SmartPlant Instrumentation Technical User Forum P2C2 (Houston SPI TUF) Meeting				**May 15, 2018 8:00 am Fluor**	
Attendees	26 Members in attendance 16 Online Connections		**Copied To**	Houston SPI LTUF Website http://www.spi-ltuf.org	
Called By	John Dressel	**Prepared By**	John Dressel		

Item	Topic	Notes	Action/Due
1	Welcome 8:00	**Welcome & Safety Moment** • Welcome & Introduction — Jim Vollmar, Fluor • Safety Moment — Emeka Nwagbara, Fluor	
2	Chairman's Notes 8:15	**Announcements and Introductions — John Dressel, Fluor** • Introductions – All attendees • HxGN LOCAL PPM User Conference Houston 2018 Houston September 20, 2018 WESTIN - MEMORIAL CITY 945 Gessner Rd. Houston, Texas 77024	
3	Presentation 8:30	**What Happens at Hexagon 2018 — John Dressel, Fluor** **11 June 2018** **PP&M ENGINEERING & DESIGN COMBINED TUF** ▪ 08:00am Opening Remarks of the Schematics and 3D-Visualization ▪ 08:10am Update on Hexagon PPM Engineering & Design Tools and Visualization Organization ▪ 08:30am Introduction to Smart Completions ▪ 08:45am Split to the E&S Combined Session and the 3D-Visualization Session **INSTRUMENTATION, ELECTRICAL & P&ID COMBINED TUF** ▪ 08:50am Opening Remarks and Introductions ▪ 09:00am Overview of E&S Tools Products ▪ 09:20am Change Request Ranking Website Update ▪ 09:40am Data-Centric Engineering ▪ 10:00am Break/Networking ▪ 10:30am Hexagon's role in Plant Digitalization ▪ 10:50am Change the Future with Web APIs ▪ 11:10am The Argo Visualization ▪ 11:30am Harmonization of the User Experience **SMARTPLANT INSTRUMENTATION GLOBAL SPI TUF** ▪ 01:00pm Opening Remarks and Introductions ▪ 01:10pm SPI Vendor Supply Chains ▪ 01:30pm Introduction to Cooleycore ▪ 01:50pm Introduction to ProLytX ▪ 02:10pm Break/Networking ▪ 02:30pm SPI 2018 Overview ▪ 03:00pm SPI Smart Form Generator ▪ 03:30pm Introduction to Mangan ▪ 03:50pm Open Q&A Session and SPI Forum ▪ 04:30pm Formal Meeting Close/Networking	

Item	Topic	Notes	Action/Due
		Tuesday June 12 (Paid Training Day) ▪ 8:00am – 9:00am - Registration ▪ 1:00pm – 2:00pm – Meet with Wisetools ▪ 2:00pm – 4:00pm – Meet with TecSurge ▪ 4:00pm – 5:00pm – Meet with Techint ▪ 5:00pm – 8:00pm - “Big Leaps” -(Ola Rollén - Key Note) & Welcome Reception **Wednesday June 13** ▪ 8:00am – 9:00am - Things Not to Miss in Project Execution Track Introduction ▪ 9:30am – 11:30am - “The Future is in Beta” Key Note (Mattias Stenberg, Hexagon PPM) ▪ 1:00pm – 2:00pm - Early Stage Design Using P&ID Modularization and Integration ▪ 2:30pm – 3:30pm - Leveraging API Web Services in SmartPlant Foundation ▪ 3:30pm – 4:30pm - SmartPlant P&ID/SmartPlant Instrumentation Integration **Thursday June 14** ▪ 8:00am – 9:00am - Accelerate Your Digital Transformation for Project & Operational Excellence: Part A ▪ 10:00am – 10:30am - Wiring Delta V Charm I/O in SmartPlant Instrumentation ▪ 10:30am – 11:00am - Electronic Marshalling ▪ 11:00am – 11:30pm - SPI v2016 SP1 for Owner Operators ▪ 11:30am – 12:00pm - Adapting SmartPlant Electrical to Generate One-Line Diagrams ▪ 1:30pm – 2:30pm - Accelerate Your Digital Transformation for Project & Operational Excellence: Part B ▪ 3:30pm – 4:00pm - CPECC Transformation from Document-centric to Data-centric EPC ▪ 4:00pm – 4:30pm - Automating Creation and Assignment of Instrument Loops in SmartPlant P&ID ▪ 4:30pm – 5:30pm - An Owner Operator's Perspective on SmartPlant Review in an Operating Plant ▪ 7:00pm – 8:30pm - Evening Event **Friday June 15** ▪ 8:00am – 9:00am - The SmartPlant Enterprise Vendor Supply Chain ▪ 10:00am – 11:00am - Integrated Electrical Design ▪ 11:00am – 11:30am - Communication is key to the SmartPlant Enterprise ▪ 11:30am – 12:00am - SmartPlant Instrumentation Customization ▪ 1:30pm – 3:30pm - Smart Engineering & Design Schematics Product Update **HxGN 2018 - HOT SPI TOPICS THIS YEAR** • Harmonization of the User Experience • Change the Future with Web APIs • Smart Engineering Manager • Smart Process Engineering • Smart Report Generator • Engineering Data Editor • Integration 2.0	

