ETSI TS 123 280 V15.4.0 (2018-07)

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/44ee34fe-0aba-4397-9224-9140c59d95a0/etsi-ts-123-280-v15.4.0-2018-07

LTE;
Common functional architecture
to support mission critical services;
Stage 2
(3GPP TS 23.280 version 15.4.0 Release 15)

Reference
RTS/TSGS-0623280vf40

Keywords
LTE

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/CommiteeSupportStaff.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.

© ETSI 2018.
All rights reserved.

DECT™, **PLUGTESTS**™, **UMTS**™ and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE**™ are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.
oneM2M logo is protected for the benefit of its Members.
GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/45e5225e-d0c5-4e34-8e0a-45e5225e-d0c5-4e34-8e0a-4e5225e-d0c5-4e34-8e0a-4e5225e-d0c5-4e34-8e0a-4

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables 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.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/dee34e-0aba-4207-9224-59d095a0/etsi-ts-123-280-v15.4.0-2018-07

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 12
1 Scope 13
2 References 13
3 Definitions, symbols and abbreviations 14
3.1 Definitions 14
3.2 Symbols 16
3.3 Abbreviations 16
4 Introduction 17
5 Assumptions and architectural requirements 17
5.1 Assumptions 17
5.1.1 Service continuity 17
5.1.2 Trust domain 17
5.2 Architectural requirements 18
5.2.1 General architectural requirements 18
5.2.2 Roaming requirements 18
5.2.3 UE-to-network relay MC service requirements 18
5.2.4 MC service user profile requirements 18
5.2.5 MC service group affiliation and MC service group de-affiliation 19
5.2.6 GCS AS requirements for the MC services 19
5.2.7 Bearer management 20
5.2.7.0 General 20
5.2.7.1 MBMS bearer management 21
5.2.7.2 EPS bearer considerations 21
5.2.8 External applications access to services in a MC system 21
5.2.9 Migration 21
5.2.9.1 General 21
5.2.9.2 PLMN utilisation 22
5.2.9.3 SIP core / IMS utilisation 22
5.2.10 Interconnection 23
5.2.10.1 General 23
5.2.10.2 Connectivity 23
5.2.10.3 Migration 23
5.2.10.4 Private calls 23
5.2.10.5 Group calls 23
5.2.10.6 Group configuration 23
5.2.10.7 MC system topology hiding 24
6 Involved business relationships 24
7 Functional model 27
7.1 General 27
7.2 Description of the planes 27
7.3 Functional model description 27
7.3.1 On-network functional model 27
7.3.2 Off-network functional model 31
7.4 Functional entities description 31
7.4.1 General 31
7.4.2 Application plane 31
7.4.2.1 General 31
7.4.2.2 Common services core 31
7.4.2.2.1 Configuration management client 31

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ec346e-0aba-4307-9224-910c-9e05a0/etsi-ts-123-280-v15.4.0-2018-07

7.4.2.2.2 Configuration management server 32
7.4.2.2.3 Group management client 32
7.4.2.2.4 Group management server 32
7.4.2.2.5 Identity management client 32
7.4.2.2.6 Identity management server 32
7.4.2.2.7 Key management client 32
7.4.2.2.8 Key management server 32
7.4.2.2.9 Location management client 33
7.4.2.2.10 Location management server 33
7.4.2.2.11 Migration management server 33
7.4.2.2.12 Functional alias management client 33
7.4.2.2.13 Functional alias management server 34
7.4.2.3 MC service 34
7.4.2.3.1 MC service client 34
7.4.2.3.2 MC service server 34
7.4.2.3.3 MC service user database 34
7.4.2.3.4 MC gateway server 34
7.4.3 Signalling control plane 34
7.4.3.1 SIP entities 34
7.4.3.1.1 Signalling user agent 34
7.4.3.1.2 SIP AS 35
7.4.3.1.3 SIP core 35
7.4.3.1.3.1 General 35
7.4.3.1.3.2 Local inbound / outbound proxy 35
7.4.3.1.3.3 Registrar finder 35
7.4.3.1.3.4 Registrar / application service selection 36
7.4.3.1.4 Diameter proxy 36
7.4.3.2 SIP database 36
7.4.3.2.1 General 36
7.4.3.2.2 SIP database logical functions 37
7.4.3.3 HTTP entities 38
7.4.3.3.1 HTTP client 38
7.4.3.3.2 HTTP proxy 38
7.4.3.3.3 HTTP server 38
7.5 Reference points 38
7.5.1 General reference point principle 38
7.5.2 Application plane 38
7.5.2.1 General 38
7.5.2.2 Reference point CSC-1 (between the identity management client and the identity management server) 38
7.5.2.3 Reference point CSC-2 (between the group management client and the group management server for configuration while UE is on-network) 38
7.5.2.4 Reference point CSC-3 (between the MC service server and the group management server) 39
7.5.2.5 Reference point CSC-4 (between the configuration management client and the configuration management server for configuration while UE is on-network) 39
7.5.2.6 Reference point CSC-5 (between the MC service server and the configuration management server) 39
7.5.2.7 Reference point CSC-7 (between the group management servers) 39
7.5.2.8 Reference point CSC-8 (between the key management server and the key management client) 39
7.5.2.9 Reference point CSC-9 (between the key management server and the MC service server) 40
7.5.2.10 Reference point CSC-10 (between the key management server and the group management server) 40
7.5.2.11 Reference point CSC-11 (between the configuration management client and the configuration management server for configuration while UE is off-network) 40
7.5.2.12 Reference point CSC-12 (between the group management client and the group management server for configuration while UE is off-network) 40
7.5.2.13 Reference point CSC-13 (between the configuration management server and the MC service user database) 40
7.5.2.14 Reference point CSC-14 (between the location management client and the location management server) 40
7.5.2.15 Reference point CSC-15 (between the location management server and the MC service server) 41
7.5.2.16 Reference point CSC-16 (between group management servers in different MC systems) 41

