



**18th ISA POWID/EPRI
CONTROLS & INSTRUMENTATION CONFERENCE
51st ANNUAL ISA POWID SYMPOSIUM
JUNE 8 –13, 2008, SCOTTSDALE, ARIZONA
The Pathway to Power Automation
for the 2010 Decade**

Preliminary Program

Sunday, June 8th	
8:00 am - 5:00 pm	Long Range Planning & Executive Committee Meeting - Sonora A
1:00 pm - 5:00 pm	Registration - near Sonora A
12:00 pm - 4:00 pm	Vendor Setup – Grand Ballroom
4:00 pm - 6:00 pm	Vendor Exhibits – Grand Ballroom
6:00 pm - 9:00 pm	Welcome Reception - Pool Side

Monday, June 9th			
6:30 am – 7:30 am	Author's Breakfast (Sonora D)		
7:00 am - 5:00 pm	Registration - near Sonora A (Breezeway)		
7:30 am – 9:00 am	Spouse's Lounge – Executive Board Room		
8:00 am - 8:45 am	Welcome Address by Kim Miller-Dunn, ISA President & POWID Officers – Grand Ballroom		
8:45 am - 9:30 am	Harsh Chitale Vice President, Strategy and Global Marketing Honeywell Process Solutions, Keynote Speaker – Grand Ballroom		
Morning Sessions 9:45 am - 12:00 pm	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p style="text-align: center;">G1 Advancing Open Systems Architecture (Sonora A/B) Session Developer – Gordon McFarland – Emerson Process Management</p> <p>P010 - Open Systems Technology :Progress Offers Opportunities and Risks, Carl Hosier - Honeywell P032 - Power Plant Automation - Where we are and where we're headed, Roger Leimbach - Metso Automation P044 - Distributed Control Technology, Robert Yeager - Emerson Power & Water Solutions P054 - Open Systems, Past, Present and Future, Tom Szudajski – Invensys Process Systems P059-Advancing Control System Technology; Providing Competitive Advantage for Your Power Plant, Ralph Porfilio - ABB Power Generation</p> </td> <td style="width: 50%; vertical-align: top;"> <p style="text-align: center;">N1 -New Plant I&C Design-Tutorial Session (Sonora C/D) Session Developer – Tim Hurst, Hurst Technologies, Inc.</p> <p>P011 - AP1000 I&C Architecture and Data Communication Overview, Albert Crew, John Ewald & Stephen Seaman - Westinghouse Electric Company P026 - US-APWR Instrumentation and Control Design, Shusuke Yuhashi - Mitsubishi US P031 – US-ABWR I&C Architecture, Linda Santoline – Westinghouse Electric Co. P084 - Watts Bar Nuclear Plant Unit 2 Completion and Associated I&C Upgrades, Ron Jarrett, TVA P086 - GE ESBWR I&C Architecture & Design, Rich Miller GEH</p> </td> </tr> </table>	<p style="text-align: center;">G1 Advancing Open Systems Architecture (Sonora A/B) Session Developer – Gordon McFarland – Emerson Process Management</p> <p>P010 - Open Systems Technology :Progress Offers Opportunities and Risks, Carl Hosier - Honeywell P032 - Power Plant Automation - Where we are and where we're headed, Roger Leimbach - Metso Automation P044 - Distributed Control Technology, Robert Yeager - Emerson Power & Water Solutions P054 - Open Systems, Past, Present and Future, Tom Szudajski – Invensys Process Systems P059-Advancing Control System Technology; Providing Competitive Advantage for Your Power Plant, Ralph Porfilio - ABB Power Generation</p>	<p style="text-align: center;">N1 -New Plant I&C Design-Tutorial Session (Sonora C/D) Session Developer – Tim Hurst, Hurst Technologies, Inc.</p> <p>P011 - AP1000 I&C Architecture and Data Communication Overview, Albert Crew, John Ewald & Stephen Seaman - Westinghouse Electric Company P026 - US-APWR Instrumentation and Control Design, Shusuke Yuhashi - Mitsubishi US P031 – US-ABWR I&C Architecture, Linda Santoline – Westinghouse Electric Co. P084 - Watts Bar Nuclear Plant Unit 2 Completion and Associated I&C Upgrades, Ron Jarrett, TVA P086 - GE ESBWR I&C Architecture & Design, Rich Miller GEH</p>
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12:00 pm – 2:00 pm	Awards Luncheon Glen Reeves, Manager Power Generation, Salt River Project - Luncheon Guest Speaker Recognition of POWID Leadership-People, Facilities & Authors by Mike Skoncey – Grand Ballroom		

