ETSI TS 137 571-5 V12.7.0 (2017-04)

TECHNICAL SPECIFICATION

Universal Mobile Telecommunications System (UMTS);
LTE;
Universal Terrestrial Radio Access (UTRA) and
Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC);
User Equipment (UE) conformance specification
for UE positioning;
Part 5: Test scenarios and assistance data
(3GPP TS 37.571-5 version 12.7.0 Release 12)

Reference

RTS/TSGR-0537571-5vc70

Keywords

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Contents

Foreword

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The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

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y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document is part 5 of a multi-part TS:

3GPP TS 37. 571-1: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 1: Conformance test specification.

3GPP TS 37. 571-2: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 2: Protocol conformance.

3GPP TS 37. 571-3: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 3: Implementation Conformance Statement (ICS).

3GPP TS 37. 571-4: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 4: Test suites.

3GPP TS 37. 571-5: Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 5: Test scenarios and assistance data.

1 Scope

The present document specifies the test scenarios and assistance data required for the conformance test for FDD or TDD mode of UTRA and E-UTRA for the User Equipment (UE) that supports one or more of the defined positioning methods. For UTRA these are Assisted Global Positioning System (A-GPS) and Assisted Global Navigation Satellite System (A-GNSS). For E-UTRA these are A-GNSS, Observed Time Difference of Arrival (OTDOA) and Enhanced Cell ID (ECID).

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document unless the context in which the reference is made suggests a different Release is relevant (information on the applicable release in a particular context can be found in e.g. test case title, description or applicability, message description or content).

[1] to [20] (void)

[21] 3GPP TS 37.571-5 Release 13: "Universal Terrestrial Radio Access (UTRA) and Evolved UTRA (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification for UE positioning; Part 5: Test scenarios and assistance data"

3 Definitions, symbols and abbreviations

Void

4 General

The requirements of the present document are provided in 3GPP TS 37.571-5 Release 13 [21].

