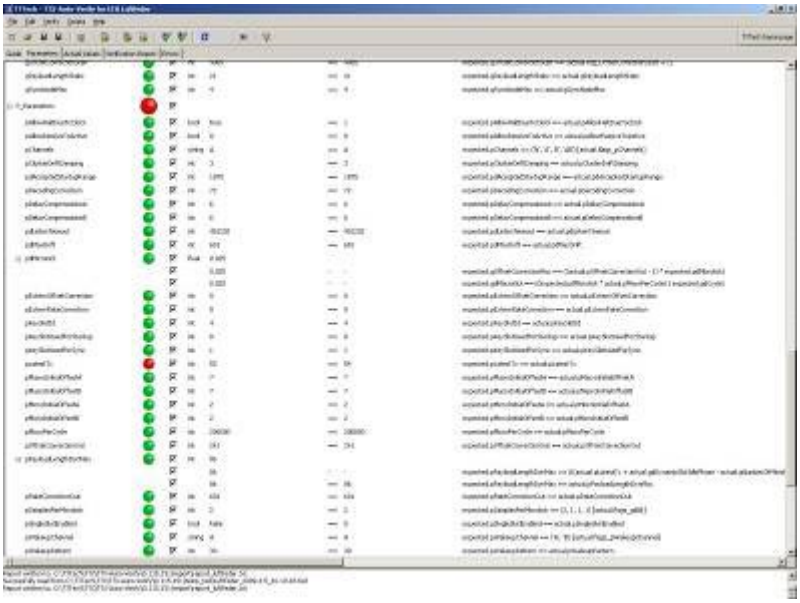
AUTOSAR Standard Software Verification



TTX AutoVerify - Safeguarding Communication for AUTOSAR Components

Automotive OEMs and suppliers develop new electronic control systems in close cooperation. Several integrations stages are carried out during the development project. The current design of electronic control units according to AUTOSAR standard bring about new challenges for development, testing and verification. The FlexRay communication software is, for instance, configured with the tools in two development stages. The configuration tool has to set more than 200 parameters for the FlexRay communication stack that have been specified in the network design. When integrating several control units it must be ensured that the set parameters comply with those calculated in the network design.

TTX AutoVerify supports the automatic verification of configuration data in the control units. This tool enables systematic checking of the control unit's software configuration und supports the automatic verification process. Verifying the FlexRay configuration parameters for conformity with the specification is a typical case of application. The supplier ensures the correct and consistent configuration of ECUs before their release. The OEM not only identifies possible incompatibilities between ECUs from different suppliers before starting the integration tests but also ensures a smooth integration of the vehicle. The tool avoids analyzing disturbances caused by sporadic faults due to slightly misconfigured bus parameters. TTX AutoVerify reduces costs for removing incompatibilities and increases the efficiency of the integration phase. The support of open standards and the easily adaptable scripting interfaces enable optimal integration in existing development processes. This also applies to systems that use standard software components of different manufacturers.

The manufacturer-independent verification of the configuration of ECUs is provided by comparing the target and actual data. A standard UDS service is used to read the actual data via CAN or FlexRay directly from the ECU. TTX AutoVerify interprets the actual data by means of a description file (XML file).

FIBEX is used as a standardized FlexRay communication description to specify the target data. TTX AutoVerify also supports input via an open interface (xml file) for specifying target data. Manual input and changing of target data and hardware configurations are also possible. TTX AutoVerify can reduce the effort for safeguarding the ECU's configuration and increase its quality as compared to conventional methods.

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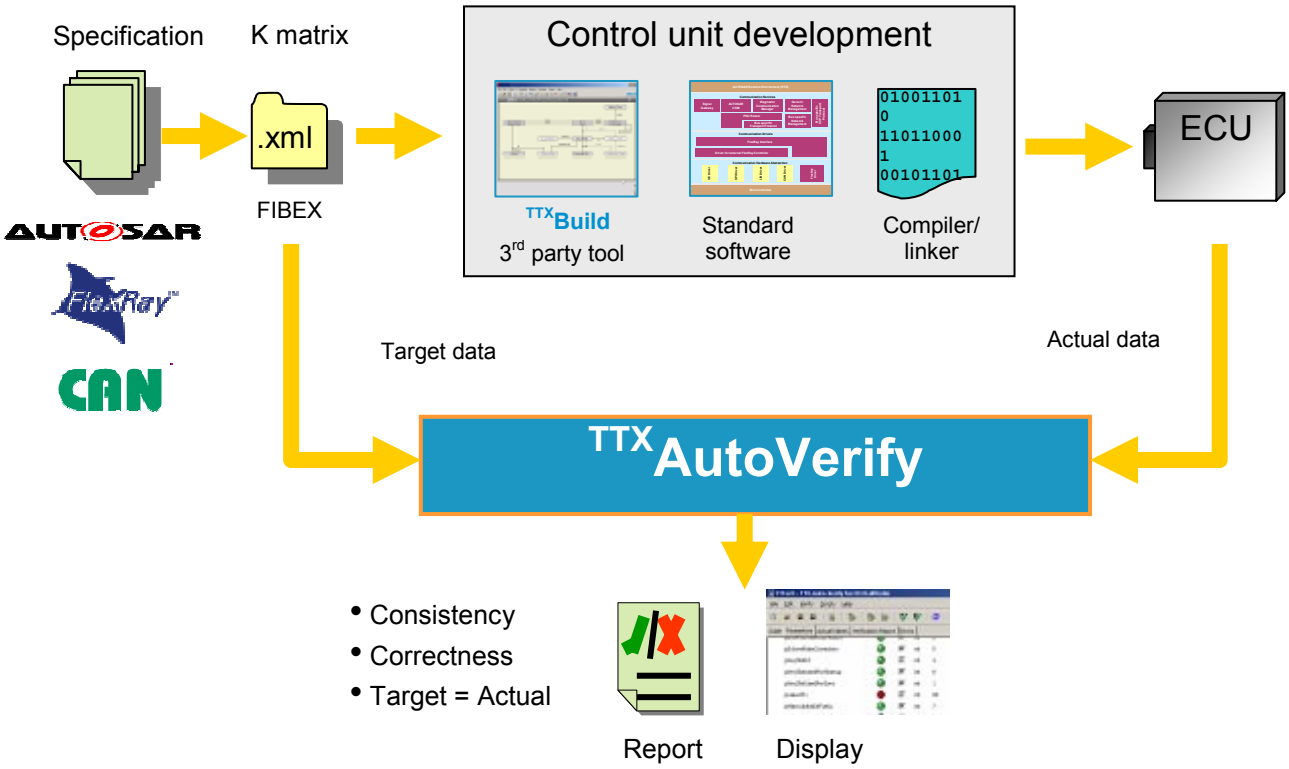

For further information, including price and availability, contact products@tttech-automotive.com.