

# **SAS® Information Delivery Portal:**

## **Organize your Organization's Reporting**

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### **ABSTRACT**

The SAS Information Delivery Portal (IDP) is a web application that allows you to present reports, graphs, document links, and web links in an easy to use interface. This paper will provide an overview of the IDP and how content can easily be surfaced. An example will show how a regular SAS program can be utilized within the IDP via stored processes. Options related to setting reporting permissions will also be presented. SAS Enterprise Guide also allows surfacing reports and graphs and there will be an overview of the advantages provided by IDP.

### **INTRODUCTION**

The SAS Information Delivery Portal is a web application that is a component of the SAS Enterprise BI Server. The purpose of the IDP is to allow for organized, easy access to information to a broad range of users. The IDP is presented with tabbed pages and within each page there can be multiple sections (or portals). When an end-user logs into the IDP, authorization rights determine whether or not a given page or portal is visible to that user.

There are multiple types of content that can be made available including reports, graphs, SAS Information Maps, document links, and web links. Reports can be static or dynamic. The ability to run a stored process (a typical SAS program that is registered in a metadata repository) opens up virtually all of the SAS analytic and data processing capabilities to users who have no SAS skills whatsoever.

The IDP provides a great deal of flexibility in terms of how much end-users are allowed to customize their own portal. On one extreme, an end-user may log in and be allowed to alter nothing; the pages and portals that the SAS administrator has set up are all that the person is allowed to view. At the other extreme, an end-user can add or delete existing pages and create their own pages using content that has been previously registered.

### **OVERVIEW OF THE SAS® INFORMATION DELIVERY PORTAL**

Figure 1 shows an overview of what a sample IDP presentation might look like. Most end-users with even a modest amount of experience with a web browser will be able to navigate without difficulty.

