

# ETSI TS 124 380 V14.5.0 (2018-01)



**LTE;  
Mission Critical Push To Talk (MCPTT) media plane control;  
Protocol specification  
(3GPP TS 24.380 version 14.5.0 Release 14)**



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**Reference**RTS/TSGC-0124380ve50

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**Keywords**LTE

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# Contents

Intellectual Property Rights .....	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	14
1 Scope .....	15
2 References .....	15
3 Definitions and abbreviations.....	16
3.1 Definitions .....	16
3.2 Abbreviations .....	17
4 General .....	18
4.1 Overview .....	18
4.1.1 Floor Control .....	18
4.1.1.1 General .....	18
4.1.1.2 On-network floor control .....	18
4.1.1.3 Off-network floor control.....	19
4.1.1.4 Determine on-network effective priority.....	19
4.1.1.5 Determine off-network effective priority .....	20
4.1.2 Pre-established session call control.....	20
4.1.2.1 General .....	20
4.1.2.2 Call setup over pre-established session .....	21
4.1.2.3 Release of a call which uses a pre-established session.....	21
4.1.3 MBMS subchannel control .....	21
4.1.3.1 General .....	21
4.1.3.2 Start of a conversation.....	22
4.1.3.3 During a conversation .....	22
4.1.3.4 Ending the conversation .....	22
4.2 Internal structure of media plane control entities .....	23
4.2.1 Controlling MCPTT function .....	23
4.2.2 MCPTT client .....	24
4.2.3 Participating MCPTT function .....	26
4.2.3.1 General .....	26
4.2.3.2 Internal structure of the participating MCPTT function.....	26
4.2.3.3 The roles of the participating MCPTT function .....	27
4.2.3.3.1 For the floor control procedures .....	27
4.2.3.3.2 For the call over pre-established session procedures.....	27
4.2.3.3.3 For the use of MBMS bearer procedures.....	27
4.2.4 Non-controlling MCPTT function of an MCPTT group.....	28
4.3 The media plane control channel.....	29
4.3.1 General.....	29
4.3.2 Control channel realization .....	29
4.3.3 Establishing a media plane control channel .....	30
4.3.3.1 General .....	30
5 Entities.....	30
5.1 General .....	30
5.2 MCPTT client.....	30
5.2.1 Introduction.....	30
5.2.2 Floor participant in on-network mode .....	31
5.2.3 Floor participant in off-network mode.....	31
5.3 Controlling MCPTT function .....	31
5.4 Participating MCPTT function .....	32
5.5 Non-controlling MCPTT function.....	32
6 On-network floor control.....	32

