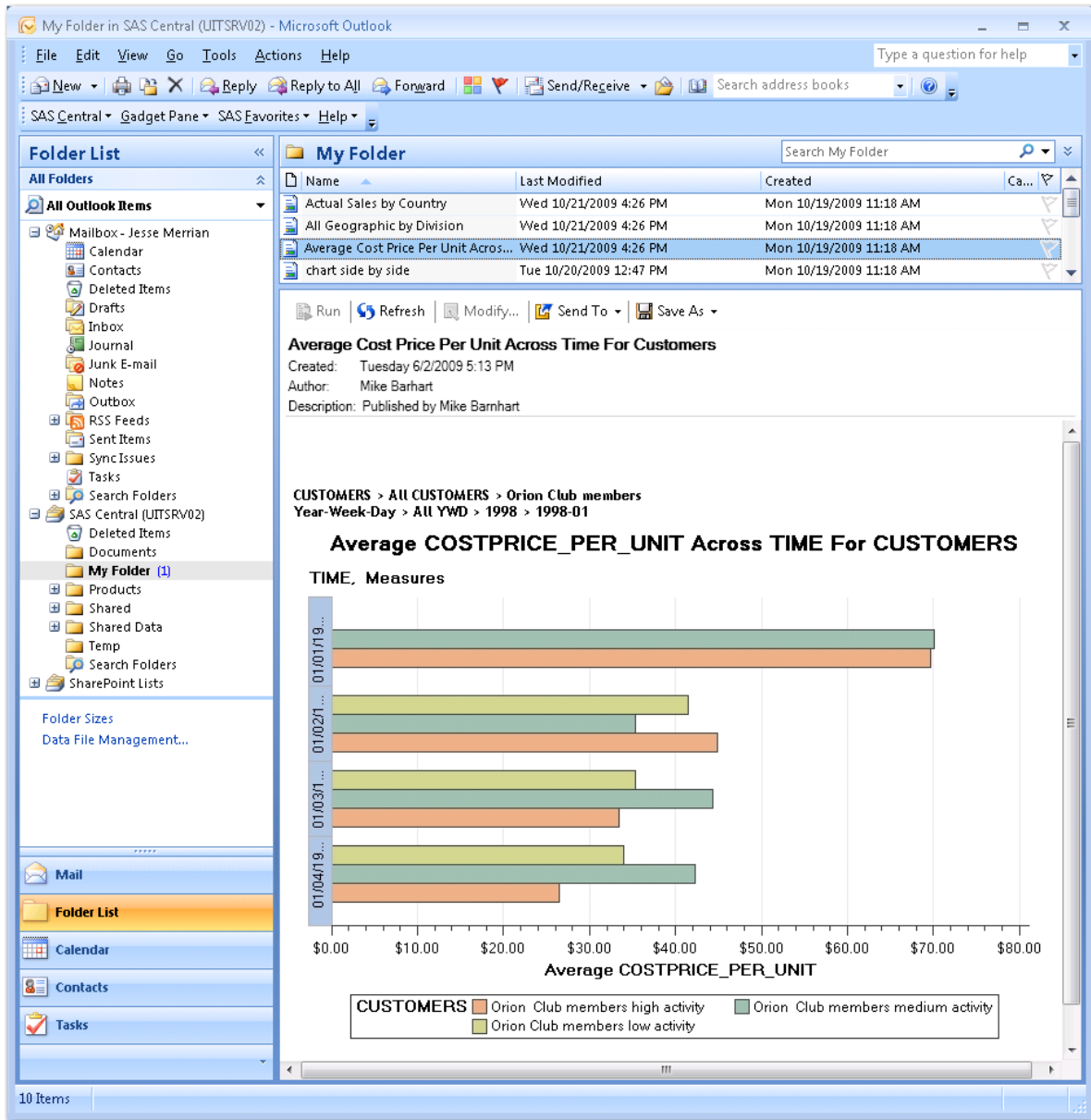
Figure 2. Example Report

The report has familiar user interface aspects from both the other add-ins in SAS Add-In for Microsoft Office and Microsoft Outlook itself. Reports can be opened in a separate view, just as with e-mail. Just as in the other add-ins, reports can be sent to other Office applications and are still live and usable via the corresponding add-ins. They can also be converted to industry standard PDF and HTML formats for sharing with people who do not have the add-ins installed.
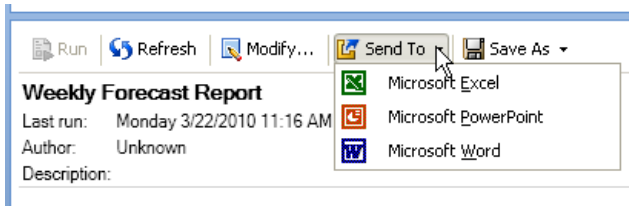

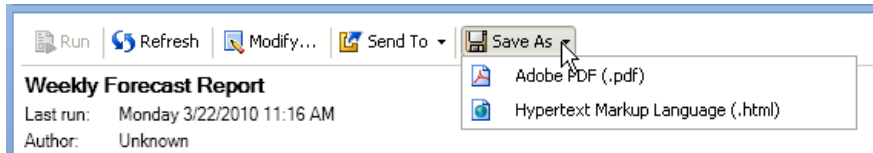Figure 3. Send To Excel Word and PowerPoint

Figure 4. Save As PDF and HTML

Reports can also be run via a Refresh button and can be run in the background while the manager checks e-mail, assigns tasks, and schedules meetings. When a new report is ready, notifications similar to Outlook's normal behavior happen:

- A notification box appears automatically at the bottom right, fading out after a few seconds
- The report folder is shown in bold text
- Parentheses showing the number of unread reports appear next to this bold text

Because of this familiarity, users easily learn how to consume this BI information, leading to faster consumption of information and ultimately decisions and follow-up actions such as scheduling new meetings or e-mailing key customers. We'll discuss these types of collaboration features further below.

HOW THESE RESULTS WERE CREATED

We've focused mainly on content that end users can consume within the Outlook add-in but we haven't discussed how this content is made available by the content producers. In this section we briefly discuss how a report author would create these reports, stored processes, and dashboards. Registering a SAS Stored Process can be done using your existing SAS code or generated from SAS applications such as SAS® Enterprise Guide® or SAS® Enterprise Miner™. Authors can use SAS Enterprise Guide or SAS® Management Console to register the SAS Stored Process in SAS Metadata so that users of applications such as the SAS Add-In for Microsoft Office can find and run these Stored Processes. For more information, see the papers mentioned in the Reference section below. Authoring a report can be done in the main report creation application, SAS® Web Report Studio, or in the power user application, SAS Enterprise Guide. In the 4.3 version of SAS® Enterprise BI Server, the Dashboard Builder has been revamped to be very easy to use. See paper 045-2010 **"Interactive Dashboards: Powered by Flash and the SAS® Programmer"** for more information about this Dashboard Builder. These reports, dashboards, and stored processes are then available via SAS Metadata Folders in SAS Central, which makes access of this SAS BI content very easy for users, authors, and administrators.

EASE OF ACCESS

As mentioned above, the report objects are available via folders under SAS Central. Users are allowed to access only the objects for which they have permission.

