SLOVENSKI STANDARD
SIST EN 300 607-1 V6.0.1:2005

01-februar-2005

Digitalni celiļ ni telekomunikacijski sistem (faza 2+) - Specifikacija skladnosti mobilne postaje (MS) - 1. del: Specifikacija skladnosti (GSM 11.10-1, razliļ ica 6.0.1, izdaja 1997)

Digital cellular telecommunications system (Phase 2+) (GSM); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 6.0.1 Release 1997)

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a23a79944afc/sist-en-300-607-1-v6-0-1-2005

Ta slovenski standard je istoveten z: **EN 300 607-1 Version 6.0.1**

ICS:

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)

SIST EN 300 607-1 V6.0.1:2005 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

SIST EN 300 607-1 V6.0.1:2005

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a23a79944afc/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

EN 300 607-1 V6.0.1 (1999-08)

European Standard (Telecommunications series)

Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 6.0.1 Release 1997)

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a23a79944afc/sist-en-300-607-1-v6-0-1-2005

GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS

European Telecommunications Standards Institute

SIST EN 300 607-1 V6.0.1:2005

Reference

REN/SMG-071110Q6-1 (5mc9300o.PDF)

Keywords

Digital cellular telecommunications system,
Global System for Mobile Communication (GSM)

ETSI Secretariat

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - 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

Internet

secretariat@etsi.fr
Individual copies of this ETSI deliverable
can be downloaded from
http://www.etsi.org
If you find errors in the present document, send your
comment to: editor@etsi.fr

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a23a79944afc/sist-en-300-607-1-v6-0-1-2005

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1999.
All rights reserved.

SIST EN 300 607-1 V6.0.1:2005

Contents

Intellectual Property Rights 28

Foreword 28

1 Scope 29

2 References 29

3 Definitions, conventions, and applicability 36
3.1 Mobile station definition and configurations 36
3.2 Applicability 36
3.2.1 Applicability of this specification 36
3.2.2 Applicability of the individual tests 36
3.2.3 Applicability to terminal equipment 64
3.3 Definitions 65
3.4 Conventions for mathematical notations 65
3.4.1 Mathematical signs 65
3.4.2 Powers to the base 10 65
3.5 Conventions on electrical terms 65
3.5.1 Radio Frequency (RF) input signal level 65
3.5.2 Reference sensitivity level 66
3.5.3 Power level of fading signal 66
3.6 Terms on test conditions 66
3.6.1 Radio test conditions 66

4 Test Equipment 68
4.1 Terms used to describe test equipment in this EN 68
4.2 Functional requirements of test equipment 68

5 Testing methodology in general (layers 1, 2, and 3) 68
5.1 Testing of optional functions and procedures 68
5.2 Test interfaces and facilities 68
5.3 Different protocol layers 69
5.4 Information to be provided by the apparatus supplier 69
5.5 Definitions of transmit and receive times 69

6 Reference test methods 69
6.1 General 69
6.2 Choice of frequencies in the frequency hopping mode 70
6.3 "Ideal" radio conditions 70
6.4 Standard test signals 70
6.5 Power (control) levels 70

7 Implicit testing 71

8 Measurement uncertainty 71

9 Format of tests 71

10 Generic call set up procedures 71
10.1 Generic call set-up procedure for mobile terminating speech calls 71
10.2 Generic call set-up procedure for mobile originating speech calls 77
10.3 Generic call set-up procedure for mobile terminating data calls 80
10.4 Generic call set-up procedure for mobile originating data calls 83
10.5 Generic call set-up procedure for mobile terminating multislot configuration, minimum number of timeslots allocated 87
10.6 Generic call set-up procedure for mobile originating multislot configuration, minimum number of timeslots allocated 90

11 General tests 94
11.1 Verification of support and non-support of services (multiple numbering scheme or ISDN) 94

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-23a79944afc/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