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		• **Project ARGO**
		
		Harmonization of the User Experience
		• Engineering Data Editor in tasks and applications
		• Consistent Catalog Explorers in P&ID and Electrical
		• Improved Enhanced T0-Do-List Integration
		• New Smart Form Generator in all PP&M Applications
		• Common Graphical User Interface across Applications
		
		Change the Future with Web APIs
		• Facilitate WEB access to PPM Data from any device on any system
		• Incorporated APIs in P&ID, SPEL and SPI in 2018 as read only
		• Read – Write capability for APIs planned for 2019
		• Allow for future development of user and vendor interfaces to their applications
		
		Smart Engineering Manager
		• Web API for Common Administration Tasks
		• Use legacy or web version on same project
		• Works side by side with Desktop version
		• Runs on Desktop or Mobile Browser
		• Common Administration Platform
		• Runs directly from Web browser
		• Phased implementation
		• Zero footprint
		
		Smart Process Engineering (SPE)
		• Intergraph Smart Process Engineering
		  • 2D conceptual design and engineering tool
		  • Aimed at Process Engineering
		  • Develops an optimized and intelligent conceptual level Front-End PFDs and Engineering Design (FEED) basis
		• Key Functionality
		  • Import of simulation data
		  • Process Case Management
		
		Smart Form Generator (SFG)
		• Will become standard Form Generator for all PPM Products
		• Will remove dependency on Infomaker and embedded forms
		• Form Elements:
		  • Labels and Properties
		  • Lines, Shapes and Pictures
		  • Text Blocks and Drop Downs
		  • Radio Buttons and Check Boxes
		
		Engineering Data Editor (EDE)
		• Graphical User Interface creates Editable Queries that Generate Reports and Exports without knowledge of database structure
		• Access all Data, Forms and Reports from Explorers or EDE Views
		• P&ID EDE Displays Graphic Elements and Properties	

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		• SPEL EDE View Displays Electrical Equipment with a Properties window • The SPI EDE features Powerful Find, Filter and Search mechanisms **Hexagon PPM Integration 2.0** • SDA/SPF web client is a browser-based user experience for all SPF-based applications • Will ultimately replace existing SPF Web Portal and Desktop Client • Utilizing Web APIs to Integrate Data from PPM and 3rd Party Applications • Minimize the use of Document Centric Integration **Project ARGO** • Project Argo is an intuitive environment available on device of choice, used by information consumers to search, locate, redline, and navigate data, graphically and contextually from, though, to, and across many different PPM data sources • SmartPlant Explorer Upgrade **HxGN LIVE 2018 LAS Observations** • The Venue was the Venetian Resort Hotel and Casino adjacent to the Sands Expo Convention Center • The Venetian Las Vegas Resort rooms were spacious suites with a separate living and sleeping areas • The Monday SPI TUF meeting was an opportunity to introduce several SPI partnering companies • Registration on Tuesday morning was at the opposite end of the center from the hotel but everybody got a back pack as a reward for the long walk • Ola Rollén (President & CEO, Hexagon) Keynote Presentation “Big Leaps” climaxed with a video of baby birds jumping off cliffs that left audience stunned • Mattias Stenberg’s (President of Hexagon PPM) “The Future is in Beta” Keynote Presentation discussed Hexagon’s Digital Transformation around the world • The Zone Expo and dinning facilities were in one very large arena that routed everyone through the exposition for most meals • As usual the path between the Hotel Rooms and the Conference Center routed everyone through the Casino for a chance to lose money • Between Hexagon, Vendor and Customer Presentations attendees experienced an extensive Insight into where Hexagon PPM is headed • The evening event at the TAO Nightclub pool deck was the most disappointing experience of the conference **Presentations Online** **https://hxgnlive.com/las-2018** **http://spi-ltuf.org/GTUF18** **http://spi-ltuf.org/GTUF18/SPI**	

