

# SmartPlant<sup>®</sup>

*Instrumentation*

## Enhanced Reports Implementation

**FLUOR**

**SmartPlant<sup>®</sup>**

**Implementation Team**



**FLUOR<sup>®</sup>**

**INTERGRAPH**

# SPI Project Specification



- ◆ **The SmartPlant Deliverable Specification defines all SPI Project Deliverables**
- ◆ **Possible Enhanced Reports are:**
  - **Junction Box Wiring Schedules**
  - **Marshalling Wiring Schedules**
  - **Instrument Loop Diagrams**
  - **Fieldbus Segment Diagrams**

**NOTE: The ESL version and Service Pack should be the same as the SPI Version and Service Pack!**

Client Name CLIENT NAME  
Project Name PROJECT NAME  
Fluor Contract NUMBER

Project Specification 00000000.270.1060  
Date 01Dec2006  
Page 5 of 33  
Revision 1

CONTROL SYSTEMS SMARTPLANT INSTRUMENTATION PROJECT IMPLEMENTATION

### 3 SMARTPLANT INSTRUMENTATION DELIVERABLES (TYPICAL)

- 3.1 Instrument Engineering Index (MS Excel “.XLS” Format)
- 3.2 Instrument Design Index (MS Excel “.XLS” Format)
- 3.3 Instrument Spec Sheets – Datasheets (Adobe Acrobat “.PDF” Format)
- 3.4 Junction Box Wiring Schedules (Enhanced Strip Reports .PDF” Format)
- 3.5 Marshalling Cabinet Wiring Schedules (Enhanced Strip Reports .PDF” Format)
- 3.6 Instrument Cable Schedules (SmartPlant Instrumentation MS EXCEL “.DXF” format)
- 3.7 Instrument Drumming Schedules (SmartPlant Instrumentation MS EXCEL “.DXF” format)
- 3.8 Instrument Loop Diagrams (Enhanced SmartLoop .PDF” Format)
- 3.9 Instrument Hookup Schedules (MS Excel “.XLS” Format)
- 3.10 SmartPlant Instrumentation Database (Sybase-SQL (Watcom) “.DB” Format)
- 3.11 Other Deliverables as Required by project

Remove any of these deliverables that you do NOT need for your project.  
DXF is Fluor’s default for transfer of CAD files. Client may dictate other formats.

# SPI Implementation Specification



- ◆ The SmartPlant Instrumentation Project Deliverable Specification shall define preference and settings for Enhanced Reports
- ◆ Each user will need to open SPI, then select File\Preferences from the top dropdown menu. Once the Preferences are open, find and expand the Enhanced Reports section of the Preferences. Preferences need to be defined for the following:
  - Enhanced Reports – General
  - Enhanced SmartLoop
  - Enhanced Panel Strip Report
  - Enhanced Segment Wiring
  - Enhanced Fieldbus Loop

Client Name CLIENT NAME Project Specification 0000000 2701060  
Project Name PROJECT NAME Date 01Dec2006  
Fluor Contract NUMBER Page 34 of 35  
Revision 1

CONTROL SYSTEMS SMARTPLANT INSTRUMENTATION PROJECT IMPLEMENTATION

**Attachment 09**  
PREFERENCE SETTINGS for ENHANCED REPORTS

The following settings are for the SmartPlant Instrumentation Enhanced Report Generation User Preferences to allow all users to generate Enhanced reports with the BP Title block and common parameters. Each user who is generating Enhanced Reports from SmartPlant Instrumentation must use the following settings in their "File/Preferences" menu to align their drawings with other users.

Note: The Panel location attribute font settings must be set in each final drawing after drawing generation. The recommended settings are Font: Arial Narrow - Font Style: Regular - Size: 12.