11.1.1 Mobile Terminated (MT) calls 94
11.1.2 Mobile Originated (MO) calls 95
11.2 Verification of support of the single numbering scheme 96
11.3 Verification of non-support of services (Advice of Charge Charging (AoCC)) 97
11.4 Verification of non-support of services (call hold) 99
11.5 Verification of non-support of services (multiparty) 100
11.6 Verification of non-support of feature (Fixed Dialling Number (FDN)) 100
11.7 IMEI Security 101
11.8 Coding of the Bearer Capability information element 102
11.8.1 Network to MS Direction 103
11.8.1.1 BS 21 to 26 - Asynchronous Service 103
11.8.1.1.1 BS 21 103
11.8.1.1.2 BS 22 107
11.8.1.1.3 BS 24 107
11.8.1.1.4 BS 25 107
11.8.1.1.5 BS 26 107
11.8.1.1.6 BS 23 107
11.8.1.2 BS 31 to 34 - Synchronous Service 108
11.8.1.2.1 BS 32 108
11.8.1.2.2 BS 31 112
11.8.1.2.3 BS 33 113
11.8.1.2.4 BS 34 113
11.8.1.3 BS 61 - Alternate Speech / Data 113
11.8.1.3.1 Speech/Asynchronous Data, Transparent 114
11.8.1.3.2 Speech/Asynchronous Data, Non Transparent 116
11.8.1.3.3 Speech/Synchronous Data 118
11.8.1.4 BS 81 - Speech followed by Data 119
11.8.1.4.1 Speech followed by Asynchronous Data 119
11.8.1.4.2 Speech followed by Synchronous Data 119
11.8.1.5 TS 61 - Alternate Speech / Facsimile group 3 119
11.8.1.5.1 TS 61 - Alternate Speech / Facsimile group 3, Transparent 120
11.8.1.5.2 TS 61 - Alternate Speech / Facsimile group 3, Non-Transparent 121
11.8.1.6 TS 62 - Automatic Facsimile group 3 122
11.8.2 MS to SS direction 122
11.8.2.1 BS 21 to 26 - Asynchronous Service 122
11.8.2.1.1 BS 21 123
11.8.2.1.2 BS 22 127
11.8.2.1.3 BS 24 127
11.8.2.1.4 BS 25 127
11.8.2.1.5 BS 26 127
11.8.2.1.6 BS 23 127
11.8.2.2 BS 31 to 34 - Synchronous Service 128
11.8.2.2.1 BS 32 128
11.8.2.2.2 BS 31 132
11.8.2.2.3 BS 33 133
11.8.2.2.4 BS 34 133
11.8.2.3 BS 41 to 46 - PAD Access Asynchronous 134
11.8.2.3.1 [2] BS 41 134
11.8.2.3.2 BS 42 136
11.8.2.3.3 BS 44 136
11.8.2.3.4 BS 45 136
11.8.2.3.5 BS 46 136
11.8.2.3.6 BS 43 136
11.8.2.4 BS 51 to 53 - Packet Service Synchronous 137
11.8.2.4.1 [2] BS 51 137
11.8.2.4.2 BS 52 137
11.8.2.4.3 BS 53 137
11.8.2.5 BS 61 - Alternate Speech / Data 138
11.8.2.5.1 Speech/Asynchronous Data, Transparent 138
11.8.2.5.2 Speech/Asynchronous Data, Non Transparent 140

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/75791b3e-5147-4873-989e-a25a7994afae/sist-en-300-607-1-v6.0.1-2005

SIST EN 300 607-1 V6.0.1:2005

11.8.2.5.3 Speech/Synchronous Data 142
11.8.2.6 BS 81 - Speech followed by Data 143
11.8.2.6.1 Speech followed by Asynchronous Data 143
11.8.2.6.2 Speech followed by Synchronous Data 143
11.8.2.7 TS 61 - Alternate Speech / Facsimile group 3 143
11.8.2.7.1 TS 61 - Alternate Speech / Facsimile group 3, Transparent 144
11.8.2.7.2 TS 61 - Alternate Speech / Facsimile group 3, Non Transparent 145
11.8.2.8 TS 62 - Automatic Facsimile group 3 146
11.8.2.9 TS 11 and TS 12- Speech 146
11.8.2.9.1 Support of only full/half rate speech version 1 146
11.8.2.9.2 Support of speech full rate version 2 (Enhanced Full Rate) 146

12 Transceiver 149
12.1 Conducted spurious emissions 149
12.1.1 MS allocated a channel 149
12.1.2 MS in idle mode 151
12.2 Radiated spurious emissions 152
12.2.1 MS allocated a channel 153
12.2.2 MS in idle mode 155
12.3 Conducted spurious emissions for MS supporting the R-GSM frequency band 156
12.3.1 MS allocated a channel 156
12.3.2 MS in idle mode 159
12.4 Radiated spurious emissions for MS supporting the R-GSM frequency band 160
12.4.1 MS allocated a channel 161
12.4.2 MS in idle mode 163

13 Transmitter 165
13.1 Frequency error and phase error 165
13.2 Frequency error under multipath and interference conditions 168
13.3 Transmitter output power and burst timing 170
13.4 Output RF spectrum 178
13.5 Intermodulation attenuation 184
13.6 Frequency error and phase error in HSCSD multislot configurations 186
13.7 Transmitter output power and burst timing in HSCSD configurations 190
13.8 Output RF spectrum in HSCSD multislot configuration 197
13.9 Output RF spectrum for MS supporting the R-GSM band 204
13.10 *[Reserved for future GSM test]* 209
13.11 *[Reserved for future GSM test]* 209
13.12 *[Reserved for future GSM test]* 209
13.13 *[Reserved for future GSM test]* 209
13.14 *[Reserved for future GSM test]* 209
13.15 *[Reserved for future GSM test]* 209
13.16 GPRS transmitter tests 209
13.16.1 Frequency error and phase error in GPRS multislot configuration 209
13.16.3 Output RF spectrum in GPRS multislot configuration 221

14 Receiver 228
14.1 Bad frame indication 234
14.1.1 Bad frame indication - TCH/FS 234
14.1.1.1 Bad frame indication - TCH/FS - Random RF input 234
14.1.1.2 Bad frame indication - TCH/FS - Frequency hopping and downlink DTX 236
14.1.2 Bad frame indication - TCH/HS 237
14.1.2.1 Bad frame indication - TCH/HS - Random RF input 237
14.1.2.2 Bad frame indication - TCH/HS - Frequency hopping and downlink DTX 238
14.1.3 Bad frame indication - TCH/FS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network 239
14.1.4 Bad frame indication - TCH/HS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network 241
14.2 Reference sensitivity 244
14.2.1 Reference sensitivity - TCH/FS 244
14.2.2 Reference sensitivity - TCH/HS (Speech frames) 246