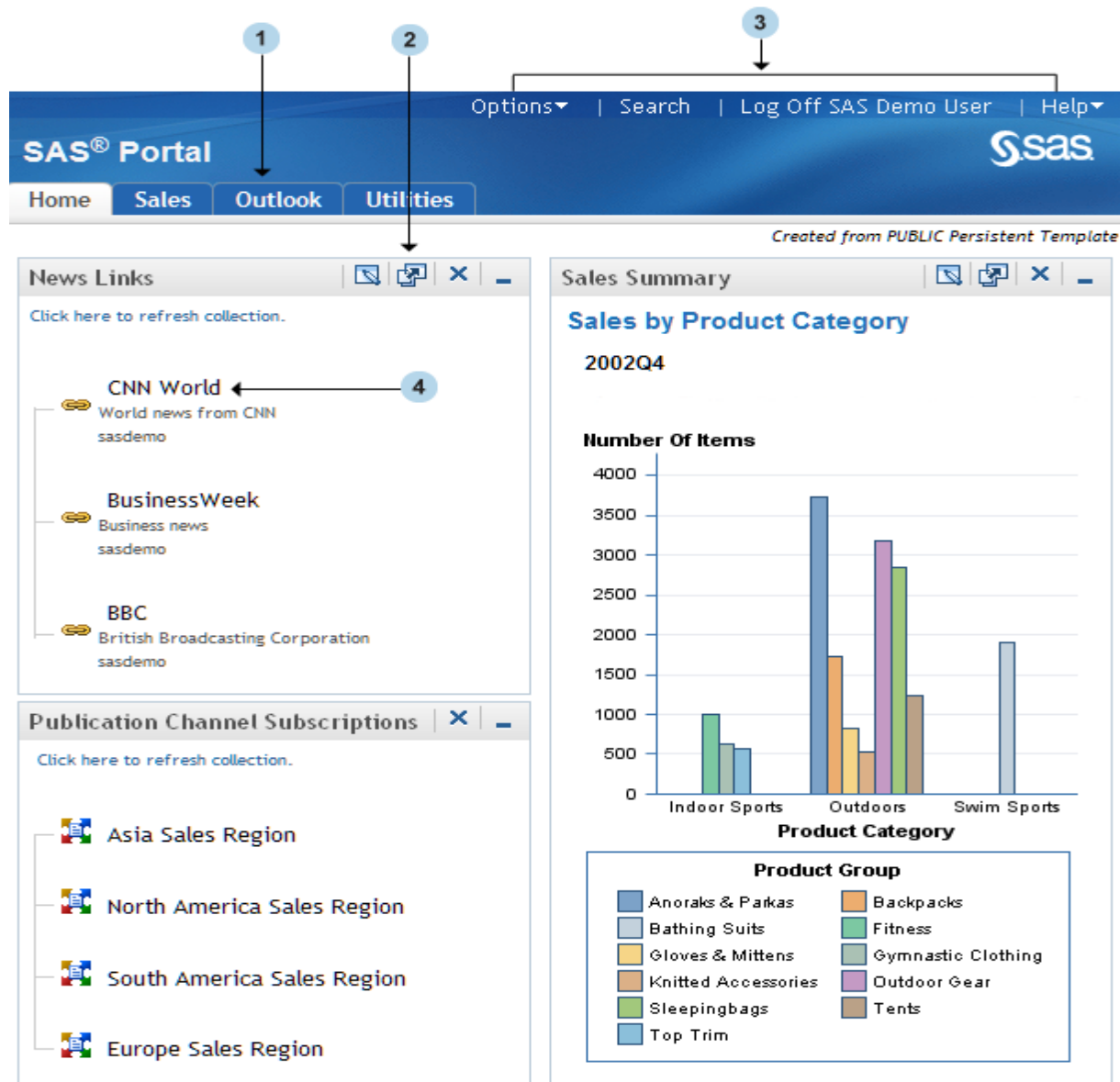


Figure 1. The SAS® Information Delivery Portal interface

- 1 Navigation bar contains links for your portal Web pages. You open a different page by clicking its name in the navigation bar.
- 2 Portlets are the rectangular display components of a portal page that contain links, graphs, reports, and other information that is available in the portal. You can edit the contents or properties of the portlet here.
- 3 Banner links – contains options for portal personalization, logging off, searching for content, and the help menu.
- 4 Portal links - To view information or to launch applications that are available to you through the portal, click any active link that is displayed inside a portlet.

## TYPES OF CONTENT AVAILABLE WITHIN IDP

IDP ships with around a dozen predefined portlet types. Table 1 lists the more common portal types that shipped with SAS IDP 4.2 including the SAS BI Portlets (released October 2009). Figure 2 shows the Portlet type selection screen.

| Portlet Type               | Allowable Content or Purpose  |
|----------------------------|---|
| Alerts                     | Lets you know that certain stored processes have finished executing and results are ready to view.  |
| Bookmarks Portlet          | Enables users to view and work with content they find using the Search tool.  |
| Information Map Viewer     | Contains bookmarks that are made while working with Information Maps in a Collection portlet.   |
| SAS BI Dashboard           | Contains indicators created within BI Dashboard   |
| SAS Collection Portlet     | Contains a list of content items from among these content types: Application (web), Data exploration, File, Link, Package, Publication Channel, SAS Information Map, SAS Report, SAS Stored Process, and Syndication Channel. |
| SAS Navigator Portlet      | Enables users to navigate repository folders in the metadata server and locate SAS content items such as reports and stored processes.  |
| SAS Report Portlet         | Enables users to display SAS reports in static HTML format.   |
| SAS Stored Process Portlet | Enables users to display stored process output.   |
| URL Display Portlet        | Displays the Web content at a specific URL.   |

