

<b>SmartPlant Instrumentation Technical User Forum P2C2 (Houston SPI TUF) Meeting</b>	November 13, 2012 8:00 am Hosted by CB&I Engineering
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<b>Attendees</b>	34 Members in attendance 8 Online Connections	<b>Copied To</b>	Houston SPI LTUF Website
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<b>Called By</b>	John Dressel	<b>Prepared By</b>	John Dressel with notes by Betty Alexander & Andrew Kunev
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Item	Topic	Notes	Action/Due
1	Welcome to CB&I	Gene Haney, CB&I <ul style="list-style-type: none"> <li>• Gene welcomed us to CB&amp;I and gave safety and housekeeping topics</li> </ul>	
2	Chairman's Notes	<ul style="list-style-type: none"> <li>• John Dressel, Fluor</li> <li>• <b>Upcoming Events:</b>                Intergraph PP&amp;M IUSA 2012 Regional Users Conference,                Thursday, November 15, 2012                Marriott Westchase in Houston, Texas  <a href="http://www.intergraphusersconference.com/2012/USA/">http://www.intergraphusersconference.com/2012/USA/</a>                 Intergraph SmartPlant Instrumentation Webinar                Wednesday, November 28, 2012  <a href="http://www.intergraph.com/ppm/webinars.aspx">http://www.intergraph.com/ppm/webinars.aspx</a> </li> <li>• <b>Comments</b>                Engineering is changing into more of a data centric environment requiring more collaboration between the disciplines and working with vendors to integrate data. On most projects the engineering is now a con-current work process. Consistent data transfer between engineers, vendors and other disciplines is a necessity. Today we will look at data integration across the supply chain.</li> <li>• <b>Introduction of all attendees</b></li> <li>• <b>Approval of Minutes of last meeting</b></li> </ul>	
3	Presentation	<b>Revision Management in SPI Spec Sheets</b> Gene Haney, CB&I <ul style="list-style-type: none"> <li>• Objective: Meet corporate/project requirement to identify any changes to the specification data since the last issued revision of the datasheet.</li> <li>• Review of the Methods of Managing Change in the Specification Module:               <ul style="list-style-type: none"> <li>- "Compare to Revision"</li> <li>- "Mark Changes"</li> <li>- Spec Binder</li> <li>- "f_changevalue" Function</li> </ul> </li> <li>• "Compare to Revision" Feature:               <ul style="list-style-type: none"> <li>- Must be executed on a tag-by-tag basis, no bulk execution. X</li> <li>- Creates a comparison report for each tag.+</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>- Changed values are highlighted on the screen.+</li> <li>- Changed values are not highlighted in the printed version. X</li> <li>• “Mark Changes” Feature: <ul style="list-style-type: none"> <li>- The “Mark Changes” selection, once set, remains active during the user’s session. Therefore any bulk printing or saving to PDFs will have the changes highlighted. +</li> <li>- Changes will be identified based on a defined window of time, not since the last revision. Example: Changes from January 1, 2012 through June 7, 2012. X</li> </ul> </li> <li>• Spec Binder: <ul style="list-style-type: none"> <li>- Spec Binder Module handles the Management of Change issue very well but is not an acceptable approach to handling datasheets for detailed design since the individual datasheets are deliverables.</li> </ul> </li> <li>• The “f_changevalue” Function is described in the “SPI Basic Engineering User’s Guide”.</li> <li>• The f_changevalue function, when included in the spec page PSR file, displays the current revision when the data field it references has been changed since the previous revision. <ul style="list-style-type: none"> <li>- Step 1 - Requires that a column be added to every line on every datasheet.</li> <li>- Step 2 - Add a computed field using the f_changevalue. Cmpnt_id, rev_id, dwg_id are required. <b>f_changevalue(Cmpnt_id, rev_id, dwg_id,"FIELD")</b></li> <li>- Step 3: The f_changevalue function will only process one data field. When there is more than one field in the row additional computed fields have to be created. Stack these directly on top of each other.</li> </ul> </li> <li>• The f_changevalue function successfully populates the changes that are included in the current revision.