CONNECTIONS VIA SAS METADATA

The Outlook Add-in is connected via SAS Metadata so permissions are managed via SAS Metadata. Content in "My Folder" and other folders is controlled by the SAS administrator so that users can view only content they have rights to view. Also, these Open dialog boxes will be familiar to any end users who already use the SAS Add-In for Microsoft Office in Excel, Word, or PowerPoint, or to users who use SAS Enterprise Guide, increasing the familiarity of this application. In addition, the Exchange Server does not become full of attachments, a benefit to both end users and their IT organizations.
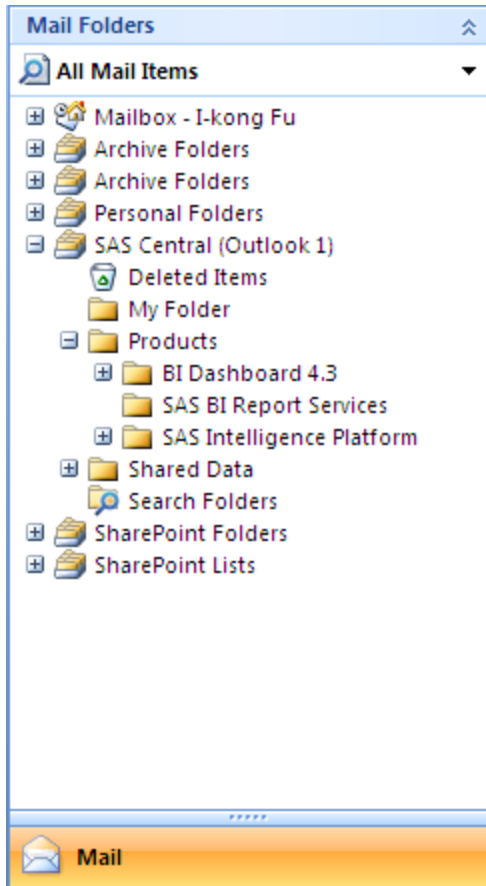
Figure 5. Access to objects in SAS Central and Folders are controlled via SAS Metadata

THE GADGET PANE

In addition to finding these objects via folders in SAS Central, the Outlook add-in has a new way to access this content in a specialized pane called the Gadget Pane. In our scenario above, after talking with an analyst, the manager and analyst decide to display portions of this content in the Gadget Pane for the executive to speed up the notice portion of the Notice-Focus-Investigate-Act flow. The Gadget Pane enables you to conveniently monitor this information while doing other things. Also, you can take advantage of the integration with Outlook to act quickly when things are right or wrong with a metric/gadget that you are monitoring. Reports and stored processes can be scaled to the appropriate size for this pane, and BI Dashboard indicators can also be added here, so there are several choices for showing key performance indicators.
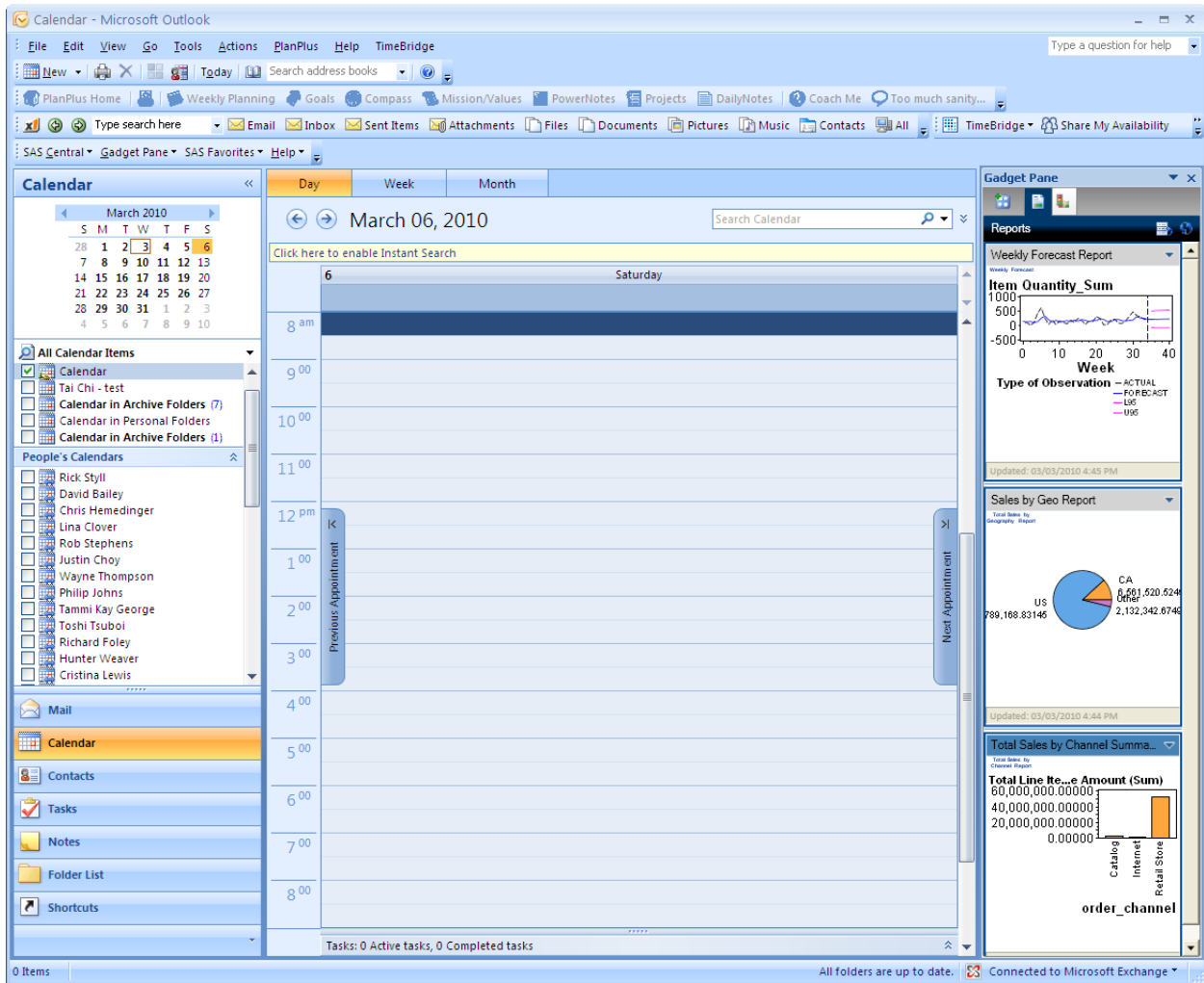
Figure 6. Gadget Pane positioned on right.