Table 1. Common IDP Portlet Types

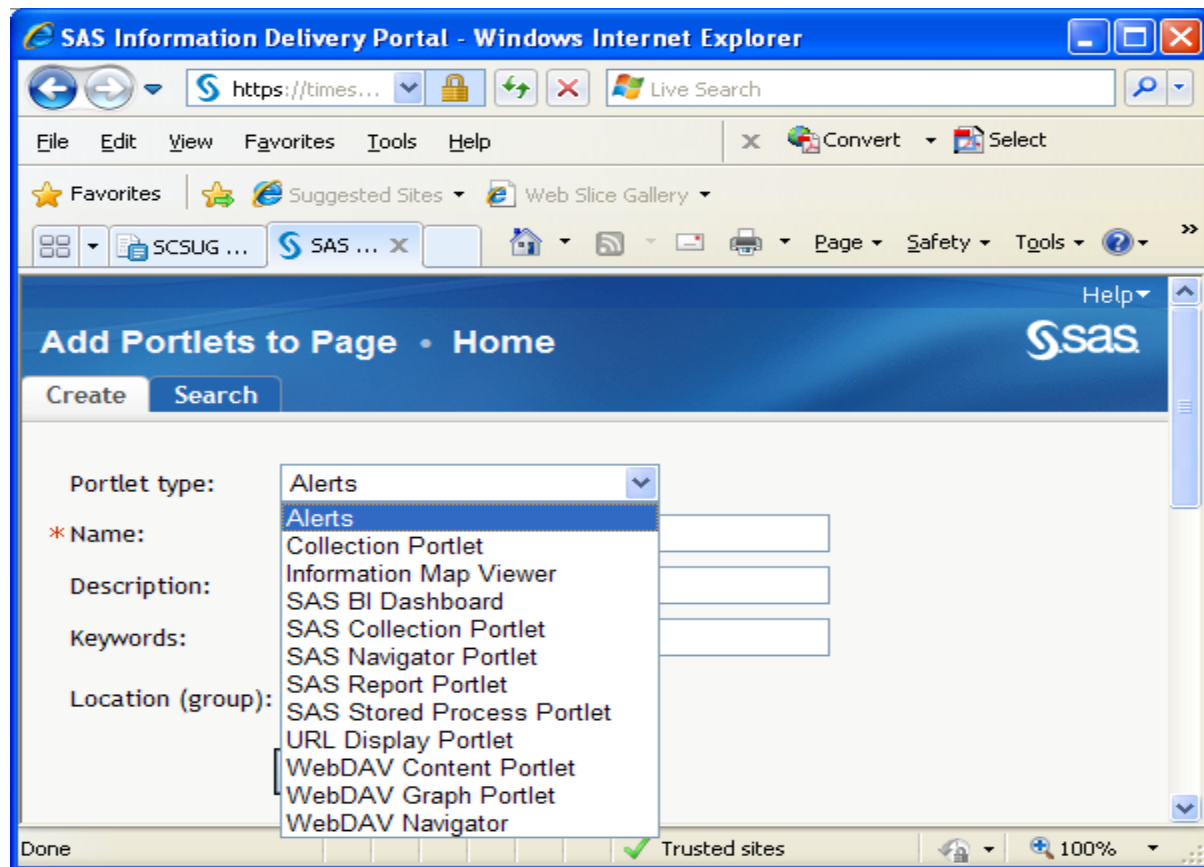


Figure 2. Portlet type selection.

Figures 3, 4, 5, and 6 display screen shots showing how several of the portal pages might appear:

