

**SmartPlant Instrumentation Technical User Forum  
P2C2 (Houston SPI TUF) Meeting**

**August 14, 2012  
8:00 am  
Hosted by Mangan, Inc.  
at Phoenix Contact CTC**

<b>Attendees</b>	41 Members in attendance 10 Online Connections	<b>Copied To</b>	Houston SPI LTUF Website
<b>Called By</b>	John Dressel	<b>Prepared By</b>	John Dressel with notes by Betty Alexander & Andrew Kunev

Item	Topic	Notes	Action/Due
1	Introduction by Mangan, Inc.	<ul style="list-style-type: none"> <li>• Nigel James, Mangan Inc. An Engineering and Automation Specialty Company:               <ul style="list-style-type: none"> <li>• 21 years old</li> <li>• 2010 Sales of \$35M</li> <li>• 250+ employees</li> <li>• Converted to ESOP in 2000</li> <li>• CSIA registered member</li> <li>• Over 5,000 employees worldwide</li> <li>• Seven offices:                   <ul style="list-style-type: none"> <li>○ Long Beach, CA</li> <li>○ Westlake Village, CA</li> <li>○ Lake Jackson, TX</li> <li>○ Houston, TX</li> <li>○ Alpharetta, GA</li> <li>○ Boulder, Colorado</li> <li>○ Cary, North Carolina</li> </ul> </li> <li>• Five Industries                   <ul style="list-style-type: none"> <li>○ Refinery</li> <li>○ Pipelines</li> <li>○ Chemical</li> <li>○ Oil &amp; Gas</li> </ul> </li> <li>• Completely Integrated Service Solutions for:                   <ul style="list-style-type: none"> <li>○ ProSys DR</li> </ul> </li> <li>• Summary                   <ul style="list-style-type: none"> <li>○ Proficient in small or large scale automation projects</li> <li>○ Proven in multiple industries</li> <li>○ Experienced in multiple platforms</li> <li>○ Demonstrated successful migration program</li> <li>○ National and International projects</li> <li>○ Local presence in Houston area</li> <li>○ Fully Integrated Automation Solutions</li> <li>○ Flexible/Innovative/Responsive</li> </ul> </li> </ul> </li> <li>• Mangan Inc. has been named Control Engineering Magazine's 2012 System Integrator of the Year.</li> </ul>	

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2	Welcome to Phoenix Contact	<ul style="list-style-type: none"> <li>• Jim Massey, Phoenix Contact</li> <li>• <b>Customer Technology Center - Houston, Texas</b></li> <li>• <b>FEATURES</b> <ul style="list-style-type: none"> <li>○ 15,000 sq.ft. Facility</li> <li>○ Demonstration Room</li> <li>○ Training Room</li> <li>○ Conference Rooms</li> <li>○ Test Lab</li> <li>○ Dining Area</li> <li>○ Small Warehouse</li> </ul> </li> <li>• <b>Available To Our Customers for</b> <ul style="list-style-type: none"> <li>○ Meetings &amp; Conferences [On a scheduled basis]</li> <li>○ Company Business Functions</li> <li>○ Design Meetings</li> <li>○ Association &amp; User Group Meetings</li> </ul> </li> <li>• <b>Mission Statement</b></li> <li>• <b><i>Our mission is to earn specifications and endorsements for our products and services by bringing VALUE to the community of specifying engineers and designers within our focus industries.</i></b> <ul style="list-style-type: none"> <li>○ Specification and Design Assistance</li> <li>○ Sampling of Product</li> <li>○ Training and Technical Seminars <ul style="list-style-type: none"> <li>▪ Webex Technical Seminars</li> <li>▪ Lunch &amp; Learn Technical Seminars</li> <li>▪ Special Training Seminars</li> <li>▪ Entry Level Engineers Training</li> </ul> </li> </ul> </li> <li>• <b>Phoenix Contact</b> <ul style="list-style-type: none"> <li>○ Over 7500 employees in 55 countries</li> <li>○ Over 6 million sq. ft. of facilities</li> <li>○ 40 National Sales companies</li> <li>○ 30 Sales Agencies in other countries</li> </ul> </li> <li>• <b>Product Development</b> <ul style="list-style-type: none"> <li>○ Phoenix Contact designs and manufactures products in Germany, the United States, and China.</li> </ul> </li> <li>• <b>Phoenix Contact USA</b> <ul style="list-style-type: none"> <li>○ Harrisburg, Pennsylvania</li> <li>○ Founded: 1981</li> <li>○ Employees: 450</li> <li>○ Sales Representatives: 96</li> <li>○ Center for U.S. Sales and Marketing</li> <li>○ Headquarters for America Regional Business Unit</li> </ul> </li> </ul>	