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/5f6f8b...-5147-4873-989c-...-sist-en-300-607-1-v6.0.1-2005

SIST EN 300 607-1 V6.0.1:2005

14.2.3 Reference sensitivity - FACCH/F ... 249
14.2.4 Reference sensitivity - FACCH/H ... 250
14.2.5 Reference sensitivity - full rate data channels ... 251
14.2.6 Reference sensitivity - half rate data channels ... 252
14.2.7 Reference sensitivity - TCH/EFS ... 253
14.2.8 Reference sensitivity - full rate data channels in multislot configuration ... 255
14.2.9 Reference sensitivity - TCH/FS for MS supporting the R-GSM band ... 257
14.3 Usable receiver input level range ... 259
14.4 Co-channel rejection ... 260
14.4.1 Co-channel rejection - TCH/FS ... 260
14.4.2 Co-channel rejection - TCH/HS ... 262
14.4.3 Co-channel rejection - TCH/HS (SID frames) ... 264
14.4.4 Co-channel rejection - FACCH/F ... 266
14.4.5 Co-channel rejection - FACCH/H ... 267
14.4.6 Co-channel rejection - TCH/EFS ... 268
14.4.7 Receiver performance in the case of frequency hopping and co-channel interference on one carrier ... 269
14.4.7.1 Definition and applicability ... 269
14.4.7.2 Conformance Requirement ... 270
14.4.7.3 Test Purpose ... 270
14.4.7.4 Method Of Test ... 270
14.4.7.4.1 Initial conditions ... 270
14.4.7.5 Test requirements ... 270
14.5 Adjacent channel rejection ... 271
14.5.1 Adjacent channel rejection - speech channels ... 271
14.5.2 Adjacent channel rejection - control channels ... 273
14.6 Intermodulation rejection ... 275
14.6.1 Intermodulation rejection - speech channels ... 275
14.6.2 Intermodulation rejection - control channels ... 277
14.7 Blocking and spurious response ... 278
14.7.1 Blocking and spurious response - speech channels ... 278
14.7.2 Blocking and spurious response - control channels ... 282
14.7.3 Blocking and spurious response - speech channels for MS supporting the R-GSM band ... 285
14.7.4 Blocking and spurious response - control channels for MS supporting the R-GSM band ... 288
14.8 AM suppression ... 291
14.8.1 AM suppression - speech channels ... 291
14.8.2 AM suppression - control channels ... 292
14.9 Paging performance at high input levels ... 294
14.10 *[Reserved for future GSM test]* ... 295
14.11 *[Reserved for future GSM test]* ... 295
14.12 *[Reserved for future GSM test]* ... 295
14.13 *[Reserved for future GSM test]* ... 295
14.14 *[Reserved for future GSM test]* ... 295
14.15 *[Reserved for future GSM test]* ... 295
14.16 GPRS receiver tests ... 295
14.16.1 Minimum Input level for Reference Performance ... 296
14.16.1.1 Definition and applicability ... 296
14.16.1.2 Conformance requirement ... 297
14.16.1.3 Test purpose ... 298
14.16.1.4 Method of test ... 298
14.16.1.4.1 Initial conditions ... 298
14.16.1.4.2 Procedure ... 299
14.16.1.5 Test requirements ... 300
14.16.2 Co-channel rejection ... 300
14.16.2.1 Co-channel rejection for packet channels ... 300
14.16.2.1.1 Definition and applicability ... 300
14.16.2.1.2 Conformance requirement ... 300
14.16.2.1.3 Test purpose ... 301
14.16.2.1.4 Method of test ... 301
14.16.2.1.4.1 Initial conditions ... 301
14.16.2.1.4.2 Procedure ... 301

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f85f-5147-4873-9896-a23a79944afe/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

14.16.2.1.5 Test requirements 302

15 Timing advance and absolute delay 303

16 Reception time tracking speed 309

17 Access times during handover 311
17.1 Intra cell channel change 311
17.2 Inter cell handover 313

18 Temporary reception gaps 316
18.1 Temporary reception gaps, single slot 316
18.2 Temporary reception gaps in HSCSD multislot configurations 317

19 Channel release after unrecoverable errors 320
19.1 Channel release after unrecoverable errors -1 320
19.2 Channel release after unrecoverable errors - 2 321
19.3 Channel release after unrecoverable errors - 3 322