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34fe-0aba-45e7-9224-9140c59d054d/etsi-ts-123-280-v15.4.0-2018-07

7.5.2.17 Reference point CSC-17 (between configuration management servers in different MC systems) 41
7.5.2.18 Reference point CSC-18 (between migration management servers in different MC systems) 41
7.5.2.19 Reference point MCX-1 (between MC service servers) 41
7.5.3 Signalling control plane 41
7.5.3.1 General 41
7.5.3.2 Reference point SIP-1(between the signalling user agent and the SIP core) 41
7.5.3.3 Reference point SIP-2 (between the SIP core and the SIP AS) 42
7.5.3.4 Reference point SIP-3 (between the SIP core and SIP core) 42
7.5.3.5 Reference point HTTP-1 (between the HTTP client and the HTTP proxy) 42
7.5.3.6 Reference point HTTP-2 (between the HTTP proxy and the HTTP server) 42
7.5.3.7 Reference point HTTP-3 (between the HTTP proxy and HTTP proxy) 42
7.5.3.8 Reference point AAA-1 (between the SIP database and the SIP core) 43
7.5.3.9 Reference point AAA-2 (between the SIP core and Diameter proxy) 43

8 Identities 43
8.1 Application plane 43
8.1.1 Mission Critical user identity (MC ID) 43
8.1.2 MC service user identity (MC service ID) 43
8.1.3 MC service group identity (MC service group ID) 43
8.1.3.1 General 43
8.1.3.2 MC service group ID management (off-network operation) 44
8.1.4 MC system identity (MC system ID) 45
8.2 SIP signalling control plane 45
8.3 Relationship between identities in different planes 45
8.3.1 Relationship between MC service ID and public user identity 45
8.3.2 Relationship between MC service group ID and public service identity 46

9 Application of functional model to deployments 46
9.1 General 46
9.2 Architecture model and deployment scenarios for on-network operations 46
9.2.1 On-network architectural model 46
9.2.1.1 On-network architectural model diagram 46
9.2.1.2 Application services layer 47
9.2.1.2.1 Overview 47
9.2.1.2.2 Common services core 47
9.2.1.2.3 MC services 47
9.2.1.3 SIP core 47
9.2.1.4 EPS 48
9.2.1.5 UE 1 48
9.2.1.6 UE 2 48
9.2.2 Deployment scenarios 48
9.2.2.1 Administration of MC service, SIP core and EPS 48
9.2.2.1.1 General 48
9.2.2.1.2 Common administration of all planes 48
9.2.2.1.3 MC service provider separate from SIP core and EPS 49
9.2.2.1.4 MC service provider administers SIP core, separate from EPS 50
9.2.2.1.5 SIP core partially administered by both PLMN operator and MC service provider 50
9.2.2.1.6 PLMN operator administers SIP core with SIP identities administered by MC service provider 51
9.2.2.2 MC service user database, SIP database and HSS 52
9.2.2.3 Control of bearers by SIP core and MC service server 55
9.2.2.3.1 General 55
9.2.2.3.2 Control of bearers by SIP core 55
9.2.2.3.3 Control of bearers by MC service server 55
9.3 Architecture model for off-network operations 55
9.3.1 Off-network architectural model diagram 55
9.3.2 UE 3 56
9.3.3 UE 4 56
9.3.4 Offline common services server 57
9.4 Architecture model for roaming 57

