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Technical Specification

Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 3: Layer3 (L3) Abstract Test Suite (ATS) (3GPP TS 51.010-3 version 5.4.0 Release 5)



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#### **Foreword**

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# Contents

Intel	lectual Property Rights	2				
Fore	eword	2				
	eword					
1						
2	References					
3	Definitions and abbreviations					
4	Test Suite Structure (TSS)	5				
5	Test Purposes (TP)					
6						
Ann	nex A to H: Void					
Ann	nex I (informative): Change history	7				
	OTTV					

#### **Foreword**

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

The present document describes the technical characteristics and methods of test for Mobile Stations (MSs), operating in the 900 MHz and 1 800 MHz frequency band (GSM 900 and DCS 1 800) within the digital cellular telecommunications system.

The present document corresponds to technical specification 3GPP TS 51.010-3, covering the Digital cellular telecommunications system (GSM Phase 2 and Phase 2+ Releases 96, 97, 98, 99, 3GPP Release 4 and Release 5) version 6.x.x.

The present document, contains Tree and Tabular Combined Notation (TTCN) for Layer 3, cell selection, Enhanced Full Rate Speech, Multi-band, GSM-R band and ASCI service conformity specifications, for which Mobile Stations, within the digital cellular telecommunications system (GSM Phase 2 and Phase 2+ Releases 96, 97, 98, 99, 3GPP Release 4 and Release 5), 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.

The present document is part 3 of a multi-part 3GPP TS covering the digital cellular telecommunications system (GSM Phase2 and Phase 2+ Releases 96, 97, 98, 99 and 3GPP Release 4); 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.

Part 4: SIM Application Toolkit conformance specification

Reference: 3GPP TS 11.10-4.

NOTE: At the present time, part 4 is 3GPP TS 11.10.

#### 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, cell selection, Enhanced Full Rate Speech, Multi-band, GSM-R band (R-GSM) and ASCI (the voice group call service (VGCS), voice broadcast service (VBS), enhanced Multi-Level Precedence and Pre-emption service (eMLPP), User-to-user Signalling (UUS) service and the Follow Me service) for the digital cellular telecommunications systems.

The present document is valid for MS implemented according GSM Phase2 or Phase2+ R96, or R97, or R98, or R99, or 3GPP Release 4, or Release 5.

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 relevant Release*.

[1] to [71] (void)

[72] 3GPP TS 51.010-3 version 6 (Release 6): 'Mobile Station (MS) conformance specification; Part 3

Layer 3 (L3) Abstract Test Suite (ATS)'

## 3 Definitions and abbreviations

Void.

# 4 Test Suite Structure (TSS)

The requirements of the present document are provided in 3GPP TS 51.010-3 version 6 (Release 6) [72].