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3	Chairman's Notes	<ul style="list-style-type: none"> <li>• John Dressel presided and thanked Mangan Inc, for Hosting and Phoenix Contact for providing the Center.</li> <li>• Next Owner / Operator Committee meeting: <ul style="list-style-type: none"> <li>- 08/21/2012 9:00 AM - 11:00 AM</li> </ul> </li> <li>• Vegas-Hexagon gave some New directions for SPI and the SmartPlant Suite including new User interfaces</li> <li>• Minutes of last meeting approved</li> </ul>	
4	Presentation	<p><b>SmartPlant Instrumentation Rule Manager</b> Gal Itzhak, Intergraph</p> <ul style="list-style-type: none"> <li>• Live presentation of Rule Manager that comes with SPI2009,</li> <li>• Enable in SPI Domain Admin, activate unique/individual icon/exe, separate from SPI User module.</li> <li>• Default separated folders for modules, to which users can Add more folders, rename, etc. <ul style="list-style-type: none"> <li>○ Note: Honeywell's New Bidirectional Interface may/may-not need RULE(s) like that shown needed by Emerson, etc.</li> </ul> </li> <li>• Rule can be on ANY Entity in SPI.</li> <li>• Example shown to use Rule to Copy info from one Cable Description to the Wire Property Note. Example is Unidirectional with Warning that was not activated/shown. <ul style="list-style-type: none"> <li>○ Tip: When doing Rule – Don't forget to SAVE actions, and logout &amp; log back into SPI to use Rule.</li> </ul> </li> <li>• Ex2, Field Entered by User in Graphic Interface, Panel Manufacturer to be disabled by rule. Using Rule to function as New Access Right control</li> <li>• New 2009 option to use External Visual Studio/Visual Basic programming for Smart Rule.</li> <li>• <b>Highlights some Useless functionality of Rule Manager, which can only be understood by deeper-level programmers.</b> Rule shown somehow affecting Cable Name Uniqueness., ~showing how parts of SPI rule manager fields come from Coded values. Duplicated Cable with rename, and showed error message when Uniqueness was conflicted with Rule</li> <li>• Custom Validation Rule shown. Panel Name, also affected by programmers coded Custom Update – if changed panel name the Rule would automatically Add Unit info into new Naming Convention, highlighted Useless duplication of info in Panel name at each change of Any Panel properties.</li> <li>• Editing Rules with External tools in SPI 2009 and higher. Watcom Backup will Save Rules</li> <li>• Q: Upgrading Service packs ... should we Turn Off Rule to Upgrade, or do the Rules upgrade?</li> <li>• A: Tables (rules) upgrade with patch upgrade, and IISDC says Admin does not have to turn off rules to upgrade.</li> <li>• Q: Compiling DLLs where?</li> <li>• A: New version 2009 'Home' Instrumentation folder called EXAMPLES, with Programmer Guide, and "SPI External Example". This can be deployed via Citrix, on main SPI Server. Point to Network from Visual Basic</li> </ul>	

