

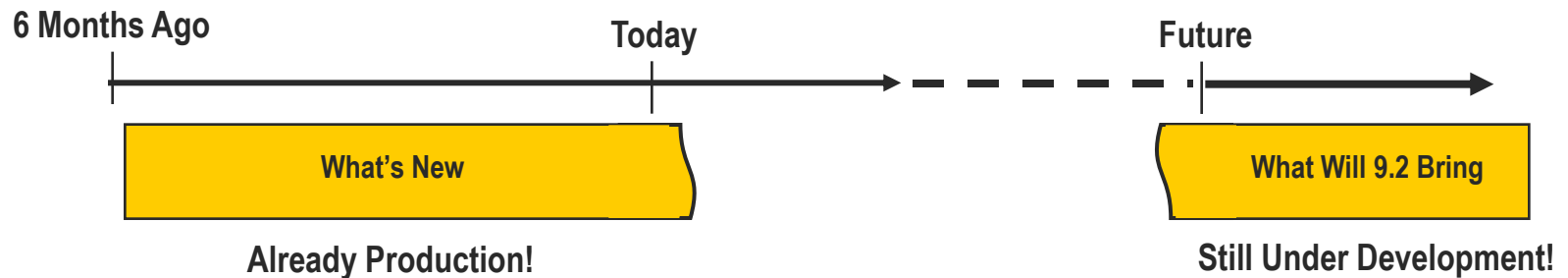


## What's new and what will 9.2 bring?

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# SAS Technologies Roadmap



Vista Support  
 BI Dashboard  
 Visual BI  
 Analytic Updates

# Effective Immediately Windows Vista Support with SAS 9.1.3 SP4

- For selected SAS technologies

(<http://support.sas.com/techsup/unotes/SN/020/020402.html>)

Base SAS	SAS/ACCESS Interface to Sybase
CGI Tools for the Web Server	SAS/AF
SAS Data Quality Server	SAS/ASSIST
SAS Drivers for JDBC	SAS/CONNECT
SAS High-Performance Forecasting	SAS/ETS
SAS Integration Technologies Client	SAS/FSP
* JMP	SAS/Genetics
SAS ODBC Driver	SAS/GIS
SAS OnlineDoc for Windows	SAS/GRAPH
SAS OnlineTutor: Basic and Intermediate SAS Programming	SAS/GRAPH ActiveX Control
SAS OnlineTutor: Advanced SAS Programming	SAS/GRAPH Java Applets
SAS OnlineTutor: Business Intelligence	SAS/IML
SAS Power and Sample Size	SAS/INSIGHT
SAS Providers for OLE DB 9.1.3	SAS/IntrNet CGI Tools
SAS/ACCESS Interface to DB2	SAS/LAB
SAS/ACCESS Interface to ODBC	SAS/ODS
SAS/ACCESS Interface to OLE DB	SAS/OR
SAS/ACCESS Interface to Oracle	SAS/QC
* SAS/ACCESS Interface to PC Files	SAS/SECURE
	SAS/SHARE
	SAS/Spectraview
	SAS/STAT
	SAS/TOOLKIT

\* JMP Version 7 is supported on Microsoft Vista

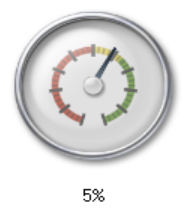
\* SAS/ACCESS to PC Files supports up to and including Microsoft Office 2003. However, there is NO support for Microsoft Office 2007.

Important: Enterprise Guide 4.1 and earlier are not supported under Microsoft Vista.

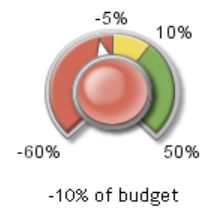
32-bit Windows Vista Business  
32-bit Windows Vista Enterprise  
32-bit Windows Vista Ultimate

