

So many wireless technologies! Which is the right one for my application?

Don Dickinson^{1*}

¹Don Dickinson, Phoenix Contact USA, 586 Fulling Mill Road, Middletown, Pennsylvania, 17057, USA
(*correspondence: ddickinson@phoenixcon.com)

FORMAT: 6-12 page paper plus 30-minute PowerPoint presentation

KEYWORDS

Spread Spectrum, Wi-Fi, Bluetooth, WirelessHART, ISA100, IEEE 802.11a/b/g/n, IEEE 802.15

ABSTRACT

Wireless technology has transformed our world. The demand for mobile communications and computing continues its dramatic growth driven by the proliferation of smart phones and tablets.

The use of wireless in industry is growing rapidly as well. Wireless technology has been used in industry for many years and has provided reliable communications for monitoring and controlling remote processes, including mission-critical applications. However, new wireless technologies have emerged giving users even more options for solving application needs such as wireless networking for the mobile worker and, wireless sensor networks for process optimization and asset management. But which is the right technology for your application? Understanding the capabilities of the various wireless technologies will allow users to realize the benefits of wireless while avoiding the problems resulting from its misapplication.

So many wireless technologies! Which is the right one for my application? The paper and presentation provide an overview of the various license-free, Spread Spectrum technologies and their appropriate use for industrial applications. The capabilities and limitations of both proprietary and public wireless protocols will be discussed along with issues such as: moving data through a wireless medium, security and robustness of wireless transmission and, application considerations for the key wireless technologies used in industry.

About the Author:



Don Dickinson has more than 28 years of sales, marketing and product application experience in Industrial Controls and Automation, involving a wide range of products and technologies in various industry segments. Don is the Senior Business Development Manager – Water Sector, Phoenix Contact USA. He is the past chair of the NC AWWA-WEA Automation Committee and the current chair of the Automation Security subcommittee.