5 to 7 Void

Annex A to B: Void

Annex A to B: Void

Annex C (informative):
Change history

Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Old	New
2010-08	RAN5#48	R5-104318			Initial draft created as TS 36.571-5		0.0.0
2010-11	RAN5#49	R5-106146			Initial draft created from TS 36.571-5 with minor updates	0.0.0	0.1.0
2010-11	RAN5#49	R5-106615			Editor's notes added	0.1.0	0.1.1
2010-11	RAN5#49	R5-106614			Version 1.0.0 prepared for presentation to RAN Plenary	0.1.1	1.0.0
2011-05	RAN5#51	R5-112807			Version 1.1.0 with additional values and editorial changes	1.0.0	1.1.0
2011-08	RAN5#52	R5-113136			Additional values and editorial changes	1.1.0	-
2011-08	RAN5#52	R5-113137			Version 2.0.0 prepared for presentation to RAN Plenary	1.1.0	2.0.0
2011-09	RAN#53	RP-111127			v2.0.0 approved at RAN#53 and raised to v9.0.0 with no change	2.0.0	9.0.0
2011-12	RAN5#53	R5-115203	0001	-	Removal of editor's notes on OTDOA values	9.0.0	9.1.0
2011-12	RAN5#53	R5-115204	0002	-	Correction of references	9.0.0	9.1.0
2012-03	RAN5#54	R5-120085	0003	-	OTDOA reference corrections	9.1.0	9.2.0
2012-03	RAN5#54	R5-120086	0004	-	Update references	9.1.0	9.2.0
2012-03	RAN5#54	R5-120092	0005	-	OTDOA parameter corrections	9.1.0	9.2.0
2012-06	RAN5#55	R5-121136	0006	-	Corrections to GPS Almanac data file	9.2.0	9.3.0
2012-06	RAN5#55	R5-121137	0007	-	Removal of OTDOA data for signalling test cases	9.2.0	9.3.0
2012-06	RAN5#55	R5-121249	0008	-	LBS: Corrections to gnss-SystemTime message	9.2.0	9.3.0
2012-06	RAN5#55	R5-121853	0009	-	Additions and corrections to GNSS data	9.2.0	9.3.0
2012-06	RAN5#55	R5-121910	0010	-	Additions and corrections to GNSS data	9.2.0	9.3.0
2012-06	RAN5#55	R5-121911	0011	-	Reduction in size of GPS data file	9.2.0	9.3.0
2012-06	RAN5#55	-	-	-	Upgraded to v10.0.0 with no change.	9.3.0	10.0.0
2012-09	RAN5#56	R5-123097	0012	-	Addition of missing Assistance Data	10.0.0	10.1.0
2012-09	RAN5#56	R5-123699	0013	-	Addition of Rel-10 Information Elements	10.0.0	10.1.0
2012-09	RAN5#56	R5-123914	0014	-	Addition of missing Assistance Data	10.0.0	10.1.0
2012-12	RAN5#57	R5-125577	0015	-	Correction to Reference UE Position value	10.1.0	10.2.0
2012-12	RAN5#57	R5-125779	0017	-	LBS Sig: Corrections to GLONASS acquisition assistance data	10.1.0	10.2.0
2012-12	RAN5#57	R5-125780	0018	-	LBS Sig: Corrections to GNSS assistance data	10.1.0	10.2.0
2012-12	RAN5#57	R5-125849	0019	-	LBS Perf: Correction of coordinates for GNSS Scenario #2 and #5	10.1.0	10.2.0
2012-12	RAN5#57	R5-125850	0020	-	LBS Perf: Corrections to GNSS assistance data	10.1.0	10.2.0
2012-12	RAN5#57	R5-125917	0021	-	LBS Perf: Corrections to GLONASS acquisition assistance data	10.1.0	10.2.0
2012-12	RAN5#56 bis	R5-124122	0022	-	OTDOA data for new test cases 10.1 - 10.4 for RSTD for Carrier Aggregation	10.1.0	10.2.0
2013-03	RAN5#58	R5-130118	0023	-	Addition of Rel-10 IEs	10.2.0	10.3.0
2013-03	RAN5#58	R5-130119	0024	-	Addition of Rel-10 IEs	10.2.0	10.3.0
2013-03	RAN5#58	R5-130122	0025	-	Change of file names for assistance data	10.2.0	10.3.0