Corporate Dashboard

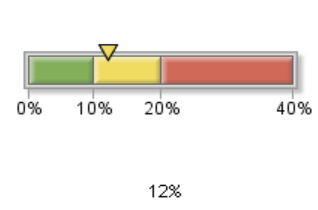
Overall Net Profit Margin



Operational Costs Vs. Budget



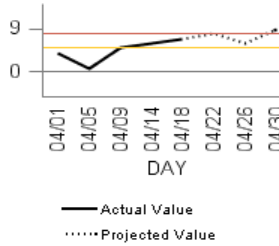
Customer Turnover



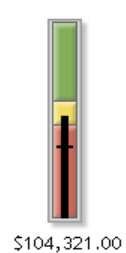
SLA Violations



Response Time Actual And Forecast



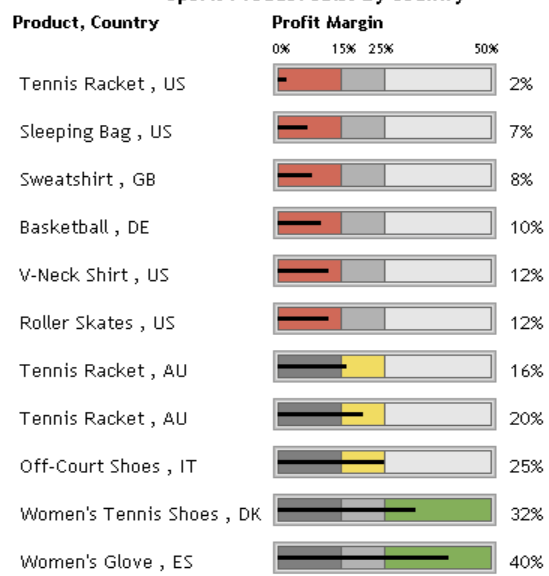
Revenue Per Employee



Dashboard: Default Dashboard Manage Dashboards

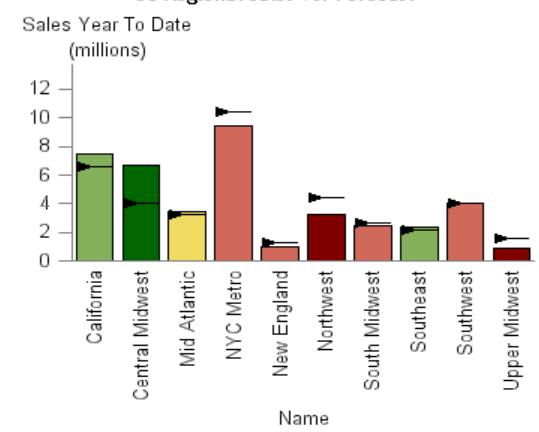
Product-Country Profit

- Sports Product Sales By Country



Sales Snapshot

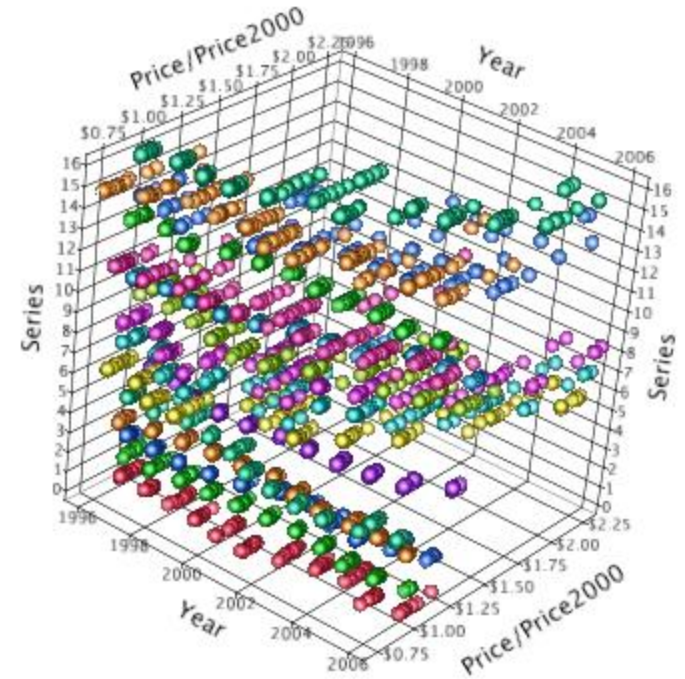
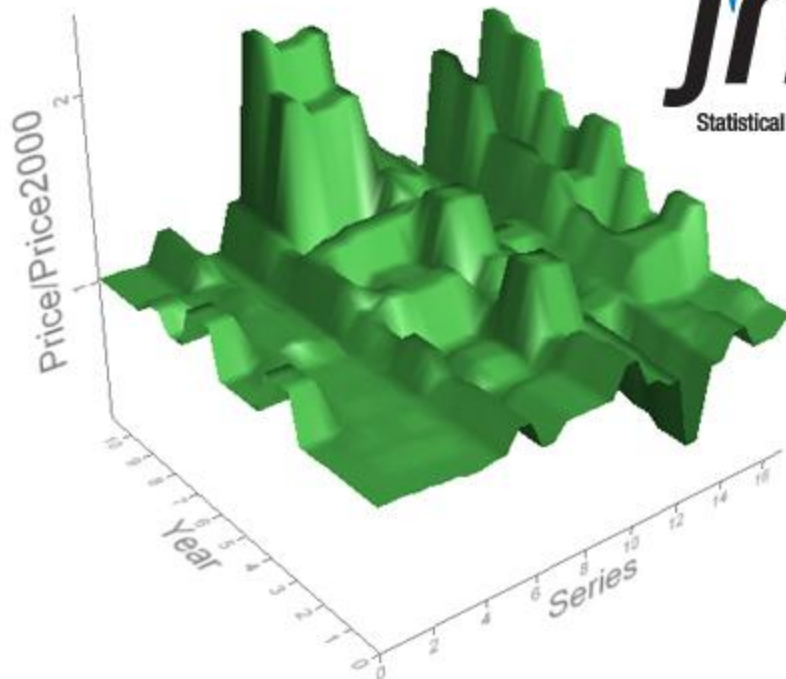
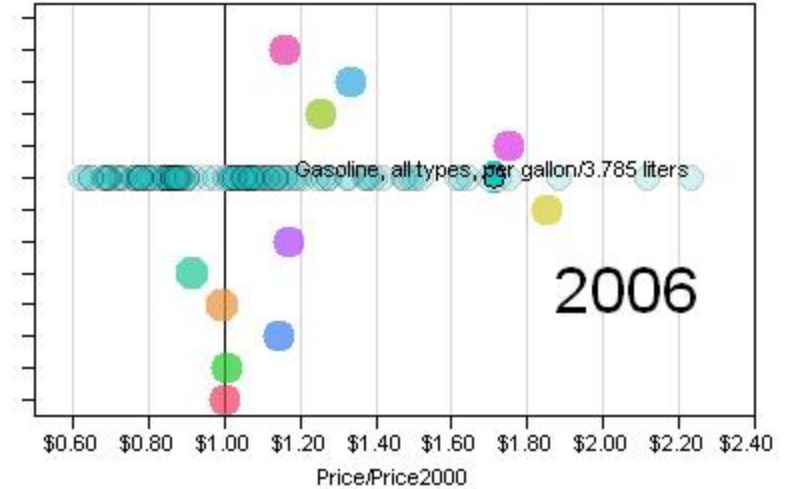
US Regional Sales Vs. Forecast



U.S. Sales Pipeline



Dashboard: - Sales Snapshot Manage Dashboards



# SAS Technologies Futures Roadmap

- SAS 9.2 will be released in 3 waves
  - Wave 1 (End of Q1/Early Q2 2008) : Classic SAS
  - Wave 2 (End of Q2/Early Q3 2008) : Technology Solutions  
Selected Solutions
  - Wave 3 (Timing still TBD) : Rest of SAS Solutions





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## What will 9.2 bring?

# SAS 9.2 Platform Enhancements



# SAS 9.2

## Improved and New Deployment Options

- Electronic Software Delivery
- SAS Deployment Wizard
- Increased support for silent (and repeatable) installs
- Pre-requisite handling of specified 3<sup>rd</sup> party products
- Optional “phone home” support
- Expanded system requirements support
- Simplified documentation install center

# SAS 9.2

## Changes to client OS Support

- Update OS baseline to reflect marketplace
  - No NT 4 Workstation support
  - No Windows 2000 SP4 Professional
  - Windows XP Pro SP2
  - Windows XP Pro x64, 32 bit compatibility mode
  - Windows Vista
  - Windows Vista x64, 32 bit compatibility mode



# SAS 9.2

## Enhanced System Management

- Start/stop/pause SAS servers from SAS Management Console
- Available logging/monitoring/auditing facilities
- Consistent management options and interfaces

# SAS 9.2

## Expanded Grid Computing Support

- Additional support for other applications being automatically deployed over a grid as well as for other middleware such as DataSynapse



# SAS 9.2

## Improved Web Service Support

- Easier to call a SAS Web Service **from anywhere**
  - More fine grained WSDL used to define SAS web services
  - Simpler use from standard tools and environments (Visual Studio, Sharepoint, Eclipse)
- Easier to call a web service **from SAS** - XML Libname engine updated to support WSDL and SOAP.
- Web Service invoked by issuing the Libname statement with the native WSDL type. *Can call web services today using other methods but it is not as clean!*

```
fileref foo "http://www.sas.com/webservice/test.wsdl";
```

```
Libname foo XML type=WSDL ;
```

To do a discover of the methods- returns the methods, input and output parameters, and the description

```
Proc content foo;
```

Returns the results from method1 in the web service foo based on the input parameters. Parameters can be a data set, and the Proc can be any Proc and the values would be manipulated appropriately.

```
Proc Print foo.method1(param1=x, param2=y...);
```

# SAS 9.2

## Single Sign On

- Single Sign-On (Windows Only – No Prompting)
- Will be implemented for all SAS platform windows based clients and Web Clients

**Edit Metadata Profile - Cypress2**

**Connection Information**  
Please enter the information necessary to establish a connection.

Machine:

Port:

User ID:

Password:

Authentication Domain:   
*Optional*

☐ Save user ID and password in this profile

☒ Use Integrated Windows authentication (single sign-on)

[Advanced...](#)

< Back   Next >   Finish   Cancel   Help

# SAS 9.2 DI Enhancements

# SAS 9.2

## SAS Data Integration Studio Enhancements

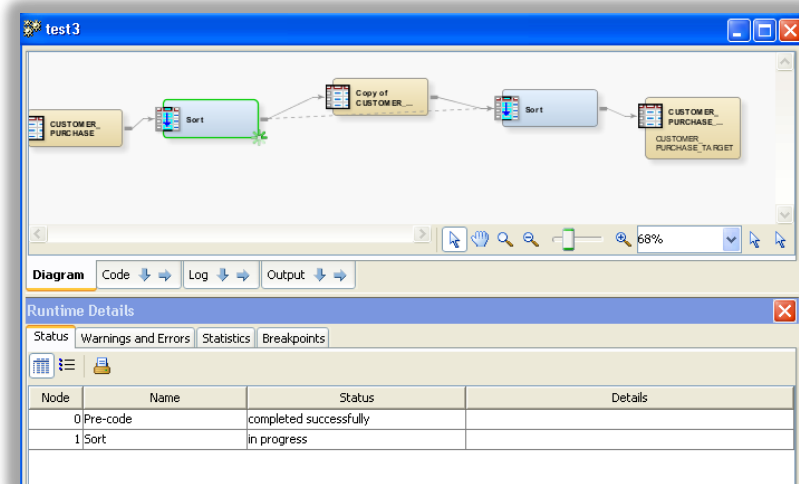
- Rewrote and enhanced all old analysis transforms – custom property sheets also added
  - Summary
  - Freq
  - Tabulate
  - Transpose
  - Surrogate Key Generator
  - Others...
- Runtime statistics captured and graphically displayed



