

SmartPlant Instrumentation Technical User Forum P2C2 (Houston SPI TUF) Meeting		May 14, 2013 8:00 am Hosted by Fluor Engineering
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Attendees	41 Members in attendance 12 Online Connections	Copied To	Houston SPI LTUF Website
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Called By	John Dressel	Prepared By	Betty Alexander
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Item	Topic	Notes	Action/Due
1	Welcome to Fluor	<ul style="list-style-type: none"> • Fluor Safety Topic Ron Jackson, Fluor (Lawn Safety = Yard mechanisms & maintenance & Children). • Welcome to Fluor Pamela Caro, Fluor (new Fluor Manager Control System) <ul style="list-style-type: none"> ○ Thanks to the LTUF community for your contributions to SPI development 	
2	Chairman's Notes	<ul style="list-style-type: none"> • John Dressel, Fluor <p><u>Upcoming Events by John Dressel:</u></p> <ul style="list-style-type: none"> • PPM Global TUF in Las Vegas, June 2 at the MGM • HxGN (Hexagon 2013) being held in Las Vegas, June 3-6 at the MGM <p>There will be hands on and instructor lead training on the new user interface.</p> <p><u>Minutes from prior meeting were approved.</u></p> <p><u>Introductions were done.</u></p> <ul style="list-style-type: none"> • Personnel from Fluor, Intergraph, Jacobs, Mustang, KBR, CB&I WP, ExxonMobil, Amec ,Technip, Endres+Hauser, Shaw, Emerson, Dow, EngrSys, Foster Wheeler, Mangan • Remote personnel from Lubrizol, Jacobs, Chevron, Bayer, General Electric 	
3	Presentation	<p><u>SmartPlant Enterprise Vision - Frank Joop, Intergraph</u></p> <ol style="list-style-type: none"> 1. Intergraph wants to make Us successful. 2. Changing Project Execution ... New Workflows – Start with the Deliverable/Task & focus on Accelerating work, realizing multiple Input-Players 3. Lower Cost of Ownership. (Lower Budget-Burden) 4. Innovation (TUF input valued as different/outside-the-box) 5. TRAINING – Continuing Education -Solution Knowledge. (E&S University=Engineering &Schematics > Regional maybe future cloud-based) 6. Task/Discipline Focus 7. Integration (SP-Partners-Suppliers) Frank acknowledged Honeywell Experion partnership. Then talked Endress & Hauser & Emerson. 8. Plant Owners ... Drive more Support to O/O. in Vegas FLUKE will have Calibrator/SPI Workshop 9. Extending the Solution Scope (D&ID = Ducting AC & Process) 10. Grow in Industry Segments (Food, Pharma, Wastewater, etc?) 	

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4	Presentation	<p>SmartPlant Instrumentation Version 2013 Guy Masin, Intergraph & SmartPlant Instrumentation Roadmap Zur Bar, Intergraph</p> <ul style="list-style-type: none"> • Integration Enhancements: • Publish/retrieve improved speed/quantity, Doc Management, Internal revisions, Mark4Deletion • Functional Enhancements: • Batch Loop Duplicate, Consolidated MultiStripRpt, Batch Spec Compare, Update ASME pipe, Import utility to Create Cables w/ complete structure using Reference Explorer Cables • Honeywell DCS bidirectional • Ability to integrate CHARM configuration • Most Users are reportedly having 2009 in house. <p>SPI V2013 This week?</p> <ul style="list-style-type: none"> ▪ Integration Enhancements – TODO List Improvements ▪ Approve Inconsistencies ▪ TODO Refresh – regenerates after Checking More Tasks (re-analyses Failures) ▪ Ability to GROUP Tasks per mutual (same) Type. {Viewable Subsets} ▪ Add Separate Access Rights to Instrument Index Supporting Tables (LTUF request!) Hierarchy capability of Access Rights(will Use Lowest privilege) ▪ Sales Pitch for 2014 release as better than ANYTHING in past! ▪ Supporting UOM Customization = Turbidity, KG/week etc CAN be used in Process Data, Calc & Spec Modules. All Existing UOM are Intergraph Stable/Fixed (Shipped UOMs are non-editable) ... New Customized are Tailor able. All this is SAVED in Watcom ... backups WILL save new UOMs. Customer has been told before that customized UOM USED-TO crash other modules. ZUR: Custom UOMs must be classified under Process Function. Conversion Factors may be problems, but integrity of the new UOM is OK. Guy: Functionality will work when upgrading to 2013 ▪ Service Pack and Hot Fix Upgrades have been ceased-practice to have CRs or database schema changes. Incentive for Users/Customers to Move UP in VERSION more than patches. ▪ Adding Wiring Connection Equipment Report PER Signal (prior problems with large strips, off Page Connectors.) >>> New Report is Shrunken Down to relevant ▪ Supporting Oracle11g – ONLY <new MSSQL will be up in 2014> ▪ Reuse Multi Strip report based on drawing name (now not need Filter) ▪ Rename/Duplicate tag option should not require selecting type. Mangan/Nezar suggests check-box for duplicating should have previously solved this. Now Duplicate comes from Instrument Source ▪ Add revision description to delivered index browse title block (previously on Rev#) ▪ Thermowell Calc Update ▪ Make User Preferences PER Domain ▪ Ability to View/Print reports when Process Data Status = 	