10 Procedures and information flows 57
10.1 MC service configuration 57

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee3dfe-0aba-4397-9224-9140c59e054d/etsi-ts-123-280-v15.4.0-2018-07

10.1.1 General 57
10.1.1.1 MC service configuration on primary MC system 57
10.1.1.2 MC service configuration for migration to partner MC system 58
10.1.2 Information flows for MC service configuration 60
10.1.2.1 Store group configuration request 60
10.1.2.2 Store group configuration response 60
10.1.2.3 Get group configuration request 60
10.1.2.4 Get group configuration response 61
10.1.2.5 Subscribe group configuration request 61
10.1.2.6 Subscribe group configuration response 61
10.1.2.7 Notify group configuration request 61
10.1.2.8 Notify group configuration response 61
10.1.2.9 Get functional alias configuration request 62
10.1.2.10 Get functional alias configuration response 62
10.1.2.11 Subscribe functional alias configuration request 62
10.1.2.12 Subscribe functional alias configuration response 62
10.1.2.13 Notify functional alias configuration request 63
10.1.2.14 Notify functional alias configuration response 63
10.1.3 MC service UE configuration data 63
10.1.3.1 General 63
10.1.3.2 Procedures 63
10.1.3.3 Structure of UE configuration data 63
10.1.4 MC service user profile 64
10.1.4.1 General 64
10.1.4.2 Information flows for MC service user profile 65
10.1.4.2.1 Get MC service user profile request 65
10.1.4.2.2 Get MC service user profile response 65
10.1.4.2.3 Notification for MC service user profile data update 65
10.1.4.2.4 Get updated MC service user profile data request 65
10.1.4.2.5 Get updated MC service user profile data response 66
10.1.4.2.6 Update MC service user profile data request 66
10.1.4.2.7 Update MC service user profile data response 66
10.1.4.2.8 Update pre-selected MC service user profile request 66
10.1.4.2.9 Update pre-selected MC service user profile response 66
10.1.4.2.10 Update selected MC service user profile request 67
10.1.4.2.11 Update selected MC service user profile response 67
10.1.4.3 MC service user obtains the MC service user profile(s) from the network 67
10.1.4.3.1 MC service user receiving MC service in primary MC system 67
10.1.4.3.2 MC service user receiving MC service from a partner MC system 68
10.1.4.4 MC service user receives updated MC service user profile data from the network 70
10.1.4.5 MC service user updates MC service user profile data to the network 70
10.1.4.6 Updating the pre-selected MC service user profile 71
10.1.4.7 Updating the selected MC service user profile for an MC service 72
10.1.5 MC service group configuration management 74
10.1.5.1 Store group configurations at the group management server 74
10.1.5.2 Retrieve group configurations at the group management client 74
10.1.5.3 Subscription and notification for group configuration data 75
10.1.5.4 Structure of group configuration data 76
10.1.5.5 Dynamic data associated with a group 76
10.1.5.6 Subscription and notification for dynamic data associated with a group 76
10.1.5.6.1 Information flows for subscription and notification for dynamic data associated with a group 77
10.1.5.6.1.1 Subscribe group dynamic data request 77
10.1.5.6.1.2 Subscribe group dynamic data response 77
10.1.5.6.1.3 Notify group dynamic data request 77
10.1.5.6.1.4 Notify group dynamic data response 77
10.1.5.6.2 Procedure for subscription and notification for dynamic data associated with a group 77
10.1.6 MC service UE migration 78
10.1.6.1 MC service UE obtains migration connectivity information of partner MC system 78
10.1.6.2 Signalling plane registration for the MC service UE between the primary and the partner MC systems 78
10.1.7 Functional alias configuration management 80
10.1.7.1 Retrieve functional alias configurations from the functional alias management server 80

ETSI STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34fe-0aba-45f2-9240-f90e2b0e5d4f/etsi-ts-123-280-v15.4.0-2018-07

