

Setting the Standard for Automation™



ISA – Expo 2005

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ISA-SP100 – User's Guide

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Standards
Certification
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Conferences & Exhibits

Users Guide – Meant to be Used

- Scope
 - **User Focus**
 - Classes of users
 - Classes of applications (see T. Phinney document)
 - **Floor, field, deployment focus**
 - Grades of deployment; No brainer to knowledge-based deployment
 - Environment characterization eg metrics, when to use site survey, can you do this with a check sheet
 - How to evaluate requirements for robustness, reliability, latency, throughput, co-existence, range, margin,..
 - What does fail mean; FMEA
 - **Not part numbers, good questions to consider**
 - Dialog between vendor and user
 - User requirements and vendor specifications
 - Encourage partnerships and communication



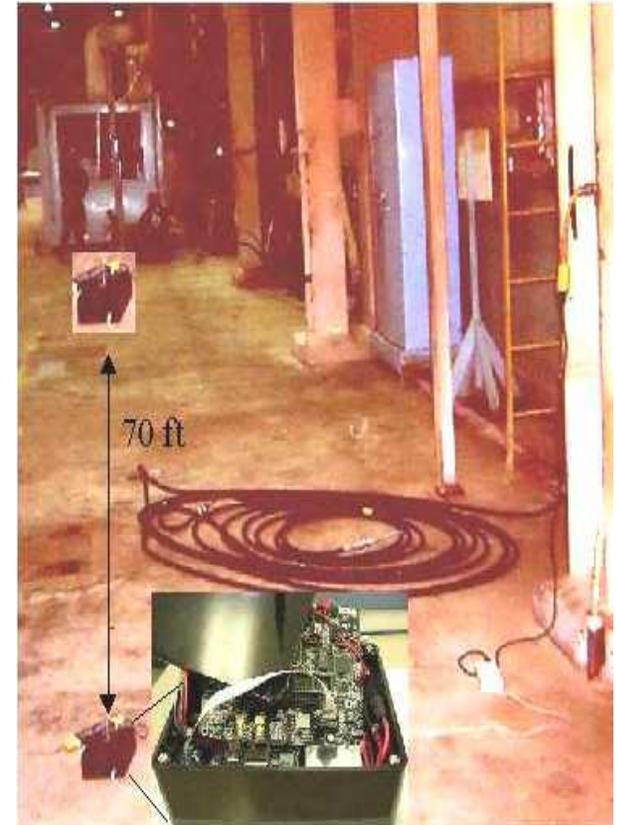
Users Guide – A Decision Aide

- Decision Drivers
 - User's Functional Requirements
 - Installation Design requirements
 - Infrastructure Requirements
 - Maintenance Requirements
- Options
 - Proprietary vs Open – defacto?
 - Vertical integration – SAP?
 - Horizontal integration – how many?
- Before and after deployment
 - Assess, evaluate user needs and requirements and suitability of wireless technology to user application
 - Evaluate environment and define what failure means
 - User vendor dialog scenarios



Users – The Key To A Successful Standard

- **Background**
 - History of industrial communications
 - Market issues
 - Wireless History
- **Critical User Issues**
 - Propagation – multi-path, absorption
 - “Open” systems – Standards?
 - Performance assessments – more than throughput
 - Frequency issues – 900 vs 2.4
 - QoS – quality of service (quoted vs measured)
 - Security – enough is enough
 - Latency – how much is too much
 - Coexistence – RFID, pagers, etc.
 - Fault tolerance – mesh vs point to point
 - Time driven vs event driven - TDMA



Users Guide – The Reference

- **Major Players**
 - Vendors
 - Universities
 - Integrators
 - Service Providers
 - Consultants
- **Information Sources**
 - ISA
 - Universities
 - Suppliers
 - Conferences
 - IEEE
 - Publications
 - Wireless Industrial Networking Alliance (WINA)
- **Bibliography**
 - Periodicals
 - Books
 - Web sites
 - Individuals

It Is the Best of Times ...But Wait!



- **Future Considerations**
 - Existing standards – IEEE 802.11b
 - Emerging standards – IEEE 1451.5
 - Radio technology – DSSS, FHSS, HSS, UWB
 - International considerations – 2.4?
- **Recommendations**
 - Balancing cost, performance, requirements
 - Prototyping
 - Testing – field surveys
 - Flexibility – extensions



***A key player in the wireless
business!
Guess Who?***