20 Cell selection and reselection 324
20.1 Cell selection 325
20.2 Cell selection with varying signal strength values 327
20.3 Basic cell reselection 329
20.4 Cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters 331
20.5 Cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages 333
20.6 Cell reselection timings 335
20.7 Priority of cells 337
20.8 Cell reselection when C1 (serving cell) < 0 for 5 seconds 338
20.9 Running average of the surrounding cell BCCH carrier signal levels 339
20.10 Running average of the serving cell BCCH carrier signal level 341
20.11 Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list 342
20.12 Decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers 343
20.13 Decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers 344
20.14 Emergency calls 345
20.15 Cell reselection due to MS rejection "LA not allowed" 346
20.16 Downlink signalling failure 348
20.17 Cell selection if no suitable cell found in 10 s 349
20.18 Cell reselection due to MS rejection "Roaming not allowed in this LA" 350
20.19 Cell selection on release of SDCCH and TCH 352
20.20 Multiband cell selection and reselection 353
20.20.1 Multiband cell selection and reselection / Cell Selection 353
20.20.2 Multiband cell selection and reselection / Cell reselection 355
20.21 R-GSM cell selection and reselection 357
20.21.1 R-GSM cell selection 358
20.21.2 R-GMS cell selection with varying signal strength values 360
20.21.3 R-GSM basic cell reselection 362
20.21.4 R-GSM cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters 364
20.21.5 R-GSM cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages 366
20.21.6 R-GSM cell reselection timings 367
20.21.7 R-GSM priority of cells 369
20.21.8 R-GSM cell reselection when C1 (serving cell) < 0 for 5 seconds 371
20.21.9 R-GSM running average of the surrounding cell BCCH carrier signal levels 372
20.21.10 R-GSM running average of the serving cell BCCH carrier signal level 373
20.21.11 Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list 374
20.21.12 R-GSM decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers 375
20.21.13 R-GSM decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers 376

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a23a79944a1c/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

20.21.14 R-GSM emergency calls 377
20.21.15 R-GSM cell reselection due to MS rejection "LA not allowed" 379
20.21.16 R-GSM downlink signalling failure 380
20.21.17 R-GSM cell selection if no suitable cell found in 10 s 382
20.21.18 R-GSM cell reselection due to MS rejection "Roaming not allowed in this LA" 383
20.21.19 R-GSM cell selection on release of SDCCH and TCH 384

21 Received signal measurements 386
21.1 Signal strength 386
21.2 Signal strength selectivity 389
21.3 Signal quality under static conditions 391
21.3.1 Signal quality under static conditions - TCH/FS 391
21.3.2 Signal quality under static conditions - TCH/HS 393
21.4 Signal quality under TU50 propagation conditions 395
21.5 Received signal measurements in HSCSD multislot configuration 397

22 Transmit power control timing and confirmation 402
22.1 Transmit power control timing and confirmation, single slot 402
22.2 Transmit power control timing and confirmation in HSCSD multislot configurations 404

23 Single frequency reference 406

24 Tests of the layer 1 signalling functions 406

25 Tests of the layer 2 signalling functions 407
25.1 Introduction, objective and scope 407
25.1.1 General 407
25.1.2 Test configurations 407
25.1.3 Pre-conditions 407
25.1.4 Layer 2 test frames 408
25.1.5 Establishment of the dedicated physical resource 408
25.1.6 Release of the dedicated physical resource 409
25.2 Test sequences 409
25.2.1 Initialization 410
25.2.1.1 Initialization when contention resolution required 410
25.2.1.1.1 Normal initialization 410
25.2.1.1.2 Initialization failure 411
25.2.1.1.2.1 Loss of UA frame 411
25.2.1.1.2.2 UA frame with different information field 412
25.2.1.1.2.3 Information frame and supervisory frames in response to an SABM frame 413
25.2.1.1.3 Initialization denial 414
25.2.1.1.4 Total initialization failure 415
25.2.1.2 Initialization, contention resolution not required 416
25.2.1.2.1 Normal initialization without contention resolution 416
25.2.1.2.2 Initialization failure 417
25.2.1.2.3 Initialization denial 418
25.2.1.2.4 Total initialization failure 419
25.2.2 Normal information transfer 420
25.2.2.1 Sequence counting and I frame acknowledgements 420
25.2.2.2 Receipt of an I frame in the timer recovery state 423
25.2.2.3 Segmentation and concatenation 425
25.2.3 Normal layer 2 disconnection 428
25.2.4 Test of link failure 429
25.2.4.1 I frame loss (MS to SS) 429
25.2.4.2 RR response frame loss (SS to MS) 430
25.2.4.3 RR response frame loss (MS to SS) 430
25.2.5 Test of frame transmission with incorrect C/R values 431
25.2.5.1 I frame with C bit set to zero 431
25.2.5.2 SABM frame with C bit set to zero 432
25.2.6 Test of errors in the control field 433
25.2.6.1 N(S) sequence error 433
25.2.6.2 N(R) sequence error 435

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989e-82a8799448ad/sist-en-300-607-1-v6.0.1-2005

