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Phoenix Contact and Proximus unlock a key 5G connection that could revolutionize Industry 4.0

Monday 01 february 2021 (Brussels, Belgium):
Industrial connection and automation technology leader Phoenix Contact teamed up with Belgian network operator Proximus to perform a successful test of PROFINET on a wireless 5G network. This achievement marks a key milestone for Industry 4.0 applications and unlocks the use of this leading factory automation protocol in combination with ultra-fast, ultra-reliable 5G mobile private networks (MPNs).

The significance of 5G for industrial stakeholders

5G is the first generation of mobile data transfer technology to enable ultra-reliable low-latency communication (URLLC), unlocking the **reliable implementation of real-time data flows**. Together with network slicing, this allows for the more precise management of available industrial IT resources to guarantee bandwidth and a reliable connection. Industrial markets are eagerly waiting for 5G to prove itself via dedicated use case tests.

A clear demonstration of feasibility

As one of the leading industrial Ethernet protocols applied in the factory automation domain, PROFINET is the most challenging to deploy for industrial machine communication, as it requires extremely low latency and ultra-reliability. As a result, PROFINET has generally required a wired ethernet connection – until now.

Phoenix Contact and Proximus collaborated to set up a proof of concept in the Proximus lab, **deploying a stable PROFINET communication via a private 5G standalone network** running on the 3.5GHz band. The test was conducted using Proximus 5G private network infrastructure and a 5G industrial router developed by Phoenix Contact.

Paving the way for never-seen-before wireless use cases

This successful deployment of PROFINET on a wireless 5G network demonstrates the feasibility of this implementation for industrial customers and offers possibilities for a broad range of new use cases, including:

Factory and safety automation

The low-latency possibilities of mobile private networks make **real-time, wireless automation and machine-to-machine communication** possible. At the same time, available equipment within plants can be used more flexibly, enabling plants to meet the manufacturing requirements of the future.

Logistics

Autonomous guided vehicles (AGVs) are already used in logistics applications, but their use is limited by the latency, bandwidth and range of current data transfer technologies. 5G offers a solution to these limitations by increasing overall connectivity, **enabling the flexible and efficient deployment of AGVs** in larger areas. Complex applications requiring precision location tracking and low-latency communication, such as interactions between production machines, robots and AGVs become possible.

Process industry

5G offers key opportunities in the wireless control and monitoring of equipment in the context of process automation, which has a much broader physical footprint than factory automation. Automating a process application requires **rapid, reliable data transfer between sensors** gathering information about temperature flow rates and pressure, for example, and to control numerous valves, coolers, heaters and pumps involved in the process.

A perfect marriage of PLCnext and 5G

For this future-oriented test setup, the choice was deliberately made for a controller that is totally flexible, open and reliable. Properties that **PLCnext** has in abundance together with rock solid hardware. This makes it possible to fully test and exploit all the advantages and new possibilities that 5G offers. This combination is perfectly suited for a wide range of different applications due to very reliable communication, both to the cloud and for real-time industrial applications.

About the Phoenix Contact Group

Headquartered in Blomberg, Germany, Phoenix Contact is a global market leader in the development of components, systems and solutions in the areas of electrical engineering, electronics and automation. The family-owned company employs 17,600 people worldwide and recorded a turnover of 2.48 billion euros in 2019. The Phoenix Contact Group has an on-site presence in over 100 countries and includes 18 companies in Germany as well as more than 55 international sales subsidiaries.

Phoenix Contact produces in 11 countries all over the world, with a high vertical range of manufacture. The group's product range comprises components and system solutions for energy supply including wind and solar, device and machine building as well as control cabinet engineering. In addition, Phoenix Contact also produces an innovative components offer, including modular terminal blocks and special-purpose terminals, printed circuit terminal blocks and plug connectors, cable connection technology and installation accessories. Electronic interfaces and power supplies, automation systems based on Ethernet and wireless networks, safety solutions for man, machine and data, surge protection systems as well as software programs and tools provide system installers and operators and device manufacturers with comprehensive solutions. The automotive, renewable energy and infrastructure markets are supported with holistic solution concepts, including engineering and training services and services tailored their specific demands.

Phoenix Contact supports the digital transformation with its products, systems and solutions. Thanks to extensive in-house machine-building experience, Phoenix Contact is familiar with the requirements of digitalization and integrated data flows from engineering to production, and further across the entire product lifecycle.

www.phoenixcontact.com

About Proximus

Proximus Group (Euronext Brussels: PROX) is a provider of digital services and communication solutions operating in the Belgian and international markets. Delivering communication and entertainment experiences for residential consumers and enabling digital transformation for enterprises, we open up a world of digital opportunities so people live better and work smarter. Thanks to advanced interconnected fixed and mobile networks, Proximus provides access anywhere and anytime to digital services and data, as well as to a broad offering of multimedia content. Proximus is a pioneer in ICT innovation, with integrated solutions based on IoT, Data analytics, cloud and security.
Proximus has the ambition to become the reference operator in Europe through next generation networks, a truly digital mindset and a spirit of openness towards partnerships and ecosystems, while contributing to a safe, sustainable, inclusive and prosperous digital Belgium.

In Belgium, Proximus' core products and services are offered under the Proximus and Scarlet brands. The Group is also active in Luxembourg as, under the brand names Tango and Telindus Luxembourg, and in the Netherlands through Telindus Netherlands. The Group's international carrier activities are managed by BICS, a leading international communications enabler, one of the key global voice carriers and the leading provider of mobile data services worldwide.

With 12,931 employees, all engaged to offer customers a superior experience, the Group realized an underlying Group revenue of EUR 5,686 million end-2019.

For more information, visit www.proximus.com & www.proximus.be.