Industrial Wireless Systems Workshop

March 13, 2017

SAS 2017 IEEE Sensor Applications Symposium
Sponsored by IEEE Instrument & Measurements Society (IMS)
March 13 – 15, 2017 | Rowan University, Glassboro, NJ, USA

Technical Co-sponsors: **National Institute of Standards and Technology (NIST)**
IEEE Industrial Electronics Society (IES)

Date: March 13, 2017
Venue: SAS 2017 IEEE Sensor Application Symposium, http://2017.sensorapps.org/

Background: Wireless technology has great appeals to many manufacturers, in this case industrial automation systems, which include process control, discrete manufacturing, safety systems, and building automation. Applying wireless sensing and control technologies in new or existing systems for monitoring and controlling equipment and processes eliminates costly cabling and enables configuration flexibility. In addition, using wireless technologies can improve plant-floor operating conditions, performance, and efficiency. But before applying these technologies, companies need to determine what wireless technology will be suitable and reliably operate to communicate measurement and control data in challenging industrial environments with many potential physical obstructions and sources of interference.

Purpose: To explore latest and future wireless technologies for establishing best practice guidelines to help manufacturers and users make confident decisions in selecting and applying appropriate wireless technologies for their plants or factories based on their operating requirements and environments.

Issues to be addressed: Examines wireless technologies that include but not limited to:

- ***Wireless Sensing***
  - wireless sensing - for monitoring; for supervisory control over wires; with wireless supervisory control; with wireless feedback control; hindrances of using wireless sensing network technologies
- ***Requirements***
  - Identification of - wireless technologies; case studies using wireless; important wireless operating requirements; and future wireless requirements such as low latency, high reliability protocols for real-time control
- ***Practical Applications***
  - Wireless safety and safety integrated systems; wireless plant floor monitoring from mobile devices; wireless backhaul from work cells; sources of interferences and coexisting of different wireless technologies; desirable benchmarking tests and metrics for wireless systems
- ***Best Practices***
  - Spectrum monitoring solutions and best practices
  - Use cases for focus on best practice guideline

Who Should Attend/Stakeholders: Industrial wireless technology developers, system integrators, device manufacturers, end-users, and researchers are invited to speak and participate in this workshop/panel discussion for establishing guideline and research direction.

Benefits: The results of the workshop will help develop guideline, standard, and future research direction, which will help manufacturers, users, and their technology suppliers to design, assess, select, and deploy secure, wireless platforms that perform dependably in their factory settings and conditions.

Workshop Moderators: Rick Candell, NIST; Kang Lee, NIST

Workshop Sessions: (Tentative)

10am – 12:30pm	Panel Presentations plus Q&A	
12:30 – 1:30pm	Lunch	
1:30 – 2:30pm	Breakout Sessions	(wireless sensing, wireless standards and gap analysis, Use cases & Requirements, Best Practices)
2:30 – 2:45pm	Coffee Break	
2:45 – 3:45pm	Breakout Session Summaries Discussion/Next Steps	

Fees:

- Workshop ONLY - $100
- Registered with SAS 2017 Conference – Included in Conference Fees
- All Participants provided with coffee breaks, lunch, workshop materials
- Register with SAS 2017 Conference Registration (http://2017.sensorapps.org/)

Organizer/contact for information:

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