6.1	General .....	32
6.2	Floor participant procedures.....	33
6.2.1	Floor participant procedures at MCPTT session initialization.....	33
6.2.2	Floor participant procedures at MCPTT call release .....	33
6.2.3	Floor participant procedures at MCPTT call modification .....	33
6.2.4	Floor participant state transition diagram for basic operation.....	33
6.2.4.1	General .....	33
6.2.4.2	State: 'Start-stop'.....	35
6.2.4.2.1	General .....	35
6.2.4.2.2	MCPTT call initiated, originating MCPTT user.....	35
6.2.4.2.3	MCPTT call established, terminating MCPTT user .....	35
6.2.4.3	State: 'U: has no permission' .....	35
6.2.4.3.1	General .....	35
6.2.4.3.2	Receive Floor Idle message (R: Floor Idle).....	35
6.2.4.3.3	Receive Floor Taken message (R: Floor Taken) .....	36
6.2.4.3.4	Receive RTP media packets (R: RTP media).....	36
6.2.4.3.5	Send Floor Request message (PTT button pressed) .....	36
6.2.4.3.6	Timer T103 (End of RTP media) expired.....	36
6.2.4.4	State: 'U: pending Request' .....	37
6.2.4.4.1	General .....	37
6.2.4.4.2	Receive Floor Granted message (R: Floor Granted).....	37
6.2.4.4.3	Void.....	37
6.2.4.4.4	Receive Floor Deny message (R: Floor Deny).....	37
6.2.4.4.5	Timer T101 (Floor request) expired .....	38
6.2.4.4.6	Timer T101 (Floor Request) expired N times .....	38
6.2.4.4.7	Receive RTP media packets (R: RTP Media) .....	38
6.2.4.4.8	Send Floor Release message (PTT button released).....	38
6.2.4.4.9	Receive Floor Queue Position Info message (R: Floor Queue Position Info) .....	38
6.2.4.5	State: 'U: has permission' .....	39
6.2.4.5.1	General .....	39
6.2.4.5.2	Send RTP media packets (RTP media) .....	39
6.2.4.5.3	Send Floor Release message (PTT button released).....	39
6.2.4.5.4	Receive Floor Revoke message (R: Floor Revoke).....	40
6.2.4.5.5	Receive Floor Granted message (R: Floor Granted).....	40
6.2.4.5.6	Receive RTP media packets (R: RTP Media) .....	40
6.2.4.5.7	Receive Floor Idle message (R: Floor Idle).....	40
6.2.4.5.8	Receive Floor Taken message (R: Floor Taken) .....	41
6.2.4.6	State: 'U: pending Release' .....	41
6.2.4.6.1	General .....	41
6.2.4.6.2	Timer T100 (Floor Release) expired .....	41
6.2.4.6.3	Timer T100 (Floor release) expired N times .....	42
6.2.4.6.4	Receive Floor Idle message (R: Floor Idle).....	42
6.2.4.6.5	Receive Floor Taken message (R: Floor Taken) .....	42
6.2.4.6.6	Receive RTP media packets (R: RTP Media) .....	42
6.2.4.6.7	Receive Floor Revoke message (R: Floor Revoke).....	43
6.2.4.6.8	Receive Floor Granted message (R: Floor Granted).....	43
6.2.4.7	In any state .....	43
6.2.4.7.1	General .....	43
6.2.4.7.2	Receive MCPTT call release – step 1 (R: MCPTT call release - 1) .....	43
6.2.4.7.3	Receive a Floor Control message with a Floor Indicator field (R: Floor Indicator).....	43
6.2.4.8	State: 'Releasing' .....	43
6.2.4.8.1	General .....	43
6.2.4.8.2	Receive MCPTT call release – step 2 (R: MCPTT call release - 2) .....	43
6.2.4.9	State: 'U: queued'.....	44
6.2.4.9.1	General .....	44
6.2.4.9.2	Receive RTP media packets (R: RTP media).....	44
6.2.4.9.3	Receive Floor Taken message (R: Floor Taken) .....	44
6.2.4.9.4	Receive Floor Granted message (R: Floor Granted).....	44
6.2.4.9.5	Receive Floor Deny message (R: Floor Deny).....	45
6.2.4.9.6	Send Floor Release message (PTT button released).....	45
6.2.4.9.7	Receive Floor Queue Position Info message (R: Floor Queue Position Info) .....	45
6.2.4.9.8	Receive Floor Idle message (R: Floor Idle).....	46

