

ETSI TS 151 010-5 V10.17.0 (2017-01)



**Digital cellular telecommunications system (Phase 2+) (GSM);
Mobile Station (MS) conformance specification;
Part 5: Inter-Radio-Access-Technology (RAT)
(GERAN / UTRAN) interaction Abstract Test Suite (ATS)
(3GPP TS 51.010-5 version 10.17.0 Release 10)**



Reference

RTS/TSGR-0551010-5vah0

Keywords

GSM

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2017.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under <http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	5
Introduction	5
1 Scope	7
2 References	7
3 Definitions and abbreviations.....	8
3.1 Definitions	8
3.2 Abbreviations	8
4 ATS Structure.....	8
5 Abstract test method and test configurations.....	8
6 Specific Test Suite Operations for InterRAT GERAN to UTRAN Handover testing	8
7 Generic Procedures for GERAN/LTE testing	9
7.1 GPRS Attach	9
7.2 PDP Context 2 Activated	9
7.3 U10 Active State	9
Annex A (normative): Abstract Test Suites (ATS).....	10
A.1 Version of specification.....	10
A.2 IR_G ATS	10
A.2.1 Void.....	11
A.2.2 The TTCN Machine Processable form (TTCN.MP)	11
Annex B (normative): Partial IXIT proforma.....	12
B.0 Introduction	12
B.1 Parameter values	12
Annex C (normative): Additional information to IXIT.....	13
C.1 Identification Summary	13
C.2 Abstract Test Suite Summary.....	13
C.3 Test Laboratory	13
C.3.1 Test Laboratory Identification.....	13
C.3.2 Accreditation status of the test service	14
C.3.3 Manager of Test Laboratory	14
C.3.4 Contact person of Test Laboratory	14
C.3.5 Means of Testing.....	15
C.3.6 Instructions for Completion.....	16
C.4 Client	17
C.4.1 Client Identification.....	17
C.4.2 Client Test Manager	17
C.4.3 Client Contact person	17
C.4.4 Test Facilities Required.....	18
C.5 System Under Test	19
C.5.1 SUT Information	19

C.5.2	Limitations of the SUT	20
C.5.3	Environmental Conditions	21
C.6	Ancillary Protocols	22
C.6.1	Ancillary Protocols 1	22
C.6.2	Ancillary Protocols 2	22
C.7	Protocol Layer Information for L3 of Mobile Station	22
C.7.1	Information provided for test purposes by the MS supplier	22
C.7.2	MMI information	22
C.7.3	Test house specified parameters	23
Annex D (normative):	PCTR Proforma	24
Annex E (informative):	Guidance on test execution	25
E.1	InterRAT test execution	25
Annex F (informative):	Change history	26
History		31

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The present document describes the technical characteristics and methods of test for Mobile Stations (MSs), operating in the different frequency bands within the digital cellular telecommunications system.

The present document corresponds to technical specification 3GPP TS 51.010-5, covering the Digital cellular telecommunications system (3GPP Release 99, Release 4, Release 5, Release 6, Release 7, Release 8, 3GPP Release 9 and 3GPP Release 10).

The present document, contains Tree and Tabular Combined Notation (TTCN) for Mobile Station (MS) Inter-RAT (GERAN to UTRAN) service conformity specifications, for which Mobile Stations, within the digital cellular telecommunications system (3GPP Release 99, Release 4, Release 5, Release 6, Release 7 and Release 8, 3GPP Release 9 and 3GPP Release 10), are tested for compliance.

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;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- 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 describes the technical characteristics and methods of test for Mobile Stations (MSs) within the digital cellular telecommunications system.

The graphical form ATS

The electronic form of the graphical representation (TTCN.GR format) corresponding to the ATS for Layer 3, is contained in the Adobe Portable Document Format™ file IR_XXX.pdf where XXX corresponds to the current version.

The machine processable ATS

The electronic form of the machine processable file (TTCN.MP format) corresponding to the ATS for Layer 3, is contained in the file IR_XXX.mp where XXX corresponds to the current version.

The present document is part 5 of a multi-part 3GPP TS covering the digital cellular telecommunications system; Mobile Station (MS) conformance specification, as identified below:

- Part 1: Conformance specification
Reference: 3GPP TS 51.010-1.
- Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification.
Reference: 3GPP TS 51.010-2.

- Part 3: Layer 3 (L3) Abstract Test Suite (ATS).
Reference: 3GPP TS 51.010-3 v6.3.0 (Note 1)
- Part 4: SIM Application Toolkit conformance specification
Reference: 3GPP TS 51.010-4.
- Part 5: Inter-RAT (GERAN to UTRAN) Abstract Test Suite (ATS)**
Reference: 3GPP TS 51.010-5.
- Part 7: Location Services (LCS) test scenarios and assistance data.
Reference: 3GPP TS 51.010-7.

NOTE 1: GP-25: TTCN is not maintained after v6.3.0, and is henceforward to be considered an example test suite rather than the conformance tests.

1 Scope

The present document specifies the Abstract Test Suites (ATS) and partial IXIT proforma for the Network Layer (Layer 3) at the mobile radio interface of the GSM/3GPP mobile stations (MS) conforming to the TSs for Layer 3, for the digital cellular telecommunications systems.

The present document is valid for MS implemented according to R99, 3GPP Release 4, Release 5, Release 6, Release 7, Release 8, Release 9 or Release 10.

The ISO standards for the methodology of conformance testing and the TTCN language are used as the basis for the test specifications.

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*.

- [1] 3GPP TS 51.010-1: "Mobile Station (MS) conformance specification; Part 1: Conformance Specification".
- [2] 3GPP TS 51.010-2: "Mobile Station (MS) conformance specification; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".
- [3] ETSI TR 101 666 (V1.0.0): "Information technology; Open Systems Interconnection Conformance testing methodology and framework; The Tree and Tabular Combined Notation (TTCN) (Ed. 2++)".
- [4] 3GPP TS 34.123-3: "User Equipment (UE) conformance specification; Part 3: Abstract Test Suites (ATSs)".
- [5] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".
- [6] 3GPP TS 04.18: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".
- [7] 3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification"
- [8] 3GPP TS 34.108: "Common test environments for User Equipment (UE) conformance testing".
- [9] ISO/IEC 9646 (all parts): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework".
- [10] ISO/IEC 8824 (all parts): "Information technology - Abstract Syntax Notation One (ASN.1)".
- [11] ISO/IEC 8825 (all parts): "Information technology - ASN.1 encoding rules".