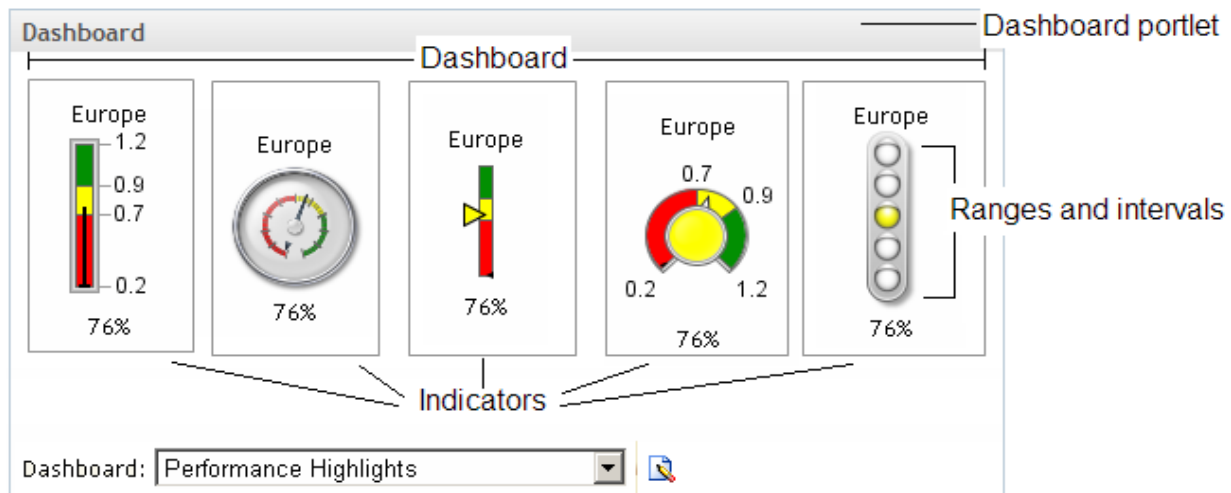


Figure 3. Portlet developed in BI Dashboard.