SIST EN 300 607-1 V6.0.1:2005

25.2.6.3 Improper F bit 436
25.2.7 Test on receipt of invalid frames 436

26 Testing of layer 3 functions 441
26.1 Default conditions and structured sequence of tests 441
26.1.1 Default test conditions during layer 3 tests 441
26.1.2 Structured sequence of the tests 442
26.1.3 General rules for message parameters 443
26.1.4 General rules for layer 3 testing 443
26.1.5 Format of layer 3 test descriptions 443
26.2 Initial tests 445
26.2.1 Channel request 445
26.2.1.1 Channel request / initial time 445
26.2.1.2 Channel request / repetition time 446
26.2.1.3 Channel request / random reference 448
26.2.2 IMSI detach and IMSI attach 449
26.2.3 Sequenced MM / CM message transfer 453
26.2.4 Establishment cause 454
26.3 Test of MS functions in idle mode 462
26.3.1 Initial conditions 462
26.3.2 MS indication of available PLMNs 464
26.3.3 MS will send only if BSS is "on air" 465
26.3.4 Manual mode of PLMN selection 465
26.4 Lower layer failures in layer 3 testing 468
26.4.1 Introduction 468
26.4.2 Layer 1 reception failures 468
26.4.3 Data link layer failures 468
26.4.4 Lower layer failures, used for the tests in clause 25 468
26.5 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions 469
26.5.1 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown protocol discriminator 469
26.5.2 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / TI and skip indicator 470
26.5.2.1 TI and skip indicator / RR 470
26.5.2.1.1 TI and skip indicator / RR / Idle Mode 470
26.5.2.1.2 TI and skip indicator / RR / RR-Connection established 471
26.5.2.2 TI and skip indicator / MM 472
26.5.2.3 TI and skip indicator / CC 474
26.5.3 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / undefined or unexpected message type 476
26.5.3.1 Undefined or unexpected message type / undefined message type / CC 476
26.5.3.2 Undefined or unexpected message type / undefined message type / MM 477
26.5.3.3 Undefined or unexpected message type / undefined message type / RR 479
26.5.3.4 Undefined or unexpected message type / unexpected message type / CC 480
26.5.4 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unforeseen information elements in the non-imperative message part 481
26.5.4.1 Unforeseen information elements in the non-imperative message part / duplicated information elements 481
26.5.5 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / non-semantical mandatory IE errors 483
26.5.5.1 Non-semantical mandatory IE errors / RR 483
26.5.5.1.1 Non-semantical mandatory IE errors / RR / missing mandatory IE error 483
26.5.5.1.1.1 Non-semantical mandatory IE errors / RR / missing mandatory IE error / special case 483
26.5.5.1.1.2 Non-semantical mandatory IE errors / RR / missing mandatory IE error / general case 484
26.5.5.1.2 Non-semantical mandatory IE errors / RR / comprehension required 485
26.5.5.2 Non-semantical mandatory IE errors / MM 486
26.5.5.2.1 Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE 486
26.5.5.2.2 Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE 488
26.5.5.2.3 Non-semantical mandatory IE errors / MM / comprehension required 489
26.5.5.3 Non-semantical mandatory IE errors / CC 491
26.5.5.3.1 Non-semantical mandatory IE errors / CC / missing mandatory IE 491

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989c-a24a79944afc/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

26.5.5.3.1.1 Non-semantical mandatory IE errors / CC / missing mandatory IE / disconnect message 491
26.5.5.3.1.2 Non-semantical mandatory IE errors / CC / missing mandatory IE / general case 492
26.5.5.3.2 Non-semantical mandatory IE errors / CC / comprehension required 493
26.5.6 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown IE, comprehension not required 494
26.5.6.1 Unknown information elements in the non-imperative message part / MM 494
26.5.6.1.1 Unknown IE, comprehension not required / MM / IE unknown in the protocol 494
26.5.6.1.2 Unknown IE, comprehension not required / MM / IE unknown in the message 496
26.5.6.2 Unknown information elements in the non-imperative message part / CC 497
26.5.6.2.1 Unknown information elements in the non-imperative message part / CC / Call establishment ... 497
26.5.6.2.2 Unknown information elements in the non-imperative message part / CC / disconnect 498
26.5.6.2.3 Unknown information elements in the non-imperative message part / CC / release 499
26.5.6.2.4 Unknown information elements in the non-imperative message part / CC / release complete 501
26.5.6.3 Unknown IE in the non-imperative message part, comprehension not required / RR 502
26.5.7 Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / spare bits 504
26.5.7.1 Spare bits / RR 504
26.5.7.1.1 Spare bits / RR / paging channel 504
26.5.7.1.2 Spare bits / RR / BCCH 505
26.5.7.1.3 Spare bits / RR / AGCH 506
26.5.7.1.4 Spare bits / RR / Connected Mode 509
26.5.7.2 Spare bits / MM 510
26.5.7.3 Spare bits / CC 512
26.5.8 Default contents of messages 514
26.6 Test of the elementary procedures for radio resource management 517
26.6.1 Immediate assignment 517
26.6.1.1 Immediate assignment / SDCCH or TCH assignment 517
26.6.1.2 Immediate assignment / extended assignment 518
26.6.1.3 Immediate assignment / assignment rejection 521
26.6.1.4 Immediate assignment / ignore assignment 522
26.6.1.5 Immediate assignment after immediate assignment reject 524
26.6.2 Test of paging 525
26.6.2.1 Normal paging 525
26.6.2.1.1 Paging / normal / type 1 525
26.6.2.1.2 Paging / normal / type 2 528
26.6.2.1.3 Paging / normal / type 3 530
26.6.2.2 Paging / extended 531
26.6.2.3 Paging / reorganization 535
26.6.2.3.1 Paging / reorganization / procedure 1 535
26.6.2.3.2 Paging / reorganization / procedure 2 538
26.6.2.4 Paging / same as before 539
26.6.2.5 Paging / multislot CCCH 540
26.6.3 Test of measurement report 542
26.6.3.1 Measurement / no neighbours 542
26.6.3.2 Measurement / all neighbours present 545
26.6.3.3 Measurement / barred cells and non-permitted NCCs 550
26.6.3.4 Measurement / DTX 554
26.6.3.5 Measurement / Frequency Formats 559
26.6.3.6 Measurement / multiband environment 563
26.6.4 Test of the channel assignment procedure 568
26.6.4.1 Dedicated assignment / successful case 568
26.6.4.2 Dedicated assignment / failure 580
26.6.4.2.1 Dedicated assignment / failure / failure during active state 580
26.6.4.2.2 Dedicated assignment / failure / general case 582
26.6.5 Test of handover 583
26.6.5.1 Handover / successful / active call / non-synchronized 584
26.6.5.2 Handover / successful / call under establishment / non-synchronized 599
26.6.5.3 Handover / successful / active call / finely synchronized 619
26.6.5.4 Handover / successful / call under establishment / finely synchronized 624
26.6.5.5 Pre-synchronized handovers 634