</li> <li>•</li> <li>• “f_changevalue” Function: <ul style="list-style-type: none"> <li>- Works with all batch printing or saving datasheets as PDF files. +</li> <li>- Requires significant processing time; depending upon the size of the CHANGE_LOG table. X</li> <li>- Function is always ‘active’ and therefore will require processing time to open the datasheet. Created hidden fields to toggle function fields off. X</li> <li>- The resulting ‘look’ is consistent with industry standards and met project expectations. +</li> </ul> </li> <li>• Common Problem: “False Positives” <ul style="list-style-type: none"> <li>- Any time data is changed and then reversed the activity will be reported as changed.</li> <li>- Example: User changes value from “0” to “1” and then back to “0”.</li> </ul> </li> <li>• Which method best suits the need? <ul style="list-style-type: none"> <li>- X “Compare to Revision”</li> <li>- ? “Mark Changes”</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>- X Spec Binder</li> <li>- X "f_changevalue" Function</li> <li>• Project asked for and obtained an exemption from the requirement.</li> </ul>	
4	Presentation	<p><b>Saving Custom Changes in SPI ESL</b> Nezar Faitouri, Mangan</p> <ul style="list-style-type: none"> <li>• Nezar gave a demonstration of different methods of saving custom changes in Enhanced SmartLoops</li> </ul>	
5	Presentation	<p><b>Integration of SPI Data in the Supply Chain</b> John Dressel, Fluor</p> <ul style="list-style-type: none"> <li>• SmartPlant Instrumentation (SPI) has more Vendor interfaces to than any other Process Controls Engineering Automation tool</li> <li>• <b>How interfaces work in a Perfect World</b> <ul style="list-style-type: none"> <li>○ SPI Spec Sheet Generation for Sizing and Selection Control Valves</li> <li>○ SPI Spec Sheet Generation for Sizing and Selection of instruments</li> <li>○ SPI Interfaces for Control System wiring I/O</li> <li>○ SPI Interfaces for DCS Configuration</li> <li>○ SPI Interfaces for Plant Maintenance and Operation</li> </ul> </li> <li>• <b>How interfaces work in the Real World</b> <ul style="list-style-type: none"> <li>○ Using SPI in As-Built, work-sharing, multi-contractor environment</li> <li>○ Issues with the SmartPlant Instrumentation Interfaces</li> <li>○ Problems with Underutilization of SPI interfaces</li> </ul> </li> <li>• <b>What can be improved with SPI interfaces and integration</b> <ul style="list-style-type: none"> <li>○ How to manage integration, exchange, and hand-over of Data throughout the Vendor Supply Chain</li> <li>○ Standardize on minimum Specs and data sets for interoperability</li> <li>○ Utilization of NE 100 and ISO 15926 Standards for data interoperability</li> </ul> </li> <li>• <b>SPI Interfaces in a Perfect World</b></li> <li>• <b>HOW SPI INTERFACE WORK PROCESSES SHOULD WORK FOR CONTROL VALVES</b> <ul style="list-style-type: none"> <li>○ Build Control Valve Instrument Tags and input process sizing and selection data in SPI using automation functions</li> <li>○ Create Control Valve Datasheets in SPI</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>▪ Export to Vendor Sizing and Selection Software</li> <li>▪ Use SPI or Vendor valve sizing calculations</li> <li>▪ Use Vendor valve selection software</li> <li>▪ Import Manufacturer and Model Numbers into SPI From Vendor Selection Software</li> <li>▪ Export Dimensional Data to SP3D for model</li> <li>▪ Issue Purchase Orders and Construction Hookup documents from SPI</li> </ul> <ul style="list-style-type: none"> <li>• HOW SPI INTERFACE WORK PROCESSES SHOULD WORK FOR INSTRUMENTS               <ul style="list-style-type: none"> <li>○ Build Instrument Tags and input process sizing and selection data in SPI using automation functions</li> <li>○ Create Control Valve Datasheets in SPI                   <ul style="list-style-type: none"> <li>▪ Export to Vendor Sizing and Selection Software</li> <li>▪ Use Vendor sizing and selection of instruments</li> <li>▪ Import Manufacturer and Model Numbers into SPI From Vendor Selection Software</li> <li>▪ Export Inline Instrument Dimensional Data to SP3D for model</li> <li>▪ Issue Purchase Orders and Construction Hookup documents from SPI</li> </ul> </li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• HOW SPI DCS INTERFACE WORK PROCESSES SHOULD WORK               <ul style="list-style-type: none"> <li>○ Create Field Wiring Network with I/O Loading in SPI by