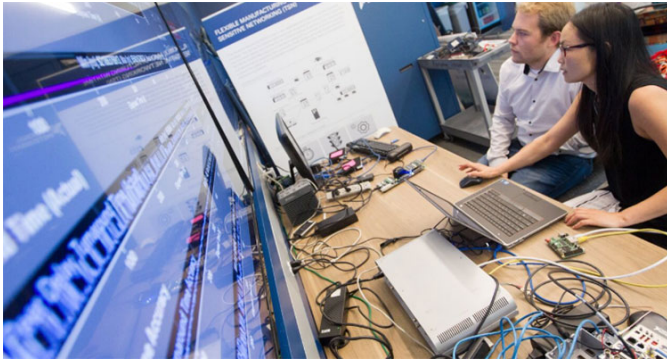# Avnu Alliance Delivers TSN Conformance Tests

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Avnu Alliance announces the first set of Avnu Time-Sensitive Networking (TSN) conformance tests for the time synchronisation of industrial devices (or IEE 802.1AS) are now available.

The tests ensure a device conforms to relevant IEEE standards, as well as additional requirements selected as necessary for system interoperability. In addition, Avnu Alliance has formed an liaison agreement with OPC Foundation to provide conformance testing and certification of OPC UA over TSN devices. The two groups are currently working together on a unified standard and interoperable ecosystem for the industrial market.

In the future, Avnu will also be able to test and certifiy other traffic shaping mechanisms, frame preemption, redundancy, ingress policing, strict priority and security.

To further speed the path to an interoperable foundation, the open source code for 802.1AS timing and synchronisation is available in the OpenAvnu repository on GitHub. The document titled "Theory of Operation for TSN-enabled Industrial Systems" outlines a certified system architecture and requirements for this industrial model. It introduces the fundamental mechanisms of TSN system architecture, including time synchronisation, QoS using scheduled transmission and network configuration, and the requirements of several industrial use cases.

Avnu will continue supporting additional capabilities, such as support for multiple IEEE 1588 profiles, guidelines for scaling to very large network architectures, centralised and distributed configuration for the network, and aggregation/composition of multiple networks into a single TSN-enabled network domain.

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