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f83e-5147-4873-989e-a23a79944afe/sist-en-300-607-1-v6.0.1-2005

SIST EN 300 607-1 V6.0.1:2005

26.6.5.5.1 Handover / successful / active call / pre-synchronized / Timing Advance IE not included 634
26.6.5.5.2 Handover / successful / call being established / pre-synchronized / timing advance IE is included / reporting of observed time difference requested 636
26.6.5.6 Handover / successful / active call / pseudo synchronized 638
26.6.5.7 Handover / successful / active call / non-synchronized / reporting of observed time difference requested 640
26.6.5.8 Handover / layer 3 failure 642
26.6.5.9 Handover / layer 1 failure 643
26.6.6 Test of frequency redefinition 644
26.6.6.1 Frequency redefinition 644
26.6.7 Test of the channel mode modify procedure 650
26.6.7.1 Test of the channel mode modify procedure / full rate 650
26.6.7.2 Test of the channel mode modify procedure / half rate 652
26.6.8 Test of ciphering mode setting 654
26.6.8.1 Ciphering mode / start ciphering 655
26.6.8.2 Ciphering mode / no ciphering 656
26.6.8.3 Ciphering mode / old cipher key 658
26.6.8.4 Ciphering mode / change of mode, algorithm and key 659
26.6.8.5 Ciphering mode / IMEISV request 667
26.6.9 Test of additional assignment 669
26.6.10 Test of partial release 669
26.6.11 Test of classmark 669
26.6.11.1 Classmark change 669
26.6.11.2 Classmark interrogation 671
26.6.12 Test of channel release 672
26.6.12.1 Channel release / SDCCH 672
26.6.12.2 Channel release / SDCCH - no L2 ACK 674
26.6.12.3 Channel release / TCH-F 675
26.6.12.4 Channel release / TCH-F - no L2 ACK 676
26.6.13 Test of starting time 678
26.6.13.1 Dedicated assignment with starting time / successful case / time not elapsed 679
26.6.13.2 Dedicated assignment with starting time / successful case / time elapsed 681
26.6.13.3 Dedicated assignment with starting time and frequency redefinition / failure case / time not elapsed 683
26.6.13.4 Dedicated assignment with starting time and frequency redefinition / failure case / time elapsed 686
26.6.13.5 Handover with starting time / successful case / time not elapsed 688
26.6.13.6 Handover with starting time / successful case / time elapsed 691
26.6.13.7 Handover with starting time and frequency redefinition / failure case / time not elapsed 693
26.6.13.8 Handover with starting time and frequency redefinition / failure case / time elapsed 695
26.6.13.9 Immediate assignment with starting time / successful case / time not elapsed 698
26.6.13.10 Immediate assignment with starting time / successful case / time elapsed 700
26.6.14 Default contents of GSM 900 layer 3 messages for RR tests 702
26.6.15 Default contents of DCS 1 800 layer 3 messages for RR tests 713
26.7 Elementary procedures of mobility management 725
26.7.1 TMSI reallocation 725
26.7.2 Authentication 728
26.7.2.1 Authentication accepted 728
26.7.2.2 Authentication rejected 729
26.7.3 Identification 732
26.7.3.1 General Identification 732
26.7.3.2 Handling of IMSI shorter than the maximum length 734
26.7.4 Location updating 737
26.7.4.1 Location updating / accepted 737
26.7.4.2 Location updating / rejected 743
26.7.4.2.1 Location updating / rejected / IMSI invalid 743
26.7.4.2.2 Location updating / rejected / PLMN not allowed 746
26.7.4.2.3 Location updating / rejected / location area not allowed 750
26.7.4.2.4 Location updating / rejected / roaming not allowed in this location area 753
26.7.4.3 Location updating / abnormal cases 760
26.7.4.3.1 Location updating / abnormal cases / random access fails 760