Enhanced Reports Recommended settings:  
Enhanced Reports / General  
General - turn on - Show generation status window  
View - turn on - Split strip display between pages  
View - turn on - Enlarge terminals with multiple connections  
Drawing - turn on - Gap connectors at intersections  
Drawing - turn on - Redraw all connections

Enhanced SmartLoop Recommended settings:  
Enhanced Reports / Enhanced SmartLoop / View  
Turn on - Retrieve last saved position  
Display options  
View - turn on - Overall shield connected to another strip  
View - turn on - DCS / PLC attributes  
View - turn on - Unconnected DCS / PLC terminals  
View - turn on - Unconnected Apparatus terminals  
View - turn on - Panel location  
View - turn on - Terminal discontinuity  
Start from page number - 1  
Connection representation  
Default Layout - Orthogonal  
Cross wiring - Orthogonal  
Revision options  
Revision macro order - Descending

Enhanced SmartLoop Required Settings:  
Enhanced Reports / Enhanced SmartLoop / File Locations  
Template for default layout:  
Z:\BP\RAD\Template\Types\Loop\normal.sma  
Symbol folder:  
Z:\BP\RAD\Symbols

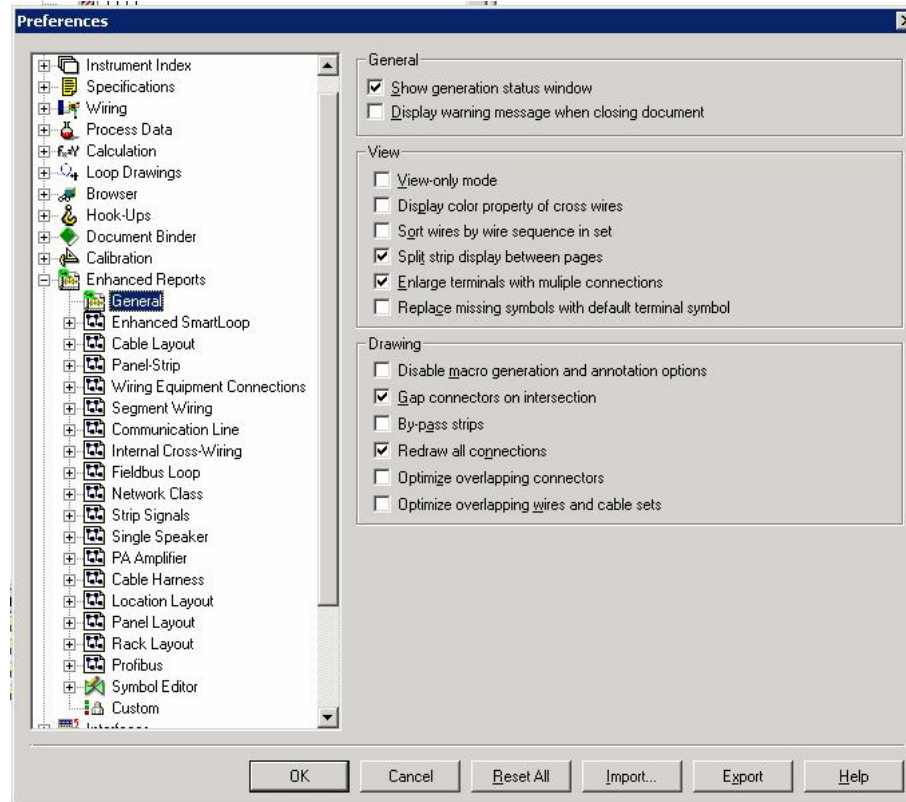
Enhanced Reports / Enhanced SmartLoop / Fonts  
Font: Arial Narrow  
Font Style: Regular  
Size: 12