Afternoon Sessions 2:15 pm – 5:00 pm	<p>G2A From the Trenches—Power Plant Control, Automation and Software Experience (Grand Ballroom) Session Developer – Jason Makansi – Pearl Street, Inc.</p> <p>P007 - Developing Configuration Management Processes for Power Plant Control Systems, Richard Marshall - Control Solutions P013-Control System Retrofit – Upgrading from the 70's to the New Millennium – In Two Weeks or Less, Kevin Geraghty - PT Inco P029 - Managing Combustibles And Operation Using Real Time Data, Economic Values And Contract Clauses Using Your DCS, Michel Ruel & Martin Emond - Top Control Inc. P035 - Documenting Power Generation Instrument and Control Data, Jody Damron & Laura Somak - Salt River Project P056 - Combined Cycle Startup Hybrid Simulation, Damien Faille - Electricité de France</p>	<p>N2 Nuclear Control Room Simulators & Training-Tutorial Session (Sonora A/B) Session Developer – Frank Quinn – Hurst Technologies, Inc.</p> <p>P014 - Nuclear Power - Nuclear Control Room Simulators & Training, Deborah Broderick – Westinghouse Electric Co. P051 - USE of Training Simulators in Beyond Training Applications, Oussama Ashy – Western Services Corp. P067 – High-Fidelity Virtual Environments for Nuclear Power Plant Operations Planning and Operator Training, Randel Crowe & Frank Boosman – Lockheed Martin P073 - A Real Time Application of the RELAP5-3D Code, Steve Freel, Duncan Burgess & Zen Wang - GSE Systems, Inc. P074 - Simulators and Nuclear New Builds, Robert Boire - L-3 Communications MAPPS Inc. P087 - Use of a Full Scope Simulator in the Development of the US-APWR HIS, Gilbert Remley, MEPPi</p>	<p>G2B Alarm Management and Automated Diagnostic Systems (Sonora C/D) Session Developer – Tim McCreary – HF Controls</p> <p>P009 - Automated Methods to Sustain Control System Performance, George Buckbee - ExperTune, Inc. P034 - Automated short circuit testing System, Julio Montero, Jose Velazquez & Alfredo Sanchez - Electrical Research Institute P036 - Continuous Alarm Management, Martin Hollender & Carsten Beuthel - ABB P038 - A Novel Instrument for In-situ NOx Measurement Applied to SCR Units, Peter DeBarber & Donna Dearmon - HORIBA Instruments, Inc. P048 - The Complement of DCS Alarm function, Byeong-Woo Jeon & In-Yong Lee – Korea Western Power Co. LTD P052 - A Software-based Approach to Support Communication Interoperability Between Multiple Electronic Devices, M. Bravo, J. Velazquez & C. Perez - Instituto de Investigaciones Electricas</p>
	5:00 pm – 7:00 pm	Vendor Exhibits (Grand Ballroom)	

