

CANopen PLUGFEST

## Testing interoperability in Italy

CiA organized a CANopen plugfest in Milan, Italy. For the second time, CiA offered Italian CiA members the possibility to verify the achieved level of interoperability and interchangeability of their CANopen devices.

CiA plugfests have always been an opportunity for CANopen device designers to experience the behavior of their latest CANopen device implementations during system integration. To achieve this, device designers from Balluff, Blink, B&R, Celmi, LAM, Mitsubishi, and Wachendorff interconnected their devices at the event hosted by B&R.

Prior to the CiA plugfest, the attending companies had submitted the EDS files of their devices so that CiA had been able to test the EDSs with regard to consistency and correctness, by means of the EDS checker tool. As configuration tools and PLCs rely on detailed and correct EDS files, this test step is very important. The next step is to prove whether the PLC is capable of running the correct boot-up procedure, including detecting, configuring, and setting the CANopen NMT slave devices to NMT operational. This test step includes the correct behavior of the network management (NMT), the SDO interoperability between SDO client and SDO server, as well as the PDO communication, including PDO linking functionality and PDO configuration (scheduling and mapping). For a final performance test, the participants stressed the devices by means of generating a high busload. This allows the verification of the correct device and system behavior even under extreme conditions.



Once again, the experts learned that system integration is eased enormously if all devices come with correct EDS files that include as much default values as possible. Most of the test cases were executed without problems. In general, the attendees gave a positive feedback about the event, because CiA offered the possibility to test their devices in a real multi-vendor network under realistic conditions. The attendees asked CiA to offer such generic CANopen plugfests more regularly because device developers appreciate the option to pretest their device prototypes in realistic multi-vendor systems. CiA is going to organize more CiA plugfests on several topics, such as CANopen Lift and CAN FD. In addition, a different kind of CANopen plugfest is permanently available at the CiA office: the "CiA interoperability test".

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