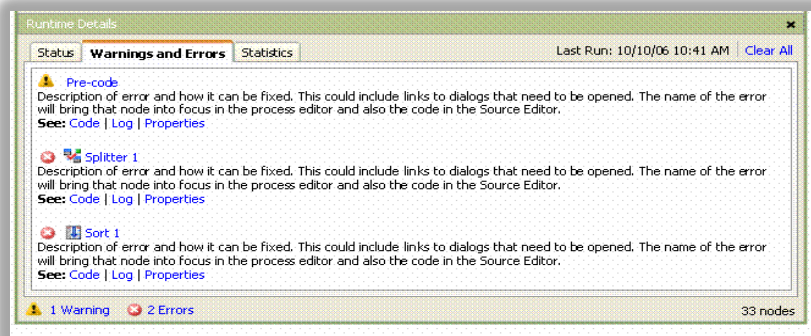
# SAS 9.2

## SAS Data Integration Studio Enhancements

- Runtime progress indicators in the process and new flow representation (standardized across SAS)



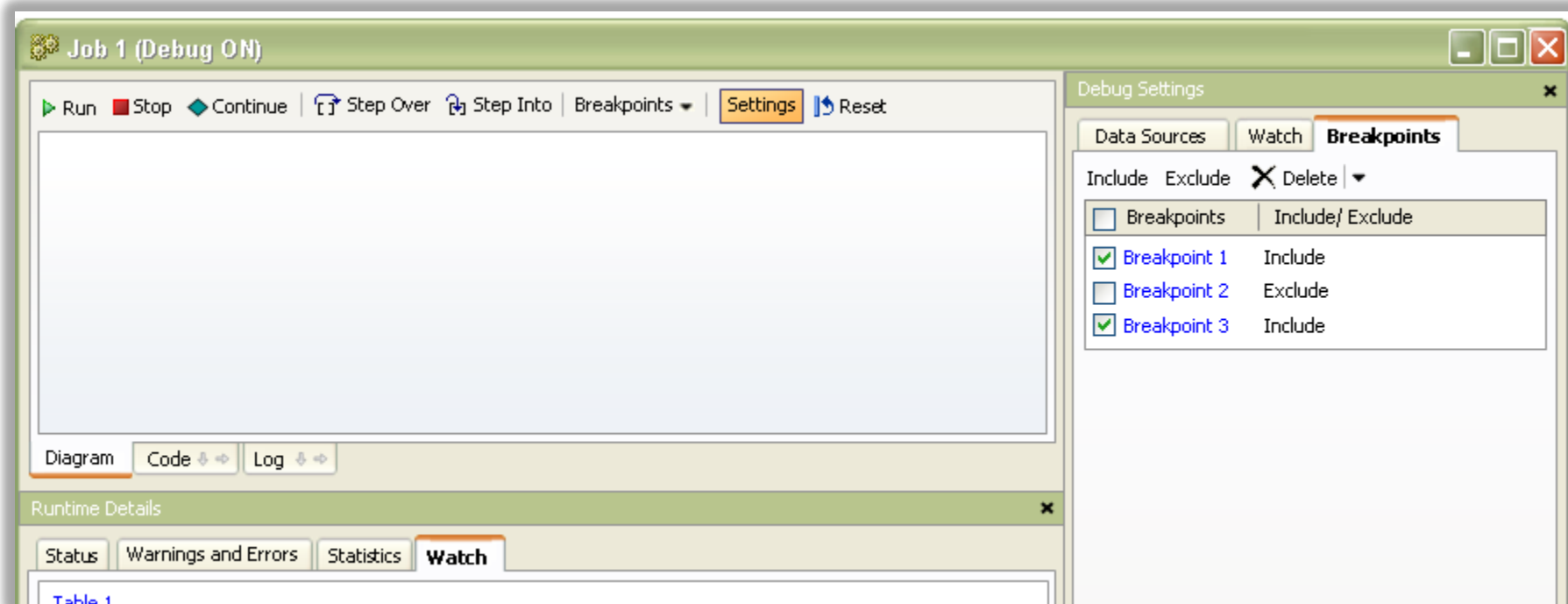
- View of Warnings and Errors with ability to jump right into the log or the code. We will also offer advice as to the likely cause



# SAS 9.2

## SAS Data Integration Studio Enhancements

- Integrated Debugging:
  - Supports: breakpoints, run from here, step, continue, environment display, others...



# SAS 9.2 Storage Enhancements

# SAS 9.2

## New Storage Engine

- Tentatively called SAS Table Server
  - Leverage SAS metadata architecture and security policies
  - Consistent transparent access to all data sources (SAS and non-SAS\*)
  - Aligns to industry standards like SQL-99, ODBC and JDBC

\* Non-SAS data access requires an access engine

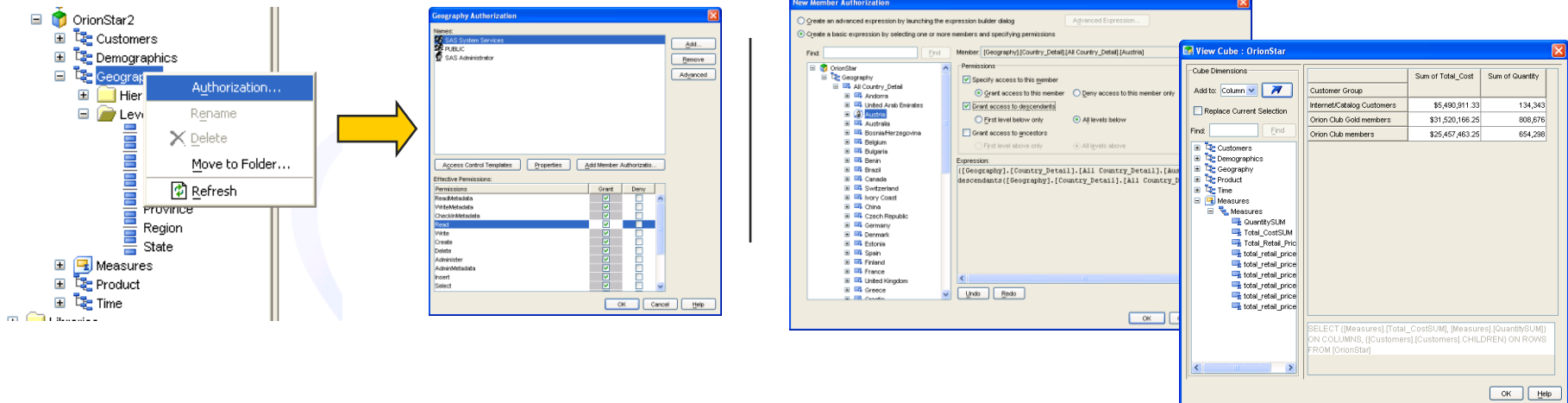
# SAS 9.2 OLAP Server Enhancements

- Incremental Cube Update:
  - Easier to update the very large cubes SAS supports. Refresh times significantly reduced
  - Available options for updating a cube:
    - Add new data
    - Add new members per dimension table
    - Member property updates for existing members



# SAS 9.2 OLAP Cube Studio Enhancements

- Provide security settings
- Carry out an incremental update
- Allows for preview and validation of cube without leaving the admin interface