Tuesday, June 10th			
6:30 am – 7:30 am	Author's Breakfast (Sonora D)		
7:00 am - 5:00 pm	Registration - near Sonora A (Breezeway)		
7:30 am – 9:00 am	Spouse's Lounge – Executive Board Room		
Morning Sessions 8:00 am - 11:00 am	<p>G3A NERC CIP Cyber Security Standard Compliance (Grand Ballroom) Session Developer – Jim Batug - PPL</p> <p>P020 - Detailed Analyses of Control System Cyber Events, Joe Weiss - Applied Control Solutions & Marshall Abrams - The MITRE Corp. P023 - Cyber Security - Are We Progressing Rapidly Enough, Thomas Kropp - Dyonix P060 - Control and Information Systems Security, Kevin Staggs - Honeywell Process Solutions P064 - Practical Guide for Power Plant Control System NERC CIP Compliance, Jim Batug – PPL, Jonathan Pollet & Walter Sikora - Industrial Defender, Inc.</p> <p>G3B NERC CIP Cyber Security Standard Compliance-Tutorial Session (Grand Ballroom) Session Developer – Jim Batug - PPL</p> <p>P006 - Process Control System Security Issues – Practices, Bruce Jensen - Yokogawa Corp. of America P019 - Cyber Security, Joe Weiss - Applied Control Solutions P080 - ISA Support for Cyber Security, A. Ristaino – ISA-Automation Standards Compliance Institute</p>	<p>N3A Human Factors (Sonora A/B) Session Developer – Frank Quinn – Hurst Technologies, Inc.</p> <p>P015 - The Incorporation of Human Factors Engineering into Design of the AP1000 Nuclear Power Plant, Julie Reed – Westinghouse Electric Co. P027 - Human Factor Engineering & HSI Design in the US-APWR, Kenji Mashio – Mitsubishi Heavy Industries, Ltd. P033 - Human Factors Verification and Validation of the Advanced Nuclear Plant Control Room Design, Kim Yu & Richard Gutierrez – GEH P063 – Control Systems & Control Rooms: How Cognitive and Social Domains Influence Decision Making, Abe Meilich – Lockheed Martin</p>	<p>N3B Condition Monitoring & Online Diagnostics (Sonora C/D) Session Developer – Dave Bell – Smart Signal</p> <p>P005 - Feedwater flowrate and thermal power monitoring and adjustment by data reconciliation in NPPs, Javier Zomoza & Jean-Melaine Favennec - Electricite de France P021 - Asset Management Technologies for New Nuclear Plants, Avni Patel – Duke Energy & Francis Quinn - Hurst Technologies Corp. P022 - Model-Based Testing Of Safety Logics, Francois Cheriaux, Denis Trognon & Patrick Salaun - EDF R&D P025 - PSAD A modular system for condition-based maintenance for EDF, Francois Pebay-Peyroula – Atos Origin P028 - Integrating Online Performance Monitoring in New Nuclear Reactor Designs, Ronald Jarrett – TVA, H. Hashemian, B. Shumaker - AMS Corp. P078 - Refurbishment of the safety I&C at the Dukovany VVER 440/213 NPPs, J. Palaric – DS&S, J. Rosol – CEZ-EDU, F. Dalik – Skoda-JS</p>
	11:00 am – 1:00 pm	Lunch (Grand Ballroom)	
11:00 am – 1:00 pm	Vendor Exhibits (Grand Ballroom)		