10.1.7.2 Subscription and notification for functional alias configuration data 81
10.2 Group management (on-network) 82
10.2.1 General 82
10.2.2 Information flows for group management 82
10.2.2.1 Group creation request 82
10.2.2.2 Group creation response 83
10.2.2.3 Group regroup request (group management client – group management server) 83
10.2.2.4 Group regroup response (group management server – group management client) 83
10.2.2.5 Group regroup teardown request 83
10.2.2.6 Group regroup teardown response 84
10.2.2.7 Group creation notify 84
10.2.2.8 Group regroup notify 84
10.2.2.9 Group regroup teardown notify 84
10.2.2.10 Group regroup teardown notification 84
10.2.2.11 Group regroup teardown notification response 85
10.2.2.12 Group regroup request (group management server – group management server) 85
10.2.2.13 Group regroup response (group management server – group management server) 85
10.2.2.14 Group regroup notification 85
10.2.2.15 Group regroup notification response 85
10.2.2.16 Group information query request 86
10.2.2.17 Group information query response 86
10.2.2.18 Group membership update request 86
10.2.2.19 Group membership update response 86
10.2.2.20 Group membership notification 87
10.2.2.21 Group deletion request 87
10.2.2.22 Group deletion response 87
10.2.2.23 Group deletion notification 87
10.2.2.24 Group information provision request 88
10.2.2.25 Group information provision response 88
10.2.2.26 Group information request 88
10.2.2.27 Group information response 88
10.2.2.28 Group information subscribe request 89
10.2.2.29 Group information subscribe response 89
10.2.2.30 Group information notify request 89
10.2.2.31 Group information notify response 89
10.2.3 Group creation 89
10.2.4 Group regrouping 90
10.2.4.1 Temporary group formation - group regrouping within an MC system 90
10.2.4.2 Temporary group formation involving multiple MC systems 91
10.2.4.3 Temporary group tear down involving multiple group host servers 93
10.2.4.4 Group regroup rules 95
10.2.5 Membership and affiliation list query 95
10.2.5.1 General 95
10.2.5.2 Procedure 95
10.2.6 Group membership 96
10.2.6.1 Group membership notification 96
10.2.6.2 Group membership update by authorized user 96
10.2.7 Group configuration for interconnection 97
10.2.7.1 Overview 97
10.2.7.2 Primary MC system provides group configuration to the partner MC system 98
10.2.7.3 Partner MC system requests group configuration from the primary MC system 99
10.2.7.4 Partner MC system subscribes to group configuration 100
10.2.7.5 Primary MC system notifies group configuration 101
10.2.8 Group deletion 102
10.3 Pre-established session (on-network) 103
10.3.1 General 103
10.3.2 Procedures 103
10.3.2.1 General 103
10.3.2.2 Pre-established session establishment 103
10.3.2.3 Pre-established session modification 104
10.3.2.4 Pre-established session release 106
10.4 Simultaneous session (on-network) 107

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ec34fe-0aba-487c-8e24-9140c59d05a0/etsi-ts-123-280-v15.4.0-2018-07