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		<ul style="list-style-type: none"> <li>• Q: Any available documentation on RM?</li> <li>• A: Yes – shown to be in pdf SPI Programmer's Guide &amp; Rule Manager User Guide – comes with SPI help docs, etc.               <ul style="list-style-type: none"> <li>- AND you can Email Gal Itzhak, @ IISDC</li> </ul> </li> <li>•</li> <li>• Q: DII has to be in Path or does it have to be registered?</li> <li>• A: IISDC is unsure ... will dig it out from guide or programmer developer</li> <li>• Conclusion: John Dressel is excited about the Validation and Data Movement of the Rule Manager</li> <li>• Suggestion hinted among some – OSI needs to provide new Rule Manager Training for SPI 2009.</li> </ul>	
5	Presentation	<p><b>SmartPlant Instrumentation Roadmap - Guy Masin, Intergraph</b></p> <p>Outline:</p> <ul style="list-style-type: none"> <li>• Review SPI 2009 SP4 enhancement               <ul style="list-style-type: none"> <li>○ Integration</li> <li>○ Functionality</li> </ul> </li> <li>• Review SPI 2013 enhancement               <ul style="list-style-type: none"> <li>○ Integration</li> <li>○ Functionality</li> </ul> </li> <li>• Review SPI 2014 enhancements</li> </ul> <p>SPI 2009 SP4 Integration Enhancements - Released June 2012</p> <ul style="list-style-type: none"> <li>• Publish enhancements               <ul style="list-style-type: none"> <li>○ Publishing large data sets</li> <li>○ Publishing from Plant level</li> </ul> </li> <li>• Retrieve enhancements               <ul style="list-style-type: none"> <li>○ Enhancing SPI retrieve capabilities</li> </ul> </li> <li>• Multi-Document Publish enhancements               <ul style="list-style-type: none"> <li>○ Before SP4 - Batch document publish was limited to 50 documents which would take approximately 60 minutes.</li> </ul> </li> <li>• Multi-Document Revise enhancements               <ul style="list-style-type: none"> <li>○ Before SP4 - Batch document revise was limited to 50 documents which would take approximately 60 minutes.</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>• SPI's revisions &amp; Integration enhancements               <ul style="list-style-type: none"> <li>○ Ability to use SPI's (internal) revisions:                   <ul style="list-style-type: none"> <li>▪ Use of the SPI Spec Binder and Global Revisions in an integrated environment.</li> </ul> </li> <li>○ Remove redundant or conflicting tasks</li> <li>○ Handling tasks with duplicated item tags.</li> <li>○ Mark for Deletion (MFD) / Overwrite functionalities.                   <ul style="list-style-type: none"> <li>▪ MFD - A preference controlled task type. Delete tasks are substituted by the MFD.                       <ul style="list-style-type: none"> <li>• The MFD items cannot be run, they can be change to a delete task. A custom browser can be supplied, will show which tag has a MFD task associated to it.</li> </ul> </li> <li>▪ A rule can be supplied as well, which will disable modification for tags that have a MFD task.                       <ul style="list-style-type: none"> <li>• – Overwrite – a new task type. A duplicated tag (same tag number) retrieved by SPI will receive an Overwrite task (instead of a Create task created till now). Running this task will substitute the referenced instrument it SPI to the duplicated tag retrieved (the second tag retrieved).</li> </ul> </li> </ul> </li> </ul> </li> </ul> <p>SPI 2009 SP4 Functional Enhancements - Released June 2012</p> <ul style="list-style-type: none"> <li>• Batch Loop Duplication functionality enhancement</li> <li>• Batch Specification Compare functionality enhancement:</li> <li>• Domain Explorer Filter usability enhancement:</li> <li>• Find Window Enhancement: Associate Conventional &amp; Bus Tags with the same Spec Multi list</li> <li>• Specification Data Dictionary select all enhancement</li> <li>• Consolidated Multi Strip Report- Showing choseable panels, their interconnections and each of their adjacent equipment.</li> <li>• Add ability to batch print Hook-up drawings based on flexible criteria</li> <li>• enable batch print Hook-up drawings using flexible user definable criteria, so that required Hook-up document packages can be quickly, efficiently and easily prepared</li> <li>• Viewing documents from an UN-logged unit</li> <li>• Update ASME pipe standard to ASME B36.10M-2004 &amp; ASME B36.19M-2004</li> <li>• Document binder revision failure (For example due to power failure) rollup to previous</li> <li>• Browser Save As (Plant/ Area/ Unit) – an additional field will be added (Path + Unit number)</li> <li>• Import utility - create cables with complete structure using</li> </ul>	

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		<p>reference cable type identification</p> <ul style="list-style-type: none"> <li>○ To have the ability to import a new plant cable to SPI based on the reference cable name</li> <li>○ The mechanism should copy the reference cable from the reference data and name the cable according to the source (the cable name in the external file)</li> </ul> <ul style="list-style-type: none"> <li>● Honeywell DCS bidirectional integration support</li> <li>● Ability to integrate CHARM configuration</li> </ul> <p><b>SPI Version 2013 - Scheduled for Q1 2013</b></p> <p>SPI Version 2013 Integration Enhancements</p> <ul style="list-style-type: none"> <li>● To-Do-List Enhancement <ul style="list-style-type: none"> <li>○ To-Do-List Refresh</li> <li>○ Approve Inconsistencies</li> <li>○ Containment of redundant or conflicting tasks</li> <li>○ Remove design basis relationship from an Object <ul style="list-style-type: none"> <li>▪ For example: An already retrieved and then altered instrument has been deleted from its origin drawing in SPP&amp;ID; There will be a possibility to dissociate this instrument and associate it to a different SPP&amp;ID instrument (if exists)</li> </ul> </li> <li>○ Ability to group tasks per mutual (same) type (like a pipe-run)</li> </ul> </li> </ul> <p>SPI Version 2013 Functional Enhancements</p> <ul style="list-style-type: none"> <li>● Add separate access rights to Instrument Index supporting tables.</li> <li>● Supporting UOM customization: <ul style="list-style-type: none"> <li>○ Can be used in Process data, calculation and specs (used types such as Flow)</li> <li>○ Shipped UOMs are non-editable.</li> </ul> </li> <li>● Adding Wiring Equipment connection report per signal</li> <li>● Supporting Oracle 11g</li> <li>● Reuse Multi strip reports based on drawing name</li> <li>● Rename/Duplicate tag option should not require selecting instrument type</li> <li>● Add revision description to delivered index browse title-block.</li> <li>● Update Orifice Calculations ISO-5167 - 2003 STD</li> <li>● Update Thermowell calculations to ASME PTC 19.3 TW-2010</li> <li>● Make User Preferences Per Domain</li> <li>● Ability to view/print reports when Proc. Data Status = Locked out to Process</li> </ul>	