000\_270\_1040\_SPI.doc Control Systems

# Enhanced Reports Preference Settings



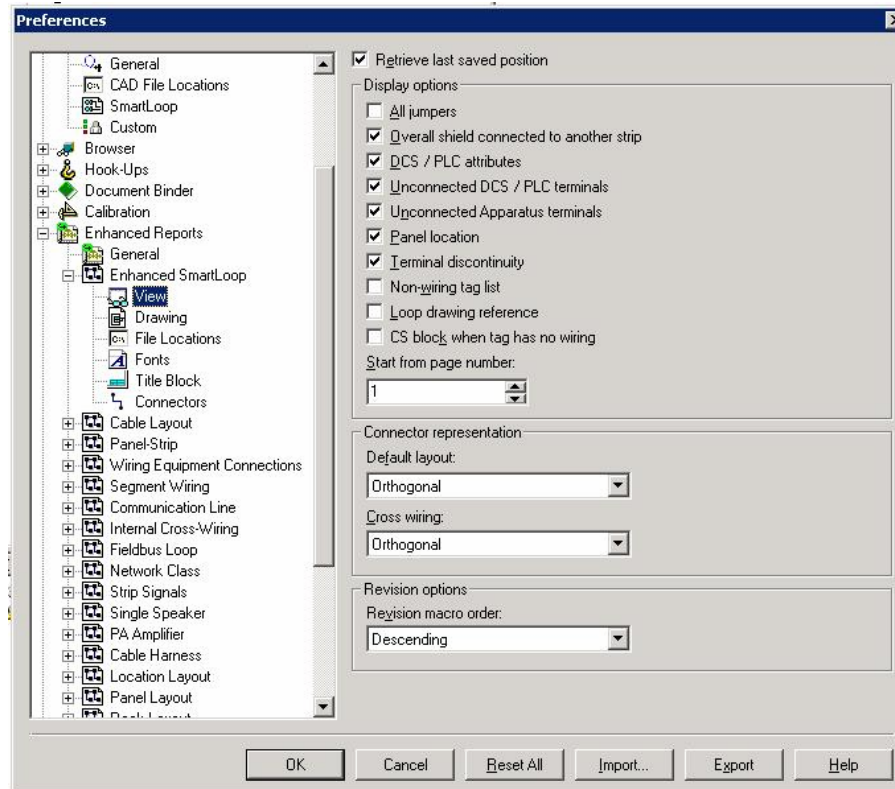
## ◆ Enhanced Reports – General Preference Settings



# Enhanced Reports Preference Settings



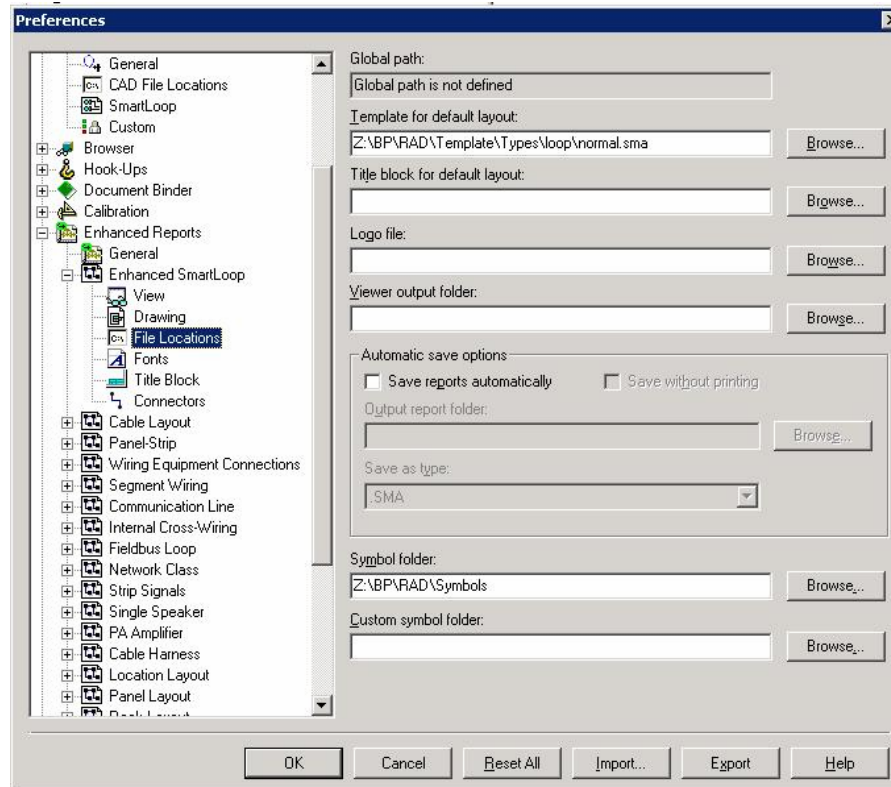
## ◆ Enhanced SmartLoop View Preference Settings