# SAS 9.2

## OLAP Monitoring and Management

- New Batch Management

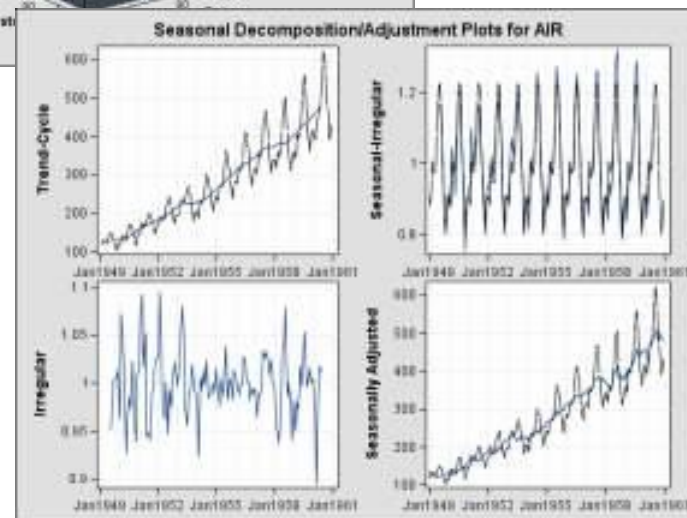
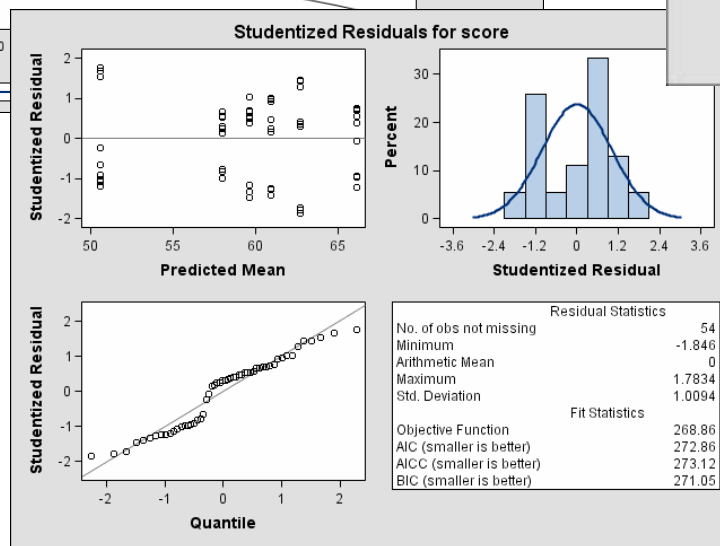
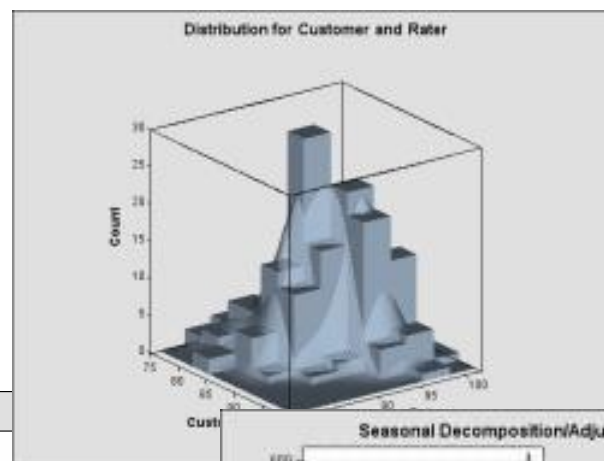
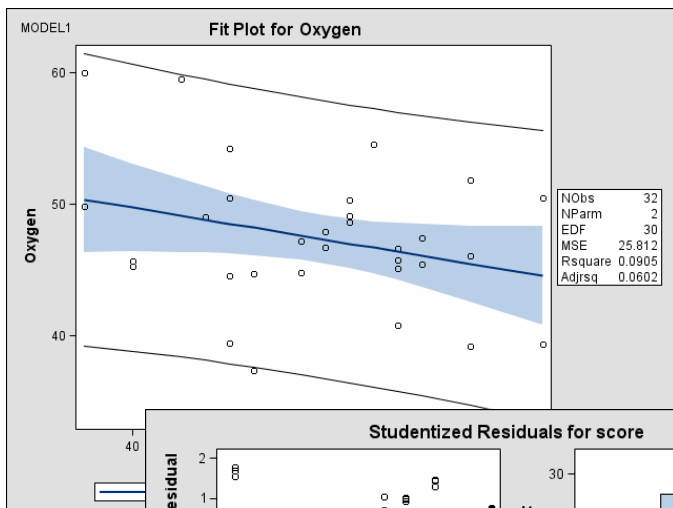
### Proc OLAPOPERATE – batch interface to OLAP Server

- list sessions and queries for an active OLAP server
- close individual active sessions
- cancel/close individual open result sets
- disable a cube or all cubes
- enable a cube or all cubes
- refresh a cube or all cubes
- stop the OLAP server

# SAS 9.2 Analytics Enhancements



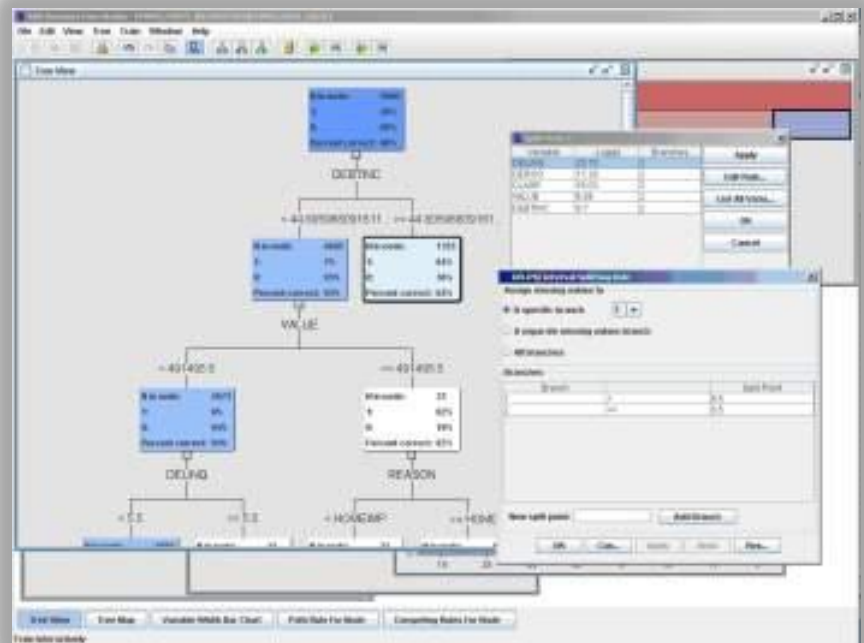
# SAS 9.2 NEW Graphics



# SAS 9.2

## SAS Enterprise Miner enhancements

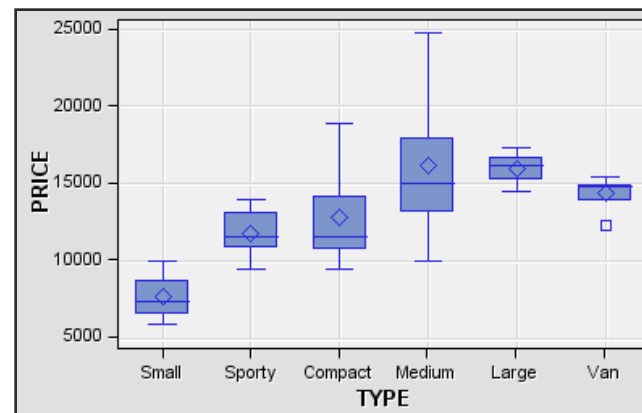
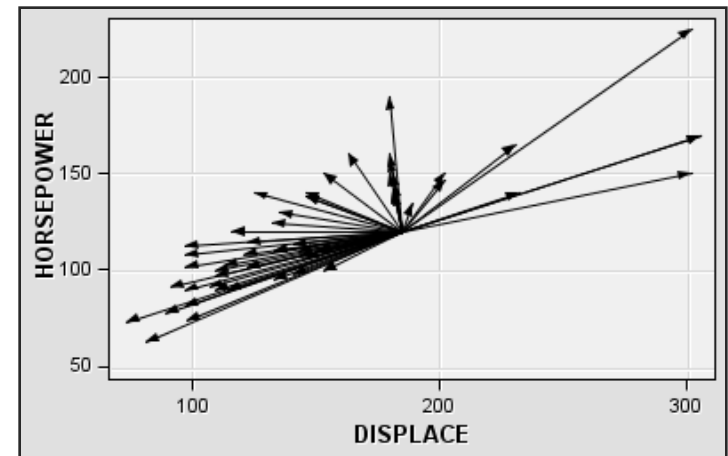
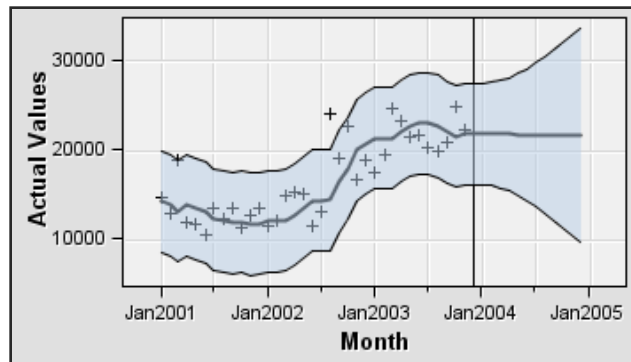
- New predictive modeling nodes
  - Support vector machines
  - Extended Tree Training
    - Gradient boosting (GRADBOOST)
    - Random forests (FOREST)
  - Enhanced Linear Regression Node