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		<p><b>SPI Version 2014 - Scheduled for Q2 2014</b></p> <ul style="list-style-type: none"> <li>• Adding the ability to create a Control logic diagram</li> <li>• Smart Query Builder &amp; Enhanced EDE (Browser) module <ul style="list-style-type: none"> <li>○ SmartPlant Query (first milestone) - allows users to create instantly any possible query from SPI</li> <li>○ No need to know the SPI data model</li> <li>○ Simple to use and provide engineering and design context</li> <li>○ Replace the needs of Infomaker</li> <li>○ Browser module will be able to use the smart query instead of customize browser</li> <li>○ In future plans to expand beyond and be platform to other modules of SPI, as well for other E&amp;S applications</li> <li>○ Ability to view/print reports when Proc. Data Status = Locked out to Process</li> <li>○ Enhanced Functionality and user experience.</li> <li>○ Modern look and feel</li> </ul> </li> <li>• Projects / As Build, improve usability</li> <li>• Improve the visibility of what is scoped when we claim or merge</li> <li>• Improve the stability of the procedure and remove special cases</li> <li>• Give engineers better view of what the results</li> <li>• Harmonize the scoping process with the below operations <ul style="list-style-type: none"> <li>○ Claim</li> <li>○ Merge</li> <li>○ Integration – shared correlation engine and opening our engineering projects to integrate with SPF</li> <li>○ Project export (backup of engineering project + ICCx)</li> </ul> </li> <li>• Remove the constraint of multi users operations when you merge data</li> </ul> <p>Question: Will we see new spec sheet forms in 2014?  Answer: Spec sheet module changes will be in 2015 version 2015 should be completely independent of Infomaker</p> <p>Question: Is Intergraph planning any mitigation of Citrix Issues?  Answer: Citrix will still be supported, SPI Version 2009 SP4 Supports Gen6.5 Citrix, IISDC does support Citrix.</p> <p>Question: What is the plan for Infomaker independence?  Answer: Query Builder is 1<sup>st</sup> phase of Infomaker independence</p>	

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6	Presentation	<p><b>Honeywell – Experion SmartPlant Instrumentation Adapter -</b> Matt Willmott, Honeywell</p> <ul style="list-style-type: none"> <li>• Provides bidirectional data exchange between the Experion and SmartPlant Instrumentation (INtools)</li> <li>• I/O catalog allows designers to complete field hardware designs within SPI and then simply load I/O allocations to Experion</li> <li>• Allows changes in design data to flow seamlessly into Experion driving productivity and schedule</li> <li>• Site modifications for Experion loops can be efficiently published to SPI to complete as-built documentation</li> <li>• Support I/O modules utilizing Universal Channel Technology <ul style="list-style-type: none"> <li>○ Any instrument type AI, AO, DI or DO to be connected to any channel</li> <li>○ I/O type definition by software configuration</li> </ul> </li> <li>• The design engineer using SPI does not need to know the specific DCS panel details <ul style="list-style-type: none"> <li>○ Eliminating the need for custom marshalling and I/O cabinets</li> <li>○ Allowing the use standard cabinets designs</li> </ul> </li> <li>• Traditional project processes can be significantly streamlined <ul style="list-style-type: none"> <li>○ Creating and assigning of controllers and I/O modules</li> <li>○ Assignment of I/O channels to control system tags</li> <li>○ Synchronization of parameters across the design and configuration databases</li> </ul> </li> <li>• Exchange of HART and Fieldbus field device properties</li> <li>• Significant investment to support and maintain the SPI design database throughout the lifecycle of the facility</li> <li>• The SPI adapter tool streamlines support - enabling the “As-Built” designs to remain in sync with online systems</li> <li>• Ensure the integrity of the design database and as such maximize the usage in day-to-day operations</li> <li>• Supports the exchange of field device information associated with HART and Foundation Fieldbus designs</li> <li>• Supports configuration of virtual tags and device resident functions blocks within Experion and SPI</li> <li>• Catalogs are also available for Honeywell Fieldbus and HART instruments</li> </ul> <p>Honeywell I/O Catalog Library</p> <ul style="list-style-type: none"> <li>• DCS Controller I/O Catalog <ul style="list-style-type: none"> <li>○ Experion C-Series I/O</li> <li>○ Experion / TPS PMIO &amp; FTAs</li> <li>○ Support for new &amp; legacy systems</li> </ul> </li> </ul>	