# Enhanced Reports Preference Settings



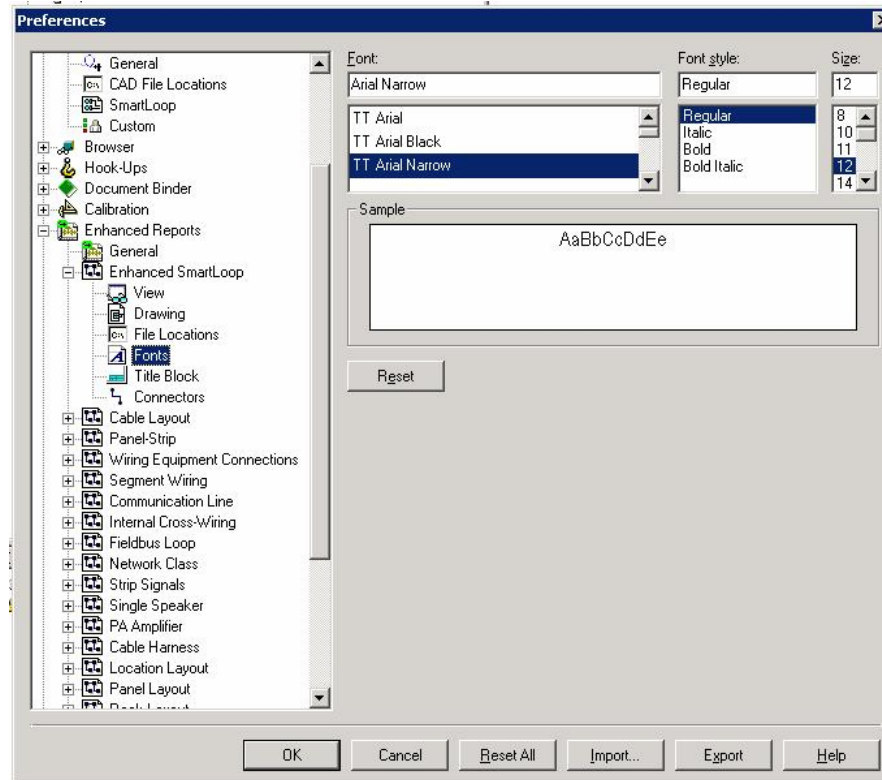
## ◆ Enhanced SmartLoop File Location Preference Settings



# Enhanced Reports Preference Settings



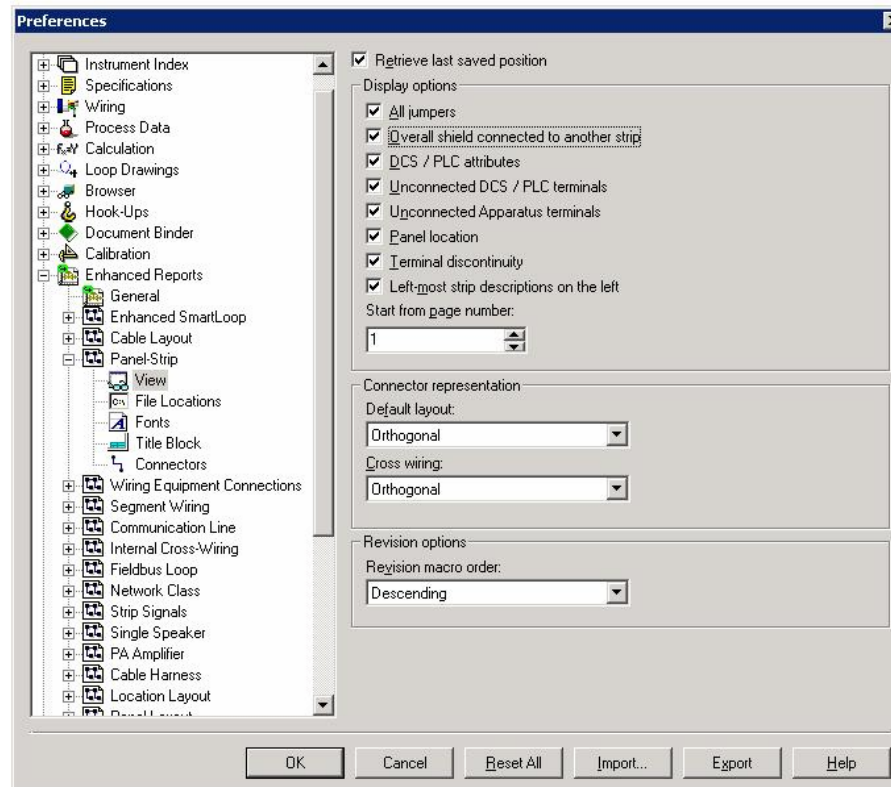
## ◆ Enhanced SmartLoop Font Preference Settings



