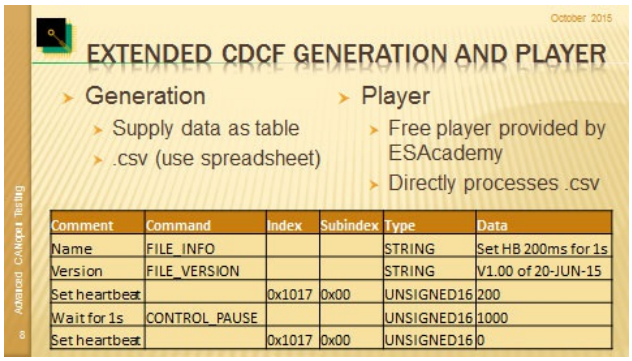
CAN Newsletter Online

15TH ICC

Testing highly dynamic CANopen systems

At the 15th international CAN conference Olaf Pfeiffer of Embedded Systems Academy (ESAcademy) presented a paper about testing of highly dynamic CANopen systems.



(Photo: Embedded Systems Academy)

HIGHLY DYNAMIC CANOPEN SYSTEMS support plug-and-play and node ID assignment by LSS (Layer Setting Services, node ID gets assigned through the network). As a result, devices may change their node ID, making tests more challenging.

One of the test utilities introduced in this paper is now available as free download from ESAcademy's web pages. It supports the extended concise DCF (Device Configuration File) as introduced in the paper. It allows users to write down configuration or test sequences in a table (save as .csv) and execute them using the free CANopen File Player.

The file format, the concise Default Configuration File is part of the basic CANopen definitions and has been in use for quite some time. The extension to it is simply a definition of a set of commands introducing the option to control things like addressing specific devices (identify by CANopen Identity record 1018h) and time delays / timeouts or user interactions. In addition, the utility can re-play previously made CAN trace recordings, supporting a wide variety of formats from Vector, Peak, and others.