2013-03	RAN5#58	R5-130123	0026	-	Change of file names for assistance data	10.2.0	10.3.0
2013-03	RAN5#58	R5-130529	0027	-	Correction to GPS assistance data	10.2.0	10.3.0
2013-03	RAN5#58	R5-130689	0028	-	Correction to GLONASS assistance data	10.2.0	10.3.0
2013-03	RAN5#58	R5-130690	0029	-	Correction to GPS assistance data	10.2.0	10.3.0
2013-03	RAN5#58	R5-130960	0030	-	Correction to GLONASS assistance data	10.2.0	10.3.0
2013-06	RAN5#59	R5-131103	0031	-	Additional OTDOA assistance data for new inter-frequency tests	10.3.0	10.4.0
2013-06	RAN5#59	R5-131108	0032	-	Correction to GLONASS ToD	10.3.0	10.4.0
2013-06	RAN5#59	R5-131329	0033	-	Correction to available GNSS assistance data elements for signalling tests	10.3.0	10.4.0
2013-06	RAN5#59	R5-131330	0034	-	Addition of missing Rel-10 IE	10.3.0	10.4.0
2013-06	RAN5#59	R5-131509	0035	-	Corrections to UTC Model assistance data values	10.3.0	10.4.0
2013-06	RAN5#59	R5-131511	0036	-	Corrections and clarifications to use of UTC Model and Auxiliary Information	10.3.0	10.4.0
2013-06	RAN5#59	R5-131948	0037	-	OTDOA assistance data alignment with RAN 4	10.3.0	10.4.0
2013-06	RAN5#59	R5-131949	0038	-	Corrections to UTC Model assistance data values	10.3.0	10.4.0
2013-06	RAN5#59	R5-131997	0039	-	LBS Perf: Introduction of GLONASS acquisition assistance data	10.3.0	10.4.0
2013-06	RAN5#59	R5-131998	0040	-	Addition of GLONASS Acquisition Assistance data	10.3.0	10.4.0
2013-06	RAN5#59	R5-132060	0041	-	Addition of GLONASS Acquisition Assistance data	10.3.0	10.4.0
2013-06	RAN5#59	R5-132061	0042	-	LBS Sig: Introduction of GLONASS acquisition assistance data	10.3.0	10.4.0
2013-06	RAN5#59	R5-132100	0043	-	Corrections and clarifications to use of UTC Model and Auxiliary Information	10.3.0	10.4.0
2013-06	RAN5#59	R5-132101	0044	-	Correction to GLONASS SV Health value in data file	10.3.0	10.4.0
2013-09	RAN5#60	R5-133177	0045	-	Removal of old Assistance Data files	10.4.0	10.5.0
2013-09	RAN5#60	R5-133179	0046	-	Addition of missing Assistance Data files	10.4.0	10.5.0
2013-09	RAN5#60	R5-133180	0047	-	Correction of Doppler 1 values for RRC	10.4.0	10.5.0
2013-09	RAN5#60	R5-133341	0048	-	Change of SV for GNSS Scenario #2 for Multi-path test	10.4.0	10.5.0
2013-09	RAN5#60	R5-133487	0050	-	Correction of Doppler 1 values for RRC	10.4.0	10.5.0
2013-09	RAN5#60	R5-133488	0051	-	Correction of Doppler values for LPP	10.4.0	10.5.0
2013-09	RAN5#60	R5-133726	0052	-	Correction of Doppler values for LPP	10.4.0	10.5.0
2013-12	RAN5#61	R5-134206	0053	-	Correction to GPS Almanac WNa value for scenarios #2 and #5	10.5.0	10.6.0
2013-12	RAN5#61	R5-134251	0054	-	Correction of OmegaA0 value for SV1 in scenario #1	10.5.0	10.6.0
2013-12	RAN5#61	R5-134257	0055	-	Deletion of FFS and Editor's note in clause 6.2.7	10.5.0	10.6.0
2013-12	RAN5#61	R5-134357	0057	-	Correction to GLONASS Navigation Model for scenario #2 and #5	10.5.0	10.6.0
2013-12	RAN5#61	R5-134443	0058	-	LBS Perf: Corrections to the headers of GPS acquisition assistance data files	10.5.0	10.6.0

