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Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN);
Derivation of test tolerances for User Equipment (UE) radio reception conformance tests
(3GPP TR 36.904 version 12.4.0 Release 12)

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Foreword

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Introduction

1 Scope

The present document specifies a general method used to derive Test Tolerances for UE radio reception conformance tests in 3GPP TS 36.521-1 [2], and establishes a system for relating the Test Tolerances to the measurement uncertainties of the Test System.

The test cases which have been analysed to determine Test Tolerances are included as .zip files.

The present document is applicable from Release 10 up to the release indicated on the front page of the present Terminal conformance specifications.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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[1] to [3] (void)

[4] 3GPP TS 36.904 Release 13: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Derivation of test tolerances for User Equipment (UE) radio reception conformance tests"

3 Definitions, symbols and abbreviations

Void

4 General Principles

The requirements of the present document are provided in 3GPP TS 36.904 Release 13 [4].

5 to 7 Void

Annex A: Void

Annex B:
Change History

Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2014-04	RAN5#63	R5-142065	-	-	TR 36.904 Skeleton proposed for RAN5#63	-	0.0.1
2014-05	RAN5#63	R5-142066	-	-	TR 36.904 update proposed including all technically endorsed TT analyses on RAN5#63	0.0.1	0.0.2
2014-05	RAN#64	RP-140610	-	-	TR 36.904 presented as 2.0.0 for approval at RAN#64	0.0.2	2.0.0
2014-06	RAN#64	-	-	-	Upgraded to v11.0.0 with no change	2.0.0	11.0.0
2014-09	RAN#65	R5-144067	0001	-	Add Test Tolerance analyses for TS 36.521-1 Test case 8.2.2.2.4	11.0.0	11.1.0
2014-09	RAN#65	R5-144069	0002	-	Add Test Tolerance analyses for TS 36.521-1 Test case 8.2.2.4.3	11.0.0	11.1.0
2014-09	RAN#65	R5-144071	0003	-	Add Test Tolerance analyses for TS 36.521-1 Test case 8.3.1.1.3	11.0.0	11.1.0
2014-09	RAN#65	R5-144073	0004	-	Add Test Tolerance analyses for TS 36.521-1 Test case 8.3.2.1.4	11.0.0	11.1.0
2014-09	RAN#65	R5-144078	0005	-	Add Test Tolerance analysis for TS 36.521-1 Test cases 8.2.1.3.3_E.1 and 8.2.2.3.3_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144100	0006	-	Test Tolerance Analysis for TS 36.521-1 TC 8.2.1.4.1_E.1+8.2.2.4.1_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144106	0007	-	Test Tolerance Analysis for TS 36.521-1 TC 8.4.1.2.3_E.2+8.4.2.2.3_E.2	11.0.0	11.1.0
2014-09	RAN#65	R5-144110	0008	-	Corrections to TR 36.904 for feICIC Group	11.0.0	11.1.0
2014-09	RAN#65	R5-144113	0009	-	Test Tolerance Analysis for TS 36.521-1 TC 9.2.1.5_E.1+9.2.1.6_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144116	0010	-	Test Tolerance Analysis for TS 36.521-1 TC 9.3.1.3.1_E.1+9.3.1.3.2_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144119	0011	-	Test Tolerance Analysis for TS 36.521-1 TC 9.5.4.1_E.1+9.5.4.2_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144285	0012	-	Add Test Tolerance analysis for TS 36.521-1 Test cases 8.2.1.2.3_C.1 and 8.2.2.2.3_C.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144288	0013	-	Add Test Tolerance analysis for TS 36.521-1 Test cases 8.2.1.2.3_E.1 and 8.2.2.2.3_E.1	11.0.0	11.1.0
2014-09	RAN#65	R5-144296	0014	-	Editorial update of eICIC CSI Test Tolerance analyses	11.0.0	11.1.0
2014-09	RAN#65	R5-144816	0015	-	Add Test Tolerance analysis for TS 36.521-1 Test cases 9.3.6.1_F and 9.3.6.2_F	11.0.0	11.1.0
2014-09	RAN#65	R5-144823	0016	-	Add Test Tolerance analyses for TS 36.521-1 Test cases 9.3.5.2.1 and 9.3.5.2.2	11.0.0	11.1.0
2014-12	RAN#66	R5-145826	0017	-	Test Tolerance Analysis for TS 36.521-1 TC 8.5.1.2.3_E.1+8.5.2.2.3_E.1	11.1.0	11.2.0
2014-12	RAN#66	R5-145834	0018	-	Update Test Tolerance analyses for TS 36.521-1 Test cases 9.5.3.x and 9.5.4.x	11.1.0	11.2.0
2015-03	RAN#67	R5-150217	0019	-	Test Tolerance Analysis for TS 36.521-1 TC 8.3.1.2.1_D_1+8.3.2.2.1_D_1	11.2.0	11.3.0
2015-12	RAN#70	R5-155883	0020	1	Add Test Tolerance analysis for FDD multi-cell SU-MIMO test case (8.2.1.3.1C)	11.3.0	12.0.0
2015-12	RAN#70	R5-155884	0021	1	Add Test Tolerance analysis for TDD multi-cell SU-MIMO test case (8.2.2.3.1C)	11.3.0	12.0.0
2015-12	RAN#70	R5-155885	0022	1	Addition of LTE Type C group into 36.904	11.3.0	12.0.0
2016-03	RAN#71	R5-160032	0024	-	Add Test Tolerance analysis for FDD PDSCH Transmit Diversity 2x2 with TM9 Interference Model - Enhanced Perrformance Requirement Type B (8.2.1.2.6)	12.0.0	12.1.0
2016-03	RAN#71	R5-160033	0025	-	Add Test Tolerance analysis for TDD PDSCH Transmit Diversity 2x2 with TM2 Interference Model - Enhanced Perrformance Requirement Type B (8.2.2.2.6)	12.0.0	12.1.0
2016-03	RAN#71	R5-160034	0026	-	Add Test Tolerance analysis for TDD PDSCH Transmit Diversity 2x2 with TM9 Interference Model - Enhanced Perrformance Requirement Type B (8.2.2.2.7)	12.0.0	12.1.0
2016-03	RAN#71	R5-160035	0027	-	Add Test Tolerance analysis for FDD and TDD CQI reporting under fading conditions (PUCCH) TM4 - Enhanced Receiver Type B (9.3.8.1.1 and 9.3.8.1.2)	12.0.0	12.1.0
2016-03	RAN#71	R5-160036	0028	-	Addition of LTE Type B groups into TR 36.904	12.0.0	12.1.0