# SAS 9.2

## SAS Enterprise Miner enhancements

- New clustering nodes
  - Hierarchical Clustering
  - Variable Clustering –VARCLUS
- Other new nodes
  - Interactions builder
  - Graph Explorer



# SAS 9.2 BI Enhancements

# SAS 9.2

## Cross Client BI Enhancements

- Updated BI Client Browser Support



Windows and Certain Linux Flavors  
1.5 and 2



Windows – continued support for  
some earlier versions too

# SAS 9.2

## Cross Client BI Enhancements

- Web Application Servers – note JBOSS not Tomcat

### JBOSS 4.04 (embedded Tomcat)

- Windows x64 (x86-64) that includes Windows Server 2003 x64, Windows XP Pro x64. In addition it will include 2007 planned releases of Windows Longhorn Server x64 and Windows Vista x64
- Windows 32-bit (x86) that includes Windows 2000 Professional, Windows XP Pro, Windows 2000 Server, Windows Server 2003. In addition it will include 2007 planned releases of Windows Longhorn Server Desktop and Windows Vista
- Linux on x64 (x86-64) that includes Red Hat 4 and Novell SuSE SLES 9
- Linux 32-bit (x86) that includes RHEL 4 and Novell SuSE SLES 9
- Solaris on SPARC (Solaris 9, 10)
- AIX on Power (AIX 5.3)
- HP/UX on Itanium (HP-UX 11.23, 11.31)
- Solaris 10 x64 (x86-64) (Solaris 10)

### BEA WebLogic 9.2

- Windows 32-bit (x86) that includes Windows 2000 Professional, Windows XP Pro, Windows 2000 Server, Windows Server 2003. In addition it will include 2007 planned released of Windows Longhorn Server Desktop and Windows Vista
- Solaris on SPARC (Solaris 9, 10)
- AIX on Power (AIX 5.3)
- HP/UX on Itanium (HP-UX 11.23, 11.31)
- Solaris 10 x64 (x86-64) (Solaris 10)

### IBM WebSphere 6.1.0.2

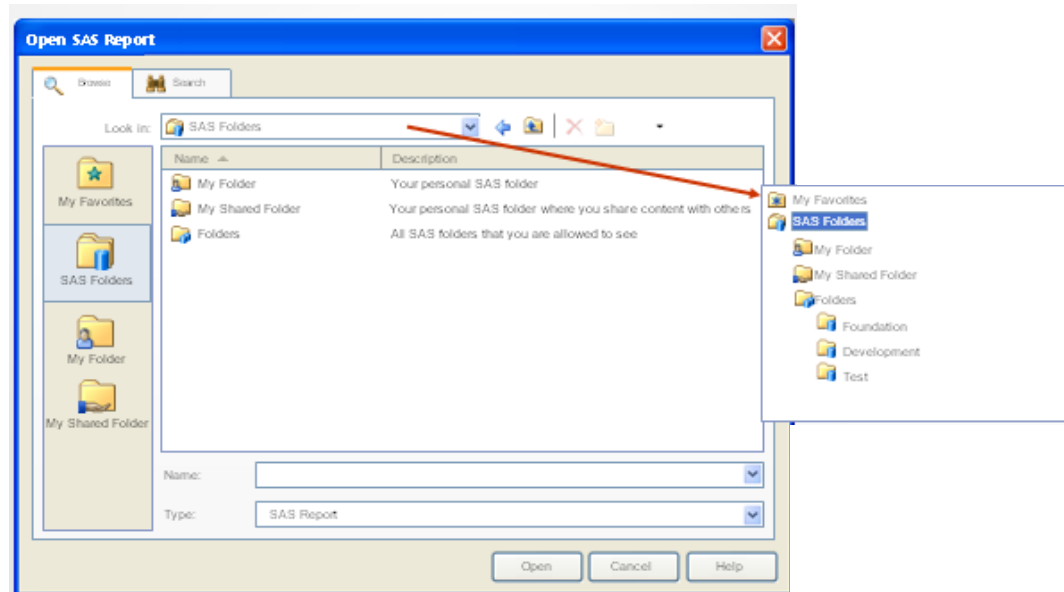
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- AIX on Power (AIX 5.3)
- Solaris 10 x64 (x86-64) (Solaris 10)

**Application Server Versions Are subject To Change**

# SAS 9.2

## Cross Client BI Enhancements

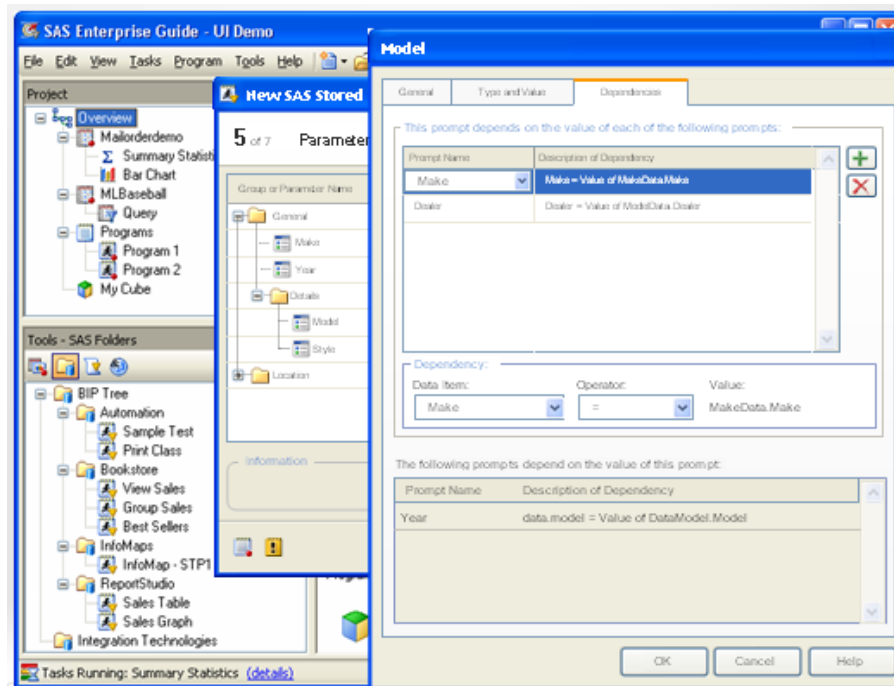
- Multiple repositories & content location independence



# SAS 9.2

## Cross Client BI Enhancements

- New shared prompting model (cascading & dynamic)



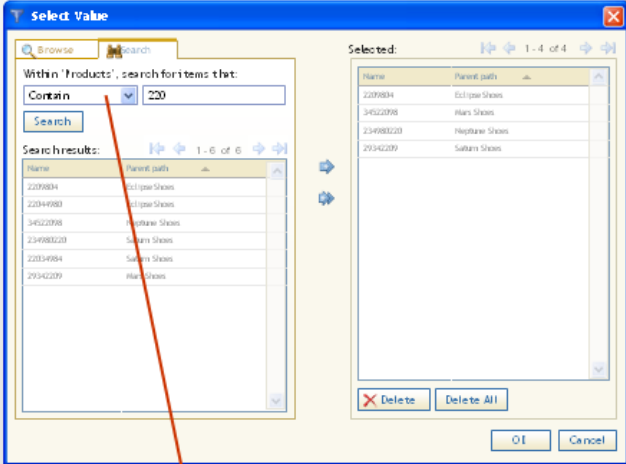
Dynamic and Cascading Prompts - Design Time



# SAS 9.2

## Cross Client BI Enhancements

- Search in Filter Capabilities



Users can also add different values to the list by specifying a searching criteria and selecting from the search results.

