



Setting the Standard for Automation™

SP100.11a Overview

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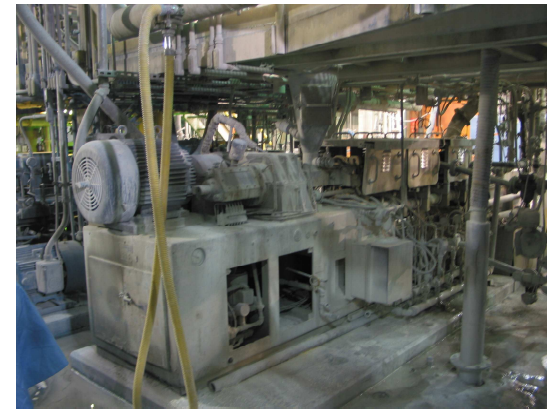


About ISA

- An international nonprofit member association of 30,000+ automation professionals engaged in the design, development, production, and application of devices and systems that sense, measure, and control industrial processes and manufacturing operations.
- Provides professional education and training, certification, conferences and exhibits, and book and journal publications.
- Accredited by the American National Standards Institute (ANSI) to develop industry standards in key areas including process safety, control system cyber security, enterprise-control system integration, engineering documentation, and wireless systems for automation (ISA-SP100).
- Headquarters: Research Triangle Park, NC. Visit www.isa.org.

ISA SP100 Positioning

- More than SP100.11a
- SP100.11a is the first of a family of standards for multiple industrial applications
- More than just process industries
 - Balance of Plant – real time monitoring





SP100.11a Relative to Wireless HART

- WiHART ONLY standardizes wireless transmission of HART messages
- SP100.11a supports multiple protocols via single wireless infrastructure:
 - HART, Profi, Mod, FF, etc.
- SP100.11a supports performance levels that enable some factory automation applications, not just process.
- SP100.11a is developed by an open user influenced standards body following ANSI accredited procedures.