# 5 Test Purposes (TP)

Void

## 6 Abstract test method and test configurations

Void

Annex A to H: Void

# Annex I (informative): Change history

Change history									
TSG #	TSG Doc	CR	Rev	Subject/Comment	Cat	Old	New	WG Doc	Work item
				31/08/2000: Conversion to 3GPP TS format		11.10- 3	51.010- 3 v4.0.0		
GP-02	GP-000494	001		Correction of the release number for User-to-Dispatcher,	F	v9.0.0 4.0.0	4.1.0		
GP-05	GP-011153	002		UUS and FM test cases Creation of merged 51.010-3 including all the available ATS from Ph2 to Rel4	F	4.1.0	4.2.0		
GP-06	GP-011467	003		Alignment of TC_26_5_3_2 with 51.010-1 section 26.5.3.2	F	4.2.0	4.3.0		
GP-06	GP-011467	004		Proposal to allow handover access bursts on a SACCH.	F	4.2.0	4.3.0		
GP-06	GP-011467	005		Alignment of TC_26_2_4_7& TC_26_2_4_8 with 51.010-1 section 26.2.4.7 & 26.2.4.8	F	4.2.0	4.3.0		
GP-07	GP-012121	006		Classmark 2 modification to support R96 and later mobiles	F	4.3.0	4.4.0		
GP-07	GP-012122	007		Mobile originated Setup PDU additions to support R96 and later mobiles.	F	4.3.0	4.4.0		
GP-07	GP-012123	800		Classmark 2 modification	F	4.3.0	4.4.0		
GP-07	GP-012278	010		CR 51.010-3-010 on Corrections to BA-IND values Rel-4	F	4.3.0	4.4.0		
GP-07	GP-012651	011	1	Updating EFR to accept Version 3 Speech (Rel 4)	F	4.3.0	4.4.0		
GP-07	GP-012162	012		Bearer Capability additions (Rel 4)	F	4.3.0	4.4.0		
GP-08	GP-020065	013		Update of references	F	4.4.0	4.5.0		
GP-09	GP-020550	014		Correction to reference clause	F	4.5.0	4.6.0		
GP-10	GP-021486	015	-	26.6.5.5.1, 26.6.5.5.2, 26.6.5.6, 26.6.5.7, 26.6.5.8, 26.6.5.9, 26.8.1.4.3.1, 26.10.2.4.2 - Allowing handover access bursts on a SACCH.	F	4.6.0	4.7.0		
GP-10	GP-021851	016	1	34.2.3 & 34.2.5.3 – Correct guard timers	F	4.6.0	4.7.0		
GP-10	GP-021852	017	1	26.12.2.1.14 & 26.12.2.1.15 – Supress Halfrate testing for non-Halfrate MS	F	4.6.0	4.7.0		
GP-14	GP-030947	018	1	20.14 - Implementation of new Test Case	F	4.7.0	4.8.0		
GP-14	GP-030948	019	1	20.6 – Bring 51.010-3 into alignment with 51.010-1	F	4.7.0	4.8.0		
GP-14	GP-030949	020	1	34.3 - Update Number change in Cell Broadcasting message	F	4.7.0	4.8.0		
GP-14	GP-030950	021	1	Change to CCCAP Information Element	F	4.7.0	4.8.0		
GP-18	GP-040451	018	1	34.3 - Correction in verdict qualifiers in lines 26 and 28 during the 5th SMS-Cell Broadcast and promotion 51.010-3 to Release 5	F	4.8.0	5.0.0		
GP-18	GP-040236	019	-	26.6.5.2x - Correction to TTCN handling of handover commands	F	4.8.0	5.0.0		
GP-18	GP-040237	020	-	Promote to Release 5	F	4.8.0	5.0.0		
GP-18	GP-040405	021	-	Upgrade in TTCN to support R99 core specifications	F	4.8.0	5.0.0		
				Addition of missing machine processable files (TTCN.MP format) files.		5.0.0	5.0.1		
GP-19	GP-040648	022	-	Correction to TTCN handling of handover commands	F	5.0.1	5.1.0	GP-040648	GSM
GP-19	GP-040649	023	-	Repeat indicator value Sequential for successive selection' ("0011") is selected in the test case which is a reserved value in R99.	F	5.0.1	5.1.0	GP-040649	GSM
GP-19	GP-040650	024	-	During "speech full rate version 3", "Multi rate IE" should be included as part of Channel Mode Modify message.	F	5.0.1	5.1.0	GP-040650	GSM
GP-19	GP-040651	025	-	Sending Physical information before the handover access bursts.	F	5.0.1	5.1.0	GP-040651	GSM
GP-19	GP-040652	026	-	Test step 29 "+Checktree(C_RegPswd)" is not required.	F	5.0.1	5.1.0	GP-040652	GSM
GP-20	GP-041265	028	-	26.6.5.1 - Incorrect handling of Timing advance.	F	5.1.0	5.2.0	GP-041265	GSM
GP-20	GP-041266	029	-	26.6.5.2.4 – Handover Command sent on wrong channel in DCS band	F	5.1.0	5.2.0	GP-041266	GSM
GP-20	GP-041267	030	-	26.8.1.4.3.2 – Assignment Command must not contain both frequency list and mobile allocation	F	5.1.0	5.2.0	GP-041267	GSM

Change history									
TSG #	TSG Doc	CR	Rev	Subject/Comment	Cat	Old	New	WG Doc	Work item
GP-20	GP-041268	031	-	26.10.3.1 - Check whether TCH is connected	F	5.1.0	5.2.0	GP-041268	GSM
GP-21	GP-041795	032	-	26.11.5.1 - Incorrect checking for the number of cells present	F	5.2.0	5.3.0	GP-041795	GSM
GP-21	GP-041796	033	-	26.2.1.3 – Increase delay between executions	F	5.2.0	5.3.0	GP-041796	GSM
GP-21	GP-041797	034	-	26.6.4.1 - To keep RR connection active	F	5.2.0	5.3.0	GP-041797	GSM
GP-22	GP-042387	035	-	Incorrect implementation when testing TS62 and BS61	F	5.3.0	5.4.0	GP-042387	GSM
GP-22	GP-042388	036	-	Increase delay for MS to be in service	F	5.3.0	5.4.0	GP-042388	GSM
GP-22	GP-042390	037	-	To change the initial condition to allow for large SMS storage (b)To handle SAP 0 and SAPI 3 messages properly.	F	5.3.0	5.4.0	GP-042390	GSM
GP-22	GP-042914	038	-	Creation of 51.010-3 REL-6: Merging of REL-5, REL-4, R99 etc. test specifications ( Foreword, clause 1 and clause 2)	F	5.3.0	5.4.0	GP-042914	TEI

# History

Document history						
V5.0.1	March 2004	Publication				
V5.1.0	May 2004	Publication				
V5.2.0	July 2004	Publication				
V5.3.0	September 2004	Publication				
V5.4.0	November 2004	Publication				