Interview about trends in industrial networks

„Fast and reliable is no longer enough“



Hirschmann has helped to define the development of industrial networks over the past decades. In this interview, Wolfgang Schenk, VP Business Development at Belden, gives an outlook on the further development of communication technologies.

THE INTERVIEW WAS CONDUCTED BY: Christian Vilsbeck, A&D **IMAGE:** Belden

SPE, OPC UA and TSN: Is this finally a setup for you to meet the requirements of industrial communication?

SPE provides flexible Ethernet communication right down to field device level. TSN adds real-time capability to Ethernet and makes precise time synchronization a central standard. Together with OPC UA for end-to-end vertical and horizontal communication, this brings us pretty close to the ideal picture for many Industry 4.0 application scenarios.

Production environments must be more flexible and modular. Will this only be possible with wireless technology in the future?

I answer this question with the statement that communication follows power supply. As long as machines and tools have to be supplied with power by cable, there will always be a good reason for wired communication. At the same time, there is no question that advances in wireless communication and, for example, battery operation are enabling ever more flexible and modular production environments. Just think of what automated guided vehicles (AGVs) already make possible today.

What impact will the increasing integration of AI have on industrial networks?

AI thrives on data - both when creating models and processing it and deriving actions. In industrial application scenarios, this data originates directly from the manufacturing processes. Industrial AI therefore requires industrial networks that can cover high bandwidth requirements already at field level. In addition, AI requires intelligent edge solutions close to the data sources to tame the immense volume of data at an early stage.

Where do you see industrial networks in ten years' time?

Many of today's communication technologies and network architectures will certainly still be around in ten years' time. However, the time will not stand still for industrial networks either. Integrated cybersecurity solutions are becoming increasingly important. Wireless communication will replace the one or the other cable. Process data is becoming increasingly valuable and must be communicated vertically. I am also very excited about how networks will be operated as-a-Service in the future as well as about the many innovations that are not yet foreseeable and that we will certainly bring to the market.



About Belden

Belden Inc. delivers the infrastructure that makes the digital journey simpler, smarter and secure. We're moving beyond connectivity, from what we make to what we make possible through a performance-driven portfolio, forward-thinking expertise and purpose-built solutions. With a legacy of quality and reliability spanning 120-plus years, we have a strong foundation to continue building the future. We are headquartered in St. Louis and have manufacturing capabilities in North America, Europe, Asia, and Africa.

For more information, visit us at:
www.belden.com

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BELDEN-CELEBRATES-100-YEARS-OF-HIRSCHMANN-2024-04-BR-EN



Belden Celebrates 100 Years of Hirschmann

MILESTONES

Founded in 1924 in Esslingen am Neckar, Hirschmann has developed into one of the world's leading suppliers of industrial automation and network solutions for critical applications. Hirschmann has been part of the Belden Group since 2007. Belden provides the infrastructure that makes the digital transformation easier, smarter and safer.

100 Years of Hirschmann

The foundation stone for the company was laid by engineer Richard Hirschmann (1894-1974) in 1924 with the invention of the banana plug connector. One hundred years later Hirschmann, now an integral part of the global company Belden, has developed into a specialist for ultra-modern and secure data and network solutions for industry and critical infrastructure.

TEXT + PICTURES: Hirschmann / Belden

Founded in 1924 in Esslingen am Neckar, Hirschmann has today a leading global supplier of industrial automation and network solutions for critical applications. Hirschmann's broad portfolio fulfils almost all requirements for today's complex industrial network infrastructures of today. As a pioneer in the introduction of Ethernet as the standard communication protocol in the industry, Hirschmann always endeavours to find new ways to improve safety and reliability in a wide range of industrial applications.

Since 2007 Hirschmann has been part of the Belden Group. Belden provides the infrastructure that makes the digital transformation easier, smarter and safer. Nowadays, the focus is not only on connectivity, but also on what Belden offers through its performance-orientated portfolio, future-oriented know-how and through its customised solutions to meet growing customer requirements. "We recognize that factories and warehouses need an infrastructure that can support increasing data volumes, and we're committed to helping them enable enterprise-wide data to flow seamlessly and securely – from the edge to the cloud – to gain valuable insights and improve key performance indicators (KPIs)," said Brian Lieser, Executive Vice President, Industrial Automation Solutions at Belden. "Our next-generation solutions provide industrial organizations the foundation for digital potential across any protocol or vendor, transporting data for analysis, orchestration and management. Together, we can anticipate what successful outcomes require and solve enterprises' unique networking needs to speed up digitization and accelerate business performance."

As the industrial sector evolves, companies need a technology infrastructure with a robust, scalable network that can handle growing data volumes. Belden delivers the infrastructure that makes our customers' digital journeys simpler, smarter and secure through a performance-driven portfolio, innovative expertise and purpose-built solutions.

HIRSCHMANN

BELDEN

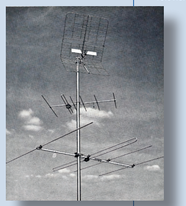
1924
Foundation of the company Richard Hirschmann Radiotechnisches Werk



1926
Invention of the „one-two plug" - today's Banana Plug Connector



1933
Radio Antenna



1933
Car Aerial

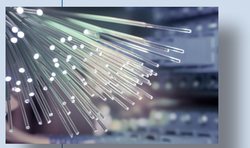


1951
Television Antenna

1967
The world's first Valve Connector



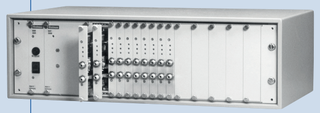
1979
Optical Transmission Technology



1979
Sensor/Actuator Connector



1984
World's first Fibre Optic-based Ethernet at the University of Stuttgart



1990
The first redundant Ethernet-Ring



1997
Industrial Ethernet Rail Switch



2003
M12 IP67 Ethernet Connector



2004
First industrial Security Router



2007
Belden acquires Hirschmann

BELDEN
HIRSCHMANN
A BELDEN BRAND

2016
Time Sensitive Networking TSN
First TSN demo with data traffic diversity and device configuration



2021
World's first Customer Innovation Centre in Stuttgart

BELDEN Customer™ Innovation Center



2022
Industrial Edge Gateway



1924 1926 1933 1933 1951 1967 1979 1984 1990 1997 2003 2004 2007 2016 2021 2022