EPC                   <ul style="list-style-type: none"> <li>▪ Import SPI I/O Card Library for DCS</li> <li>▪ Connect devices and cables in SPI using the SPI Wiring Explorer and Modules</li> </ul> </li> <li>○ Export SPI DCS I/O data to DCS Vendor Configuration Programs</li> <li>○ Operation and Maintenance Owner Operator Functions                   <ul style="list-style-type: none"> <li>▪ Use DCS Configuration software and SPI Wiring data to Configure and Maintain Process Control System</li> </ul> </li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• <b>How Interfaces work the Real World</b></li> </ul> <ul style="list-style-type: none"> <li>• Issues with the SmartPlant Instrumentation side of the Interfaces               <ul style="list-style-type: none"> <li>○ Issues when using SPI in As-Built, work-sharing or multi-contractor environment</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>▪ The SPI Database is often remote with limited access via Terminal Services adding complexity to the use of interfaces – <i>(requires a neutral file for passing data)</i></li> <li>▪ Inconsistency of capabilities of different pillars on a work share project affects the quality of data passed through the Interfaces – <i>(requires project wide standards)</i></li> <li>○ Additional cost for Interface licensing results in limited usage of the interfaces <ul style="list-style-type: none"> <li>▪ <i>User community is working with Intergraph and the vendors to include the interfaces in the standard licenses together with other add-on features</i></li> </ul> </li> <li>○ SPI requires that the SmartPlant Foundation Integrator be loaded for the DCS Interface to work – even when only needing to download the I/O libraries <ul style="list-style-type: none"> <li>▪ <i>User community has asked Intergraph separate the I/O libraries from the Interfaces</i></li> </ul> </li> <li>○ Multiple Process Cases do not export properly from SPI to the sizing interfaces <ul style="list-style-type: none"> <li>▪ <i>Intergraph is working on a solution to the export problem (May be a moot issue)</i></li> </ul> </li> <li>○ Use of vendor specific SPI spec forms limits early engineering data development <ul style="list-style-type: none"> <li>▪ <i>Utilization of standard SPI Spec Libraries based on ISA S20 Specifications</i></li> </ul> </li> <li>● Problems with Underutilization of SPI interfaces <ul style="list-style-type: none"> <li>○ Cost of license keys for interfaces limits availability <ul style="list-style-type: none"> <li>▪ Reduce or remove the required special license key for all DCS interfaces and make the Interfaces part of the standard add-ons for all licenses</li> </ul> </li> <li>○ Different I/O Data requirements from different Vendors makes interface too complex <ul style="list-style-type: none"> <li>▪ Develop a standard DCS data exchange library that will work across multiple DCS Vendors to import and export SPI data</li> </ul> </li> <li>○ The I/O Card Library used by EPC and DCS Configuration, Ranges and Set Points used by Owner Operators are part of the same interface <ul style="list-style-type: none"> <li>▪ The I/O Card Library import needs to be separated from the DCS Interface</li> </ul> </li> <li>○ Lack of trained SPI and Vendor Users results in Manual or Paper transfer of data</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>▪ Standardize the interfaces and data transfer so interfaces work the same from vendor to vendor makes user training simpler</li> </ul> </li> <li>○ The magnitude of data fields on Spec forms are confusing use more man hours to properly populate Specs.               <ul style="list-style-type: none"> <li>▪ Indicate Interface Required fields on the Standard SPI Spec forms</li> </ul> </li> </ul> </li> <li>• <b>Emerging Technology &amp; Vendor Interfaces</b></li> <li>• Most Projects today use a combination of Conventional, Bus wiring and Wireless Instrument types and technologies selected for best fit to project and system requirements</li> <li>• Finding the right balance between system requirements and applied technology are day-to-day choices facing engineers working in both large and small engineering companies</li> <li>• Electronic Vendor data integration is becoming a factor in the Vendor selection process</li> <li>• <b>Improving the SPI Vendor Interfaces</b></li> <li>• The Vendor Interfaces are unique for each product