10.4.1 General 107
10.5 Use of UE-to-network relay 107
10.5.1 UE-to-network relay service authorization 107
10.5.2 UE-to-network relay MC service 107
10.6 General user authentication and authorization for MC services 107
10.6.1 Primary MC system 107
10.6.2 Interconnection partner MC system 108
10.6.3 Migration to partner MC system 108
10.6.3.1 General 108
10.6.3.2 Information flows for migrated service authorization 108
10.6.3.2.1 Migration service authorization request 108
10.6.3.2.2 Migration service authorization response 109
10.6.3.3 Procedure 109
10.7 Use of MBMS transmission 111
10.7.1 General 111
10.7.2 Information flows for MBMS transmission 111
10.7.2.1 MBMS bearer announcement 111
10.7.2.2 MBMS listening status report 112
10.7.2.3 MBMS suspension reporting instruction 112
10.7.2.4 Discover bearer request 113
10.7.2.5 Discover bearer response 113
10.7.2.6 Media distribution request 113
10.7.2.7 Media distribution request response 113
10.7.2.8 Identify multicast participants request 114
10.7.2.9 Remove call from bearer request 114
10.7.2.10 Media distribution release 114
10.7.2.11 Media broadcasting notification 114
10.7.3 Procedures for MBMS usage 114
10.7.3.1 Use of pre-established MBMS bearers 114
10.7.3.1.1 General 114
10.7.3.1.2 Procedure 115
10.7.3.2 Use of dynamic MBMS bearer establishment 116
10.7.3.3 Switching from MBMS bearer to unicast bearer 117
10.7.3.4 Use of MBMS bearer for application level control signalling 118
10.7.3.4.1 Description 118
10.7.3.4.2 Procedure 118
10.7.3.5 MBMS bearer announcement over MBMS bearer 119
10.7.3.5.1 Description 119
10.7.3.5.2 Procedure 119
10.7.3.6 MBMS bearer quality detection 121
10.7.3.6.1 Description 121
10.7.3.6.2 Procedure 121
10.7.3.7 Service continuity in MBMS scenarios 122
10.7.3.7.1 General 122
10.7.3.7.2 Service continuity when moving from one MBSFN to another 122
10.7.3.7.3 Service continuity with a UE-to-Network relay 123
10.7.3.8 MBMS suspension notification 125
10.7.3.8.1 Description 125
10.7.3.8.2 Procedure 125
10.7.3.9 Multi-server bearer coordination 126
10.7.3.9.1 General 126
10.7.3.9.2 Procedures 127
10.7.3.9.2.1 MBMS bearer coordination independent on broadcasted media 127
10.7.3.9.2.2 MBMS bearer coordination within one group call 128
10.7.3.10 MBMS bearer event notification 130
10.7.3.10.1 General 130
10.7.3.10.2 Procedure 131
10.7.3.11 Use of FEC to protect MBMS transmissions 132
10.7.3.11.1 General 132
10.7.3.11.2 FEC encoding by the BM-SC 132
10.7.3.11.3 FEC encoding by the MC service server 133
10.7.3.12 Header compression over MBMS with ROHC 134

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34fe-0aba-4397-9224-f10c59d5a0ad/etsi-ts-123-280-v15.4.0-2018-07

10.7.3.12.1 General 134
10.7.3.12.2 Header compression by the MC service server 134
10.7.3.12.3 Header compression by the BM-SC 135
10.8 Affiliation and de-affiliation to/from MC service group(s) 137
10.8.1 General 137
10.8.2 Information flows 137
10.8.2.1 MC service group affiliation request 137
10.8.2.2 MC service group affiliation request (MC service server – MC service server) 137
10.8.2.3 MC service group affiliation response 137
10.8.2.4 MC service group affiliation response (MC service server – MC service server) 138
10.8.2.5 Group affiliation status update 138
10.8.2.6 MC service group de-affiliation request 138
10.8.2.7 MC service group de-affiliation request (MC service server – MC service server) 138
10.8.2.8 MC service group de-affiliation response 139
10.8.2.9 MC service group de-affiliation response (MC service server – MC service server) 139
10.8.2.10 Group de-affiliation status update 139
10.8.2.11 MC service group affiliation change request 139
10.8.2.12 MC service group affiliation change response 140
10.8.2.13 MC service group de-affiliation notification 140
10.8.3 Affiliation 140
10.8.3.1 MC service group affiliation procedure 140
10.8.3.2 Affiliation to MC service group(s) defined in partner MC system without topology hiding 141
10.8.3.2.1 Functional description 141
10.8.3.2.2 Procedure 141
10.8.3.2a Affiliation to MC service group(s) defined in partner MC system using topology hiding 143
10.8.3.2a.1 Functional description 143
10.8.3.2a.2 Procedure 143
10.8.4 De-affiliation from MC service group(s) 145
10.8.4.1 General 145
10.8.4.2 MC service group de-affiliation procedure 145
10.8.4.3 De-affiliation from MC service group(s) defined in partner MC service system 146
10.8.4.4 MC server initiated group de-affiliation procedure 147
10.8.4.5 MC server initiated group de-affiliation from group defined in partner MC service system 148
10.8.5 Remote change of affiliation 150
10.8.5.1 Remote change of affiliation for groups defined in primary MC system 150
10.8.5.1.1 Authorized user remotely changes another MC service user's affiliated MC service group(s) – mandatory mode 150
10.8.5.1.2 Authorized user remotely changes another MC service user's affiliated MC service group(s) – negotiated mode 151
10.8.5.2 Remote change of affiliation for groups defined in partner MC system 153
10.8.5.2.1 Authorized user remotely changes another MC service user's affiliated MC service group(s) defined in partner MC system – mandatory mode 153
10.9 Location management (on-network) 154
10.9.1 General 154
10.9.2 Information flows for location information 155
10.9.2.1 Location reporting configuration 155
10.9.2.2 Location information report 155
10.9.2.3 Location information request 155
10.9.2.4 Location reporting trigger 155
10.9.2.5 Location information subscription request 156
10.9.2.6 Location information subscription response 156
10.9.2.7 Location information notification 156
10.9.3 Procedure 157
10.9.3.1 Event-triggered location reporting procedure 157
10.9.3.2 On-demand location reporting procedure 158
10.9.3.3 Client-triggered location reporting procedure 158
10.9.3.4 Location reporting cancel procedure 159
10.9.3.5 Location information subscription procedure 160
10.9.3.6 Usage of location information procedure 160
10.9.3.6.1 Event-trigger location information notification procedure 160
10.9.3.6.2 On-demand usage of location information procedure 161
10.10 Emergency Alert 161