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2013-12	RAN5#61	R5-134444	0059	-	LBS Sig: Corrections to the headers of GPS acquisition assistance data files	10.5.0	10.6.0
2013-12	RAN5#61	R5-134851	0060	-	Addition of OTDOA Assistance Data for new 20MHz CA test cases	10.5.0	10.6.0
2013-12	RAN5#61	R5-134912	0061	-	Correction of OmegaA0 value for SV1	10.5.0	10.6.0
2013-12	RAN5#61	R5-134913	0062	-	Correction to GNSS Navigation Model (sub-test 1)	10.5.0	10.6.0
2013-12	RAN5#61	R5-135064	0063	-	LBS Perf: Corrections to the GNSS acquisition assistance data - CR 1	10.5.0	10.6.0
2013-12	RAN5#61	R5-135065	0064	-	LBS Perf: Corrections to the GNSS acquisition assistance data - CR 2	10.5.0	10.6.0
2013-12	RAN5#61	R5-135072	0065	-	LBS Sig: Corrections to the GNSS acquisition assistance data	10.5.0	10.6.0
2014-03	RAN5#62	R5-140198	0066	-	Adjustment of SV IDs of Satellites to be simulated	10.6.0	10.7.0
2014-03	RAN5#62	R5-140377	0067	-	LBS Perf: Update of headers of some GNSS acquisition assistance data files	10.6.0	10.7.0
2014-03	RAN5#62	R5-140378	0068	-	LBS Sig: Removal of redundant inappropriate files from GNSS_Data_Sig_V7.zip file	10.6.0	10.7.0
2014-03	RAN5#62	R5-140383	0069	-	LBS Perf: Introducing Ephemeris files in Rinex format	10.6.0	10.7.0
2014-03	RAN5#62	R5-140384	0070	-	LBS Sig: Introducing Ephemeris files in Rinex format	10.6.0	10.7.0
2014-03	RAN5#62	R5-140794	0071	-	LBS Sig: Clarification on usage of acquisition assistance files	10.6.0	10.7.0
2014-03	RAN5#62	R5-140795	0072	-	LBS Sig: Changing the name of Almanac files not in Yuma format	10.6.0	10.7.0
2014-03	RAN5#62	R5-140873	0073	-	LBS Perf: Clarification on usage of acquisition assistance files	10.6.0	10.7.0
2014-03	RAN5#62	R5-140874	0074	-	LBS Perf: Changing the name of Almanac files not in Yuma format	10.6.0	10.7.0
2014-03	RAN5#62	R5-140879	0075	-	Corrections to GLONASS GANSS Day and gnss-DayNumber values	10.6.0	10.7.0
2014-03	RAN5#62	R5-140900	0076	-	Corrections to GLONASS GANSS Day and gnss-DayNumber values	10.6.0	10.7.0
2014-03	RAN5#62	R5-141034	0077	-	RSTD value updates	10.6.0	10.7.0
2014-06	RAN5#63	R5-142097	0078	-	Corrections to prs-MutingInfo	10.7.0	10.8.0
2014-06	RAN5#63	R5-142249	0079	-	Correction to T_lamda_n_A values for scenario #1	10.7.0	10.8.0
2014-06	RAN5#63	R5-142250	0080	-	Correction to T_lamda_n_A values	10.7.0	10.8.0
2014-06	RAN5#63	R5-142252	0081	-	Clarification of use of satellite simulator	10.7.0	10.8.0
2014-06	RAN5#63	R5-142884	0082	-	LBS Sig: Correction of FT values in GLONASS scenarios and RINEX file update	10.7.0	10.8.0
2014-06	RAN5#63	R5-142885	0083	-	LBS Sig: Moving some .rnx files to the right .zip file	10.7.0	10.8.0
2014-06	RAN5#63	R5-143110	0084	-	LBS Perf: Moving some .rnx files to the right .zip file	10.7.0	10.8.0
2014-06	RAN5#63	R5-143128	0085	-	LBS Perf: Correction of FT values in GLONASS scenarios and RINEX file update	10.7.0	10.8.0
2014-09	RAN5#64	R5-144133	0086	-	LBS Perf: Adding missing information for QZSS	10.8.0	10.9.0
2014-09	RAN5#64	R5-144135	0087	-	LBS Perf: Adding missing files for QZSS	10.8.0	10.9.0
2014-09	RAN5#64	R5-144136	0088	-	LBS Sig: Adding missing files for QZSS	10.8.0	10.9.0
2014-09	RAN5#64	R5-144139	0091	-	LBS Perf: Adding missing files for Galileo	10.8.0	10.9.0
2014-09	RAN5#64	R5-144140	0092	-	LBS Sig: Adding missing files for Galileo	10.8.0	10.9.0
2014-09	RAN5#64	R5-144793	0089	-	LBS Perf: Adding missing information for Galileo and introduction of Galileo hybrid-subtest	10.8.0	10.9.0
2014-09	RAN5#64	R5-144795	0090	-	LBS Sig: Adding missing information for Galileo and introduction of Galileo hybrid-subtest	10.8.0	10.9.0
2014-09	RAN5#64	R5-144872	0097	-	Updates OTDOA Neighbour Cell Info List	10.8.0	10.9.0
2014-12	RAN5#65	R5-145101	0102	-	LBS Perf: Adding missing information for Galileo	10.9.0	10.10.0
2014-12	RAN5#65	R5-145102	0103	-	LBS Sig: Adding missing information for Galileo	10.9.0	10.10.0
2014-12	RAN5#65	R5-145135	0104	-	Clarification to OTDOA Assistance Data	10.9.0	10.10.0
2014-12	RAN5#65	R5-145136	0105	-	Update Galileo ICD reference	10.9.0	10.10.0
2014-12	RAN5#65	-	-	-	Raised to v11.0.0 with no change	10.10.0	11.0.0
2014-12	RAN5#65	R5-145978	0098	-	LBS Perf: Adding test scenarios for Beidou	11.0.0	12.0.0
2014-12	RAN5#65	R5-145098	0099	-	LBS Sig: Adding test scenarios for Beidou	11.0.0	12.0.0
2014-12	RAN5#65	R5-145099	0100	-	LBS Perf: Adding data files for Beidou	11.0.0	12.0.0
2014-12	RAN5#65	R5-145100	0101	-	LBS Sig: Adding data files for Beidou	11.0.0	12.0.0
2014-12	RAN5#65	R5-145895	0106	-	Addition of Editor's Note concerning missing data for TDD in sections 5.2 and 6.2	11.0.0	12.0.0
2015-03	RAN5#66	R5-150052	0107	-	Updates to expectedRSTD values following changes in RAN 4	12.0.0	12.1.0
2015-03	RAN5#66	R5-150106	0108	-	Change Nprs value in tests 10.3B, 10.3C, 10.4B, 10.4C	12.0.0	12.1.0
2015-03	RAN5#66	R5-150237	0109	-	LBS Perf: Correction to simulated BDS satellites	12.0.0	12.1.0
2015-03	RAN5#66	R5-150839	0110	-	Missing Abbreviations in Specification	12.0.0	12.1.0
2015-03	RAN5#66	R5-150840	0111	-	Missing OTDOA CA Test Cases	12.0.0	12.1.0
2015-03	RAN5#66	R5-150891	0112	-	Abbreviation Corrections for BDS in 37.571-5	12.0.0	12.1.0
2015-06	RAN5#67	R5-151069	0113	-	Add TDD to A-GNSS Assistance Data	12.1.0	12.2.0
2015-06	RAN5#67	R5-151091	0114	-	Missing RSTD new tests for 10.2D and 10.4D	12.1.0	12.2.0
2015-06	RAN5#67	R5-151910	0117	1	Corrections to the Ionospheric Model of BDS	12.1.0	12.2.0
2015-09	RAN5#68	R5-153108	0118	-	Corrections to UTC Model and Time Model	12.2.0	12.3.0
2015-09	RAN5#68	R5-153109	0119	-	Update to Galileo Assistance Data IEs	12.2.0	12.3.0