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		<p>Locked out of Process. WorkFlow Issue from TUF. >CRs DO Work.<</p> <ul style="list-style-type: none"> ▪ Multi-Input Device ,, FFB wiring 848L ... Cable has CS Tag, must be removed to have propagation (Conventional instr attached to a Multi-input device) Existing TR ... Must be reviewed again Intergraph ▪ 2013 Reliability question by Audience. Zur says 2009 to 2013 upgrade is Simple, Tested, Well Secure/Stable. 2009SP2 to 2013 in one shot (prior SPI Versions up to SPI2009SP2 1st) To support Oracle – Was Major Platform Change (2013 is equal to 2009SP5) Infomaker? Oracle10/Oracle11 tentative query. Intergraph Shipping SPI2013 CDs NOW. <p>SPI V2014 Schedule Q2-Q3 2014</p> <ul style="list-style-type: none"> ○ Many Overhauls ... Start Integration (Beta Testing in Sept) ○ Improve READABILITY of Info retrieved. ○ Enhanced ToDo List Design ... Flat File Look of Engineering View. ○ Existing ToDo List is rough, minimal info ... hard to follow per Task. Now Improved USE from customer comments. One Row of Instr, line, piping code, etc on ONE line much more Understandable. Tricky is how to indicate Update, Change, etc in the New Grid. (similar to Excel) ... Now the Grid is to be Customizable based on Related Mapped Properties (and even Unmapped Design Based Info – drag-n-drop from interface. Info Segregated (keeps Sources as separate Tabs – example P&ID vs. DCS) Access Rights will be finely defined. IMPROVED Engineering Checking Point. Hyperlink to external documents (like P&ID) Using RAD Viewer. ○ Summary 3 Views: FLAT VIEW Tasks ToDo List, TREE VIEW Interfaces (DCS!), Old TASK VIEW – keeps old options in new environment. ○ More Customers are integrating now than in past years ○ Control Logic Diagrams (previously advertized) Drag-n-Drop dumb graphics into panel & New Folder for Control Logic Diagrams. Individual Sheets & Plant objects per sheet. ○ Zur Hints to User Question @ Why Intergraph does THIS Control Logic Diagrams? Not supplementing MAC/MIC work. System Integrators requesting this from EPCs ... long-standing EMEA & APAC request ... Not yet projects in USA. <ul style="list-style-type: none"> ○ Question from J.Dressel Process Safety P&ID Cause & Effect integration? Zur – will Eventually merge to be able to derive this in SPI. THIS Control Logic Diagram direction is foundation. ○ SP QUERY (1st Milestone) Allows Query Builder to create browser immediately ... to remove InfoMaker need/use. Demo main Screen = Simple Engineering, Item properties, Browser Columns – Preview Results Floating window (Detachable from SPI Frame, resizable). Making more info available to Users. Query from Room: Behind-the-scene Table structure Cleanup. SPI data dictionary is Back-engineered and in flux. NEW Cleanup will Occur in 2014 and Not expose Users to un-necessary (like dwg type Flag) ... will Display Correct Engineering Context Terms. 	