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4	Presentation 9:00	**Honeywell SmartLine Integration** **Phil Ng, Honeywell** **CONNECTING PROCESSES, ASSETS AND PEOPLE** Changing Workforce – Changing the Way to Do Things • 50% retirement in next 5 years • 65% held by outdated and rigid work styles • 12 months average to train staff after upgrade • 78% modern technology is important ~ Hays Global Oil and Gas Salary Guide 2015 **Topics** Connecting Processes and People • Specifying validating and pre-configuring transmitters • Using and troubleshooting transmitters • Commissioning and loop check testing • Maintaining devices **Cloud-based Engineering Tool – Application and Validation Tool (AVT)** • First step – help to confidently make the right choice • Cloud based • License free • Password free • Multi-platform • Guided experience or advanced user • Unique sessions **What are you measuring** • **Level** - High accuracy real-time measurement of the level of products in a tank • **Pressure** - High accuracy real-time measurement of pressure in a pipe or tank • **Flow** - High accuracy real-time measurement of flow in a pipe AVT: Built-in Assistance to Choose the Right SmartLine Transmitter for Your Application AVT: Connecting You to Expert Information with a Reference Chemical Compatibility Table AVT: Connecting with Experts for Real-time, Remote Collaboration AVT: Deliver Pre-Configured Transmitters AVT: ISA Datasheet **Cloud Engineering and Auto Device Commissioning** **Auto Device Commissioning (ADC)** ADC: Loop Check Workbook Template • Excel based template • Modify test procedure per site standard • Apply test per transmitter ADC: Loop Check Workbook - Results • New Experion SmartLine Dashboard Displays – Overview • New enhanced displays • Optimized data presentation	

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		Experion SmartLine Dashboard – Compares transmitter configuration versus the channel configuration
		
		Easy access to Field Device Manager (FDM) is the asset management tool
		
		Field Device Manager Plant Area Views
		• Unique summary health overviews:
		  • Plant
		  • Sites
		  • Areas
		  • Process cells
		  • Units
		  • Modules
		• High level or detail summary health status at a glance
		• Drill down to each device
		
		Integration with Asset Management
		• Replaceable modules in the field and
		• Identification and notification of issues
		• Starts in the Product Design
		
		Honeywell Connected Plant, Unequalled Equation for Success
		We connect processes, assets and people to continually redefine optimal performance
		
		Connected Process
		• Deep domain expertise across project and plant lifecycle phases
		• Reduce project risk
		+
		Connected Assets
		• From field devices to control systems to networked applications
		• Improve plant availability
		+
		People Connected
		• Automated actions connecting the knowledge of experienced workers with new workers.
		• Protect knowledge of retiring workforce
		=
		Connected Plant
		• Unmatched enabler connecting process, assets and people
		• Integrated solution that breaks down the boundaries
		• Cost reduction and increased productivity
		
		Honeywell's footprint to deliver on the promise of Industrial Internet of Things (IIoT)	

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5	Presentation
	9:30
		Honeywell Universal I/O **Lonnie Faucheux, Honeywell**
		
		LEAP™ - Lean Project Execution
		
		The Challenge of a Traditional Project
		
		Start **PHYSICAL** **FUNCTIONAL** **Finish**
		Define Design Manufacture Configure Test Install
		
		Drive Effectiveness Not Efficiency
		
		Eliminate hardware
		• Reduce Hardware Footprint
		• Remove Early Hardware Order
		
		Eliminate tasks
		• Remove Custom Designs
		• Reduce Complexity
		
		Reduce Risk
		
		Eliminate travel
		• Reduce Travel
		• Reduce System FAT
		
		Optimize execution
		• Reduce Cost
		• Reduce Schedule
		
		To Efficiently Do What is Not Required is NOT Effective!
		