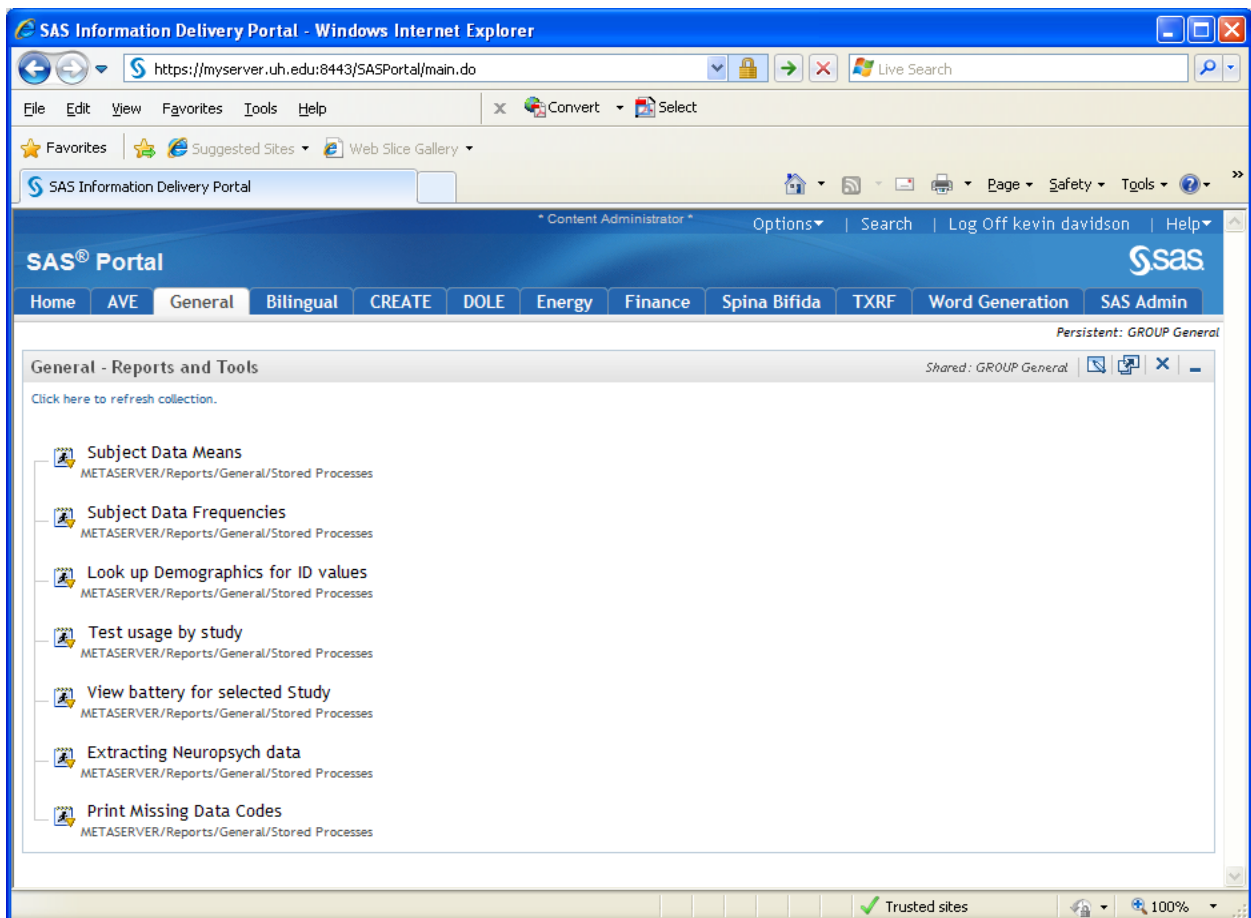


Figure 4. Collection portlet displaying stored processes.



Figure 5. A SAS report from IDP that displays in Web Report Studio.

Bookmark Publish E-mail

File Data View Query Bookmarks

Query

Selected Items:

- Columns
  - Department
  - Employee Gender
  - Annual Salary

Add Remove

Available Items:

- Organization Map
- ORGANIZATION\_DIM
  - Department
  - Employee Gender
  - Annual Salary
  - Company
  - Employee Birth Date
  - Employee Country
  - Employee Hire Date
  - Employee Id
  - Employee Name
  - Employee Termination Date
  - Job Title
  - Manager At 1. Level
  - Manager At 2. Level
  - Manager At 3. Level
  - Manager At 4. Level
  - Manager At 5. Level
  - Manager At 6. Level
  - Levels Of Management
  - Group
  - Section

Apply Restore

Applied Filters:

View Data Properties

|    | Department            | Employee Gender | Annual Salary |
|----|-----------------------|-----------------|---------------|
| 1  | Accounts              | Female          | \$297,815     |
| 2  | Accounts              | Male            | \$382,625     |
| 3  | Accounts Management   | Female          | \$185,715     |
| 4  | Accounts Management   | Male            | \$211,460     |
| 5  | Administration        | Female          | \$1,666,190   |
| 6  | Administration        | Male            | \$2,008,225   |
| 7  | Concession Management | Female          | \$233,625     |
| 8  | Concession Management | Male            | \$138,600     |
| 9  | Engineering           | Female          | \$466,450     |
| 10 | Engineering           | Male            | \$457,830     |
| 11 | Executives            | Female          | \$207,885     |
| 12 | Executives            | Male            | \$945,445     |
| 13 | Group Financials      | Female          | \$89,460      |
| 14 | Group Financials      | Male            | \$42,605      |
| 15 | Group HR Management   | Female          | \$477,675     |
| 16 | Group HR Management   | Male            | \$250,735     |
| 17 | IS                    | Female          | \$526,835     |
| 18 | IS                    | Male            | \$773,845     |
| 19 | Logistics Management  | Female          | \$300,630     |
| 20 | Logistics Management  | Male            | \$518,240     |

Rows 1 - 20 of 34

Figure 6. Information Map accessed from IDP

## ADAPTING EXISTING SAS PROGRAMS FOR USE IN IDP

Most SAS shops have a large number of programs written that generate reports. This section will walk through the steps required to surface a SAS program within IDP.