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		<ul style="list-style-type: none"> ○ Zur would like in July/August to conduct Workshop Users to beta test training intro to this ... to be mentioned in Aug for November 12th in LTUF customer presenting Live Examples 1 in Houston, 1 in Europe. ○ Room users can give Very Good examples. Zur wants us to Upgrade Existing Queries ... without Tweeking ... to ensure Smart Query Builder is Customer Satisfied. ○ SPI Enhanced EDE Browser - Browser Filtering capability. Sorting, Grouping, Saved Views & Default. Wildcards OK. ○ Fundamentals of EDE (Browser) Editing. Example P&ID rename – Supporting Table Double Click Capability to avoid previous Restrictions of Table Hierarchy. Much More XLS – Like ... with Color-coordinated Validation (Clear to reject invalid) ○ Project As Built to be Completely Overhauled – Improved Usability <ul style="list-style-type: none"> ○ Example w/ Domain Explorer, Graphic View, Scope-Table View (ToDoList), Scope-Tree View ○ Customer Query on MAC Remote I/O vs. DCS ... Zur answers as Project AsBuilt moved from Admin to SPI to allow all SPI Services from SPI (makes loops, specs reviewable when Claiming) Keep integrity of data when scoping. Demo Instant View – no generation ... but if need LoopDwg or DataSheet can be generated by click. In 2014 Claim/Merge can be done WHILE Users are IN the SPI, Plus Scheduler ... To Be Added Workshop for LTUFs. ○ Customer Outsourced data-entry ... duplication from Exxon (like MZR did for tags parent vs. child of O/O mode) Zur innovating talk about As built start ~ Now REVISITING to Overhaul & proved NEW AsBuilt project so that ALL EXISTING Domains will be Upgradable. 	
5	Presentation	<p><u>Smarter SmartPlant Instrumentation - John Dressel, Fluor</u> {Lessons Learned} Database in General</p> <ul style="list-style-type: none"> ❖ Garbage in <> garbage out ❖ Useless Data with no Value Added ... memory and space in db schema dataset <ul style="list-style-type: none"> ○ Example N/A, "-", yes/no Flags Add data value not flags, Space instead of NULL field adds memory. ○ Worse when in table like Line Number ○ In Oracle, Null data stop the trigger relationships with Subsequent Tables in Relational DB <p>Un-needed In Database DB</p> <ul style="list-style-type: none"> ❖ Garbage in <> garbage out ❖ Useless Data with no Value Added ... memory and space in db schema dataset <ul style="list-style-type: none"> ○ Example N/A, "-", yes/no Flags Add data value not flags, Space instead of NULL field adds memory. ○ Worse when in table like Line Number ○ In Oracle, Null data stop the trigger relationships with Subsequent Tables in Relational DB ❖ Un-needed Instrument Tag Numbers <ul style="list-style-type: none"> ○ Soft Tags not needed in SPI per Fluor. SPI is a Wiring database. DCS configuration and updates reside in DCS. Example FINE @ Owner where in emergency, legacy Soft Tag info was in SPI, but 	

Item	Topic	Notes	Action/Due
		<p>only updated</p> <ul style="list-style-type: none"> ○ Implied Tags. Valves have Positioner ... No Need to have Positioner Tag. TE & TT in one Device. Non Wired Tags like PSVs ... Tags Furnished by others, or Basic Control Systems. Telecom Tags Fire & Gas ○ Keep the number of Tags in SPI to minimum <p>❖ Required Index Data.</p> <ul style="list-style-type: none"> ○ FEED Data Requirements: Simple Instrument List, Basic Process Control I/O list ○ Detailed Engineering: Index, Spec, Loops <p>Administration</p> <ul style="list-style-type: none"> ❖ Failure to Configure a project at the beginning will result in Significant Rework ❖ PAU <ul style="list-style-type: none"> ○ Basis of structure important ○ Established from Operations Ideally (not Construction) as Relevant to Lifecycle of Plant ○ Keep the number of Units to a minimum: Users work in one unit at a time, error prone from more Units ❖ Tagging Conventions <ul style="list-style-type: none"> ○ Keep Tags short and meaningful ○ Consistent with P&IDs ○ Avoid Conventions TIED to Equipment or P&ID Numbers ○ Avoid containing Asset Management Functional Location from SAP or other System Keys ○ Try to stay as Close to ISA as possible ○ Try to make Document naming Tied to Loop or Instrument Tag Numbers ○ Default Plant = Misery (do not delete, remove or rename) Use Admin Checkbox to Hide. <ul style="list-style-type: none"> ▪ Hookups reference data once put in Default, also Sandbox practice and training <p>Automation</p> <ul style="list-style-type: none"> ❖ Misuse of Automation is primary cause of Data Corruption on an SPI project ❖ Instrument Type Profiles <ul style="list-style-type: none"> ○ Keep Instrument Types to minimum ○ COMPLETE Instrument Type PROFILES Before adding Tags to Index (impossible on fast track live projects) ○ If Profiles are not Complete – Turn OFF Automation in the User Preferences (Instr Index>Activate Instr Type Profile Options) ❖ Batch Tools <ul style="list-style-type: none"> ○ Prepare Batch RULES Carefully before Launching a Batch Function ○ Validate Data before and after running Batch ○ Don't try to do too much with one function ○ Check Results of a Batch Operation to minimize unexpected results ❖ Importing & Integration <ul style="list-style-type: none"> ○ Do NOT Import NEW Tags into SPI (per Fluor). 	