# Enhanced Reports Preference Settings



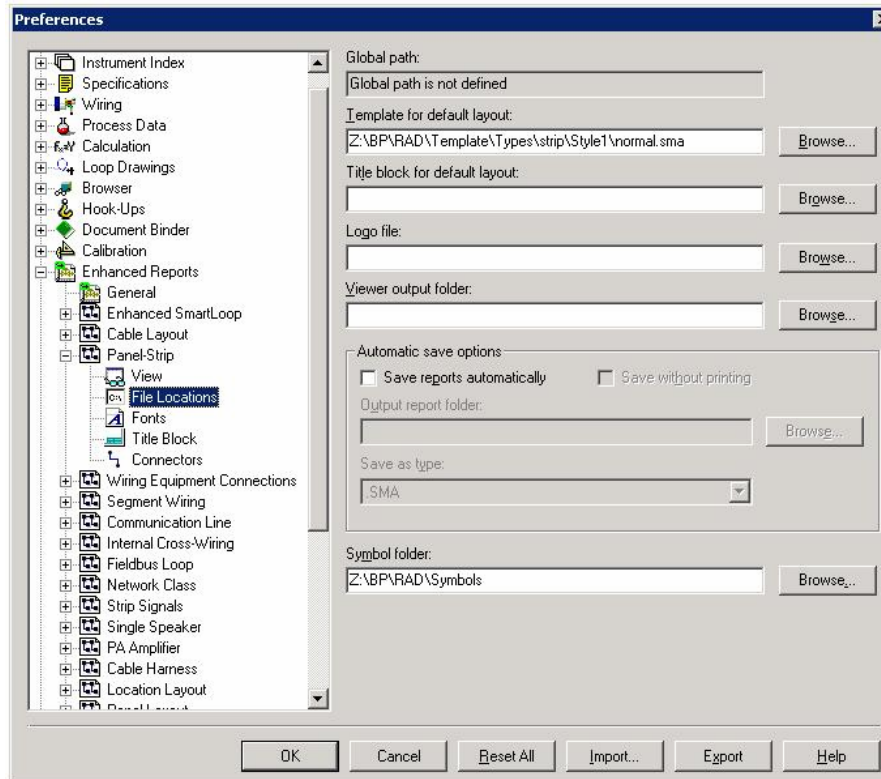
## ◆ Enhanced Panel-Strip View Preference Settings



# Enhanced Reports Preference Settings



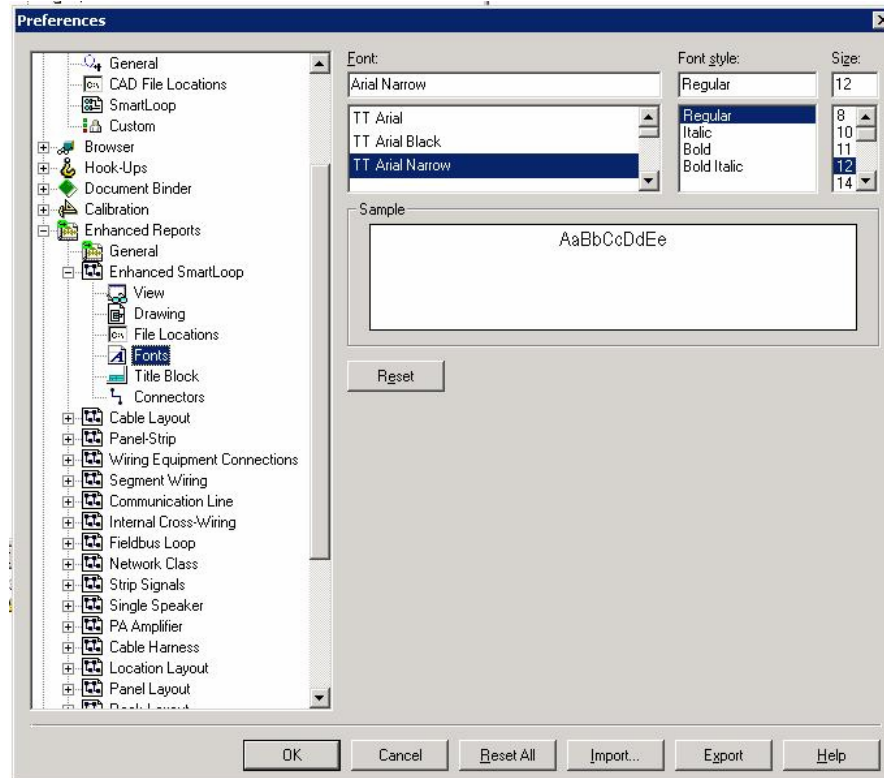
## ◆ Enhanced Panel-Strip File Location Preference Settings





