



News Release

OPC UA TSN Achievements from Combined IT-OT Leader Investment

Industry leaders and organizations unite to drive interoperability for IIoT and Industrie 4.0 applications.

Nuremberg, Germany – November 28, 2017 16:45 CET – Today, the [Avnu Alliance](#) (Avnu), [Industrial Internet Consortium](#) (IIC), and OPC Foundation announce their collaboration with IT-OT industry leaders to advance industrial device interoperability and to show the progress made in bringing the open, unified communication standard OPC UA over Time Sensitive Networking (TSN) to market. Leading companies active in these groups have pledged their commitment to ensuring the interoperability of deterministic industrial devices and have made significant investments in achieving this goal. Rapid developments of these technologies have been made over the last year. Through the support of Avnu, IIC and OPC, these leaders come together at [SPS IPC Drives 2017](#) to review achievements to date and confirm their commitment to ongoing work into the future.

“With the rapid adoption of TSN as a foundational technology for automation, the community is increasingly relying on an interoperable set of network services and infrastructure. Today, 17 market leaders are reinforcing their commitment to complete a unified communication technology,” said Todd Walter, Avnu Alliance Industrial Segment Chair. “By leveraging the relationships of Avnu, IIC and OPC Foundation, we’re creating a faster process for the creation of an open, interoperable ecosystem of devices that take advantage of secure, guaranteed latency and delivery for critical traffic. It is exciting to see the fruits of our labor in these milestones.”

The pillars of this announcement are:

Conformance testing advances: Avnu TSN conformance test plans for time synchronization of industrial devices are ready and available to test houses. A relationship between Avnu and OPC Foundation has been established to meet the needs of the industry with certification of OPC UA TSN products. At last month’s Avnu IIC Interoperability Workshop, more than 20 companies came together to demonstrate interoperability in the IIC TSN Testbed and to advance the conformance tests with the assistance of University of New Hampshire InterOperability Lab, an Avnu-recognized test facility. Test houses participated in preparation for their future roles to provide full conformance testing for manufacturers of industrial automation equipment.

Standards evolved, more vendors, more devices: The Publish Subscribe extension for OPC UA is now available in release-candidate form, enabling the exchange of OPC UA over UDP connections. This is the prerequisite for running OPC UA TSN. “OPC UA over TSN adds additional capability to the OPC Foundation portfolio, including enhancing controller-to-controller and machine-to-machine communication and information integration. OPC UA addresses the complex requirements of initiatives like Industrie 4.0 and the IIoT, providing information integration between devices, applications and the cloud, truly providing the foundation for the





much-demanded seamless communication and information integration between IT and OT networks,” said Thomas Burke, OPC Foundation President.

Companies in support of OPC UA TSN are showcasing devices at this year’s SPS IPC Drives including: Analog Devices, Belden, Bosch Rexroth, B&R, Cisco, Hilscher, National Instruments, Renesas Electronics, Schneider Electric, and TTTech in demonstrations at the OPC Foundation booth (7-572/7-670) and the IIC TSN Testbed itself will be exhibited at the TTTech booth (6-460).

Demonstrated interoperability between different vendors: Interoperability testing via [the IIC TSN Testbed](#) is rapidly progressing with eight hands-on plugfests taking place in the US and Europe over the past 18 months. More than 20 companies have participated in these face-to-face events to test and demonstrate interoperability between devices from various manufacturers and vendors – both collaborative and competitive. Many of the devices are already communicating in OPC UA data format. The results from the Testbed plugfests are fed into the conformance testing plans to ensure that the tests exercise the fundamentals of the architecture. “Our TSN Testbed stands as a showcase for the business value of TSN. The work coming out of the TSN Testbed is already having a direct impact on suppliers and manufacturers who see the technology as a value-add for their system structures,” said Paul Didier, IIC TSN Testbed Coordinator, Cisco Solution Architect. “Companies are invited to participate in our [plugfests](#) to test their own TSN devices for interoperability, including OPC UA Pub-Sub TSN devices.”

As a next step these companies and organizations are committed to driving OPC UA TSN technology forward. By gathering test experiences in a production environment, the groups plan to develop further conformance testing for interoperability and extend the specifications for use cases that require even more precise timing.

Senior executives from Industry leaders driving OPC UA TSN forward such as ABB, Belden, B&R, Bosch Rexroth, Cisco, Hilscher, National Instruments, Phoenix Contact, Pilz, Schneider Electric, SEW-EURODRIVE, and TTTech as well as Avnu Alliance, Industrial Internet Consortium and OPC Foundation are available to answer questions on these announcements in a live press conference at SPS IPC Drives on Tuesday, November 28 at 16:45 in the Istanbul room, Nürnberg Convention Center Ost, Level 2.

A full listing of the IIC TSN Testbed participants is as follows: Analog Devices, Avnu Alliance, Belden/Hirschmann, Bosch Rexroth, B&R Industrial Automation, Calnex, Cisco, Hilscher, Intel, ISW, Ixia, Kalycito, KUKA, National Instruments, Phoenix Contact, Pilz, Renesas Electronics, Schneider Electric, SICK AG, TTTech, WAGO, and Xilinx.

About Industrial Internet Consortium

The Industrial Internet Consortium is the world’s leading membership program transforming business and society by accelerating the Industrial Internet of Things (IIoT). The IIC delivers a trustworthy IIoT in which the world’s systems and devices are securely connected and controlled to deliver transformational outcomes. The Industrial Internet Consortium is a program of the Object Management Group (OMG). For more information visit www.iiconsortium.org.

About OPC Foundation

The mission of the OPC Foundation is to manage a global organization in which users, vendors and consortia collaborate to create data transfer standards for multi-vendor, multi-platform, secure and reliable interoperability in industrial automation. To support this mission, the OPC Foundation creates and maintains specifications, ensures compliance with OPC specifications via certification testing and collaborates with industry-leading standards organizations.





About Avnu Alliance

The Avnu Alliance is a community creating an interoperable ecosystem of low-latency, time-synchronized, highly reliable networked devices using open standards. Avnu creates comprehensive certification programs to ensure interoperability of networked devices. The foundational technology enables deterministic synchronized networking based on IEEE Audio Video Bridging (AVB) / Time Sensitive Networking (TSN) base standards. The Alliance, in conjunction with other complimentary standards bodies and alliances, develops complete solutions in professional AV, automotive, industrial control and consumer segments.

Press Contact

On-site at SPS IPC Drives: Simon Brooks, TTTech, mobile: +43-676-849-372-4250

US: Alexandra Crabb, Caster Communications, Inc. mobile: +1-401-318-2229