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2015-09	RAN5#68	R5-153112	0120	-	Corrections to UTC Model	12.2.0	12.3.0
2015-09	RAN5#68	R5-153113	0121	-	Update to Galileo Assistance Data IEs	12.2.0	12.3.0
2015-09	RAN5#68	R5-153150	0122	-	Missing RSTD information for multiple test cases	12.2.0	12.3.0
2015-09	RAN5#68	R5-153151	0123	-	Missing BDS reference in the A-GNSS Minimum Performance Testing	12.2.0	12.3.0
2015-09	RAN5#68	R5-153664	0126	-	Update of Galileo OS SIS ICD reference	12.2.0	12.3.0
2015-09	RAN5#68	R5-153791	0124	1	Corrections to BDS Clock Model and Navigation Model for SIG tests	12.2.0	12.3.0
2015-09	RAN5#68	R5-153866	0127	1	Corrections to BDS Clock Model and Navigation Model for Perf tests	12.2.0	12.3.0
2015-09	RAN#69	-	-	-	update of the "non-specific references" in section 2 according to the approved R5-153582 and an action point on ETSI MCC	12.2.0	12.3.0
2015-12	RAN#70	R5-155185	0131	-	Values for two new 3 DL CA RSTD Measurement Accuracy test cases	12.3.0	12.4.0
2015-12	RAN#70	R5-155877	0130	1	Values for two new 3 DL CA RSTD Measurement Reporting Delay test cases	12.3.0	12.4.0
2015-12	RAN#70	R5-156186	0133	2	LBS-Sig: Corrections to A-BDS navigation files	12.3.0	12.4.0
2015-12	RAN#70	R5-156187	0132	2	LBS-Perf: Corrections to A-BDS navigation files	12.3.0	12.4.0
2016-03	RAN#71	R5-160173	0136	-	LBS Perf: Correction of assistance data files for A-BDS scenario 1	12.4.0	12.5.0
2016-03	RAN#71	R5-160174	0137	-	LBS Sig: Correction of assistance data files for A-BDS	12.4.0	12.5.0
2016-03	RAN#71	R5-160899	0138	1	LBS Perf: Correction of assistance data files for A-GALILEO scenario 1	12.4.0	12.5.0
2016-03	RAN#71	R5-160973	0140	1	LBS Sig: Correction of assistance data files for A-GALILEO	12.4.0	12.5.0
2016-03	RAN#71	R5-161000	0139	1	LBS Perf: Correction of assistance data files for A-GALILEO scenario 2	12.4.0	12.5.0
2016-09	RAN#73	R5-165088	0145	-	Correction of BDS Almanac di values for geostationary satellites	12.5.0	12.6.0
2016-09	RAN#73	R5-165089	0146	-	Correction of BDS Almanac di values for geostationary satellites	12.5.0	12.6.0
2016-09	RAN#73	R5-165994	0147	1	Aligning GNSS and GPS UE reference position	12.5.0	12.6.0
2017-03	RAN#75	R5-171336	0163	-	Removal of technical content in 37.571-5 v12.6.0 and substitution with pointer to the next Release	12.6.0	12.7.0

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