6.2.4.9.9	Send Floor Queue Position Request message (S: Floor Queue Position Request) .....	46
6.2.4.9.10	Timer T104 (Floor Queue Position Request) expired.....	46
6.2.4.9.11	Timer T104 (Floor Queue Position Request) expired N times .....	46
6.2.4.9.12	User indication for accept of pending request .....	46
6.2.4.9.13	Timer T132 (Queued granted user action) expires .....	47
6.3	Floor control server procedures.....	47
6.3.1	General.....	47
6.3.2	Controlling MCPTT function procedures at MCPTT call initialization .....	47
6.3.2.1	General.....	47
6.3.2.2	Initial procedures.....	47
6.3.2.3	Switching from a non-controlling MCPTT function mode to a controlling MCPTT function mode.....	48
6.3.3	MCPTT floor control procedures at MCPTT call release.....	48
6.3.4	Floor control server state transition diagram for general floor control operation .....	49
6.3.4.1	General.....	49
6.3.4.2	State: 'Start-stop'.....	51
6.3.4.2.1	General .....	51
6.3.4.2.2	MCPTT call initialization .....	51
6.3.4.3	State: 'G: Floor Idle' .....	51
6.3.4.3.1	General .....	51
6.3.4.3.2	Enter the 'G: Floor Idle' state .....	52
6.3.4.3.3	Receive Floor Request message (R: Floor Request) .....	53
6.3.4.3.4	Timer T7 (Floor Idle) expired .....	53
6.3.4.3.5	Timer T4 (Inactivity) expired .....	53
6.3.4.3.6	Receive an implicit floor request (R: Implicit floor request).....	54
6.3.4.4	State: 'G: Floor Taken'.....	54
6.3.4.4.1	General .....	54
6.3.4.4.2	Enter the 'G: Floor Taken' state .....	54
6.3.4.4.3	Timer T1 (End of RTP media) expired.....	55
6.3.4.4.4	Timer T2 (Stop talking) expired.....	55
6.3.4.4.5	Receive RTP media packets (R: RTP media).....	55
6.3.4.4.6	Receive Floor Release message (R: Floor Release) .....	56
6.3.4.4.7	Receive Floor Request message with pre-emptive priority (R: pre-emptive Floor Request) .....	56
6.3.4.4.8	Receive Floor request message from permitted floor participant (R: Floor Request) .....	57
6.3.4.4.9	Timer T20 (Floor Granted) expired.....	57
6.3.4.4.10	Timer T20 (Floor Granted) expired N times .....	57
6.3.4.4.11	Permitted MCPTT client release (R: client release) .....	57
6.3.4.4.12	Receive an implicit floor request (R: Implicit floor request).....	57
6.3.4.5	State: 'G: pending Floor Revoke'.....	58
6.3.4.5.1	General .....	58
6.3.4.5.2	Enter the 'G: pending Floor Revoke' state .....	58
6.3.4.5.3	Receive RTP media packets (R: RTP media).....	58
6.3.4.5.4	Receive Floor Release message (R: Floor Release) .....	58
6.3.4.5.5	Timer T3 (Stop talking grace) expired .....	59
6.3.4.5.6	Timer T1 (End of RTP media) expired.....	59
6.3.4.6	In any state .....	59
6.3.4.6.1	General .....	59
6.3.4.6.2	Receive MCPTT call release - 1 .....	59
6.3.4.6.3	Receive an instruction to merge group calls (R: Merge) .....	59
6.3.4.7	State: 'Releasing' .....	59
6.3.4.7.1	General .....	59
6.3.4.7.2	Receive MCPTT call release - 2.....	59
6.3.4.8	State: 'G: Floor Initialising' .....	60
6.3.4.8.1	General .....	60
6.3.4.8.2	Enter the 'G: Initialising' state.....	60
6.3.4.8.3	Receiving a floor request from a constituent MCPTT group (R: mcptt-floor-request) .....	60
6.3.4.8.4	All final SIP responses received (R: final SIP responses) .....	60
6.3.5	Floor control server state transition diagram for basic floor control operation towards the floor participant .....	61
6.3.5.1	General .....	61
6.3.5.2	State: 'Start-stop'.....	63
6.3.5.2.1	General .....	63