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		<ul style="list-style-type: none"> <li>• Safety Controller I/O Catalog <ul style="list-style-type: none"> <li>○ Safety Manager / FSC I/O &amp; FTAs</li> <li>○ Supports loops for SIS, ESD, FGS</li> </ul> </li> <li>• Specialized assemblies for <ul style="list-style-type: none"> <li>○ Integrated GI/IS modules</li> <li>○ Non-incendive I/O</li> <li>○ Integrated F&amp;G interfaces</li> </ul> </li> <li>• Improved Design Efficiency <ul style="list-style-type: none"> <li>○ 200+ hrs saving per project</li> </ul> </li> </ul> <p>Experion-SPI Adapter - R100 Technical Details</p> <ul style="list-style-type: none"> <li>• The SPI adapter provides the import and export of the following components. <ul style="list-style-type: none"> <li>○ Controllers</li> <li>○ IO Modules</li> <li>○ IO Channels</li> <li>○ Control System Tags</li> <li>○ HART Devices</li> <li>○ Fieldbus Devices</li> <li>○ Fieldbus Function Blocks</li> <li>○ Fieldbus Interface Modules</li> </ul> </li> <li>• Supports the SPF “file mode” transfer mechanism (XML)</li> <li>• Supported from SPI 2009 SP4 (released June 2012)</li> <li>• Interface is enabled as a licensed SPI option from Intergraph <ul style="list-style-type: none"> <li>○ Appears as ‘INB’ code in SmartPlant License Manager</li> </ul> </li> <li>• Interface allows <ul style="list-style-type: none"> <li>○ Retrieve Honeywell definitions</li> <li>○ Publish SPI data</li> <li>○ Retrieve Honeywell data</li> </ul> </li> <li>• Retrieving the Honeywell Experion PKS definitions is a prerequisite for both publishing and retrieving the Honeywell Experion PKS data</li> <li>• The Honeywell definitions that you download and retrieve in SPI constitute the engineering library of the Experion I/O module and terminations</li> <li>• I/O Catalog definition files are downloaded from HPS website</li> <li>• Xml files are imported into SPI to populate Reference Explorer</li> <li>• Help files and lookup matrix enable IO module and</li> </ul>	

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		<p>termination assembly associations</p> <ul style="list-style-type: none"> <li>• Defining Experion Cabinets in SPI <ul style="list-style-type: none"> <li>○ Experion cabinets are defined under DCS Panels within Plant/Area/Unit domain</li> <li>○ Panel hierarchy with SPI follows “Panel / Rack / Slot / Module”</li> <li>○ I/O channels are associated with I/O Terminations</li> <li>○ I/O Terms are associated with I/O modules</li> <li>○ For Series C IOMs and IOTAs are always in the same position (slot)</li> <li>○ For PMIO IOPs and FTAs may be in different cabinets &amp; redundant IOPs are usually in different racks</li> <li>○ Terminals and CS Tags reside under I/O Channels</li> </ul> </li> </ul> <p>Question: Are all Hart Protocol data properties supported? Answer: Yes</p> <p>Question: Does it include actually Reassigning I/O in SPI? Answer: YES , Users can change it in SPI with the SPI adapter</p> <p>Question: Will the Interface Change the Wiring Connections? Answer: Associates CStag but wiring must be done manually</p> <p>Question: How does it work when DCS is in the plant and the files are in another state? Answer: XMLS are files that can be sent disconnected</p> <p>Comment: SPI terms comparison to Experion Terminology is a Very good slide.</p> <p>Question: Are we using the plug-in Module number? Answer: Address of the IO Module is within the Form, it can be addressed there, arbitrary to SPI. (may need a slide to show this?) Experion requires Unique (naming convention assigned) names for IOM</p> <p>Question: (Mangan): Screen for terminals. Channels/IOM/IOTA definition by Honeywell or Intergraph? Answer: Honeywell developed configuration, required for interface</p> <p>Question: (Mangan): Can users rename terminals or channels? Answer: Terminals yes, Channels are needed to stay. Rules will have to be developed, and those rules are in the Experion help files, but not yet Rule Manager rules (may be developed later.)</p>	