2016-03	RAN#71	R5-160040	0029	-	Add Test Tolerance analysis for FDD PDSCH Transmit Diversity 2x2 with TM2 Interference Model - Enhanced Performance Requirement Type B (8.2.1.2.5)	12.0.0	12.1.0
2016-03	RAN#71	R5-160157	0032	-	Test Tolerance Analysis for TS 36.521-1 TC 9.3.7.1+9.3.7.2	12.0.0	12.1.0
2016-03	RAN#71	R5-160160	0033	-	Test Tolerance Analysis for TS 36.521-1 TC 9.4.1.4.1+9.4.1.4.2+9.4.2.3.3+9.4.2.3.4	12.0.0	12.1.0
2016-03	RAN#71	R5-161124	0031	2	Test Tolerance Analysis for TS 36.521-1 TC 9.6.1.3.1+9.6.1.3.2+9.6.1.4.1+9.6.1.4.2	12.0.0	12.1.0
2016-06	RAN#72	R5-162173	0036	-	Add Test Tolerance analysis for Power Control Relative power tolerance for CA (intra-band contiguous DL CA and UL CA) test case	12.1.0	12.2.0
2016-06	RAN#72	R5-162899	0037	1	Update of NAICS demod TT analyses to clarify handling of flatness	12.1.0	12.2.0
2016-06	RAN#72	R5-162950	0034	1	Add Test Tolerance analysis for FDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference Model - Enhanced Performance Requirement Type B (8.2.1.4.4)	12.1.0	12.2.0
2016-06	RAN#72	R5-162951	0035	1	Add Test Tolerance analysis for TDD PDSCH Closed Loop Single Layer Spatial Multiplexing 2x2 with TM4 Interference Model - Enhanced	12.1.0	12.2.0
2016-12	RAN#74	R5-168690	0041	-	Add Test Tolerance analysis for FDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type B (8.3.1.1.4)	12.2.0	12.3.0
2016-12	RAN#74	R5-168691	0042	-	Add Test Tolerance analysis for FDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM3 interference Model - Enhanced Performance Requirement Type B (8.3.1.1.6)	12.2.0	12.3.0
2016-12	RAN#74	R5-168692	0043	-	Add Test Tolerance analysis for TDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM9 Interference Model - Enhanced Performance Requirement Type B (8.3.2.1.5)	12.2.0	12.3.0
2016-12	RAN#74	R5-168693	0044	-	Add Test Tolerance analysis for TDD PDSCH Closed Loop Single-layer Spatial Multiplexing on antenna ports 7 or 8 with TM3 interference Model - Enhanced Performance Requirement Type B (8.3.2.1.7)	12.2.0	12.3.0
2016-12	RAN#74	R5-168694	0045	-	Add Test Tolerance analysis for FDD and TDD CQI Reporting under fading conditions - PUCCH 1-1 (CSI Reference Symbol) TM9 - Enhanced Receiver Type B (9.3.8.2.1 and 9.3.8.2.2)	12.2.0	12.3.0
2017-03	RAN#75	R5-171330	0054	-	Removal of technical content in 36.904 v12.3.0 and substitution with pointer to the next Release	12.3.0	12.4.0

History

Document history		
V12.0.0	January 2016	Publication
V12.1.0	May 2016	Publication
V12.2.0	August 2016	Publication
V12.3.0	January 2017	Publication
V12.4.0	April 2017	Publication