<p>Afternoon Sessions 1:00 pm – 2:45 pm</p>	<p>G4A1 NERC CIP Cyber Security Standard Compliance - Tutorial & Panel Session (cont.) (Grand Ballroom) Session Developer – Jim Batug - PPL</p> <p>P012 - Achieving & Managing NERC CIP Compliance, Clayton Coleman & James Bassett - Invensys Process Systems P079 - Pending Nuclear Regulatory Commission Guidance on Cyber Security Programs for Nuclear Facilities, C. Glantz, G. Landine, P. Craig - Pacific Northwest National Laboratory, D. Rahn - U.S. Nuclear Regulatory Commission</p> <p>Panel Session - NERC CIP Cyber Security Standard Compliance</p>	<p>N4 Digital Based I&C Regulatory Activities-Tutorial Session (Sonora A/B) Session Developer – Ray Torok - EPRI</p> <p>P018 - Resolution of Human Factors Technical and Regulatory Issues for New Plants and for Modification of Operating Plants, Robert Fink – CDF Services, Inc. & Joseph Naser – EPRI P030 - Design Acceptance Criteria for Digital Instrumentation and Controls, Joseph Ashcraft – US NRC P045 - Status of Industry Activities to Resolve Digital I&C Implementation Issues, Gordon Cleifton – Nuclear Energy Institute P053 - Protecting Against Common-Cause Failures in Digital I&C Systems – Approach for Addressing Key Technical and Regulatory Issues, Ray Torok – EPRI & Thuy Nguyen - Electricite de France</p>	<p>G4B Advanced Controls (Sonora C/D) Session Developer – Dr. Joseph Bentsman – University of Illinois</p> <p>P001 - Intelligent Fuzzy Control For Multi Variable Four Tank System, Kaliampurthy Sudha, Dr. R. Rani Hemamalini, M. Suresh & N. Sri MadhavaRaja - St Peter's Engineering College P041 - Simulation and Advanced Controls for Hybrid Combustion-Gasification Chemical Looping Process, Xinsheng Lou, Carl Neuschaefer – ALSTOM & Susan Maley – US DOE/NETL P042 - Controller Design for a Nonlinear Drum-Boiler Turbine System, Shizhong Yang & Chunjiang Qian - The University of Texas at San Antonio P043 - Neural Network Modeling and Nonlinear Model Predictive Control for a Gas Fired Boiler Simulator, Joshi Abhinaya - ALSTOM</p>
<p>2:45 pm - 3:00 pm</p>	<p>Afternoon Break</p>		
<p>Afternoon Sessions 3:00 pm – 5:00 pm</p>	<p>G4A2 Wireless (Grand Ballroom) Session Developer – Aaron Hussey - EPRI</p> <p>P002 - Integrating Wireless Retrofits Into Power Plant Automation Strategies For Enhanced Plant Asset Management, Condition Monitoring And Maintenance, Paul Sereiko - AirSprite Technologies P040 - Developing a protocol driver to communicate Remote Terminal Units using a data flow based industrial automation software, Alfredo Sanchez, Felipe Leon & Fernando Rivas - Electrical Research Institute P061 - Wireless Unlock the Possibilities: Getting Started, Cindy Bloodgood - Honeywell Process Solutions P076 - Wireless Sensors for Condition Monitoring of Industrial Equipment and Processes, H. Hashemian, C. Kiger, B. Shumaker, G. Morton – AMS Corp. P082 - Industrial Wireless Economics 101, D. Runkle – LCRA Lost Pines Power Plant</p>	<p>N4 Digital Based I&C Regulatory Activities-Tutorial Session (Sonora A/B) Session Developer – Ray Torok - EPRI</p> <p>P058 - Regulatory Perspectives on Diversity and Defense-in-Depth (D3) for Digital Instrumentations & Controls, Ian Jung – U.S. NRC P065 – Combined License (COL) Related Activities & Issues, Dinesh Taneja – U.S. NRC P070 – Development of Digital Instrumentation and Control Guidance for Nuclear Power Plants, Steven Arndt – U.S. NRC P071 – Status of Risk-Informed Activities Associated with Licensing of Digital I&C, David Blanchard-AREI</p>	<p>G4B Advanced Controls (Sonora C/D) Session Developer – Dr. Joseph Bentsman – University of Illinois</p> <p>P050 - Method Of Self Tuning With Simple Gain On Feedforward Controllers, Luis Lopez Manrique, Luis Lopez Villarreal & Lucio Lopez Villarreal – Universida Juarez Autonoma P055 - A Modern Look at Bumpless Transfer: Robust, Optimal, Hybrid, Dr. Joseph Bentsman - University of Illinois, Cyrus Taft – EPRI I&C Center & Kai Zheng - ArcelorMittal Steel Co. P072 - Characterization of NOX Emissions from the Morgantown Station by Perturbation Method™ Testing, Murray Abbott – Fuel And Furnace Consulting</p>
<p>5:00 pm – 7:00 pm</p>	<p>5:15 pm Special Event – Candid Discussion of “Lights Out” by author Jason Makansi (Grand Ballroom)</p> <p>Vendor Exhibits (Grand Ballroom)</p>		