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		<p>Question: Shell WestHollow has 6 C300 domains, early installs. Not yet in SPI. Looking at THIS Adaptor as possibility to Load Legacy offline INTO SPI.</p> <p>Answer: Bring in pieces, associate and wire up objects manually, and bring in More thru interface. Common Data would be almost automatic, but some Manual work would be needed. Shell Wishes to speak more with Matt.</p>	
7	Presentation	<p><b>Process Data in SmartPlant Instrumentation</b> - John Dressel, Fluor</p> <ul style="list-style-type: none"> <li>• <b>Process Department Issues</b></li> <li>• Identifying Process Customer <ul style="list-style-type: none"> <li>○ The Process Data is not a project deliverable to the Client on most projects</li> <li>○ The Primary Process Customer is Control Systems for the Sizing and Calibration of the Inline Instrument devices</li> <li>○ Mechanical and Piping also use the Process Design Conditions for equipment and line sizing and material spec</li> </ul> </li> <li>• Additional Process Hours for SPI loading <ul style="list-style-type: none"> <li>○ Process develops initial Process Data on spreadsheets using the stream data and material balance</li> <li>○ Additional time to enter this data into SPI is not normally estimated in the Process Home Office Man Hour Estimate</li> <li>○ It is the responsibility of Control Systems to make the SPI data loading as efficient as possible for Process</li> </ul> </li> <li>• Change Control in SmartPlant Instrumentation <ul style="list-style-type: none"> <li>○ Because of the Critical and Dynamic nature of process data it is important that Change Management Procedures be in place on every project.</li> <li>○ The Process Engineer is the Owner of the Process Data in SmartPlant Instrumentation</li> </ul> </li> <li>• Process Training for SmartPlant Instrumentation <ul style="list-style-type: none"> <li>○ It is the responsibility of the Control Systems SmartPlant Instrumentation administrator to Train the Process Engineers in the use of the Process Module</li> <li>○ Use the SPI Process Module tutorial provided by Intergraph</li> <li>○ Supplemental Training of Browser and Save As functions</li> </ul> </li> <li>• <b>SPI Process Data Module</b></li> <li>• Tag data is the primary process loading method. <ul style="list-style-type: none"> <li>○ General Instrument area</li> <li>○ Process Properties area</li> <li>○ Additional Properties</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>○ Base conditions area</li> <li>○ Alarm conditions area</li> <li>○ API 2540 Standards</li> <li>○ User Defined Fields</li> <li>○ Process Notes Area</li> <li>● Different Process Functions Require Different Process Data</li> <li>● Handles multiple Cases</li> <li>● Fluid properties lookups</li> <li>● Data entered by Tag or Line</li> <li>● Unit of Measure conversion</li> <li>● Copy data from other Tags</li> <li>● Additional Properties</li> <li>● Base Conditions</li> <li>● Alarm / Trip Settings</li> <li>● User Defined Fields</li> <li>● Workflow control</li> <li>● Process datasheets with Revisions</li>   <li>● <b>Data Required from Process Department</b> <ul style="list-style-type: none"> <li>○ <b>Inlines</b>; Process Data for inline devices (control valves and flow elements) and analyzers are furnished by Process. Depending on the project scope, Relief Valve Process Data may be required to be furnished to Control Systems by Process Engineering.</li> </ul> </li> <li>● <b>Data NOT Required from Process Department</b> <ul style="list-style-type: none"> <li>○ <b>Offlines</b>; Data for off-line instruments (transmitters, temperature elements, pressure elements, etc.) is collected by Control Systems from the inline device data, line list, mechanical equipment data sheets and other sources. On a work share project, it may be possible to have personnel in another office, such as a GEC, enter some or all of this data. The work process for doing so will be the responsibility of Control Systems.</li> <li>○ <b>Piping Inlines</b>; For Thermowell velocity calculations, Control Systems will utilize the inline device data, line list and other sources for applicable installations. For those Thermowells where flow information is not available from other sources, Process will be consulted.</li> </ul> </li>   <li>● <b>Process Line Data Table</b> <ul style="list-style-type: none"> <li>○ Line Data Table maintains the piping line data as required for material and sizing</li> <li>○ Line Properties dialog box allows the editing of line materials, Size, Schedule and dimensions</li> <li>○ The Pipe Data Lookup Table will allow</li> </ul> </li> </ul>	

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		<p>selection of the proper Pipe Schedule for a given size from the line class specification report.</p> <ul style="list-style-type: none"> <li>○ Line data automatically placed in Process Data Module</li> </ul> <ul style="list-style-type: none"> <li>● <b>Instrument Process Data Module</b></li> <li>● Process Engineers enter data directly into SPI for Calculations and Instrument Spec Sheets.</li> <li>● Process Engineers may enter fluid properties manually or select from internal database.</li> <li>● Process Engineers may select hydrocarbon properties from the internal API 2540 table.</li> </ul> <ul style="list-style-type: none"> <li>● <b>SmartPlant Process Browser Module</b></li> <li>● All primary SmartPlant data tables are exposed for Browsing</li> <li>● Allows users to create queries on Spec Sheets and Process Data</li> <li>● Automatic Report and Export of query data from Browser</li> </ul> <ul style="list-style-type: none"> <li>● <b>Process Data User Preferences</b></li> <li>● Open Process Data from Browsers</li> <li>● Tag Creation NOT allowed from Process Module</li> <li>● No Custom Fields results in better Process Data Reports</li> </ul> <ul style="list-style-type: none"> <li>● <b>Instrument Spec Module</b></li> <li>● Instrument Specification <ul style="list-style-type: none"> <li>○ Form for each Spec Type</li> <li>○ Edit Forms in SPI</li> <li>○ Drop Down Data Windows</li> <li>○ External Form Editor</li> <li>○ Multi-Item forms</li> <li>○ Multi-Sheet forms</li> <li>○ Revision control</li> <li>○ Show data from Index table</li> <li>○ Link directly to Process Data</li> <li>○ Export Specs to Excel or Intergraph External Editor</li> </ul> </li> <li>● Given proper rights – the process data may be edited from the Spec Sheets <ul style="list-style-type: none"> <li>○ Automatic Unit conversion does NOT work from Spec Sheets</li> <li>○ Only selected process data is visible on Spec Sheets</li> <li>○ Rights can be set to prohibit editing of process data from Spec Sheets</li> <li>○ Multi case process data can be accessed on the Spec Sheet from the process Module</li> </ul> </li> </ul>	

