

ETG semiconductor working group held its 19th meeting

Recently, the EtherCAT Technology Group (ETG) held the 19th meeting of its Technical Working Group (TWG) Semi. This working group develops device profiles for the semiconductor industry and included the topic of its work in functional safety with Safety over EtherCAT (FSoE) during the online meeting. In addition, the integration of the EtherCAT Conformance Test Tool (CTT) into automated device acceptance was an important topic.

The TWG Semi of the EtherCAT Technology Group meets semi-annually in plenary sessions and in many sub-working groups. This has resulted in a set of specifications for using EtherCAT in semiconductor applications that has contributed significantly to the success of the communication standard in this industry. This success can also be seen in the continued willingness across the industry to participate in the TWG Semi: More than 70 participants registered again for the most recent online meeting, who dedicated themselves to working on existing and new EtherCAT device profiles in the course of numerous sessions.

In addition to the work on device profiles, selected topics are always examined in more detail at the TWG Semi meetings. One of the key topics at the most recent meeting was Safety over EtherCAT (FSoE) technology, which was presented to participants in detail by ETG safety expert Dr. Guido Beckmann. Based on this, the meeting covered relevant use cases in the area of functional safety for the semiconductor manufacturing machines referred to as "tools" as well as the associated devices to be worked out in the future. Florian Essler, who has been supporting the work of the TWG Semi from the ETG side since 2011, explains: "Today, we consistently see a deep understanding from manufacturers in the semiconductor industry with regard to EtherCAT. Bringing Safety over EtherCAT into this ecosystem will address another particularly powerful aspect of EtherCAT. This will make a big contribution as the major machine builders in the industry can make significant advancements with the integration of functional safety in their machines." Another topic was the enhanced features of the EtherCAT Conformance Test Tool (CTT), which contribute to increased test automation as well as greater test coverage – including tests for Safety over EtherCAT.

So far the TWG Semi of the EtherCAT Technology Group has developed 14 so-called Specific Device Profile (SDP) documents with more than 20 device profiles for the semiconductor industry. In addition, new projects are constantly in development, so that in the meantime there is a corresponding overview document with the SDP Design Guideline, which describes how a Specific Device Profile is written, what has to be considered in the implementation and how to handle more complex questions in the profile definition.

EtherCAT Compendium: first chapters are online

The EtherCAT Compendium provides a comprehensive and coherent description of the EtherCAT technology with its technical details, system, implementation as well as user aspects. It complements the formal specifications with easy-to-read, applicable and application-specific know-how. The compendium is in progress, first chapters are already online now. The EtherCAT Compendium is available for all ETG members and addresses general interested readers, developers and support engineers as well as test engineers, students and scientists. The work is divided into several sections, with the first chapters to be published being parts of the Technology Details section. Other sections that will follow are "EtherCAT Introduction", "System Aspects", "Implementation Aspects" and "User Aspects". The EtherCAT Compendium can be downloaded from www.ethercat.org/compendium.

EtherCAT Interoperability Testing Week continues its success in Asia

After the virtual developer meetings from the EtherCAT Technology Group (ETG) in Europe and the USA were very well received in the first half of 2021, two additional EtherCAT Interoperability Testing Week events were also held in China and Korea. During the weeklong digital events, participants were able to listen to exciting presentations by ETG experts, clarify open questions about their individual EtherCAT applications and exchange information with other participants on a wide range of development topics. In total, more than 120 people from China, Korea, Singapore and Taiwan participated in the events. Dr. Guido Beckmann, who is responsible for the EtherCAT Interoperability Testing Weeks at ETG, summarizes: "The plenary webinars as well as the individual expert sessions have shown us that the event format is a good opportunity to exchange experiences and ideas, to enter into discussions with the developers and to decisively advance the EtherCAT technology and its interoperability." The virtual EtherCAT Interoperability Testing Weeks were established during the worldwide coronavirus pandemic to provide developers who attend regular EtherCAT Plug Fests under normal conditions with a new opportunity. While they certainly cannot replace the in-person meetings, the webinars allow developers to receive high-quality support in planning and implementing their EtherCAT devices and applications.