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f85c-5147-4d75-989e-a25a79944afe/sist-en-300-607-1-v6-0-1-2005

SIST EN 300 607-1 V6.0.1:2005

26.7.4.3.2 Location updating / abnormal cases / attempt counter less or equal to 4, LAI different 762
26.7.4.3.3 Location updating / abnormal cases / attempt counter equal to 4 768
26.7.4.3.4 Location updating / abnormal cases / attempt counter less or equal to 4, stored LAI equal to broadcast LAI 776
26.7.4.4 Location updating / release / expiry of T3240 784
26.7.4.5 Location updating / periodic 785
26.7.4.5.1 Location updating / periodic spread 785
26.7.4.5.2 Location updating / periodic normal / test 1 787
26.7.4.5.3 Location updating / periodic normal / test 2 789
26.7.4.5.4 Location updating / periodic HPLMN search 792
26.7.4.5.4.1 Location updating / periodic HPLMN search / MS waits time T 792
26.7.4.5.4.2 Location updating / periodic HPLMN search / MS in manual mode 793
26.7.4.5.4.3 Location updating / periodic HPLMN search / MS waits at least two minutes and at most T minutes 795
26.7.4.6 Location updating / interworking of attach and periodic 796
26.7.5 MM connection 798
26.7.5.1 Introduction 798
26.7.5.2 MM connection / establishment with cipher 798
26.7.5.3 MM connection / establishment without cipher 800
26.7.5.4 MM connection / establishment rejected 801
26.7.5.5 MM connection / establishment rejected cause 4 802
26.7.5.6 MM connection / expiry T3230 803
26.7.5.7 MM connection / abortion by the network 804
26.7.5.7.1 MM connection / abortion by the network / cause #6 804
26.7.5.7.2 MM connection / abortion by the network / cause not equal to #6 807
26.7.5.8 MM connection / follow-on request pending 808
26.7.5.8.1 MM connection / follow-on request pending / test 1 808
26.7.5.8.2 MM connection / follow-on request pending / test 2 809
26.7.5.8.3 MM connection / follow-on request pending / test 3 811
26.7.6 Default contents of messages 812
26.8 Tests related to circuit switched call control 816
26.8.1 Circuit switched Call Control (CC) state machine verification 816
26.8.1.1 General on CC state machine verification 816
26.8.1.2 Establishment of an outgoing call 817
26.8.1.2.1 Outgoing call / U0 null state 819
26.8.1.2.1.1 Outgoing call / U0 null state / MM connection requested 819
26.8.1.2.2 Outgoing call / U0.1 MM connection pending 820
26.8.1.2.2.1 Outgoing call / U0.1 MM connection pending / CM service rejected 820
26.8.1.2.2.2 Outgoing call / U0.1 MM connection pending / CM service accepted 822
26.8.1.2.2.3 Outgoing call / U0.1 MM connection pending / lower layer failure 823
26.8.1.2.3 Outgoing call / U1 call initiated 824
26.8.1.2.3.1 Outgoing call / U1 call initiated / receiving CALL PROCEEDING 824
26.8.1.2.3.2 Outgoing call / U1 call initiated / rejecting with RELEASE COMPLETE 825
26.8.1.2.3.3 Outgoing call / U1 call initiated / T303 expiry 827
26.8.1.2.3.4 Outgoing call / U1 call initiated / lower layer failure 828
26.8.1.2.3.5 Outgoing call / U1 call initiated / receiving ALERTING 829
26.8.1.2.3.6 Outgoing call / U1 call initiated / entering state U10 830
26.8.1.2.3.7 Outgoing call / U1 call initiated / unknown message received 831
26.8.1.2.4 Outgoing call / U3 MS originating call proceeding 833
26.8.1.2.4.1 Outgoing call / U3 MS originating call proceeding / ALERTING received 833
26.8.1.2.4.2 Outgoing call / U3 MS originating call proceeding / CONNECT received 834
26.8.1.2.4.3 Outgoing call / U3 MS originating call proceeding / PROGRESS received without in band information 835
26.8.1.2.4.4 Outgoing call / U3 MS originating call proceeding / PROGRESS with in band information 836
26.8.1.2.4.5 Outgoing call / U3 MS originating call proceeding / DISCONNECT with in band tones 838
26.8.1.2.4.6 Outgoing call / U3 MS originating call proceeding / DISCONNECT without in band tones 839
26.8.1.2.4.7 Outgoing call / U3 MS originating call proceeding / RELEASE received 841
26.8.1.2.4.8 Outgoing call / U3 MS originating call proceeding / termination requested by the user 842
26.8.1.2.4.9 Outgoing call / U3 MS originating call proceeding / traffic channel allocation 843
26.8.1.2.4.10 Outgoing call / U3 MS originating call proceeding / timer T310 time-out 844

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/7575f85e-5147-4873-989e-a29a799444a6/sist-en-300-607-1-v6.0.1-2005