Item	Topic	Notes	Action/Due
		<ul style="list-style-type: none"> <li>• <b>Editing Process Data From Spec Sheets is NOT Recommended</b></li>   <li>• <b>Instrument Calculation Module</b></li> <li>• Uses excepted standard formulas</li> <li>• Documents calculation basis</li> <li>• Direct access to Process Data</li> <li>• Generates Calculation Reports with Revisions</li> <li>• Types of calculations <ul style="list-style-type: none"> <li>○ Control Valve Sizing</li> <li>○ Relief Valve Sizing</li> <li>○ Flow Meter Sizing</li> <li>○ Thermowell Parameters</li> </ul> </li>   <li>• <b>Process Data Issues</b></li> <li>• Types of Process Data <ul style="list-style-type: none"> <li>○ Process Design Conditions</li> <li>○ Process Operating Conditions</li> <li>○ Process Ranges</li> <li>○ Process Alarms and Trips</li> </ul> </li> <li>• Process Workflow needs to be different for Inline vs. Offline Devices</li> <li>• Process Data Workflow may be circumvented using Process and Spec Browsers</li> <li>• Process notes often required on Spec Sheet (create spec sheet notes page for Inline devices)</li>   <li>• <b>Value Added by placing Process Data directly into SmartPlant Instrumentation:</b> <ul style="list-style-type: none"> <li>○ Timely Access to Process Data by Control Systems</li> <li>○ Data Centric Control of Process Data</li> <li>○ Management of Change</li> <li>○ Real Process Data Becomes Deliverable</li> </ul> </li> </ul> <p>Question: Can SPI Spec sheets support Process Multi Case environments?</p> <p>Answer: There is a restorable form from the SPI library with Hybrid (with 3 cases displayed on one datasheet). Another solution is to create a Governing Case, or NORM purchasing case. Each Case is a separate report. Exporting cases to Fisher FirstView only One Case at a time with unique tag numbers.</p>	
8	Presentation	<p><b>SMARTPLANT INSTRUMENTATION V2009, SP3 BATCH LOOP AND TAG CREATION</b></p> <p>- Nezar Faitouri, Mangan SPI Technical Consultant</p> <p>The purpose of this presentation is to show the SPI users how to utilize and use the new SPI batch loop and tag creation function. This new function was introduced to SPI in V2009, SP3.</p>	

Item	Topic	Notes	Action/Due
		<ul style="list-style-type: none"> <li>• The new SPI batch loop and creation function is implemented to support the SPP&amp;ID macro expansion function and the interface between SPI and SPP&amp;ID.</li> <li>• The new SPI batch loop and creation function enables the SPI user to batch create tags without having to batch create loops. In the old SPI and INtools versions, the SPI user could not batch create tags without creating loops.</li> <li>• The new SPI batch loop and creation function utilizes the SPI reference explorer to create the necessary typical (templates) for loops and tags.</li> <li>• The new SPI batch loop and creation function utilizes the SPI reference explorer to create the macro expansion function.</li> <li>• Either the loop and/or tag property windows or the index browser or the macro item general property can be utilized to populate data to these typical loops and tags.</li> <li>• The reference explorer is used to create the typical loops and tags. <ul style="list-style-type: none"> <li>○ Highlight Typical loops folder – right click – New – Loop</li> <li>○ Define the typical loop name and define loop property info (if required) such as service, type, function, notes, and criticality.</li> <li>○ Define the instruments that will be assigned to the typical loop. This includes defining the instrument data (if required) such as service, instrument type, status, location, manufacturer, model, I.S., power supply, notes, signal type, linearity type, and UDT's.</li> <li>○ The typical instruments can be Conventional, or Fieldbus, or Electrical, or Hart, or Profibus, or Soft Tag, or Telecom.</li> <li>○ Local typical instruments can be defined as well without having to define a typical loop.</li> <li>○ Highlight the typical instrument folder – right click – New – Instrument.</li> </ul> </li> <li>• The browser module can be utilized to update typical instrument information such as UDF's, instrument price, instrument serial number, remarks, etc. <ul style="list-style-type: none"> <li>○ The key to view typical instrument in a browser view is to set the browser data level to Typical.</li> <li>○ There are some SPI tag information that can not be utilized through the browser such as line numbers, P&amp;ID, and Equipment.</li> </ul> </li> <li>• The reference explorer macros folder is used to define macro expansion for creating typical loops and instruments either by the SPI user or the SPI interface with SPP&amp;ID. <ul style="list-style-type: none"> <li>○ Highlight the macros folder – right click – New</li> <li>○ Define the Macro name, and description.</li> <li>○ The 2 carrier check boxes are used when interfacing between SPI and SPP&amp;ID and executing the To DO List tasks.</li> </ul> </li> <li>• Assigning a Typical Loop to the Macro <ul style="list-style-type: none"> <li>○ Highlight the typical loop and drag and drop in the macro item details area.</li> </ul> </li> </ul>	

