Release Presentation

ASAM CAT GDI BS V 4.5.0

Regensburg, 2011-02-01 (ASAM TSC Meeting)

Structure of GDI

ASAM GDI consists of

- Base Standard
- Companions (e.g. MDAQ, ChasisDyno, Crash, MCD3)
- Transport Layer Communication Types (e.g. IP, COM, LPT, USB, SOFTSYNC)

Deliverables

Programmers Guide

- Part 1: BS
- Part 2: PID
- Part 3: Technology Reference Mapping Rules C++ Coordinator API

Header, Templates (e.g. Service Functions, Application Callback, DIP, xsd)

Coordinator Services

- EA Modell
- C++ Technology Reference

Introduction

ASAM GDI makes it possible to connect devices and subsystems simply and smoothly with test automation systems. In this standard the capability of the equipment regarding its communication is available in an electronically readable form (Device Capability Description). To achieve genuine Plug & Play the different device classes were defined in a Companion standard (e.g. Crash Test devices, Exhaust Analyzer, Chassis Dynamometer, multi-data acquisition measurement systems...). The GDI standard is platform independent because of the specified platform adapter for each operating system. The coordinator with its API can connect to several devices simultaneously. The GDI standard supports real time systems and uniform integration scenarios.

What's new

The Base standard contains now also PID, which means in one hand an alternatively description of an DCD as schema is available and on other hand the parameterization itself is as xml described.

Naming and Term harmonization with ISO 20242 Part 5

Renaming of Layer Interfaces

layer 4	Coordinator Services	device neutral interface (former application neutral)
layer 3	DD API	physical connection neutral interface (former device neutral)
layer 2	PA API	platform neutral interface
layer 1	PA-EXT API	physical connection and communication type specific interface

Renaming of Coordinator Access Interfaces

	Old	New
Mandatory	<B> Base	<S> SMART access interface
Optional	<E> Extended	<E> Extended access interface
Optional	<D> Description	<F> Full access interface

What's new

- Sync Link can use now FO References additionally to fix values

- Unsolicited status of VD introduced. This avoids polling of STATUS by application to receive the result of configuration check

- Contry Code used for language definition of DIT

Compatibility

The following GDI versions are valid

- GDI 4.2
- GDI 4.3.2
- GDI 4.4
- GDI 4.5

An 4.5 coordinator supports device drivers of all valid GDI versions in parallel.

An 4.5 device driver supports platform adapter of all valid GDI versions in parallel.

An 4.5 coordinator shall only support the coordinator services of version 4.5!

Relation to ISO

ISO 20242

- Part 1: Overview	
- Part 2: Resource Management Service Interface	PA and PA-EXT API
- Part 3: Virtual Device Service Interface	DD API
- Part 4: Device capability profile template	XSD DCD and PID
- Part 5: Application Program Service Interface	Coordinator Services

At the moment the Predefined Service Functions and DIP are not reflected in the ISO standard, as they are specific modeling concepts, which are covered by the creation of ASAM GDI Companions.