		LEAP Enabling Technologies
		Integrated solutions increase value of individual benefits!
		• Universal IO
		• Cloud Engineering
		• Virtualization
		
		LEAP Project vs. Traditional
		• LEAP Modular, Incremental Design is not Backend Loaded
		• Traditional Project approach is often backend loaded
		
		Universal Input/Output Technology
		
		Universal IO – Applied Universally
		• Available for multiple control and safety system platforms
		  • Process Control with C300 or ControlEdge UOC
		  • Safety Management with Safety Manager
		  • ControlEdge PLC
		
		Universal Process IO
		• 32 configurable channels for AI, AO, DI, DO
		  • HART7 is supported for AI/AO
		• Non-redundant or redundant
		• Extended temperature range (-40°C to +70°C)
		• Remote enclosures (Class 1 Div 2)
		• Local enclosures together with other Series C I/O modules	

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		• Single HART Modem per channel
		• Pulse Input – any 4 channels
		• Input Scan Rate – 10 ms
		• NAMUR DI compatible With external isolator like P&F HiC2441
		• SOE with 1 ms resolution
		
		Universal Safety I/O
		• High density 32 channel Universal I/O module
		  • Non-redundant or redundant
		• Support of AI, AO, DI and DO signals on any channel
		• Compatible with existing Safety Manager installations
		• Extreme temperature range
		  • -40 to +70 degrees C, -40 to +158 degrees F
		• Ethernet – up to 100km / 6 switch levels
		• Low latency SOE (1 msec)
		• Supports HART pass thru
		
		Flexibility meeting project need
		• Series 900 Universal IO
		• Used with PLC and UOC
		• 16 configurable channels for AI, AO, DI, DO
		  • HART7 is supported for AI/AO
		• Non-redundant
		
		Universal Channel Technology
		
		• Traditional Cabinets
		  • Wait for final definition of instruments and then build custom cabinets
		• Universal Cabinets
		  • Standard cabinet that can adapt to late wiring changes
		
		Remote IO Cabinets
		• Traditional design with field junction boxes and local equipment rooms add engineering and construction cost
		• Field mounted UIO eliminates significant cost, delivery lead times and opportunities for error
		
		Reducing Project CAPEX
		
		Relative Total Installed Cost Savings with Remote UIO Cabinets
		Component Cost ($ per I/O basis) I/O UIO UPC
		Cost of I/O Hardware 100% 110% 145%
		Cost of Custom Marshalling Panels 15%* - -
		Cost of Cabinet Staging and FAT 6%* - -
		RIE Footprint 56% 42% -
		Home Run Cables 30% 30% -
		Field Junction Boxes 20% 20% -
		Fiber Optics and Power Cables - - 20%
		Loop Wiring Testing 9% 9% 3%
		--- 	
		Total Installed Cost (TIC) 236% 210% 169%
		Relative Savings Base (11%) (28%)	

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		Universal Process Cabinet - Content • Fiber Optic Media Convertors • Fiber Optic Termination • Redundant Power Supply • Marine Application Power Filters • Up to 3 Redundant Universal I/O Modules 96 Channels of I/O • Termination, Disconnects & Optional Conditioning • Terminations & Disconnects • 16 Channels of LLAI (option) • Field Configurable Gland Plate **Universal Process Cabinet – Key Features** • Up to 96 redundant UIO channels • Up to 128 LLAI channels • Up to 64 UIO & 16 LLAI channels • Redundant Power Supplies and Fiber Optic Extenders • Easy software configurable UIO supporting HART • Low level Temperature IO inclusion • Optional Marshalling / Signal Conditioning • Temperature range: -20oC to +55oC, -30oC to +45oC, -40oC to +45oC • No External Cooling Required • Marine Certifications – Lloyds • HAZLOC Certifications - C1/D2, C1/Z2 Mounting / Field Wiring • 7 UPCs can be connected in a leap frog arrangement over Single Mode Fiber • Accelerated Life Test with >30 year life **Universal Process Cabinet – Options** • Universal Safety Cab • Flexable Wiring Entry • Field Mounting, Sun Shield	

6	Presentation
	10:15
		Ne Honeywell SPI Interfaces Andrew Kunev, Honeywell
		
		Honeywell's DCS Integration with SPI was 1st!
		
		• Honeywell DCS was the Earliest available 'library‘ of TDC freely available inside Intergraph INtools, way back in the 20th Century.
		
		• Before INtools became a part of Smart Plant as SPInstrumentation.
		  • Before the Reference Explorer & re-write/update of the Wiring Module at Rev7
		
		• Before any MIC/MAV/MAC vendor Interfaces.
		  • TDC input/output termination assemblies (IOTA) were openly offered to Intergraph customers free within several early INtools software version downloads	

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		Honeywell's History, (for LTUF Archive perusal)
		
		• In 1975, Honeywell introduced the world's first Total Distributed Control System (TDC 2000) that revolutionized the entire process control industry with a centralized view of de-centralized control and a fully redundant communication link for continuous processes.
		  • Honeywell further introduced a state-of-the-art Total Distributed Control System 3000 (TDC3000) in 1985.
		  • The new TDC 3000 system adopted a brand new architecture that allowed the existing TDC 2000 system to be integrated with the new system as well as future expansion through a new in-house developed network operating system for performing various plant-wide control, monitoring, alarming, reporting, and historical date storage & retrieval functions.
		  • TDC 3000 system was the backbone of Honeywell Industrial Solutions for Petroleum, PetroChem, Fine Chemical, Pulp & Paper, Power Generation, and many other industries.
		
