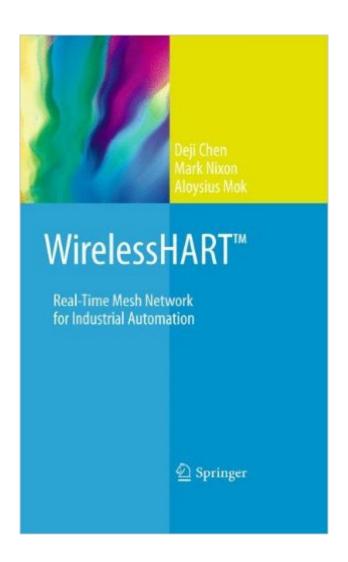# WirelessHARTTM: Real-Time Mesh Network For Industrial Automation

Synopsis

The process control industry has seen generations of technology advancement, from pneumatic communication to electrical communication to electronic c- munication, from centralized control to distributed control. At the center of todayâ ™s distributed control systems are operator workstations. These operator wo- stations provide the connection between those overseeing and running plant operations to the process itself. With each new generation of products the operator workstation has become increasingly more intelligent. Newer applications provide advanced alarming, control, and diagnostics. Behind all of these applications are smarter devices. These smart devices provide greater process insight, reduce en- neering costs, and contribute to improving the overall operational performance of the plant. Smart devices include advanced diagnostics that can report the health of the device and in many cases, the health of the process that the device is connected to. It is not uncommon for smart devices to include diagnostics that can detect plugged lines, burner flame instability, agitator loss, wet gas, orifice wear, leaks, and cavitations. These devices tell the user how well they are operating and when they need maintenance. Improvements in sensor technology and diagnostics have lead to a large variety of smart devices. So how do users connect the capabilities of these smart devices to their existing control system infrastructures? The answer is wireless. Wireless technology has matured to the point that it now can be safely applied in industrial control, monitor, and asset management applications.

Book Information

Hardcover: 276 pages

Publisher: Springer; 2010 edition (April 22, 2010)

Language: English

ISBN-10: 1441960465

ISBN-13: 978-1441960467

Product Dimensions: 6.1 x 0.7 x 9.2 inches

Shipping Weight: 1.3 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 starsÂ Â See all reviewsÂ (3 customer reviews)

Best Sellers Rank: #2,020,794 in Books (See Top 100 in Books)   #245 inÂ Books > Computers & Technology > Hardware & DIY > Maintenance, Repair & Upgrading   #409 inÂ Books > Computers & Technology > Hardware & DIY > Internet & Networking   #975 inÂ Books > Computers & Technology > Computer Science > Robotics

Customer Reviews

This is probably one of the worst written and least useful book I've ever encounter. Badly edited (look at the TOC, chapters of 30 pages mix with single-page "chapters"), really badly written and disorganized in general. In addition, the pages look terrible, figures are low-quality and non-informative, and you get pages of useless tables taken from the standard.I have hoped to extract useful information in order to be able to get an overview on the physical and MAC layers within WirelessHART. Not having the standards texts themselves, I had to resort to this book. The physical layer is treated in two pages (!), then "in-depth" some "discourses" (i.e., random, non-organized stuff the authors have copied there) are given in further 4 pages (!), in a horribly written text full of incorrect formulations, see e.g. 8.1.2. Then two chapters later again some random "discourse" on the physical layer, which rather looks like some basic text taken from a communications systems textbook. So you get essentially 0 information, scattered over three chapters. You get absolutely no idea how the overall system or parts of it work.Overall, the book resembles to a low-quality standard text (which is really bad for a textbook), with randomly shuffled chapters. Not recommended unless you don't have any other option (at least from a networking perspective).

This was a great source for understanding the WirelessHART protocol. All my questions were answered, and then some.

Wireless Links has existed in the industrial environment for many years, however Wireless Sensing Networks enabled by WirelessHART are a complete new technology that enables a whole new range of applications for the process controls space. WirelessHART leverages the capabilities of the IEEE802.15.4 wireless sensing standard in a way that creates the most reliable an secure network for industrial applications.This book fills a gap on the technical literature as it cover in depth the underpinning of the WirelessHART Industrial Wireless Sensing Technology. Deji Chen and Mark Nixon did an outstanding job in presenting in a sistematic way the details of the IEC62591 Standard (also known as WirelessHART).

WirelessHARTTM: Real-Time Mesh Network for Industrial Automation Essential Guide to Samsung SmartThings Smart Home Automation System: A Practical Guide to on How to Use SmartThings Home Automation in Your Everyday Life. ... Home Automation Essential Guides Book 6) Network Programmability and Automation: Skills for the Next-Generation Network Engineer Real Time Systems and Programming Languages: Ada 95, Real-Time Java and Real-Time C/POSIX (3rd

Edition) Real Estate: Learn to Succeed the First Time: Real Estate Basics, Home Buying, Real Estate Investment & House Flipping (Real Estate income, investing, Rental Property) Automation Made Easy: Everything You Wanted to Know about Automation--and Need to Ask Home Automation with the Raspberry Pi: Build Home Automation Systems Using The Power of The Raspberry Pi Apple's Homekit Smart Home Automation System Handbook: Discover How to Build Your Own Smart Home Using Apple's New HomeKit System (Smart Home Automation Essential Guides Book 7) Evaluation of Industrial Disability: Prepared by the Committee of the California Medical Association and Industrial Accident Commission of the State ... of Joint Measures in Industrial Injury Cases. Industrial Network Security, Second Edition: Securing Critical Infrastructure Networks for Smart Grid, SCADA, and Other Industrial Control Systems Industrial Network Security: Securing Critical Infrastructure Networks for Smart Grid, SCADA, and Other Industrial Control Systems Extending Simple Network Management Protocol (SNMP) Beyond Network Management: A MIB Architecture for Network-Centric Services Industrial Automation: Hands On Programming and Automating Cisco Networks: A guide to network programmability and automation in the data center, campus, and WAN (Networking Technology) Learn to Make Deco Mesh Wreaths Different Types of Fabrics Used At Homes: Knowing About Ikat, Mesh, Muslin and Velvet Fabrics Real-time Operating Systems (The engineering of real-time embedded systems Book 1) Memory Controllers for Real-Time Embedded Systems: Predictable and Composable Real-Time Systems: 2 The Best Homemade Kids' Lunches on the Planet: Make Lunches Your Kids Will Love with Over 200 Deliciously Nutritious Lunchbox Ideas - Real Simple, Real Ingredients, Real Quick! Lupus: Real Life, Real Patients, Real Talk