# Enhanced Reports Preference Settings

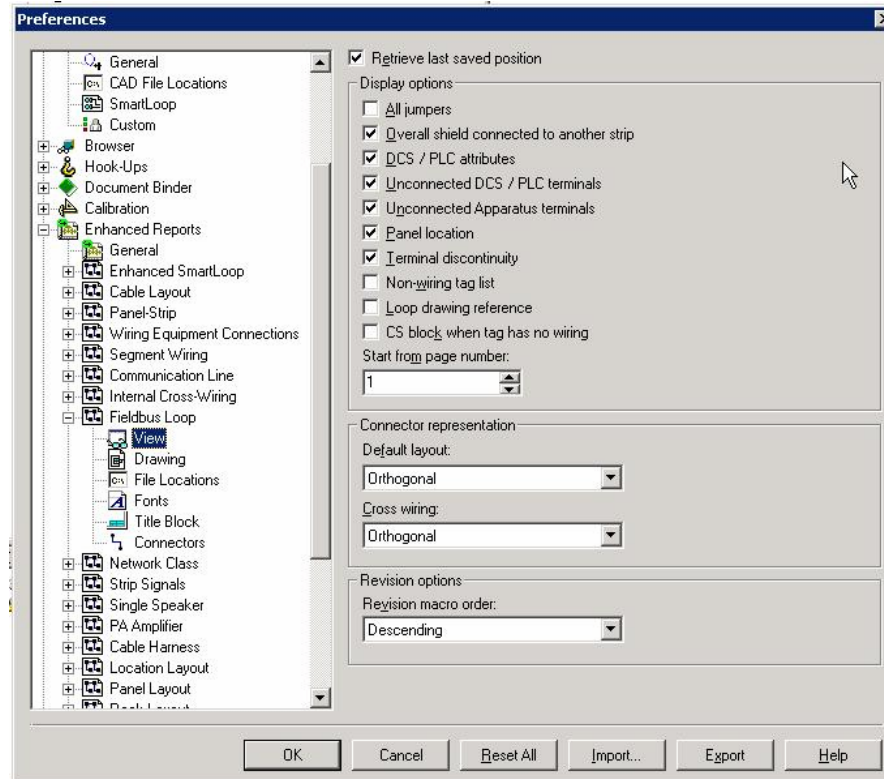
Set Panel- Strip Fonts the same as Enhanced SmartLoop Font Preference Settings



# Enhanced Reports Preference Settings



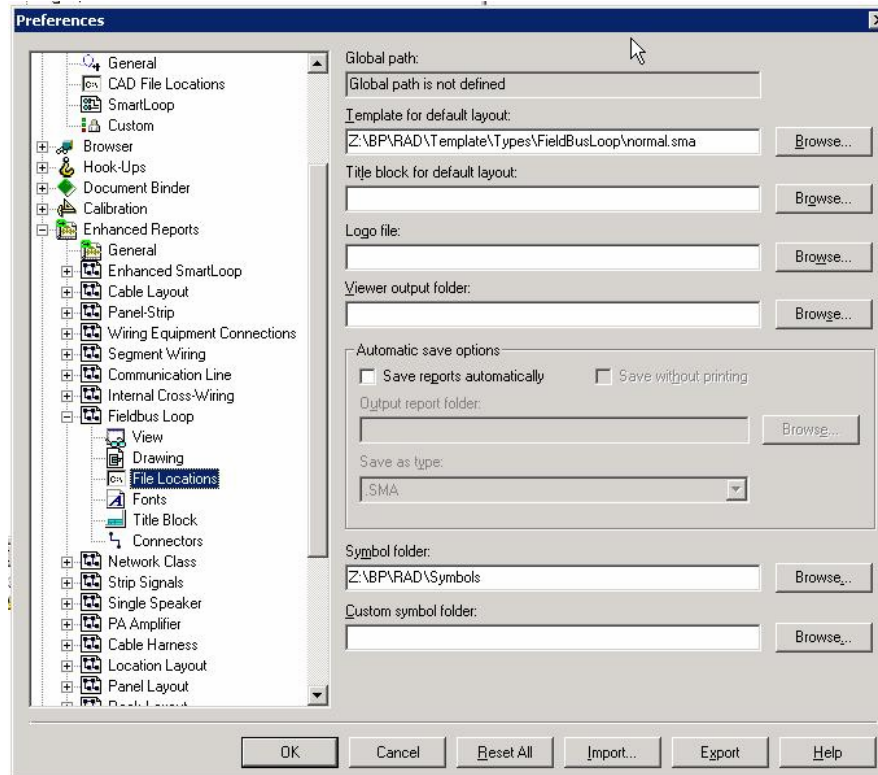
## ◆ Enhanced Fieldbus Loop View Preference Settings