		Honeywell bidirectionally exchanges SPI & EPKS data, with different opportunities based on the type of data, schedule and workflow.
		
		1. **SUDS** = Almost Limitless amount of data exchange – fully manual exchange (cut-n-paste using XLS) – Hundreds of Global project experiences.
		  • With the SUDS process, there is also an advanced internal EDMT workflow, and I'll describe that much further after sharing the general three alternative details.
		
		2. **ESPIA** = Limited amount of data exchange – can be automated somewhat past mapping & external XML file transfer – Some global project exposure but 1st usage may be later this year, with a recent Mega-EPC program win.
		  • Most value to End-Users during Plant/Process Lifecycle, vs Design Engineering.
		
		3. **TRACE** = new development, shall be limitless data - fully automated past mapping & external node-based transfer – Not yet recorded usage for Full Control Strategy Deliverable purpose, to my knowledge.
		
		SUDS = Shared User Data Structure (XLS)
		• Honeywell has defined a list of data design fields required for exchange between SPI HOST and Honeywell Project Team during Project Execution.
		  • These fields are defined in SUDS, with a detailed matrix supporting a well proven and established workflow to manage the data exchange
		
		• Honeywell commits to a phased approach to data handover in predefined data packages, and the SPI HOST is	

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		responsible for entering the directed data into the SPI database. • This eliminates any data-integrity risk of direct Honeywell involvement in multiple modules/tables of the SPI application past the preliminary data mapping and responsibility deliberations. • Honeywell is Non-responsible for SPI input, and data transfer is made via MS Excel (XLS) packages, governed by project change management tracking, and scheduled along LEAP milestones. **ESPIA = EPKS <> SPI Adapter (XML)** • Experion SPI Adapter achieves a bidirectional data exchange between the EPKS Control Builder & SPI using Intergraph's TEF transfer mechanism. • The solo CSTag-table limited integration works primarily in phases: • A mini IO list is published by the SPI tool using the Honeywell Interface into an XML format. ESPIA maps the import of SPI data into Experion Control Builder by retrieving the data file, using a selective interface (To-Do List). • After Honeywell Controller config, ESPIA enables the export of Experion Control Builder data by publishing it. This data is then imported into the SPI tool by retrieving the data, again using a To-Do List. • SPI Users build the Experion IO module with the Ref Explorer Library IOTA and make the channel assignment of the SPI "Control System Tag". For Universal IO, EPCs define what type of channel the MIXED library templates become & publish after making wiring connections, (Ideally for UIO: direct from Field to SJB-DCS). • Then the channel assignment is sent to Experion, and Honeywell Control Modules can be completed automatically. • This can be updated both directions infinitely during Lifecycle to capture changes. • SPI-LTUF.org Archive Aug2013 □ ESPIA = Honeywell SPI Interface pdf. **TRACE™ (potentially new Node-based SPI<>EPKS solution)** • Honeywell Trace™ is a new generation documentation and change analysis software for engineering configuration activities. • Trace documents & retains the tribal knowledge performed on control systems and prevents undesired behaviors while increasing uptime, visibility and control. • Currently, our Honeywell Trace™ automated data collection and change management system to help identify differences in control configuration during pre-commissioning and start-up.	