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		<p>OSI & Mangum have documented steps to catch flags and minimize garbage.</p> <ul style="list-style-type: none"> ○ All Importing should ONLY be Done by a Qualified WELL Trained SPI Admin ○ Do NOT build Table data in xls or access and expect to Populate SPI (example spaces before name) ○ Integration is NOT necessarily Data Centric. SPI is Currently Only DUPLICATION of Data ... not keeping data in ONE place only <p>Instr Index</p> <ul style="list-style-type: none"> ❖ Time Wasted to produce CUSTOM Index Reports and Content as Project Deliverable <ul style="list-style-type: none"> ○ Field Operators don't need paper ❖ Instrument Index Reports <ul style="list-style-type: none"> ○ Personal Preferences are NOT needed in the report output. ❖ User Defined Index Fields <ul style="list-style-type: none"> ○ 2000 UDFs in SPI ... Mostly not needed or resides somewhere else (other table, etc.) ○ Users should NOT be able to create or rename UDFs ○ Govern Use of UDFs by ASMIN Module ❖ Support Table Content <ul style="list-style-type: none"> ○ Ex: I/O Types – Should NOT be changed ○ Description Column in some tables should NOT be used (ex: P&ID Number) <ul style="list-style-type: none"> ▪ Argument about Document number versus P&ID Number/Table ○ Key and Description should match in some Tables (Ex Location Table) Ex2= Status Field <p>Spec Sheets</p> <ul style="list-style-type: none"> ❖ Engineers put Too Much info in SPECS ❖ Specs SHOULD be Used to Size, Select & Purchase Engineered Instrument Devices ❖ Specify to “Manufactures Standard” when possible. Costly example = PAINTED Instr Devices ❖ Do Not TRY to TELL Manufacturers How to Build their Devices. ❖ Suggestions to Intergraph to allow Colors/Highlights for Spec Fields ❖ Know Difference between Model Number and Catalog Number (Cat # = danger) ❖ Spec Browsers from Data Dictionary – controls Browser & IEE. ❖ Change HEADERS in the Spec Data Dictionary to make more sense and shorten to fit browser area <p>Training</p> <ul style="list-style-type: none"> ❖ Create Specialty Users <ul style="list-style-type: none"> ○ SPI I VERY Complex ○ Many Users are VERY specific to Job Function – Train to Work Task ❖ Training and User Groups <ul style="list-style-type: none"> ○ Create Specific User Guides. 	

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		<ul style="list-style-type: none"> ○ If no Guidance – Users will attempt to Use Other Tools ○ SPI Tutorial & Online Documentation ○ Get Smart! Webinars ○ SPI Test Drive <p>Comment on phone – Soft Tags – Dual Functionality Meters. DCS controls but SPI needed to maintain. Fluor suggests Minimizing Soft Tags.</p> <p>Room Comment @ Model Numbers in the database</p> <p>Future SPI OZZYBUS? Or AussieBus (Guy says will look into) ...</p>	
6	Presentation	<p><u>Smarter SmartPlant Loop Creation Mitch Fortey, Fluor</u> Meat of PPT is Step-By-Step and will be online. Batch Loop presentation by Nezar on SPILTUF Site THIS approach – Starts with Hand-held Standard Global Convention for Typical Loop Code, Loop Name, descry, P&ID/Table, Expanded Tag Number Note: MAKE SURE INSTR TYPE PROFILES are Built. Step-By-Step: Ref Explr>Loop NumbersProperties>OverWrite Default Tag Number>TagProperties>can Duplicate or New from Reference Explorer. (Lost Something about TYPICAL in Tag Class) Demo image of Finished Typical Loop with typical Instruments Batch Macro (after Typical Loop/Instr) (missed something about Carriers?)</p> <p>Batch Macro Creation (SPI error in Length when separated by commas) Most Presenter could create were SEVEN Loops and 7 Tags Using Consecutive Order, could create 31 Loops and 31 Tags</p>	
7	Forum Topics	<p><u>FORUM:</u></p> <ul style="list-style-type: none"> • SPI CR Ranking Website • SPI Integration • SPI Version 2013 • SPI Version 2014 • Other SPI Topics 	
8	Close	<ul style="list-style-type: none"> • Hosting of next meetings <ul style="list-style-type: none"> ○ August 13 - Endress+Hauser ○ November 12 Jacobs • John Dressel closed meeting 	