SP100.11a Relative to ZigBee

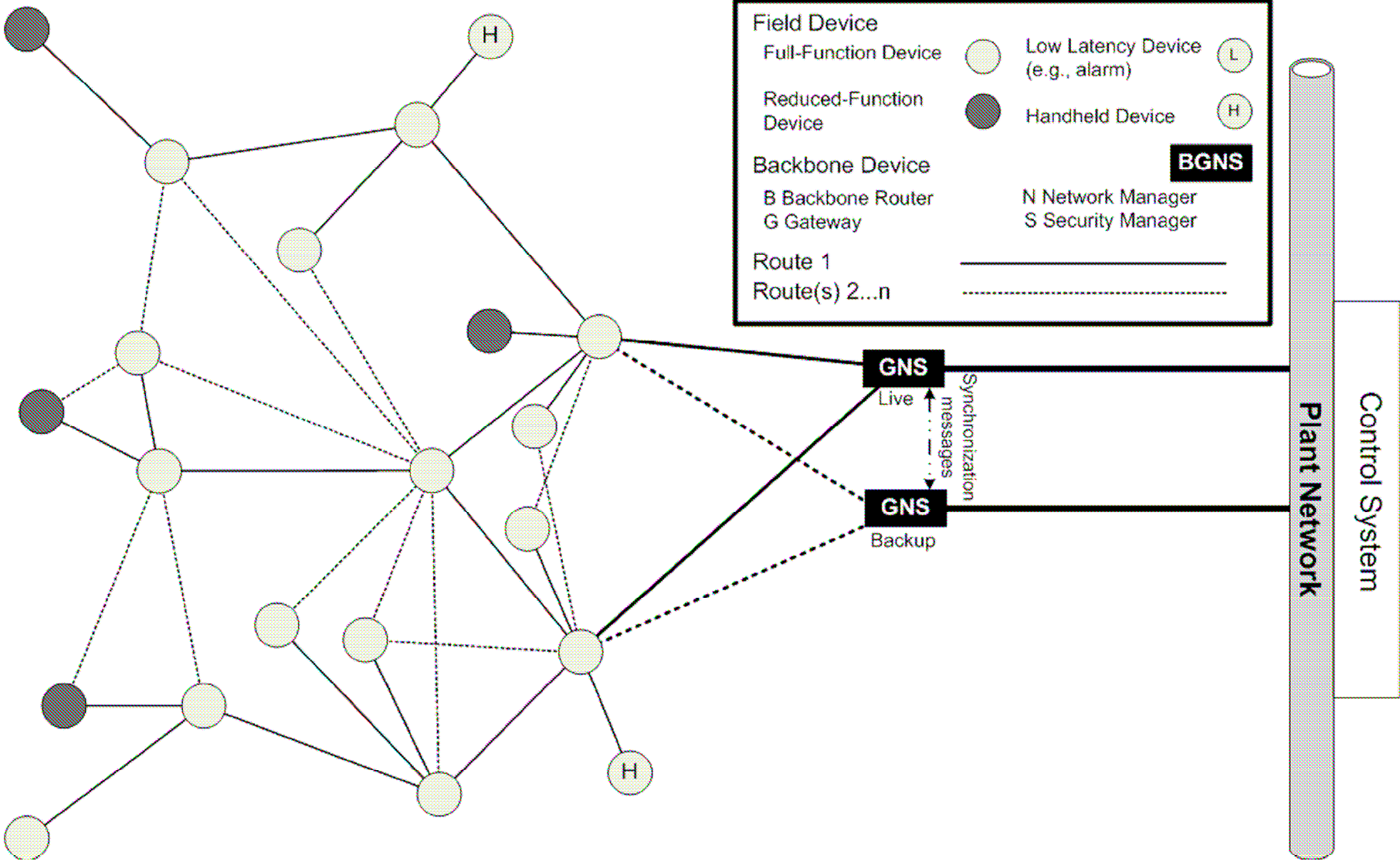
- SP100 is industrial strength
 - Reliability (enhanced error detection, frequency hopping)
 - Predictability (TDMA, Quality of Service levels)
 - Security (designed with FIPs in mind)
- SP100.11a is optimized to allow sensor flow to higher network levels
- SP100.11a defines a complete industrial wireless sensing architecture
- SP100.11a supports multiple industrial protocols via single wireless infrastructure:
 - HART, Profi, Mod, FF, etc.
- SP100.11a supports performance levels that enable some factory automation applications, not just process
- SP100.11a is developed by an open user influenced standards body
- Like ZigBee SP100.11a is also optimized for long battery life applications and also supports battery powered routers.