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		• Trace™ allows users to bulk analyze control system configuration. • It standardizes configuration, thereby reducing maintenance effort, improving troubleshooting and reducing the time to identify potential issues. • In a Disconnected Mode, Trace™ could Import engineering data from SPI or other assets, consolidating multiple systems into one EPKS document. • This is another means of mapping SPI data and EPKS data into a more complete Control Strategy Loop Diagram than the SPI tool itself creates. **SUDS deep dive – view-only during LTUF** • This is an XLS based Electronic data transfer mechanism between project participants using our Shared User Database Structure (SUDS) process by maximizing the single point of entry concept. • The following objectives were established: • Minimize rework • Eliminate duplicate work • Identify areas of expertise • Create standard roles and responsibilities structure • Create tools around standard • Support virtual project team concepts • The viewable XLS defines the Mapping Fields (like a data dictionary) to be exchanged between SPI HOST and Honeywell for each Tag (point) defined in the hosted SPI. • Originating design ownership and responsibility to provide the data for each field is also part of the SUDS definition. **SUDS sections = LEAP scheduling milestones** • The SUDS Mapping Fields have been segregated into Data Package sections for scheduling milestones with Objectives suggested as follows: **SPI HOST Objectives to MAC** • **Detail Design** - Enable ICSS (Integrated DCS & SIS) hardware design config loading and system partitioning • **I/O Binding** - Provide I/O allocations to SJBs and overall SJB wiring details for installation and commissioning • **Testing-** Completion of configuration databases and Validate SPI against other documents (P&IDs, narratives, Cause & Effect, etc.) • **V-FAT** - Completion of configuration and inputs for final configuration validation **MAC Objectives to SPI HOST** • **Detail Design** - Enable UPS, HVAC, building design, SJB location design, & fiber-optic and power cable design • **I/O Binding** - Provide additional marshalling data needed for loop diagrams • **Testing** - Provide updated designs where needed (controller re-allocation) as well as feedback and queries on SPI	

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		requirements
		
		• Originating design ownership and responsibility to provide the data for each field is also part of the SUDS definition.
		
		SUDS Structure Definition for Mapping File
		• SUDS mapping table is a list of fields defining the properties of each point (field tag) created in SPI. During the MIC/MAV/MAC project FEED phase, Honeywell and SPI HOST shall review and agree on the fields to be utilized.
		  • Depending on the Project requirements and ICSS architecture several other fields can be added.
		• The “Header Row” of the SUDS Table describes the properties of each field to be defined:
		  • Pkg.Item = Numbering, w/ skipped numbers, maintains linkage to Standard SUDS.
		  • Name = Headers for deliverable columns of Transfer files during data exchange.
		  • SPI Name = SPI database field, generic start for UDFs/UDTs for SPI Host defining.
		  • Description = Brief description that indicates what the field represents.
		  • Type/Size = Data type (Date, Text, etc.)/ Number of characters per EPKS/SPI.
		  • Responsibility (3 columns) = EPC/SPI HOST, Client/COMPANY, HWL/Honeywell.
		  • Definition/Remarks, Format, Notes, etc = More detailed info for each Field.
		
		SUDS + EDMT (internal Engineering Data Management Tool)
		• Workflow & potential exchange, as EDMT maps xls type databases via Change Management. Data joined w/ Map Sets defined for HW Typicals + Function Block parameters > EPKS CMs can be created
		• **EDMT is Honeywell INTERNAL automation of SUDS data to EPKS**
		
		Honeywell Hardware Typicals = Early Honeywell Deliverable to EPCs during project FEED phase
		• Hardware Typicals describe how each type of field device will be connected to the Honeywell Experion ICSS system depending on their process zone location and other project specific requirements (i.e signal isolation required or not).
		  • Most standard Honeywell Hardware Typicals (HHT) to be used on a project will be defined and agreed in advance between Honeywell and SPI HOST, and the “pick-list” options will be built into the SPI field UDT identified by SUDS at the Seed stage or by SPI Host.
		• Honeywell folk may sometimes refer to HHT drawings with the MIC/MAV/MAC-centric generic use of the word “Loops”, especially in verbal communication.
		  • Note that HHT are Honeywell responsible drawings, whereas the industry standard usage of the word “Loop” refers to the SPI deliverable Loop drawing which is SPI HOST responsibility	

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		• EPCs assign Honeywell Hardware Typicals to each SPI IO point • Equivalent Mapping fields found in the IO Binding Tab of SUDS **HONEYWELL SPI INTERFACES CONCLUSION** • For more SPI Interface information, after SPI LTUF Meeting, especially with potential project need for SUDS XLS (requiring NDA or other confidentiality partnership) … please contact your Honeywell Representative to eventually reach Honeywell's Americas/Global Field SPI (INtools) Discipline Leader. **Thanks**	
7	Forum 10:45	**Forum Discussion Topics** **All Attendees** • Web APIs and SPI • Smart Report Generator • SPI / DCS Interfaces • SPI Data Validation • PIP DMDIM001 SIG	
12	11:30	• **The next meeting tentatively scheduled for November 13, 2018 at JGC** John Dressel closed meeting with thanks to everyone for attending	