Wednesday, June 11th		
6:30 am – 7:30 am	Author's Breakfast (Sonora D)	
7:00 am - 12:00 pm	Registration - near Sonora A (Breezeway)	
7:30 am – 9:00 am	Spouse's Lounge – Executive Board Room	
Morning Sessions 8:00 am - 11:30 am	<p style="text-align: center;">G5 Turbine Automation & Performance Optimization (Sonora A/B) Session Developer – Jeff Schleiss – Wood Group</p> <p>P003 - Electronic Turbine Control System P400-TCS installed at the Mondi Packaging Paper, Swiecie, Poland– Case Study, Jerry Kopczynski – Alstom, Zbigniew Lemieszko - Saturn Management P037 - Equipment Upgrades and Phased Optimization Enhance Unit Performance, Don Labbe - Invensys Process Systems, Darryl Roberts & Jeff Brown - SMEPA P046 - A Comparison of Electro-hydraulic Control System Fluids, Jeffrey Ruzas - Wood Group Turbine Control Services P047 - 500MW TBN Governor Valve Characteristic Curve Modification, Gi-Sang Kim & In-Yong Lee - Korea Western Power Co. LTD P049 - The Optimization of Main Steam Temperature, Ju-seob Jang & In-Yong Lee - Korea Western Power Co. LTD P085 - Zonal™ Combustion Tuning Systems For Improving Coal Fired Boiler Performance, D. Draxton, N. Widmer, G. Xu, D. Moyeda, GE Energy</p>	<p style="text-align: center;">N5 Current Activities (Sonora C/D) Session Developer – Bob Queenan – Sciencetech</p> <p>P062 - Special Techniques For Wide Range Neutron Flux Monitoring, Metta Krishna - Indira Gandhi Centre for Atomic Research & Loura Amali – Dept. of Atomic Energy P075 - A Strategy to Upgrade I&C Systems for the Korean Standard Nuclear Power Plants (KSNP), Y.S. Suha, J.Y. Keuma – Korea Atomic Energy Research Institute & C.H. Sungb - Nuclear Engineering & Technology Institute P077 - Why FPGA/ASIC is considered a key technology for the future of I&C in the power industry at EDF, Patrick Salaün, Thuy Nguyen, Frederic Daumas – EDF, Claude Esmenjaud-DS&S P081 - Qualification of FPGA-Based Safety-Related PRM System, H. Sakai, N. Oda, Y. Goto, et. al. - Toshiba Corporation Isogo Nuclear Engineering Center</p> <p style="text-align: center;">N5A Current Activities - Tutorial Session</p> <p>P057 - US Digital I&C Operating Experience, Bruce Geddes - Southern Engineering Services & Ray Torok - EPRI P066 – Vogtle Safety-Related Diesel Sequencer, James Flowers – Southern Co. P068 – Replacement of Safety Related Controls at Nuclear Power Plants, Gregg Clarkson – Wolf Creek Nuclear Operating Co. P069 – Large AC Drive Applications In Operating Nuclear Power Plants, Tricia Bolian, Stuart Bondurant & Stanley Sutphin – Areva NP P083 - Digital Upgrade of the Reactor Protection System and Engineered Safeguards System at Oconee Nuclear Station, Michael Bailey – Duke Energy P088 - Strategy for Successful Digital I&C Upgrades, L. Santoline, Westinghouse Electric Co.</p>
11:30 am – 12:00 pm	Closing Comments (Grand Ballroom)	
12:00 pm – 1:00 pm	ISA Conference Critique Meeting (Flemings) Note: Open only to Conference Committee Members and EXCOM Members	
12:00 pm – 1:00 pm	Exhibitor Critique Meeting (Grand Ballroom) Lunch (Grand Ball Room)	
1:00 pm – 3:00 pm	ISA 77 Committee Meeting (Sonora A)	Joint DOE/EPRI I&C Workshop (Sonora B) (Dinner provided following meeting)
3:00 pm – 5:00 pm	ISA 67 Committee Meeting (Sonora A)	
5:00 pm – 7:00 pm		

Thursday, June 12th		
8:00 am – 5:00 pm	ISA 77 Standards & Committee Meeting (Flemings)	
8:00 am – 12:00 pm	ISA 67.04 Standards & Committee Meeting (Sonora A)	Joint DOE/EPRI I&C Workshop (Sonora B)
1:00 pm – 4:00 pm		
8:00 am – 4:00 pm ISA Training Classes	ES15C Introduction to Boiler Control Systems (Sonora C)	IC32C Securing Industrial Networks: Cyber Protection for Automation, Control and SCADA Systems (Sonora D)

Friday, June 13th		
8:00 am – 4:00 pm ISA Training Classes	ES16C Boiler Burner Management-Meeting NFPA Standards (Sonora C)	TC05C1 Tuning of Feedback Controllers (Sonora D)