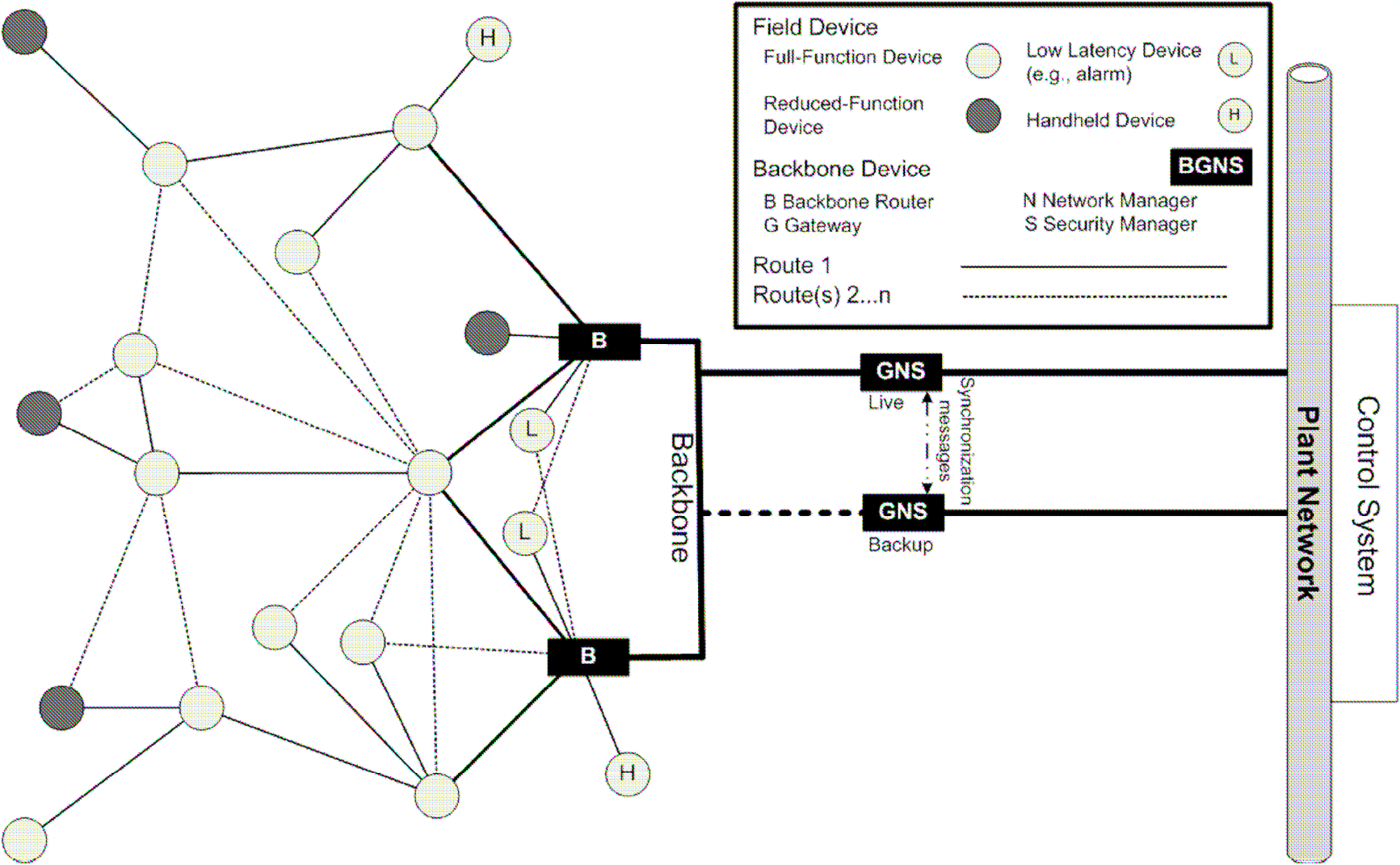
SP100.11a Versus Proprietary Wireless

- Interoperability
- Open
- Developed in an ANSI-accredited open process by Industry leaders
- Maintained by ISA
- Multiple Silicon Suppliers, Multiple Software providers
- Technical growth path with ever reducing costs and increasing capabilities