line with separate user interfaces and integration mechanisms. As the interfaces mature they will assume a more standardized look and feel as well as a unified integration method</li> <li>• The Intergraph SmartPlant Foundation integration component of SmartPlant Enterprise will allow supplier data to be integrated with any of the SmartPlant Suite of Software using adapters</li> <li>• The Interfaces will be based on one or more international standards to facilitate Global Implementation across multiple business sectors</li> <li>• The use of third party data integration tools and cloud based vendor catalogs will standardize vendor data resources</li> <li>• <b>Improving the SPI Vendor Spec Sheets</b></li> <li>• Demands on SPI Spec Sheets           <ul style="list-style-type: none"> <li>○ Sizing Data Requirement               <ul style="list-style-type: none"> <li>▪ Process Data and Ratings</li> </ul> </li> <li>○ Instrument Selection Data               <ul style="list-style-type: none"> <li>▪ Materials and Design conditions</li> </ul> </li> <li>○ Optional Accessories               <ul style="list-style-type: none"> <li>▪ For catalog number resolution</li> </ul> </li> <li>○ Related Components               <ul style="list-style-type: none"> <li>▪ Positioners, etc...</li> </ul> </li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>○ Manufacture &amp; Model <ul style="list-style-type: none"> <li>▪ Catalog Number</li> </ul> </li> <li>○ Vendor Specific Specifications</li> <li>● Future SPI Specification Libraries <ul style="list-style-type: none"> <li>○ Standardized across vendors</li> <li>○ Specs Simplified for purpose</li> <li>○ Minimal Required Data indicated</li> </ul> </li> <li>● <b>Improving the SPI Interface Standards</b></li> <li>● The Process Engineering communities need to further coordinate efforts in areas critical to lifecycle information Interface and Integration</li> <li>● Companies like Emerson, Fluor, Bechtel and Intergraph are working together to utilize international data interface standards for interoperability</li> <li>● Data Interface and Integration STANDARDS WARS: <ul style="list-style-type: none"> <li>○ NAMUR / ProlistNE-100 Interface Data Definition Interface Standard for engineering processes to build and maintain chemical plants <ul style="list-style-type: none"> <li>▪ XML Interface Data Definition Interface Standard</li> <li>▪ NE-100 for engineering processes to build and maintain chemical plants using Lists of Properties (LOP) for data exchange</li> <li>▪ NE-100 Version 3.1 (2009) contained 105 LOP for: <ul style="list-style-type: none"> <li>▪ Measuring instruments (51)</li> <li>▪ Interface Devices (37)</li> <li>▪ Actuators (19)</li> <li>▪ In preparation: I/Os for DCS/PLC</li> </ul> </li> </ul> </li> </ul> </li> <li>● ISO 15926 is a Cross Product Data Mapping Integration Standard for data exchange developments in the oil and gas industries <ul style="list-style-type: none"> <li>○ Cross Product Data Mapping Integration Standard</li> <li>○ ISO 15926 is the basis for many developments in oil and gas data exchange</li> <li>○ Part 1 - Introduction, information concerning engineering, construction and operation of production facilities is created, used and modified by many different organizations throughout a facility's lifetime. The purpose of ISO 15926 is to facilitate integration of data to support the lifecycle activities and processes of production facilities.</li> <li>○ Part 2 - Data Model. a generic 4D model that can support all disciplines, supply chain company types and life cycle stages, regarding information about functional requirements, physical solutions, types of</li> </ul> </li> </ul>	

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		<p>objects and individual objects as well as activities.</p> <ul style="list-style-type: none"> <li>○ Parts 4,5,6 - Reference Data, the terms used within facilities for the process industry.</li> <li>○ Part 7 - Implementation methods for the integration of distributed systems, defining an implementation architecture that is based on the W3C Recommendations for the Semantic Web.</li> </ul> <ul style="list-style-type: none"> <li>● SmartPlant Foundation is the information management and integration component of SmartPlant Enterprise. The underlying SmartPlant Foundation and SmartPlant Instrumentation data model has shared a common basis with ISO 15926 Part 2.</li> </ul>	
