Straight talk: TSN

The turbo for PROFINET and OPC UA.

What's the next big step for digitalization with PROFINET and OPC UA?

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Straight talk: our commitment for digitalization

Digitalization is setting the bar very high, especially when it comes to industrial communication. Siemens already builds on the rapidly expanding open communication standard Industrial Ethernet – with PROFINET at field level and OPC UA from the control level. Here, the benefits are perfectly combined within a single network. But Siemens is going one step further – with TSN (Time-Sensitive Networking), an Ethernet-based technology.

From the automotive industry and machine building to the food and beverage industry, TSN offers key benefits for industrial production – like reserved bandwidths, Quality of Service (QoS) mechanisms, a low transmission latency, and the simultaneous transmission of multiple protocols which can also be real-time capable.

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TSN creates a standardized basic technology within the framework of IEEE 802.1. It is composed of a number of existing IEEE standards and exclusively pertains to the OSI layer 2 of communication. This means that the user interface remains unchanged even with TSN.

What helps PROFINET and OPC UA to ensure the basis of the digital enterprise in future plant networks?

What makes Quality of Service (QoS) possible in standard Ethernet networks?

What is based on encapsulated streams and ensures that different protocols – even real-time capable – can use the same Ethernet network?

What offers guaranteed and scalable bandwidths as well as a low transmission latency?

What creates the basis for open, integrated networking within the company to enable flexible and deterministic production?

What helps PROFINET and OPC UA to ensure the basis of the digital enterprise in future plant networks?
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