- 1) Register the Stored Process in Metadata. The reader is referred to the SAS Stored Process Developer's Guide (see references) for information on registering a stored process. Note that there are several ways to register your stored process, including the use of SAS Management Console, SAS Enterprise Guide, and SAS Data Integration Studio.
- 2) Identify the IDP page (tab), existing or new, where you want the stored process report to appear
- 3) Verify that the page has a portlet that can host the stored process. It will need to be a portlet type of Collection or SAS Stored Process. Create a new portlet if one doesn't already exist. The steps for adding a new portlet:
  - a. At the top of the IDP page, select Options-Edit Page Content
  - b. On the Edit Page Content screen, select click the Add Portlets button

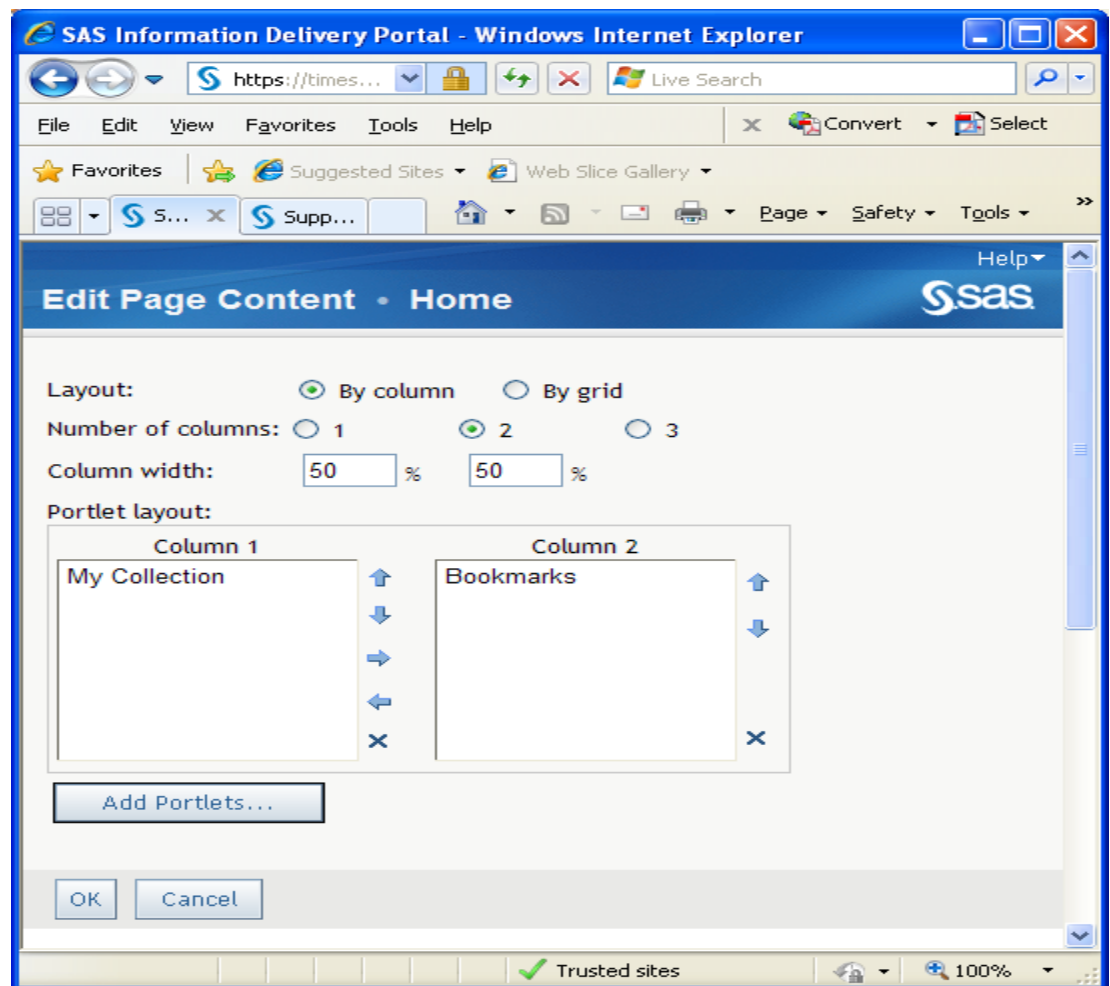