6	Presentation	<p><b>Endress+Hauser Wireless Sensor Networks</b> Jon Eide, Endress+Hauser</p> <ul style="list-style-type: none"> <li>● Wireless is used in process automation in many ways</li> <li>● Open standards are essential for a broad acceptance</li> <li>● IEC62591(WirelessHART) Network standards apply to: <ul style="list-style-type: none"> <li>○ WirelessHART Fieldgates</li> <li>○ WirelessHART Adapters</li> <li>○ Any HART or 4-20 mA field device</li> </ul> </li> <li>● WirelessHART network is ideal for process automation <ul style="list-style-type: none"> <li>○ No expert knowledge required to setup the network</li> <li>○ Mesh technology: self-organizing and self-healing (easy-to-deploy)</li> <li>○ Range from antenna to antenna up to 250 m</li> <li>○ Data encryption for privacy and authentication</li> <li>○ Highest energy efficiency by using state-of-the-art communication technology</li> <li>○ License-free 2.4 GHz with frequency hopping for coexistence w/ WLAN, etc.</li> </ul> </li> <li>● WirelessHART is an evolutionary step <ul style="list-style-type: none"> <li>○ Based on HART and thus it is straight forward to use</li> <li>○ Facilitates the rich diagnose information of HART</li> <li>○ Is fully compatible with all HART field devices and all HART host systems</li> <li>○ HART is the most frequently installed field protocol with more than 25 million installed devices</li> </ul> </li> <li>● Endress+Hauser's portfolio consists of 3 components <ul style="list-style-type: none"> <li>○ WirelessHART Fieldgate</li> <li>○ WirelessHART Adapter</li> <li>○ DTM/DD/OPC</li> </ul> </li> </ul>	



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		<ul style="list-style-type: none"> <li>• All components are based on IEC62591 (WirelessHART) to ensure interoperability</li>   <li>• All HART devices can be connected to adapters <ul style="list-style-type: none"> <li>○ Wired interface of adapter talks HART and measures 4-20 mA.</li> <li>○ Adapter fits to ALL HART and 4-20 mA devices</li> </ul> </li>   <li>• WirelessHART networks are secure <ul style="list-style-type: none"> <li>○ All data are encrypted using the currently best algorithms</li> <li>○ AES128 officially validated by NIST for privacy <ul style="list-style-type: none"> <li>▪ Advanced Encryption Standard with 128-bit keys, protection against eavesdropping</li> </ul> </li> <li>○ CCM mode for authentication <ul style="list-style-type: none"> <li>▪ Mode describing the packaging of the message, protection against tampering, forgery</li> </ul> </li> </ul> </li>   <li>• Batteryless Adapter SWA70, mid-2013 <ul style="list-style-type: none"> <li>○ Power is available in many places, e.g. for lights, and can be used at low costs</li> <li>○ WirelessHART Adapter with Power Supply <ul style="list-style-type: none"> <li>▪ Solar module incl. panel and battery for the night</li> <li>▪ Mains input of 24-230 VAC &amp; DC, 50/60 Hz</li> <li>▪ Intrinsically safe power supplies</li> <li>▪ All supplies include a backup battery for 1-hour wireless operation</li> </ul> </li> <li>○ Advantage no battery logistics <ul style="list-style-type: none"> <li>▪ Reduces OPEX</li> <li>▪ Reduces project costs, no battery logistics</li> </ul> </li> </ul> </li>   <li>• W@M (Wireless Asset Management) Structure <ul style="list-style-type: none"> <li>○ Many different databases (Engineering data, spare parts, certificates, records etc)</li> <li>○ Connected via 1 central database (Common equipment record)</li> <li>○ Available via SAP NetWeaver®</li> </ul> </li>   <li>• W@M provides direct access to ALL Asset information <ul style="list-style-type: none"> <li>○ Existing on-site tools can access these databases via dynamic hyperlinks or Web Services</li> </ul> </li>   <li>• Asset Integration to W@M through FDT <ul style="list-style-type: none"> <li>○ Create Full Comparison of Historical Configuration Report</li> </ul> </li> </ul>	

