SNDCP (V7.0.0) Protocol Modules for TTCN-3 Toolset with TITAN, Function Specification

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# Introduction

## Revision history

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| --- | --- | --- | --- |
| Date | Rev | Characteristics | Prepared |
| 2008-01-21 | PA1 | First draft version | ETHEKR |
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## How to Read this Document

This is the Function Specification for the set of SNDCP protocol modules. SNDCP protocol modules are developed for the TTCN-3 Toolset with TITAN. This document should be read together with Product Revision Information [3].

## Scope

The purpose of this document is to specify the content of the SNDCP protocol modules. Basic knowledge of TTCN-3 [2] and TITAN TTCN-3 Test Executor [4] is valuable when reading this document.

## References

[1] 3GPP TS 44.065 V7.0.0 (2006-09),   
3rd Generation Partnership Project:; Technical Specification Group Core Network; Digital cellular telecommunications system (Phase 2+); Mobile Station(MS) – Serving GPRS Support Node (SGSN); Subnetwork Dependent Convergence Protocol (SNSCP) (Release 7)

[2] ETSI ES 201 873-1 v.3.2.1 (2007-02)  
The Testing and Test Control Notation version 3. Part 1: Core Language

[3] 109 21-CNL 113 576-1 Uen  
SNDCP (V7.0.0) Protocol Modules for TTCN-3 Toolset with TITAN, Product Revision Information

[4] 1/198 17-CRL 113 200/3 Uen  
User Guide for the TITAN TTCN-3 Test Executor

[5] 2/198 17-CRL 113 200/3 Uen  
Programmer’s Technical Reference for the TITAN TTCN-3 Test Executor

## Abbreviations

TTCN-3 Testing and Test Control Notation version 3

## Terminology

No specific terminology is used.

# General

Protocol modules implement the message structures of the related protocol in a formalized way, using the standard specification language TTCN-3 . This allows defining of test data (templates) in the TTCN-3 language [2] and correctly encoding/decoding messages when executing test suites using the Titan TTCN-3 test environment [4].

Protocol modules are using Titan’s RAW encoding attributes [5] and hence is usable with the Titan test toolset only.

# Functional specification

## Protocol version implemented

This set of protocol modules implements protocol messages and constants of the SNDCP protocol - 3GPP TS 44.065 V7.0.0 (see [1]).

## Modifications/deviations related to the protocol specification

### Unimplemented Messages, Information Elements and Constants

None.

### Protocol Modifications/Deviations

None.

## Encoding/Decoding and Other Related Functions

This product also contains encoding/decoding functions which assure correct RAW encoding of messages when sent from Titan and correct RAW decoding of messages when received by Titan. Implemented encoding/decoding functions:  
Name Type of formal parameters Type of return value  
enc\_PDU\_SN PDU\_SN octetstring

dec\_PDU\_SN octetstring PDU\_SN