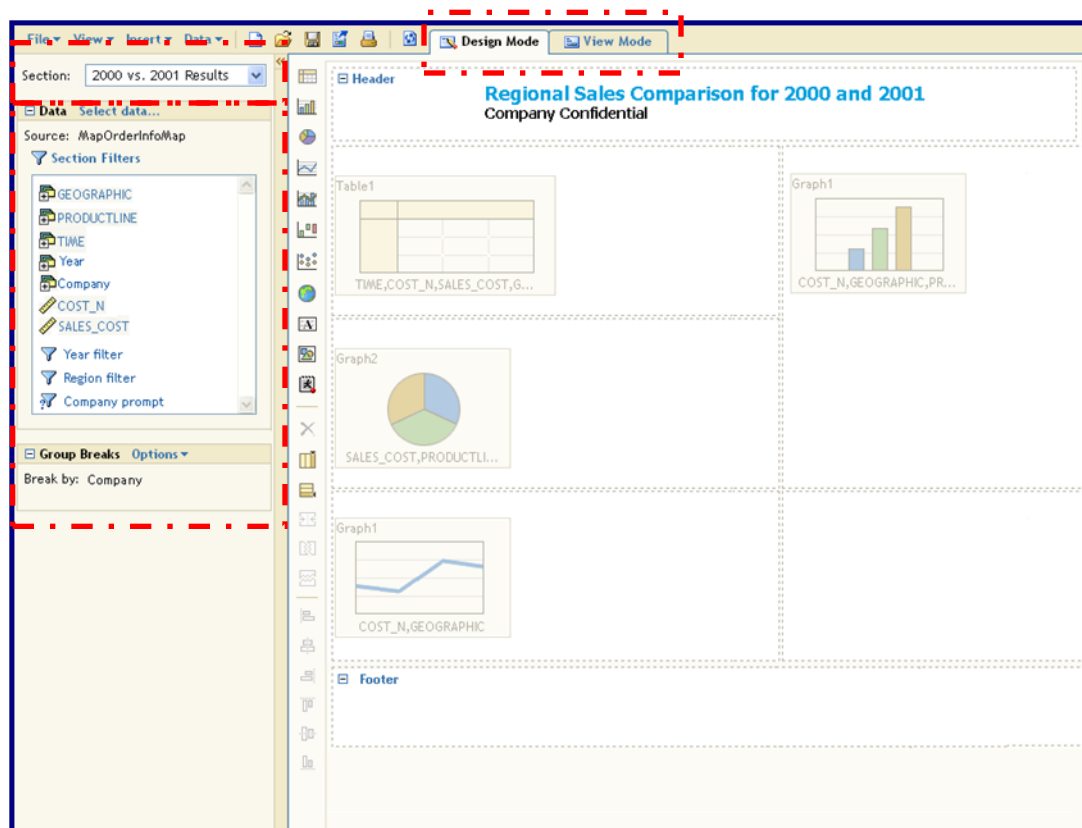
The choices here are:  
 Contain (which is the default)  
 Is equal to  
 Start with  
 End with  
 Match pattern

When 'Match pattern' is selected, users can enter wild card search in the text entry field:  
 \* Stands for any sub-string  
 ? Stands for a character  
 \ is used for escape.  
 Space is honored.

# SAS 9.2

## SAS Web Report Studio 4.2 Enhancements

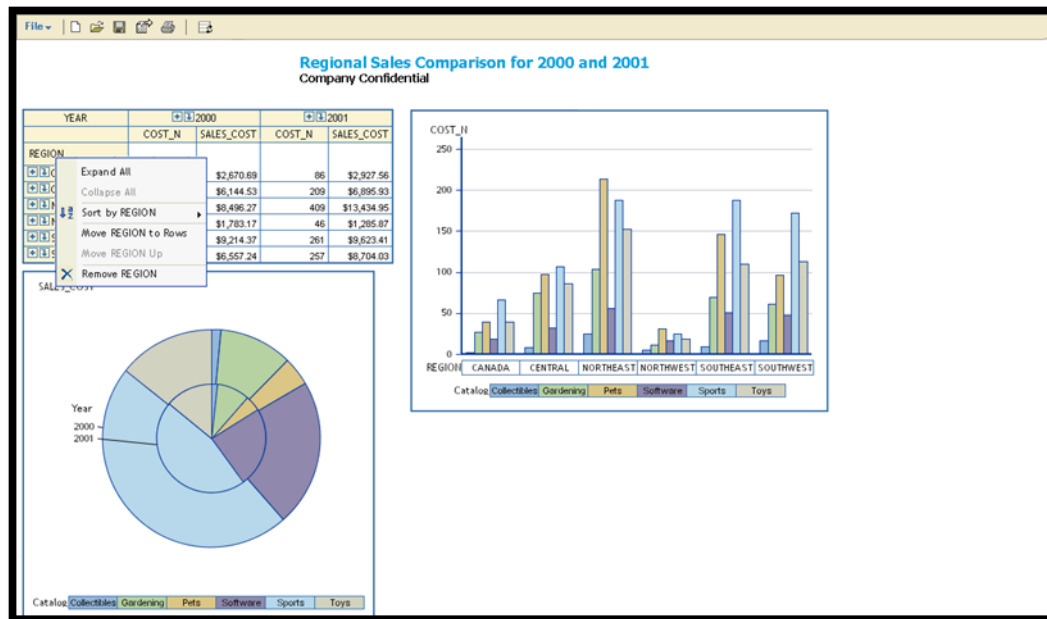
- User Interface
  - Side Navigation
    - Data Items
    - Filters
    - Groups
  - Design and View Mode
  - Sections as dropdown



# SAS 9.2

## SAS Web Report Studio 4.2 Enhancements

- User Interface
  - Right mouse context menus



# SAS 9.2

## SAS Web Report Studio 4.2 Enhancements

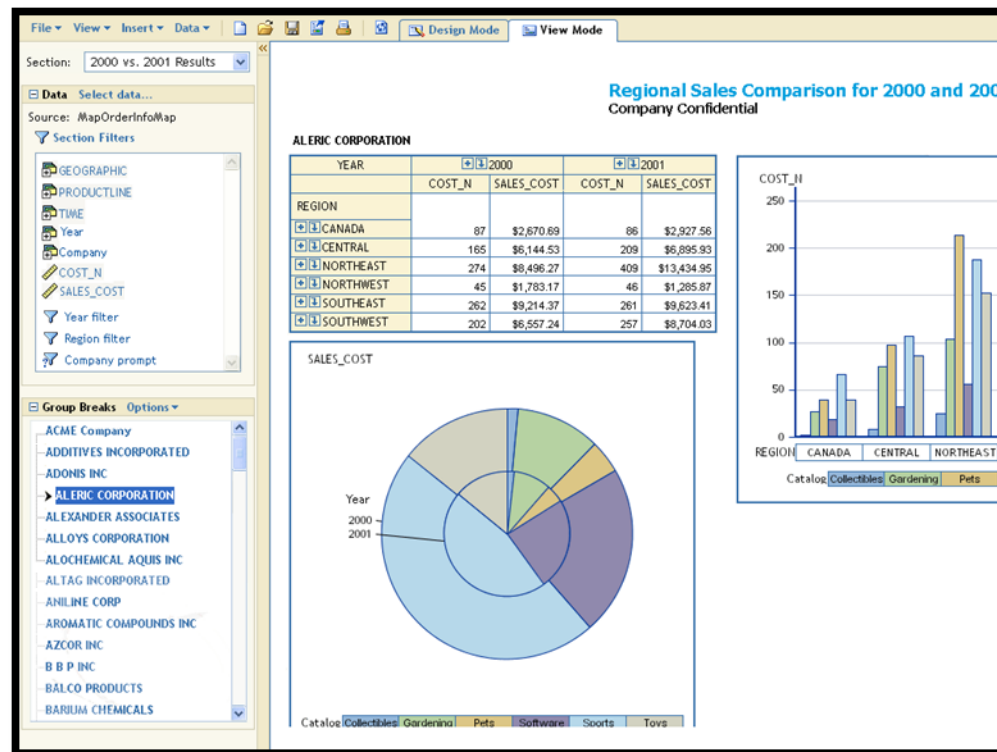
- Desktop like experience (via AJAX). Partial Web page refresh when...
  - Resizing graphs via drag & drop.
  - Dragging & dropping data items from data pane to table/graph or within table/graph.
  - Sorting, filtering/ranking, moving data items or conditionally highlighting tables and graphs.