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7	Presentation	<p><b>ThomasNet Dynamic Product Content for SmartPlant</b> John Dang, Thomas Industrial Network</p> <ul style="list-style-type: none"> <li>• Agenda <ul style="list-style-type: none"> <li>○ Our Business... Then and Now !</li> <li>○ Data Centric Approach – Navigator</li> <li>○ Intergraph &amp; ThomasNet: A Content Partnership</li> <li>○ Fiotech: Expediting Equipment &amp; Material Selection and Acquisition (EMSA) project</li> <li>○ Strategy to Engage Suppliers</li> </ul> </li> <li>• Thomas Register: The Green Book Company <ul style="list-style-type: none"> <li>○ Thomas Publishing evolved our strategy by developing data management, webCAD and online publishing technologies</li> <li>○ Thomas Industrial Network now provides: <ul style="list-style-type: none"> <li>▪ Development &amp; hosting services for eCatalogs, websites, CAD templates, drawings, etc.</li> <li>▪ Distributor data syndication services</li> <li>▪ Application syndication services</li> </ul> </li> <li>○ Thousands of suppliers are now on the Thomas Navigator platform, hundreds of thousands on ThomasNet.com</li> </ul> </li> <li>• Thomas Industrial Network Today <ul style="list-style-type: none"> <li>○ Media Solutions: Industrial Directory – Brand Search – Product Search – Product News – Industrial News Letters</li> <li>○ Web Solutions: Websites – eCatalog – Product Search &amp; Configuration - eCommerce – WebCAD – Content Management</li> <li>○ Enterprise Solutions: PIM Solutions-Distributor Syndication – Enterprise Syndication – Business Systems Integration</li> </ul> </li> <li>• Digital Evolution: Digital Product Data <ul style="list-style-type: none"> <li>○ Make it easier to find product suppliers online</li> <li>○ Build multipurpose content sets</li> <li>○ Shift away from static data and documents to interoperable data</li> <li>○ Integrate attribute, dimensional and standards data</li> </ul> </li> <li>• Process Industry Product Data Challenges <ul style="list-style-type: none"> <li>○ Tremendous time and effort to research and validate supplier product data to design specifications</li> <li>○ Limited dimensional data available from suppliers / time consuming to retrieve or re-</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>○ create</li> <li>○ Data is static (PDF brochures/Catalogs, Images are not interoperable with design/engineering tools)</li> <li>○ Data entry effort and errors when rekeying product data into engineering and procurement systems</li> <li>○ Product data not certified by suppliers/distributors; uncertainty of accuracy of information</li> <li>○ Continuing product data maintenance issues</li> <li>○ Difficult to compare products across suppliers</li> <li>● Product Knowledge Opportunities <ul style="list-style-type: none"> <li>○ Standardized content from design through operation</li> <li>○ Improve product knowledge and expedite selection</li> <li>○ Utilize a common set of data across supply chain: O/O to EPC-Supplier-Manufacturer</li> <li>○ Shorten project lifecycle design / engineering / procurement / construction implementation timelines</li> <li>○ Better allocation of limited engineering resources</li> <li>○ Interoperable via data schemas and standards platforms</li> </ul> </li> <li>● <b>Navigator: "A Single Source of Truth"</b></li> <li>● Navigator Platform Capabilities: <ul style="list-style-type: none"> <li>○ Host eCommerce</li> <li>○ Convert standard product data into online searchable content</li> <li>○ Configurable Products Capabilities</li> <li>○ Product Matching</li> <li>○ Cut Sheets/Sales Drawings</li> <li>○ Online access to all documentation (DOL)</li> <li>○ Import 3D CAD Models including SmartPlant 3D</li> </ul> </li> <li>● Intergraph &amp; ThomasNet: SmartPlant Technology Partner <ul style="list-style-type: none"> <li>○ Certified Intergraph partner, trained on SP3D materials data creation</li> <li>○ Trained in Huntsville by Intergraph</li> <li>○ Custom training program at Thomas' data creation facility</li> <li>○ Member of Intergraph Dev. team for symbol creation</li> <li>○ Intergraph's Challenge: Attaining manufacturer product content and build parametric data libraries of industrial components</li> </ul> </li> </ul>	