6.3.5.2.2	SIP Session initiated .....	63
6.3.5.3	State: 'U: not permitted and Floor Idle' .....	67
6.3.5.3.1	General .....	67
6.3.5.3.2	Enter state 'U: not permitted and Floor Idle' .....	67
6.3.5.3.3	Send Floor Taken message (S: Floor Taken).....	67
6.3.5.3.4	Receive Floor Request message (R: Floor Request) .....	67
6.3.5.3.5	Send Floor Grant message (S: Floor Grant) .....	68
6.3.5.3.6	Send Floor Deny message (S: Floor Deny) .....	68
6.3.5.3.7	Receive Floor Release message (R: Floor Release) .....	68
6.3.5.3.8	Receive RTP media packets (R: media) .....	69
6.3.5.3.9	Receive an implicit floor request (R: Implicit floor request).....	69
6.3.5.3.10	Send Floor Idle message (S: Floor Idle).....	69
6.3.5.4	State 'U: not permitted and Floor Taken'.....	69
6.3.5.4.1	General .....	69
6.3.5.4.2	Enter state 'U: not permitted and Floor Taken' .....	70
6.3.5.4.3	Send Floor Idle message (S: Floor Idle).....	70
6.3.5.4.4	Receive Floor Request message (R: Floor Request) .....	70
6.3.5.4.5	Receive Floor Release message (R: Floor Release) .....	73
6.3.5.4.6	Receive RTP media packets (R: media) .....	74
6.3.5.4.7	Send Floor Queue Position Info message (R: Floor Queue Position Request).....	75
6.3.5.4.8	Receive an implicit floor request (R: Implicit floor request).....	75
6.3.5.4.9	Send Floor Granted message (S: Floor Granted).....	75
6.3.5.4.10	Send Floor Taken message (S: Floor Taken).....	76
6.3.5.5	State: 'U: permitted' .....	76
6.3.5.5.1	General .....	76
6.3.5.5.2	Enter state 'U: permitted' .....	76
6.3.5.5.3	Receive Floor Release message (R: Floor Release) .....	76
6.3.5.5.4	Send Floor Idle message (S: Floor Idle).....	77
6.3.5.5.5	Send Floor Revoke message (S: Floor Revoke) .....	77
6.3.5.5.6	Receive RTP media packets (R: media) .....	77
6.3.5.5.7	Receive Floor Request message (R: Floor Request) .....	78
6.3.5.5.8	Send RTP Media (S: media).....	78
6.3.5.5.9	Send Floor Taken message (S: Floor Taken).....	78
6.3.5.6	State: 'U: pending Floor Revoke'.....	78
6.3.5.6.1	General .....	78
6.3.5.6.2	Enter state 'U pending Floor Revoke' .....	78
6.3.5.6.3	Timer T8 (media Revoke) expired .....	78
6.3.5.6.4	Receive RTP media packets (R: media) .....	79
6.3.5.6.5	Receive Floor Release message (R: Floor Release) .....	79
6.3.5.6.6	Send Floor Idle message (S: Floor Idle).....	80
6.3.5.6.7	Send Floor Taken message (S: Floor Idle) .....	80
6.3.5.7	State 'U: not permitted but sends media' .....	80
6.3.5.7.1	General .....	80
6.3.5.7.2	Enter state 'U: not permitted but sends media' .....	80
6.3.5.7.3	Timer T8 (Floor Revoke) expired.....	80
6.3.5.7.4	Receive Floor Release message (R: Floor Release) .....	81
6.3.5.8	In any state .....	82
6.3.5.8.1	General .....	82
6.3.5.8.2	Receive MCPTT call release – 1 .....	82
6.3.5.8.3	Receiving a merging instruction (R: Merge) .....	82
6.3.5.9	State: 'Releasing' .....	82
6.3.5.9.1	General .....	82
6.3.5.9.2	Receive MCPTT call release - 2.....	83
6.3.5.10	State: 'U: not permitted and initiating'.....	83
6.3.5.10.1	General .....	83
6.3.5.10.2	Enter the 'U: not permitted and initiating' state .....	83
6.3.5.10.3	Send Floor Taken message (S: Floor Taken).....	83
6.3.5.10.4	Send Floor Idle message (S: Floor Idle).....	83
6.3.5.10.5	Receive Floor Request message (R: Floor Request) .....	83
6.3.5.10.6	Send Floor Granted message (S: Floor Granted).....	84
6.3.5.10.7	Receive a Floor Release message (S: Floor Release).....	84
6.3.6	Dual floor control .....	85