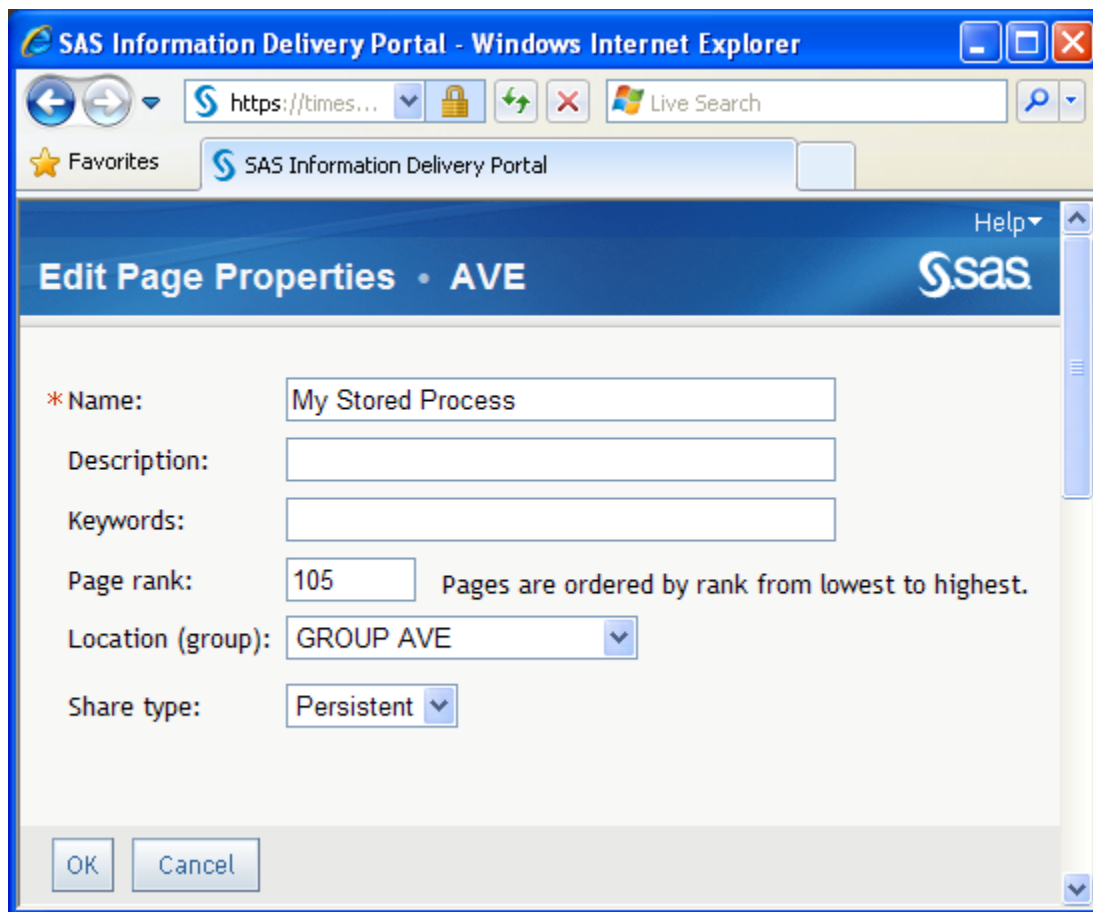
Figure 7. Edit Page Content screen

- c. On the "Add Portlets to Page" screen, select a portlet type of Collection or SAS Stored Process. Provide a logical name and then click the Add button.
- d. On the portal page, find your portlet and click on the 'Edit Content' icon.
- e. On the Edit Portlet Content page, click on the 'Add Items' button
- f. Click on the Search tab
- g. In the Keywords text box, type in a word or two from the name of the stored process that you wish to add to the portlet. Click the 'SAS Stored Process' check box and then hit the Search button.
- h. Select the stored process from among those listed and then click the 'Add' button and then the 'Done' button
- i. Click the 'OK' button on the Edit Portlet Content screen.
- j. You should now see your stored process within the portlet and be able to run it!