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34f0-0aba-4307-9224-9f0c9e0c95ad/etsi-ts-123-280-v15.4.0-2018-07

10.10.1 On-network emergency alert....161
10.10.1.1 General....161
10.10.1.2 MC service emergency alert....162
10.10.1.2.1 MC service emergency alert initiation....162
10.10.1.2.2 MC service emergency alert cancel....164
10.10.2 Off-network emergency alert....166
10.10.2.1 General....166
10.10.2.2 MC service emergency alert....166
10.10.2.2.1 Emergency alert initiation....166
10.10.2.2.2 Emergency alert cancel....167
10.11 MC service resource management (on-network)....168
10.11.1 General....168
10.11.2 Request for unicast resources at session establishment....169
10.11.3 Request for modification of unicast resources....170
10.11.4 Management of multicast media bearers....171
10.11.5 Request for resources with shared priority....171
10.11.5.1 General....171
10.11.5.2 Procedure....171
10.11.6 Request for media resources from MC service server....172
10.11.6.1 General....172
10.11.6.2 Procedure....173
10.12 Priority Management....174
10.12.1 General....174
10.12.2 Information flows....174
10.12.2.1 MC priority request....174
10.12.3 Procedure for priority coordination between multiple MC service servers....174
10.13 Functional alias management (on-network)....176
10.13.1 General....176
10.13.2 Information flows for functional alias management....176
10.13.2.1 Functional alias information query request....176
10.13.2.2 Functional alias information query response....176
10.13.2.3 Functional alias activation request....176
10.13.2.4 Functional alias activation response....177
10.13.2.5 Functional alias de-activation request....177
10.13.2.6 Functional alias de-activation response....177
10.13.2.7 Functional alias status notification....177
10.13.2.8 Functional alias take over request....178
10.13.2.9 Functional alias take over response....178
10.13.2.10 Functional alias revoke notification....178
10.13.3 Authorised MC service user retrieves active functional alias(es) for a certain MC service....178
10.13.4 MC service user activates functional alias(es) within an MC system....179
10.13.5 MC service user de-activates functional alias(es) within an MC system....180
10.13.6 Authorised MC service user takes over functional alias(es) within an MC system....181
10.14 Generic procedures for interconnection....182
10.14.1 General....182
10.14.2 Generic call procedure with topology hiding....182
10.14.2.1 General....182
10.14.2.2 Procedure for calls with topology hiding....182
10.14.3 Generic call procedure for enforcement of local MC service group configuration....184
10.14.3.1 General....184
10.14.3.2 MC service group call initiated in the partner MC system of the MC service group....184
10.14.3.3 MC service group call request received from the primary MC system of the MC service group....185
10.14.4 Generic call procedure for media replication in participating MC system in MC service group calls....186
10.14.4.1 General....186
10.14.4.2 Media replication in the partner MC system of the MC service group....186

Annex A (normative): Configuration data for MC services....188

A.1 General....188

A.2 MC service UE configuration data....189

A.3 MC service user profile configuration data....189

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ec24fe-0aba-4e8c-9224-910c59d05a1/etsi-ts-123-280-v15.4.0-2018-07

A.4 Group configuration data.....189
A.5 MC service configuration data.....194
A.6 Initial MC service UE configuration data.....194
Annex B (informative): Service continuity for MC service.....196
B.1 Service continuity between on-network MC service and UE-to-network relay MC service.....196
Annex C (informative): Change history.....199
History.....203

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34fe-0aba-4397-9224-9140c59d95a0/etsi-ts-123-280-v15.4.0-2018-07

Foreword

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

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
https://standards.iteh.ai/catalog/standards/sist/d4ee34fe-0aba-4397-9224-9140c59d95a0/etsi-ts-123-280-v15.4.0-2018-07