

Prepared (also subject responsible if other)		No.		
ETMEMOD Timea Moder		1551-CNL 113 833 Uen		
Approved	Checked	Date	Rev	Reference
GFBEGFBGAACB [Julianna Rózsa]	ETHGASZ	2016-04-05	A	

BSSGP v13.0.0 Protocol Modules for TTCN-3 Toolset with Titan, Description

Abstract

This is the description for the BSSGP v13.0.0 protocol module. The BSSGP v13.0.0 protocol modules are developed for the TTCN-3 Toolset with Titan. This document should be read together with Product Revision Information [3].

Contents

1	Functionality	1
1.1	Implemented protocols	2
1.1.1	Modified and non-implemented Protocol Elements	2
1.2	Backward incompatibilities	2
1.3	System Requirements	2
2	Usage	2
2.1	Installation	2
2.2	Configuration	2
2.3	Examples	2
3	Interface description	3
3.1	Top Level PDU	3
3.2	Encoding/decoding and other related functions	3
3.2.1	Implemented encoding and decoding functions	3
4	Terminology	3
4.1	Abbreviations	3
5	References	3
6	Change information	4
6.1	R1A	4

1

Functionality

The BSSGP v13.0.0 protocol module implements the message structures of the related protocol [5] in a formalized way, using the standard specification language TTCN-3. This allows defining of test data (templates) in the TTCN-3 language and correctly encoding/decoding messages when executing test suites using the Titan TTCN-3 test environment.

The BSSGP v13.0.0 protocol module uses Titan's RAW encoding attributes [4] and hence is usable with the Titan test toolset only.

Prepared (also subject responsible if other)		No.		
ETMEMOD Timea Moder		1551-CNL 113 833 Uen		
Approved	Checked	Date	Rev	Reference
GFBEGFBGAACB [Julianna Rózsa]	ETHGASZ	2016-04-05	A	

1.1 Implemented protocols

This set of protocol modules implements protocol messages and constants of the BSSGP v13.0.0 protocol as described in [5].

1.1.1 Modified and non-implemented Protocol Elements

None.

1.2 Backward incompatibilities

None

1.3 System Requirements

Protocol modules are a set of TTCN-3 source code files that can be used as part of TTCN-3 test suites only. Hence, protocol modules alone do not put specific requirements on the system used. However, in order to compile and execute a TTCN-3 test suite using the set of protocol modules the following system requirements must be satisfied:

- Titan TTCN-3 Test Executor version CRL 113 200/5 R4A (5.4.pl0) or higher installed. For Installation Guide see [2]. Please note: This version of the test port is not compatible with Titan releases earlier than CRL 113 200/5 R4A.

2 Usage

2.1 Installation

The set of protocol modules can be used in developing TTCN-3 test suites using any text editor; however, to make the work more efficient a TTCN-3-enabled text editor is recommended (for example `nedit`, `xemacs`). Since the BSSGP v13.0.0 protocol is used as a part of a TTCN-3 test suite, this requires TTCN-3 Test Executor be installed before the module can be compiled and executed together with other parts of the test suite. For more details on the installation of TTCN-3 Test Executor see the relevant section of [2].

2.2 Configuration

None.

2.3 Examples

None.

Prepared (also subject responsible if other)		No.		
ETMEMOD Timea Moder		1551-CNL 113 833 Uen		
Approved	Checked	Date	Rev	Reference
GFBEGFBGAACB [Julianna Rózsa]	ETHGASZ	2016-04-05	A	

3 Interface description

3.1 Top Level PDU

The top level PDU is the TTCN-3 union `PDU_BSSGP`.

3.2 Encoding/decoding and other related functions

This product also contains encoding/decoding functions, which assure correct encoding of messages when sent from Titan and correct decoding of messages when received by Titan.

3.2.1 Implemented encoding and decoding functions

<u>Name</u>	<u>Type of formal parameters</u>	<u>Type of return value</u>
<code>enc_PDU_BSSGP</code>	in <code>PDU_BSSGP</code>	octetstring
<code>dec_PDU_BSSGP</code>	in octetstring	<code>PDU_BSSGP</code>
<code>dec_PDU_BSSGP_backtrack</code>	in octetstring, out <code>PDU_BSSGP</code>	integer
<code>dec_PDU_BSSGP_fast</code>	in <code>PDU_BSSGP</code> , out octetstring	integer

4 Terminology

4.1 Abbreviations

PDU	Protocol Data Unit
BSSGP	BSS GPRS Protocol
BSS	Base Station System
GPRS	General Packet Radio Service
TTCN-3	Testing and Test Control Notation version 3

5 References

- [1] ETSI ES 201 873-1 v4.4.1 (2012-04)
The Testing and Test Control Notation version 3. Part 1: Core Language
- [2] 1/ 198 17-CRL 113 200/5 Uen
User Guide for TITAN TTCN-3 Test Executor

Prepared (also subject responsible if other)		No.		
ETMEMOD Timea Moder		1551-CNL 113 833 Uen		
Approved	Checked	Date	Rev	Reference
GFBEGFBGAACB [Julianna Rózsa]	ETHGASZ	2016-04-05	A	

- [3] 109 21-CNL 113 833-1
BSSGP v13.0.0 Protocol Modules for TTCN-3 Toolset with Titan
Product Revision Information
- [4] 2/198 17-CRL 113 200/5 Uen
Programmer's Technical Reference for Titan TTCN-3 Test Executor
- [5] 3GPP TS 48.018 v13.0.0 (2015-12)
3rd Generation Partnership Project; Technical Specification Group
GSM/EDGE Radio Access Network;
General Packet Radio Service (GPRS);
Base Station System (BSS) - Serving GPRS Support Node (SGSN);
BSS GPRS Protocol (BSSGP)
(Release 13)

6 Change information

6.1 R1A

Initial version.