Item	Topic	Notes	Action/Due
		<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ The External usage check box is used to use this typical loop with other external applications</li> </ul> </li> <li>○ The created macro is now part of the macro folder in the reference explorer.                             <ul style="list-style-type: none"> <li>▪ Highlight the macro name – right click – action – batch macro creation.</li> <li>▪ In the batch macro creation window, define the number range for these loops and tags.</li> <li>▪ Examples: 9000-9010,9012-9014,9016,9018. The dash (-) means create the numbers in sequence, and the comma (,) means create the numbers as specified.</li> </ul> </li> </ul> </li> <li>• Creating Project Loops using the Assigned Macro                             <ul style="list-style-type: none"> <li>○ The Properties command allows the SPI user to define addition loop and tag data such as Suffix, loop and tag index data.</li> <li>○ The macro property can be exported and imported as XML files.                                     <ul style="list-style-type: none"> <li>▪ Please note that the XML file truncates data that is longer than 200.</li> </ul> </li> <li>○ The Run command will execute the creation of the project loops and tags</li> </ul> </li> <li>• Typical Browser Data vs. Macro Item Gen. Property                             <ul style="list-style-type: none"> <li>○ Any typical data that is defined in the macro item general property window will overwrite “supersedes” typical data defined in the browser and/or the loop or tag property window.</li> </ul> </li> <li>• Typical Loop and Tag Issues                             <ul style="list-style-type: none"> <li>○ Multiple places (property windows, browsers, and macro item general properties) to populate typical loop and tag information such as Status, remarks, etc.</li> <li>○ Cannot define Fieldbus, Hart, and Profibus information such as Function Blocks, Device Revision, Analog Signal Parameters, Voltage, etc to a typical Fieldbus, Hart, and Profibus tag.</li> <li>○ There are other issues that are reports by the users and fixed in SP3 and Hot Fixes and SP4 and Hot Fixes. Please refer to the Intergraph Knowledgebase Website.</li> </ul> </li> </ul> <p>Question: How is Instrument Type handled with macro expansion?                      Answer: The general properties window Supersedes the Profile, but I/O Type can be done with the Item Type.</p> <p>Question: Will this feature be available in older versions of SPI?                      Answer: Changes are not retroactive updatable.</p> <p>Question: Service descriptions window for Loop properties?                      Answer: If setting up typical loop, The description is grayed out in Loop Property window.</p>	



Item	Topic	Notes	Action/Due
9	Forum Topics	<ul style="list-style-type: none"> <li>• SPI CR Ranking Website <ul style="list-style-type: none"> <li>○ Brief review by Dennis Cooley on changes in the website. <ul style="list-style-type: none"> <li>▪ Sections for all SmartPant Products</li> <li>▪ New Publicized top 5, # of ideas implemented</li> <li>▪ Pictures can now be loaded onto the site.</li> <li>▪ Suggested: Have a "work around" as well as a "comments area"</li> <li>▪ Wish List section is NOW available.</li> </ul> </li> <li>○ John Dressel will push the LTUF wish list developed in the May meeting into the CR Wish list section.</li> </ul> </li> <li>• We LTUF members should Submit More CRs thru the Site, to upgrade the priority.</li> <li>• SPI 2009 SP4 Upgrade <ul style="list-style-type: none"> <li>○ Upgrade Tool has also been enhanced</li> <li>○ Issue seen with Saving Custom changes and Layouts for Panel Strip Reports</li> <li>○ Right Click on tabs to restore classic menu bar (undocumented.)</li> </ul> </li> <li>• SmartPlant Foundation <ul style="list-style-type: none"> <li>○ Only 3 or 4 EPC companies are starting to integrate toward SPF in projects</li> <li>○ Intergraph is responsive to fixing SPF issues/needs ... but we need to start using it and reporting integration challenges.</li> <li>○ Some Owner Operators are considering moving all P&amp;IDs into SmartPlant P&amp;ID to use more data warehousing, as well as SPEL, and with all that goes the SPF, to help with documentation, etc.</li> </ul> </li> <li>• Other SPI Topics <ul style="list-style-type: none"> <li>○ Noted that a couple work orders have been solved at local Houston Intergraph level. This may be indication of improved local the Intergraph support.</li> <li>○ We need to invite the local Intergraph support members them to these LTUF Meetings.</li> <li>○ INVIEW (INVUE?) problems identified as incomplete transfer or poor specs.</li> </ul> </li> <li>• Owner Operator Mode: <ul style="list-style-type: none"> <li>○ DCS Interface transfer only works with As Built Owner Operator Mode.</li> <li>○ Publishing back to the system not possible in past.</li> <li>○ XML may only work in the Owner Operator mode.</li> <li>○ Interfaces still require a license fee.</li> </ul> </li> </ul> <p>SPI2009 SP2 changed the INtools_backup.db file is available on the Intergraph support website, Original file might have been corrupted.</p>	
10	Close	<ul style="list-style-type: none"> <li>• Next Meeting - November 13, 2012 at CB&amp;I</li> <li>• John Dressel closed meeting</li> </ul>	