# Enhanced Reports Preference Settings



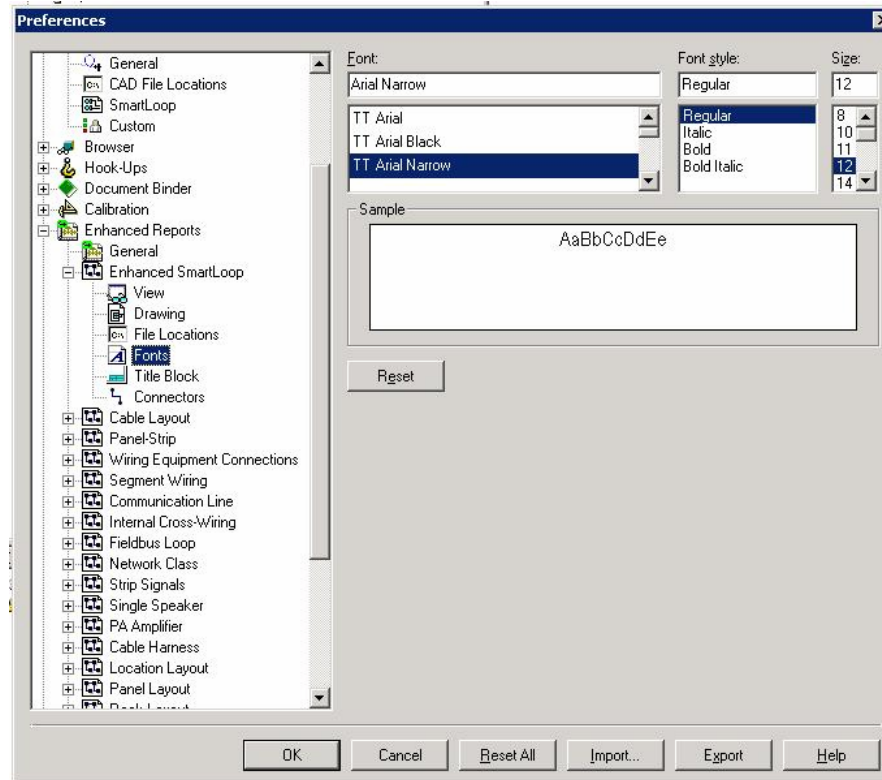
## ◆ Enhanced Fieldbus Loop File Location Preference Settings





# Enhanced Reports Preference Settings

Set Fieldbus Loop Fonts same as Enhanced SmartLoop Font Preference Settings





# Report Management Dialog Box

- ◆ Report Management Dialog Box Displays an overview of all the reports created in the SmartPlant Instrumentation modules.
- ◆ The Domain Administrator uses this dialog box to define revision management settings and revision archiving options, and apply custom title blocks to reports.
- ◆ In the Domain Administrator Module, click on “Activities / Report Management”

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Management Dialog Box

- ◆ **Report Name** — Displays the full name of the report available in SmartPlant Instrumentation.
- ◆ **Module Name** — Displays the name of the module that includes the report.
- ◆ **Report Type** — Displays the report type of List or Non-List.

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Type Column

- ◆ **List** - A report that displays a list of items. Examples of such reports are multi-strip reports. If you created a report for a list of items using item search parameters, the software applies a unique document number and revision to this report according to the item search parameters.
- ◆ **Non-List** - A report that is generated for a specific main item. Such a report displays the main item data and associations. An example of a non-list-type report is a panel-strip report, which you can generate for a specific strip. Such a report can display the main strip, two additional strips, numerous cables, and wires.

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Pe Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Pe Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Pe Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Pe Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Pe Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:

Default archive path  
Path:



# Report Revision Management

- ◆ In SmartPlant Instrumentation, you cannot apply global revisions to reports belonging to the list report type because for a global revision, you can only use reports generated for a specific item.
- ◆ Revision Management — Displays the revision management setting determined by the report type. A revision management setting of all list-type reports is always per document. A revision management setting of certain non-list-type reports is set permanently as per item, while for other non-list-type reports you can define the revision management setting as either per item or per document.