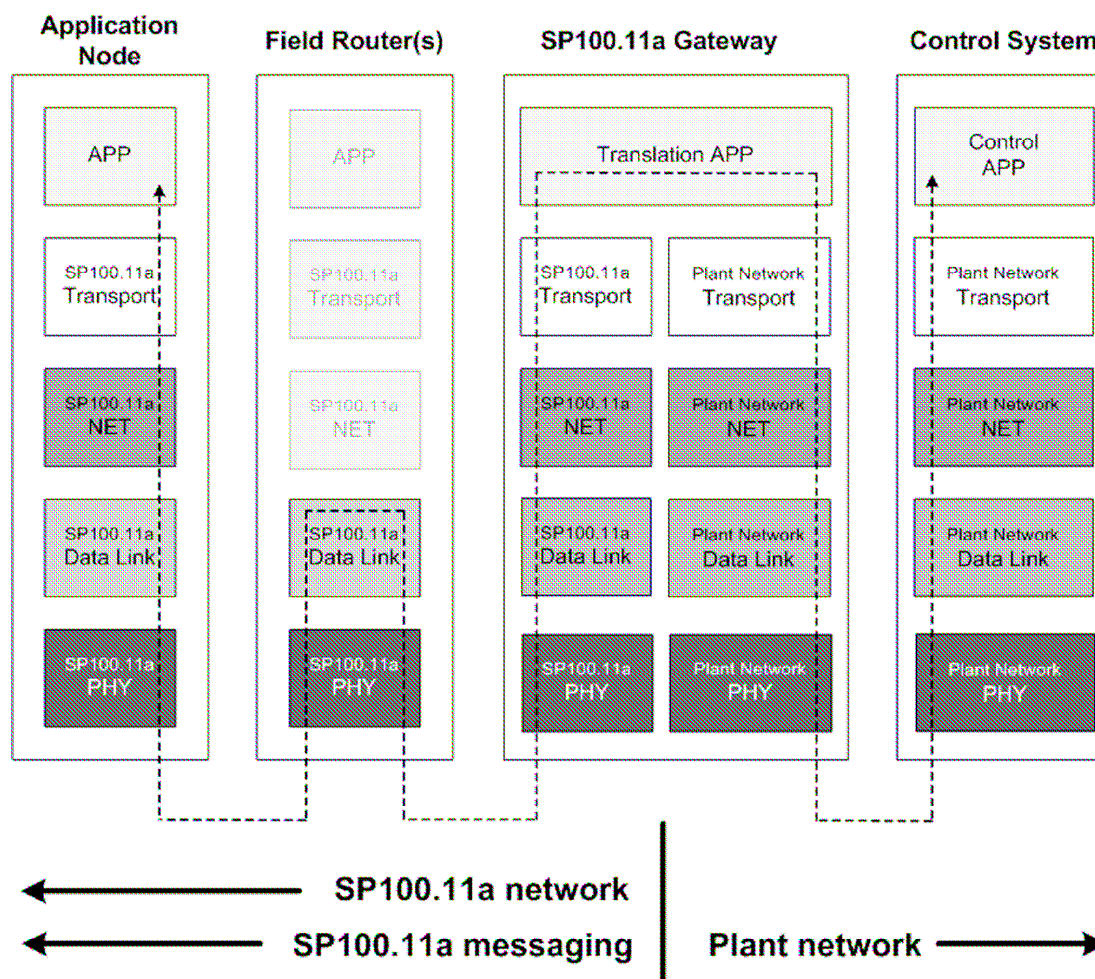
SP100.11a Basic Network



SP100.11a with Bridges



SP100.11a Stack





SP100.11a Release 1 Will.....

- **Be an open standard for anyone to implement and deploy**
- **Be simple to use and deploy for end users**
- **Be focused on:**
 - **serving process industry applications without excluding factory automation**
 - **in-plant/near-plant**
 - **global deployment**
- **Provide technology to address Class 1 (non-critical) to Class 5 applications such as monitoring**
- **Assure multi-vendor device interoperability**
- **Have a draft standard ready for work group balloting by October, 2007**
- **Include only 2.4 GHz 802.15.4-2006 radios**
- **Adhere to a comprehensive coexistence strategy**
- **Use channel hopping to support co-existence and increase reliability**
- **Use a single application layer providing both native and tunneling protocol capability for broad usability**
- **Provide simple, flexible, and scalable security addressing major industrial threats leveraging 802.15.4-2006 security**
- **Offer field device meshing and star capability**



SP100.11a system architecture will:

- **Include provisions to accommodate alternate Phys in future releases**
- **Support factory automation applications**
- **Support low latency applications**
- **Not preclude low cost implementations over the life cycle of the intended deployments**



We Value Your Input

- Questions on ISA-SP100?
- Ideas / Suggestions?
- To get involved, contact:
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