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		<ul style="list-style-type: none"> <li>○ Thomas' Navigator and WebCAD technology selected to provide data conversion capabilities to Intergraph SmartPlant 3D users</li> <li>○ Continuing engagements with EPC's and Owner/Operators to identify "Preferred" product vendors.</li> <li>● Example: Endress and Hauser Data syndicated to SP3D <ul style="list-style-type: none"> <li>○ Product Data Verified by the Supplier</li> <li>○ Effective and efficient verification</li> <li>○ Simplifies review of highly detailed and complex data</li> <li>○ Used for data updates/maintenance</li> <li>○ Centralized Product Data Exchange</li> </ul> </li> <li>●</li> <li>● Building Industry Partnerships <ul style="list-style-type: none"> <li>○ FIATECH - Expediting Equipment &amp; Material Selection and Acquisition (EMSA) project</li> <li>○ Purpose: Streamline the identification, evaluation, selection, and procurement of commonly used materials and equipment on capital projects through data-centric, web enabled eCataloging.</li> <li>○ In addition, this project incorporates provisions for interoperability compliance to a variety of standards (ISO-15926, PIP, HI, PIDX, AEX, etc.) and broad range 3D model compatibility support</li> <li>○ FIATECH's EMSA on Navigator</li> <li>○ Use case with Global Valve Cross-Reference eCatalog (GVCC) to create standards / attribute based product selection process</li> <li>○ Leveraging Process Industry Practices (PIP.org) for valve definitions</li> <li>○ Comparison feature built-in</li> <li>○ Public/Private Access limited to Approved Manufacturers Lists (AML's)</li> <li>○ eCataloging Roadmap - Categories of Commonly Used Equipment &amp; Materials <ul style="list-style-type: none"> <li>▪ Valves</li> <li>▪ Actuators</li> <li>▪ Instrumentation</li> <li>▪ Pumps</li> <li>▪ Motors</li> <li>▪ Heat Exchangers</li> <li>▪ Pipes</li> </ul> </li> </ul> </li> <li>● Benefits and Value Proposition: Suppliers <ul style="list-style-type: none"> <li>○ Make it easier for your customers to work with you</li> <li>○ Help EPCs / Owners spend less time and effort</li> </ul> </li> </ul>	

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		<p>searching for product data</p> <ul style="list-style-type: none"> <li>○ Deliver a service differentiator and build brand loyalty / recognition</li> <li>○ Complete product data expedites selection process</li> <li>○ EPC/Owners want to specify specific products earlier in project lifecycle</li> <li>○ Offer “on-demand” automated 3D CAD Models, Sales Drawings, Cut Sheets, Certified Drawings</li> <li>○ Improve sales process and response times to RFI/RFQ/RFPs</li> <li>○ Leverage Dynamic Digital Product Data as a marketing opportunity for customer outreach and lead generation</li> <li>○ Address needs of modern Engineering / Procurement tools</li> <li>○ Product Data today needs to be interactive &amp; interoperable</li> <li>○ Product Data is carried through to Maintenance, Repair , Operations (MRO)</li> <li>○ Effectively manage and maintain product data with a single source of truth (Navigator).</li> <li>○ Eliminate concerns/issues with accuracy and certification of product data</li> <li>○ Be a leader of change and capitalize on a lagging industry</li> <li>○ Gain a competitive advantage on your competitors</li> <li>○ Most are still delivering static PDF Catalogs, documents, spreadsheets that requires data-entry/re-input</li> <li>○ ThomasNet understands connecting Suppliers to Buyers</li> <li>○ We understand manufacturing and the importance of digital data</li> <li>○ We’ve been doing this for over 114 years with a network of 700,000 companies in manufacturing and distribution</li> <li>○ The Navigator Platform has been proven with thousands of customers</li> <li>○ Leverage our partnerships with leading industry organizations and technology firms (Intergraph, Fiotech, Ariba, PIP)</li> </ul> <ul style="list-style-type: none"> <li>● Supplier Engagement Program <ul style="list-style-type: none"> <li>○ Can be project led or for corporate-wide</li> <li>○ Attain unified support for manufacturer outreach to attain data</li> <li>○ Incorporate “Deliverable Requirement” for RFQ / RFP</li> </ul> </li> </ul>	

Item	Topic	Notes	Action/Due
		<ul style="list-style-type: none"> <li>○ Identify list of key manufacturers and categories</li> <li>○ Conduct informational seminar or webinar sessions</li> <li>○ Individual follow up meetings with manufacturers</li> <li>● ThomasNet has resources to assist: <ul style="list-style-type: none"> <li>○ Coordination and development of seminar / webinar</li> <li>○ Discovery / Scope definition with manufacturers</li> <li>○ Project manage the production / execution of data creation</li> </ul> </li> </ul>	
8	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> </ul>	
9	Close	<ul style="list-style-type: none"> <li>● Next Meeting – February 14, 2012 at Foster Wheeler</li> <li>● John Dressel closed meeting</li> </ul>	