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Title Block Management

- ◆ **Title Block** — Allows you to use a title block in the report. This can be a title block designed by the user, or one of the defaults supplied with SmartPlant Instrumentation.

**Note:** If you want to display the report without a title block, clear this check box.

- In this case, the macros that appear in the title block appear at the top of the report.
- For those reports that must contain a title block, the check box is selected by default, and you cannot clear it.

- ◆ **Title Block Location** — Displays the location of the title block in the report. This can not be changed.

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Title Block Management

- ◆ **Title Block Customization (available when selecting the Title Block check box) — Allows you to assign a custom title block to a particular report, or a default title block that is supplied with SmartPlant Instrumentation. Note that some reports do not support custom title blocks. For these reports, the value Default appears, and the option to select a custom title block from this list is disabled.**
- ◆ **Custom Title Blocks are assigned with the “Tools / Title Blocks...” menu option in the opening SmartPlant Instrumentation screen**

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Archiving Management

- ◆ **Save Document Data** — Allows you to save all revision data for all reports of the specified type when using the Changed Documents feature accessed from the Tools menu in SmartPlant Instrumentation. If you clear the check box, the software performance is improved when creating revisions. Clearing this check box does not affect the report comparison functionality which is controlled by the Archiving Option settings.
- ◆ **Changed Documents** – Allows you to see what documents are changed since last revision or between dates and create a report of the changes

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	No not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	No not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:

Default archive path  
Path:



# Report Archiving Management

- ◆ **Archiving Option** — Allows you to assign an archiving option to a particular report, needed if you want to enable Report Comparison. The following options are available:
  - **Do not save** — Sets the software not to keep a revision archive. This is the default
  - **Save to database** — Sets the software to keep a revision archive in the database
  - **Save as File** — Sets the software to keep a revision archive as an external .psr or .sma file
  - **Compress as ZIP file** — Sets the software to keep a revision archive in a compressed .zip file
- ◆ **Report Comparison** – Allows you to view archived reports or compare current report with one or more previously archived reports. Accessed from the Print Preview screen

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	\\ASPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	\\ASPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Archiving Management

- ◆ **Archive Path** — Allows you to define a different path for a specific report to be saved as a file, or compressed as a .zip file.
- ◆ **When selecting the archiving options Save as File, or Compress as Zip file, click and enter a path or click on the folder and browse to the selected .**
- ◆ **You can use this option in addition to defining the “Default archiving path”.**

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

Filter by  
Module:   Apply

Find  
Report:

Sort by  
 Report  Module

Global path:  
Global path is not defined

Default archive path  
Path:  Browse...

OK Cancel Help



# Report Archiving Management

- ◆ **Filter by** – Allows you to filter the reports list by a specific module.
- ◆ **Find / Report** — Allows you to find a specific report by entering a text string corresponding to the name of the desired report.
- ◆ **Sort by** – Report or Module determines the alphabetical sorting order of the reports list
- ◆ **Default archive path** – Allows you to enter or browse to the default archive path for all the report revisions to be saved as files, or compressed as .zip files.

Report Management

Report Name	Module Name	Report Type	Revision Management	Title Block	Title Block Location	Title Block Customization	Save Document Data	Archiving Option	Archive Path
Enhanced Hook-Up	Hook-Ups	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default	<input type="checkbox"/>	Do not save	
Enhanced Multi-Strip Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save as file	D:\SPI\TEMP\
Enhanced Multi-Strip Signal Report	Wiring	List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Compress as Zip file	D:\SPI\TEMP\
Enhanced Panel Signals Report	Wiring	Non-List	Per Document	<input checked="" type="checkbox"/>	Bottom	Default	<input checked="" type="checkbox"/>	Do not save	
Enhanced SmartLoop	Loop Drawings	Non-List	Per Item	<input checked="" type="checkbox"/>	Bottom	Default TB with PB units	<input checked="" type="checkbox"/>	Save to database	

**Filter by**

Module:   Apply

**Find**

Report:

**Sort by**

Report  Module

**Global path:**  
Global path is not defined

**Default archive path:**  
Path:  Browse...

OK Cancel Help

# Enhanced Report Management

- ◆ Questions & Comments