The ETG Expands EtherCAT Conformance Initiatives

The EtherCAT Technology Group (ETG) gives top priority to conformance and interoperability. In addition to the group’s successful plug fests – the 7th European EtherCAT Interoperability Meeting will take place in March – the official ETG Conformance Test Tool was released in 2008 and has proven to be quite popular with members. In another recent development, the first ETG Test Center in Nuremberg, Germany, is now open. So far around 50 EtherCAT devices have been certified at the Test Center. Upcoming ETG plans in 2009 include device profile enhancements to the Test Tool, establishing a Test Center in Japan and hosting further plug fests in Europe, Asia and North America.

EtherCAT already provides a basic compatibility via slave controller chips, which implement all “real-time relevant” protocol components in hardware. In addition, most EtherCAT slave devices make use of the well-harmonized stacks from Beckhoff Automation and Hilscher for the higher protocol layers, which are provided in the implementation kits from those companies. EtherCAT avoids uncontrolled variety of incompatible protocol stacks.

Since the beginning of 2006, the ETG has run plug-fests, which are developer meetings with the goal of testing and improving the interoperability of EtherCAT master and slave devices. The Conformance Test Tool allows developers to conduct in-house testing at their own R&D labs. This also helps prepare for the official EtherCAT Conformance Test, which is performed at the EtherCAT Test Center. Passing the test there is the pre-requisite for the EtherCAT Certificate, a “seal of approval” issued by the ETG.

The ETG is currently enhancing the tool to cover other device profiles so the implementation of the various control modes of a servo drive can also be checked, for example.

“So far 50 devices have been certified, but the large number and variety of EtherCAT devices will keep the test center in Nuremberg busy well into the future,” says Florian Häfele, who heads the lab which is run by Beckhoff on behalf of the EtherCAT Technology Group. “We invite the
device vendors among our members to bring their EtherCAT products to the official test center. We also encourage end users to check for the ETG Certificate when purchasing EtherCAT products."

EtherCAT sets new standards for real-time performance and topology flexibility, while meeting or undercutting traditional fieldbus cost levels. EtherCAT features include high precision device synchronization, cable redundancy options, and a functional safety protocol (SIL3). EtherCAT is an international standard (IEC, ISO and SEMI).

The EtherCAT Technology Group (ETG) is an organization in which key user companies from various industries and leading automation suppliers join forces to support, promote and advance EtherCAT technology. With over 900 members from 45 countries, the EtherCAT Technology Group has become the largest organization in the world that is exclusively focused on Industrial Ethernet technologies. Founded in November 2003, it is also currently the fastest growing fieldbus organization.

For further information please see www.ethercat.org