Continent		Australia/Pacific		Europe		North America	
		Unit Costavg	Ordercnt	Unit Costavg	Ordercnt	Unit Costavg	Ordercnt
Product Line	Order Channel						
	Retail Sale	\$32.04	2,639	\$36.61	69,121	\$33.11	25,043
1 Clothes & Shoes	Catalog Sale	\$28.99	899	\$36.04	7,520	\$43.43	453
	Internet Sale	\$27.90	900	\$36.09	6,154	\$42.04	453

# SAS 9.2

## SAS Web Report Studio 4.2 Enhancements

- Select data from navigation pane



# SAS 9.2

## SAS Web Report Studio 4.2 Enhancements

- Report Linking
  - Link from ESRI spatial map support with multi-select parameter passing
  - Link directly to a stored process
  - Link to a specific report section

# SAS 9.2

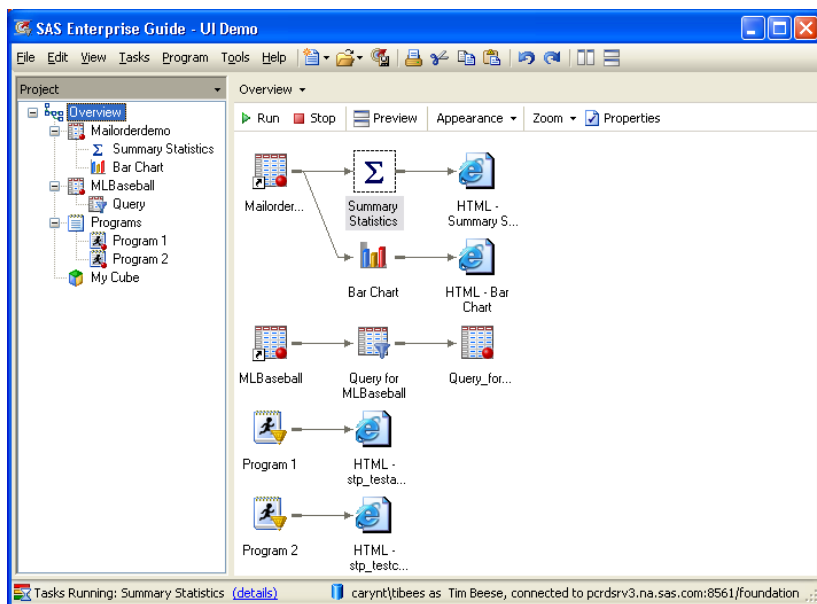
## SAS Web Report Studio 4.2 Enhancements

- OLAP Aggregations (Also in SAS Web OLAP Viewer for Java 4.2)
  - Totals and subtotals enhancements
  - Display parent values (based on security) or visual totals
- Show % of visual totals or parent values
- Support for secure parent values

# SAS 9.2

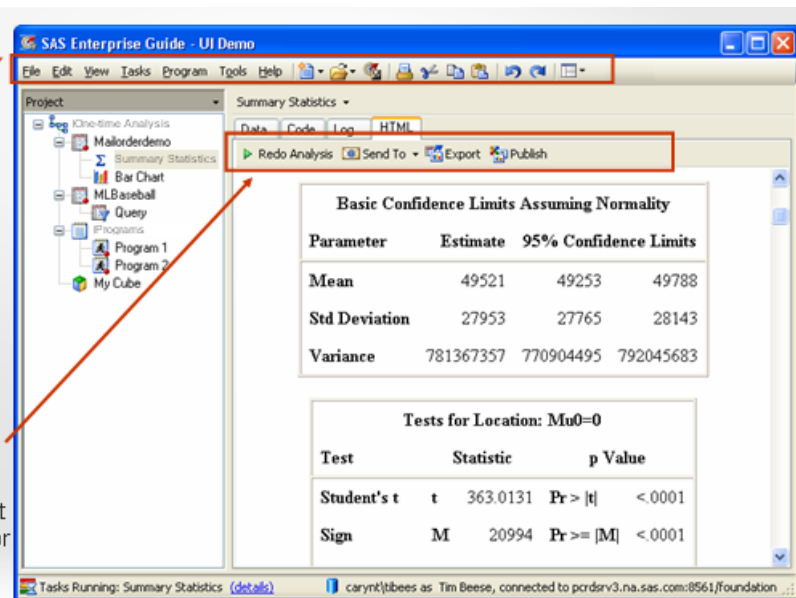
## SAS Enterprise Guide 4.2 Enhancements

- Updated Enterprise Guide UI
  - Contextual toolbars and simplified menus



Top-level menus have been reduced and combined with a basic toolbar. (The Tasks menu combines Code, Data, Describe, Graph, Analyze, OLAP; also, the Window menu is eliminated.)

A contextual toolbar appears inside the content area optimized for the object being viewed.

