

Spirent TTplugin CSN.1

Concrete Syntax Notation One

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CSN.1 is a formal language for describing binary bit-based messages using grammars. It was developed by 3GPP and is mainly used in standards like 3GPP TS 44.060 and 3GPP TS 24.007.

Since binary representation is the basis for any machine-based encoding, any kind of message can be defined using CSN.1. The rules of the grammars also constitute an abstract syntax that gives syntactic structure to the binary message. This structure is used to derive an equivalent TTCN-3 type system representing the same set of messages in a more abstract way.

Every CSN.1 file can be easily integrated into TTCN-3 using the CSN.1 plugin of TTworbench. When importing a CSN.1 specification into a TTCN-3 module, the plugin transforms the CSN.1 notation into the equivalent TTCN-3 type system to be used for representation of data packets and matching templates. Automatic generation of a codec for this type system is also provided by the CSN.1 plugin.

Features & highlights

- Direct import of CSN.1 modules
- Automatic generation of TTCN-3 representation from CSN.1 notation
- Configurable mapping profiles
- Automatic generation of specific codec for each CSN.1 module
- Generic CSN.1 codec for automatic delegation to specific CSN.1 codecs
- Support of CSN.1 include for grammar modularization
- Freely combinable with additional test access (TTplugins)

References

- CSN.1 Specification, Version 2.0, Michel Mouly, Cell & Sys, ISBN: 2 9510062 0 9
- 3GPP TS 24.007, Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Mobile radio interface signalling layer 3; General Aspects, Annex B

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