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ETH/RZXC (Peter Kremer)		2008-01-14	A	GASK2

M3UA Protocol Modules for TTCN-3 Toolset with TITAN, Function Specification

Contents

1 Introduction

1.1 Revision History

Date	Rev	Characteristics	Prepared
2007-05-08	PA1	First draft version	EFERKOV

1.2 How to Read this Document

This is the Function Specification for the set of M3UA protocol modules. M3UA protocol modules are developed for the TTCN-3 Toolset with TITAN. This document should be read together with the Product Revision Information [3].

1.3 Scope

The purpose of this document is to specify the content of the M3UA protocol modules.

1.4 References

[1] 2/198 17-CRL 113 200 Uen
Programmer's Technical Reference for the TITAN TTCN-3 Test Executor

[2] ETSI ES 201 873-1 v.3.1.1 (06/2005)
The Testing and Test Control Notation version 3. Part 1: Core Language

[3] 109 21-CNL 113 536-1 Uen
M3UA Protocol Modules for TTCN-3 Toolset with TITAN, Product Revision Information

[4] 198 17-CNL 113 536 Uen
M3UA Protocol Modules for TTCN-3 Toolset with TITAN, User Guide

[5] IETF RFC 3332
Signaling System 7 (SS7) Message Transfer Part 3 (MTP3) – User Adaptation Layer (M3UA)

1.5 Abbreviations

IETF	Internet Engineering Task Force
IP	Internet Protocol
MTP3	Message Transfer Part 3
M3UA	MTP3 User Adaptation Layer

RFC	Request for Comments
TTCN-3	Testing and Test Control Notation version 3

1.6 Terminology

TITAN	TTCN-3 Test Executor.

2 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 and correctly encoding/decoding messages when executing test suites using the TITAN TTCN-3 test environment.

Protocol modules are using TITAN's RAW encoding attributes [1] and hence are usable with the TITAN test toolset only.

3 Functional Specification

3.1 Protocol Version Implemented

This protocol module contains the protocol messages and elements of the M3UA protocol (see [5]).

3.2 Modifications/deviations Related to the Protocol Specification

3.2.1 Implemented messages

All message types listed in protocol description [5] are implemented.

3.2.2 Protocol Modifications/Deviations

None

3.3 Encoding/Decoding and Other Related Functions

This product contains encoding/decoding functions that provide for the correct encoding of messages when sent from TITAN and correct decoding of messages when received by TITAN. For encoding and decoding the message two functions are available:

- Function **enc_PDU_M3UA** makes simple RAW encoding without any modification on the input M3UA message.
- Function **dec_PDU_M3UA** makes simple RAW decoding without any modification on the input octetstring.

Implemented encoding/decoding functions:

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Name	Type of formal parameters	Type of return value
enc_PDU_M3UA	**PDU_M3UA**	**octetstring**
dec_PDU_M3UA	**octetstring**	**PDU_M3UA**