The BI Dashboard Indicators automatically refresh on a specified interval. In addition, various familiar actions are available for collaboration with others using Outlook functionality merged with SAS BI results. From this Gadget Pane, users can right-click a report or dashboard indicator to send an e-mail, schedule a meeting, or assign a task. A snapshot of the report item is included automatically along with some context information.   Users can also refresh, copy, and modify gadgets and view properties such as the last run time and author information.

CONCLUSION

SAS is releasing an exciting new capability that is going to revolutionize access to your business' most critical information through a tool that most users are very familiar with: Microsoft Outlook. This product is part of the SAS Add-In for Microsoft Office that already provides you with SAS BI integration with Microsoft Office productivity applications. We are happy to introduce this extension. Along with other integration points such as SharePoint and mobile device integration, this new product will help you deliver SAS results to the places that are most convenient for you and your users. This integration of SAS BI and Microsoft Outlook increases informed decision-making by giving users intuitive access to reports, stored processes, and dashboards. These capabilities reduce the user learning curve and improve productivity, thereby increasing the return on investment of business intelligence implementations. Users obtain contextual information from SAS Business Intelligence while performing daily tasks in Microsoft Outlook. The SAS Add-In for Microsoft Office user interface seamlessly integrates with the Microsoft Outlook look and feel. By leveraging the widely used Microsoft Outlook environment, SAS BI Outlook integration can make the rich functionality of the SAS Enterprise Business Intelligence server, reporting and analytics available to all employees within an organization.

RECOMMENDED READING

Paper 045-2010: Interactive Dashboards: Powered by Flash and the SAS® Programmer.

Paper 051-2009: What's New in SAS® Add-In 4.2 for Microsoft Office

Paper 320-2009: What's New in SAS® Enterprise Guide 4.2®

Paper 330-2009 SAS® Stored Processes: Going Beyond the Current Capabilities of the

Stored Process Wizard

Paper 390-2009: Henderson, David; Alexandre, Sean. Integrating SAS® Business Intelligence with Microsoft SharePoint.

CONTACT INFORMATION

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