The CLPA and PI highlight how collaboration is key to advance TSN

18 May 2023

Industry leaders worldwide are recognizing the role of Time-Sensitive Networking (TSN) as a critical enabler in the development of state-of-the-art Industry 4.0 applications. The CC-Link Partner Association (CLPA) and PROFIBUS & PROFINET International (PI) are premier organizations acknowledging the opportunities offered by this enabling technology and dedicated to helping users and adopters maximize the gains. They are also committed to standardizing certification guidelines for compatible devices, which is being achieved through the TSN Industrial Automation Conformance Collaboration (TIACC).

Watch the two organizations explain why TSN is a game changing technology and the importance of the TIACC program: https://youtu.be/gGO2ZbZj4aA

TSN is an update to the specifications of Ethernet, which makes it deterministic and provides the foundations of converged network architectures. As such, TSN is seen by established network technology and industrial automation experts as a key technology for future-oriented Industry 4.0 and smart manufacturing applications. These will require the transfer of extraordinarily large volumes of different types of data across the enterprise, a requirement that only TSN can support, with its ability to provide a converged network via synchronization, traffic scheduling, prioritization and queueing functions. These abilities are behind key efforts from automation vendors to incorporate the technology within their new products.

Karsten Schneider, Chairman at PI, comments: "TSN is starting to become a relevant technology right now. The technology has developed over the last years and is now really ready to break through in the market. If you are a manufacturer of devices and you did not start (adopting it), you'd better get their hands dirty. Start with the technology and implement it, because now it's the time for that."

Given the prominent role of TSN in the creation of the highly automated production lines of the future across a wide range of industries, standardization is key. To this end, various open network organizations have banded together to deliver a common way of testing for these systems. This has led to the TIACC initiative, which was set up to develop standardized testing for TSN conformance and involves the CLPA, PI, Avnu Alliance, ODVA and OPC Foundation (OPCF).

Karsten Schneider explains: "Today we have a lot of dedicated technologies, which are proprietary and very specialized. With TSN we can offer an open, standardized infrastructure that all of us can use."

Since its establishment, the TIACC working group has been focusing on helping network technology experts and industrial automation vendors adopt this innovation by developing a single common conformance test plan. This will support a single, standardized certification for TSN-compatible products, in line with the IEC/IEEE 60802 TSN profile for Industrial Automation.

Tom Burke, Global Strategic Advisor at the CLPA, adds: "The TIACC is all about conformance. We are working together to develop the necessary testing infrastructure to allow us to have consistency and validation of all of our networking technologies." Karsten Schneider agrees: "TIACC is a very important milestone. We need to make sure that the interoperability in the end users spans (across all the

base of installed devices) - we need to make sure that (our devices) work together. That's why we started this collaboration: to define a common testing procedure and architecture to ensure interoperability."

Thanks to the key activities of the TIACC program and its members, industrial automation engineers and vendors will be able to offer highly competitive, fully interoperable solutions that will help end users achieve quantum leaps in their digital transformation. As a result, the adoption of TSN can drive the competitiveness of all these communities. Tom Burke concludes: "The CLPA is here to help our partners quickly adopt the CC-Link IE TSN technology, the first open gigabit industrial Ethernet with TSN functions. We have got a multitude of partners that have been supporting CC-Link technologies for a long period of time, we are now working with those partners again to help them adopt the new TSN technology, enabling a communication bridge across the entire enterprise) via total interoperability."

To watch the full interview of Tom Burke and Karsten Schneider on TSN and TIACC: https://youtu.be/gGO2ZbZj4aA

Image captions:

Image 1: The CC-Link Partner Association (CLPA) and PROFIBUS & PROFINET International (PI) are committed to standardizing certification guidelines for compatible devices, through the TSN Industrial Automation Conformance Collaboration (TIACC)

About The CC-Link Partner Association (CLPA)

The CLPA is an international organization founded in 2000, now celebrating its 20th Anniversary. Over the last 20 years, the CLPA has been dedicated to the technical development and promotion of the CC-Link open industrial network family. The CLPA's key technology is CC-Link IE TSN, the world's first open industrial Ethernet to combine gigabit bandwidth with Time-Sensitive Networking (TSN), making it the leading solution for Industry 4.0 applications. Currently the CLPA has over 4,100 corporate members worldwide, and more than 2,000 compatible products available from over 370 manufacturers. Around 38 million devices using CLPA technology are in use worldwide.

Anyone interested in joining the organization can apply here: https://www.cc-link.org/en/clpa/members/index.html

Press contact:
CC-Link Partner Association Americas
Thomas Burke
Global Strategic Advisor
Tel.:   (847) 478-2100
tom.burke@cclinkamerica.org

PR agency:
DMA Europa
Chiara Civardi
Progress House, Great Western Avenue, Worcester,
WR5 1AQ, UK
Tel.:   +44 (0) 1905 917477
chiara.civardi@dmaeuropa.com
news.dmaeuropa.com