## SECURITY WITHIN IDP

There are several different levels of security that can be applied. Portal pages as well as individual portlets can have permissions applied that limit access to specified user(s) or group(s).

In order to limit authorization to a given page, select "Options-Edit Page Properties" and you will see a screen similar to Figure 8.



The screenshot shows a web browser window titled "SAS Information Delivery Portal - Windows Internet Explorer". The address bar shows "https://times...". The page content is titled "Edit Page Properties • AVE" with the SAS logo in the top right. The form contains the following fields:

- \* Name:** Text box containing "My Stored Process".
- Description:** Empty text box.
- Keywords:** Empty text box.
- Page rank:** Text box containing "105". To the right, text reads: "Pages are ordered by rank from lowest to highest."
- Location (group):** Drop-down menu showing "GROUP AVE".
- Share type:** Drop-down menu showing "Persistent".

At the bottom are "OK" and "Cancel" buttons.

Figure 8. Edit Page Properties

The "Location (group):" drop down list lists metadata defined Groups of users that are allowed to view the page.



The “Share type:” drop down list has 3 possibilities:

- a. Available – the page can be added by a user to their view but is not done so automatically
- b. Default – the page is added to the users portal view but can be removed by the user
- c. Persistent - the page is added to the users portal view and cannot be removed by the user

In addition, portlets can have group rights set by selecting the ‘Edit Portlet Properties’ icon within the portlet. Using this functionality, you can have a page viewable by a larger group and then have portlets on the page that are visible only to smaller groups where the smaller groups are subsets of the larger group.

## COMPARISON OF IDP WITH SAS® ENTERPRISE GUIDE

SAS Enterprise Guide also allows surfacing reports and graphs. Table 2 lists some of the important distinctions in terms of their capabilities.

|  | Information<br>Delivery<br>Portal | Enterprise<br>Guide | Comment   |
|--|-----------------------------------|---------------------|---|
| Web Interface  | X                                 |                     |   |
| No client connection to metadata required                        | X                                 |                     | After logging in to the IDP, all processing and handshakes are managed by the web and SAS servers, not the client machine.  |
| SAS metadata tools to restrict authorization                     | X                                 |                     |   |
| Avoid file system issues   | X                                 |                     | IDP allows sharing reports with thousands (assuming proper server scaling). EG project files must be accessible and likely made to be read-only if to be shared by a large number of users. |
| Numerous report types including Information Maps and SAS Reports | X                                 | X                   | EG does not support OLAP based information maps   |
| Scheduling capabilities and subscription channels                | X                                 |                     | Reports can be pushed. Add-in to Microsoft Office 4.3 adds Outlook and thus IDP can send directly to Outlook folders  |
| Advanced organization ability                                    | X                                 |                     | Although EG can have multiple reports, the IDP interface is more polished. EG is meant to be a more interactive development tool.   |

Table 2. Comparison of Reporting/Organization features in Information Delivery Portal versus Enterprise Guide

## CONCLUSIONS

The Information Delivery Portal has enormous potential for centralizing and organizing reporting needs in a wide variety of types of organizations. One of the strengths of SAS has always been its flexibility, and with the advent of Stored Processes and IDP, nearly any SAS program can be made available to a very large number of users with very little effort. In addition, IDP content can be managed so that different groups of users have access to different sets of reports and data sources. IDP can handle a wide range of content types including reports, graphics, Information Maps (Relational and OLAP), and links to other web applications and sites.

## REFERENCES

SAS Institute Inc. 2009. SAS® Information Delivery Portal 4.2: Introduction. Cary, NC: SAS Institute Inc. Available at <http://support.sas.com/documentation/cdl/en/idpintro/61360/PDF/default/idpintro.pdf>

SAS Institute Inc. 2009. SAS® 9.2 Stored Processes: Developer’s Guide. Cary, NC: SAS Institute Inc. Available at <http://support.sas.com/documentation/cdl/en/stpug/61271/PDF/default/stpug.pdf>

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