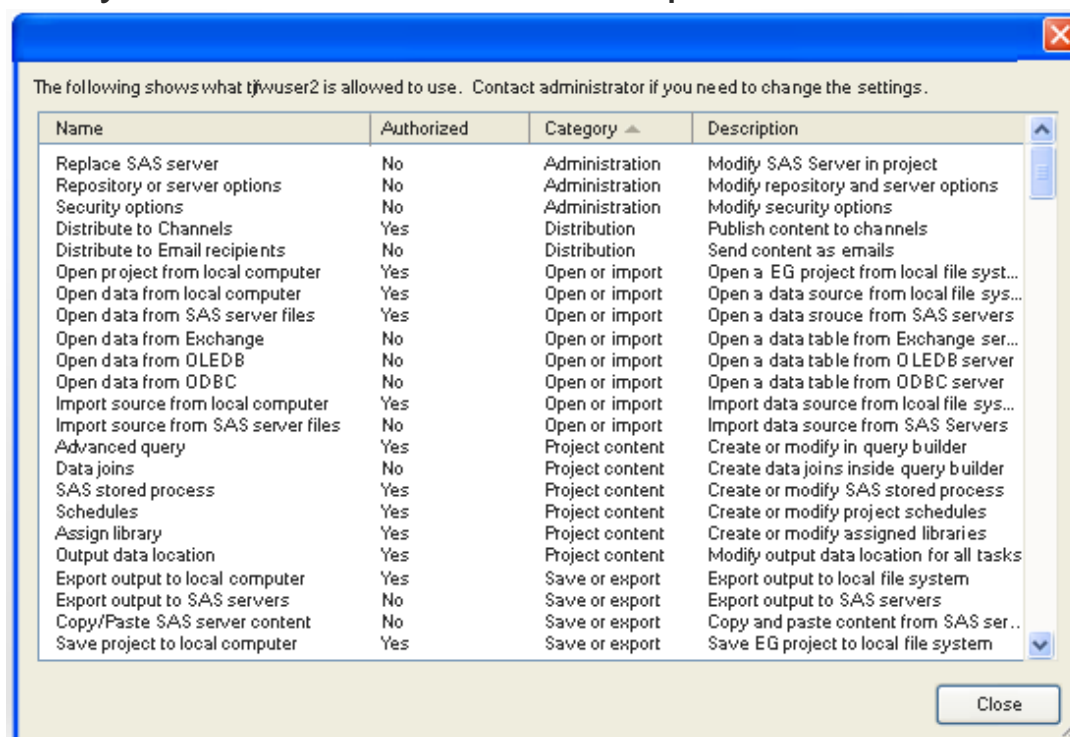




# SAS 9.2

## SAS Enterprise Guide 4.2 Enhancements

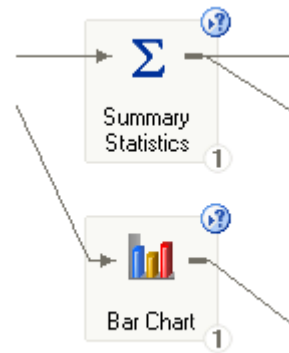
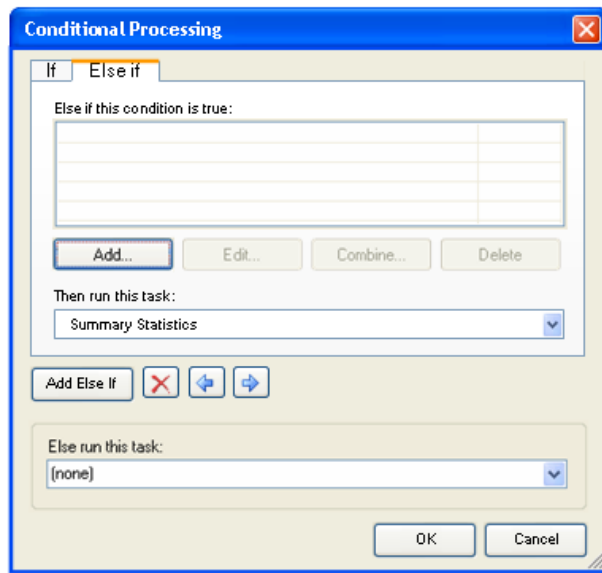
- Updated Enterprise Guide UI
  - Centrally control user access to capabilities



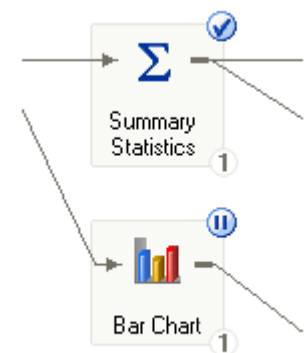
# SAS 9.2

## SAS Enterprise Guide 4.2 Enhancements

- Conditional Processing
  - Take different routes based on rules and graphically display path taken



Conditional logic  
setup but not run

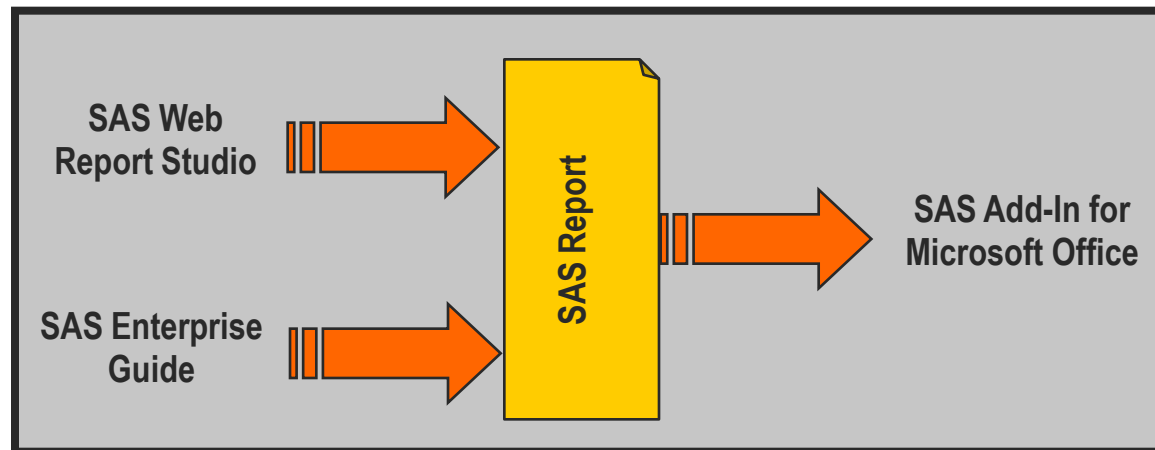


Icons show path taken  
from current run

# SAS 9.2

## SAS Add-In for Microsoft Office 4.2 Enhancements

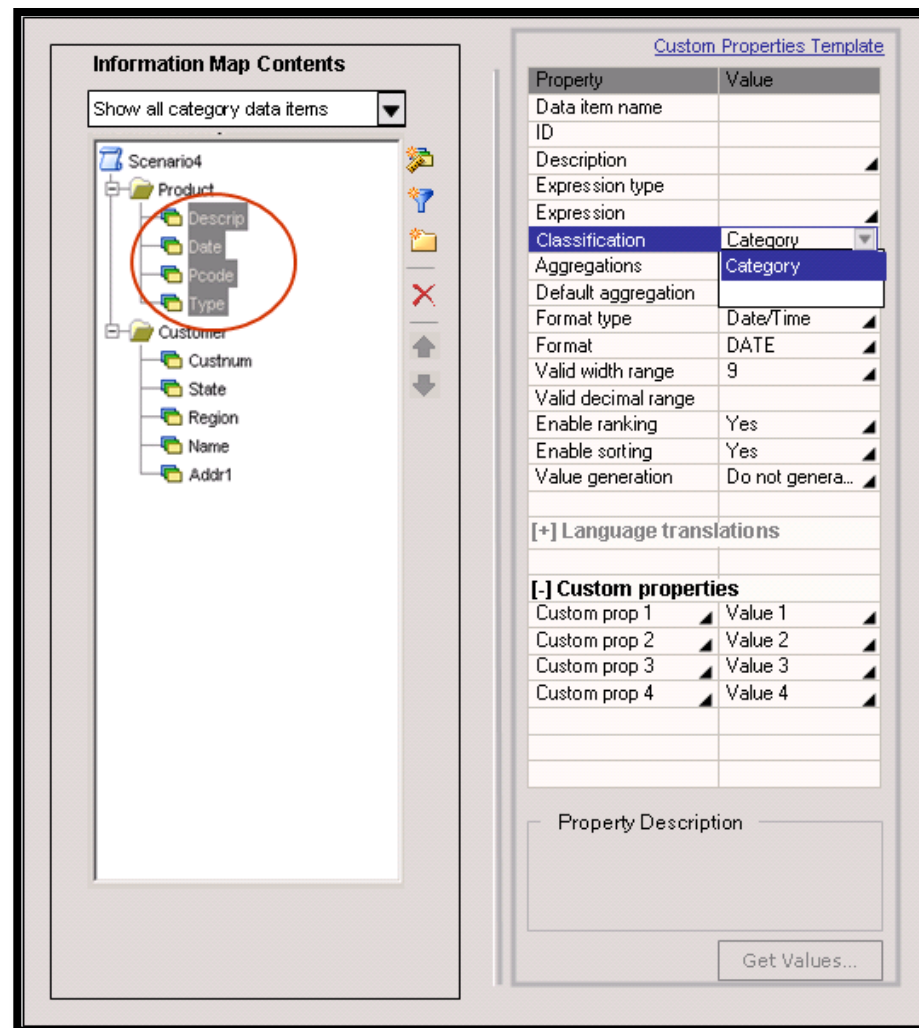
- Add-In for Microsoft Office - Open SAS Reports authored from WRS or EG



# SAS 9.2

## SAS Information Map Studio 4.2

- Dynamic and Cascading Prompts
- Bulk edit for Data Items
  - Multi-select data items
  - Relevant changes to Properties window based on user selection
  - Allows changing *common editable values*



# SAS 9.2

## SAS Information Delivery Portal

- BI Portlets to render WRS reports & stored process results
- New navigator portlet for all content types
  - Configurable to expose specific content types

# QUESTIONS?