SIST EN 300 607-1 V6.0.1:2005

26.8.1.2.4.11 Outgoing call / U3 MS originating call proceeding / lower layer failure 845
26.8.1.2.4.12 Outgoing call / U3 MS originating call proceeding / unknown message received 847
26.8.1.2.4.13 Outgoing call / U3 MS originating call proceeding / Internal alerting indication 848
26.8.1.2.5 Outgoing call / U4 call delivered 849
26.8.1.2.5.1 Outgoing call / U4 call delivered / CONNECT received 849
26.8.1.2.5.2 Outgoing call / U4 call delivered / termination requested by the user 850
26.8.1.2.5.3 Outgoing call / U4 call delivered / DISCONNECT with in band tones 851
26.8.1.2.5.4 Outgoing call / U4 call delivered / DISCONNECT without in band tones 853
26.8.1.2.5.5 Outgoing call / U4 call delivered / RELEASE received 854
26.8.1.2.5.6 Outgoing call / U4 call delivered / lower layer failure 855
26.8.1.2.5.7 Outgoing call / U4 call delivered / traffic channel allocation 857
26.8.1.2.5.8 Outgoing call / U4 call delivered / unknown message received 858
26.8.1.2.6 U10 call active 859
26.8.1.2.6.1 U10 call active / termination requested by the user 859
26.8.1.2.6.2 U10 call active / RELEASE received 860
26.8.1.2.6.3 U10 call active / DISCONNECT with in band tones 861
26.8.1.2.6.4 U10 call active / DISCONNECT without in band tones 863
26.8.1.2.6.5 U10 call active / RELEASE COMPLETE received 864
26.8.1.2.6.6 U10 call active / SETUP received 865
26.8.1.2.7 U11 disconnect request 867
26.8.1.2.7.1 U11 disconnect request / clear collision 867
26.8.1.2.7.2 U11 disconnect request / RELEASE received 868
26.8.1.2.7.3 U11 disconnect request / timer T305 time-out 870
26.8.1.2.7.4 U11 disconnect request / lower layer failure 871
26.8.1.2.7.5 U11 disconnect request / unknown message received 872
26.8.1.2.8 U12 disconnect indication 873
26.8.1.2.8.1 U12 disconnect indication / call releasing requested by the user 873
26.8.1.2.8.2 U12 disconnect indication / RELEASE received 874
26.8.1.2.8.3 U12 disconnect indication / lower layer failure 876
26.8.1.2.8.4 U12 disconnect indication / unknown message received 877
26.8.1.2.9 Outgoing call / U19 release request 878
26.8.1.2.9.1 Outgoing call / U19 release request / timer T308 time-out 878
26.8.1.2.9.2 Outgoing call / U19 release request / 2nd timer T308 time-out 880
26.8.1.2.9.3 Outgoing call / U19 release request / RELEASE received 881
26.8.1.2.9.4 Outgoing call / U19 release request / RELEASE COMPLETE received 882
26.8.1.2.9.5 Outgoing call / U19 release request / lower layer failure 884
26.8.1.3 Establishment of an incoming call / Initial conditions 885
26.8.1.3.1 Incoming call / U0 null state 887
26.8.1.3.1.1 Incoming call / U0 null state / SETUP received with a non supported bearer capability 887
26.8.1.3.2 Incoming call / U6 call present 889
26.8.1.3.2.1 Incoming call / U6 call present / automatic call rejection 889
26.8.1.3.3 Incoming call / U9 mobile terminating call confirmed 890
26.8.1.3.3.1 Incoming call / U9 mobile terminating call confirmed / alerting or immediate connecting 890
26.8.1.3.3.2 Incoming call / U9 mobile terminating call confirmed / TCH assignment 891
26.8.1.3.3.3 Incoming call / U9 mobile terminating call confirmed / termination requested by the user 892
26.8.1.3.3.4 Incoming call / U9 mobile terminating call confirmed / DISCONNECT received 894
26.8.1.3.3.5 Incoming call / U9 mobile terminating call confirmed / RELEASE received 895
26.8.1.3.3.6 Incoming call / U9 mobile terminating call confirmed / lower layer failure 896
26.8.1.3.3.7 Incoming call / U9 mobile terminating call confirmed / unknown message received 898
26.8.1.3.4 Incoming call / U7 call received 899
26.8.1.3.4.1 Incoming call / U7 call received / call accepted 899
26.8.1.3.4.2 Incoming call / U7 call received / termination requested by the user 900
26.8.1.3.4.3 Incoming call / U7 call received / DISCONNECT received 901
26.8.1.3.4.4 Incoming call / U7 call received / RELEASE received 902
26.8.1.3.4.5 Incoming call / U7 call received / lower layer failure 904
26.8.1.3.4.6 Incoming call / U7 call received / unknown message received 905
26.8.1.3.4.7 Incoming call / U7 call received / TCH assignment 906
26.8.1.3.4.8 Incoming call / U7 call received / RELEASE COMPLETE received 907
26.8.1.3.5 Incoming call / U8 connect request 909
26.8.1.3.5.1 Incoming call / U8 connect request / CONNECT acknowledged 909

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 300 607-1 V6.0.1:2005
https://standards.iteh.ai/catalog/standards/sist/75758f3e-2147-4873-989e-d25a7994fa1e/sist-en-300-607-1-v6.0.1-2005