6.3.6.1	General .....	85
6.3.6.2	State: 'Start-stop'.....	86
6.3.6.2.1	General .....	86
6.3.6.2.2	Receive Floor Request message with overriding pre-emptive floor priority (R: Floor Request) ....	86
6.3.6.3	State: 'D: Floor Taken'.....	86
6.3.6.3.1	General .....	86
6.3.6.3.2	Enter state 'D: Floor Taken' .....	86
6.3.6.3.3	Timer T11 (End of RTP dual) expired .....	87
6.3.6.3.4	Timer T12 (Stop talking dual) expired .....	88
6.3.6.3.5	Receive RTP media packets (R: media) .....	89
6.3.6.3.6	Receive Floor Release message (R: Floor Release) .....	89
6.3.6.3.7	Receive Floor request message from permitted floor participant (R: Floor Request) .....	90
6.3.6.3.8	Permitted MCPTT client release .....	90
6.3.6.3.9	Receive Terminate (Terminate).....	91
6.3.6.4	In any state .....	91
6.3.6.4.1	General .....	91
6.3.6.4.2	Receive MCPTT call release - 1 .....	91
6.3.6.5	State: 'Releasing' .....	91
6.3.6.5.1	General .....	91
6.3.6.5.2	Receive MCPTT call release - 2.....	91
6.4	Participating MCPTT function floor control procedures.....	91
6.4.1	General.....	91
6.4.2	Receive floor control messages .....	92
6.4.3	Receive RTP media packets (R: RTP Media).....	92
6.4.4	Release of session .....	93
6.5	Non-controlling MCPTT function of an MCPTT group .....	93
6.5.1	General.....	93
6.5.2	The MCPTT call initialization procedure in the non-controlling MCPTT function of an MCPTT group .....	93
6.5.2.1	General .....	93
6.5.2.2	Initial procedures when a new SIP session is establishing a group session .....	93
6.5.2.3	Switching from a controlling MCPTT function mode to a non-controlling MCPTT function mode.....	94
6.5.2.3.1	Overview .....	94
6.5.2.3.2	Preparing for the switch to non-controlling MCPTT function (Step 1).....	94
6.5.2.3.3	Start acting as a non-controlling MCPTT function (Step 2).....	94
6.5.3	The MCPTT call release procedure in the non-controlling MCPTT function of an MCPTT group.....	95
6.5.4	Floor control server interface procedures .....	95
6.5.4.1	General .....	95
6.5.4.2	Receiving a Floor Request message.....	96
6.5.4.3	Receive Floor Release message .....	96
6.5.4.4	Receive Floor Queue Position Request message.....	96
6.5.4.5	Receive Floor Ack message .....	97
6.5.4.6	Receive Floor Granted message.....	97
6.5.4.7	Receive Floor Deny message .....	98
6.5.4.8	Receive Floor Idle message.....	98
6.5.4.9	Receive Floor Taken message.....	99
6.5.4.10	Receive Floor Revoke message.....	101
6.5.4.11	Receive Floor Queue Position Info message .....	101
6.5.4.12	Receive RTP media packets from controlling MCPTT function .....	101
6.5.4.13	Receive RTP media packets from an MCPTT client .....	102
6.5.4.14	MCPTT session release step 1 .....	102
6.5.4.15	MCPTT session release step 2 .....	102
6.5.4.16	Receiving a split instruction (R: Split) .....	102
6.5.5	Floor participant interface procedures .....	102
6.5.5.1	General .....	102
6.5.5.2	State: 'Start-Stop' .....	103
6.5.5.2.1	General .....	103
6.5.5.2.2	Participant invited to session .....	103
6.5.5.3	State: 'P: has no permission' .....	104
6.5.5.3.1	General .....	104
6.5.5.3.2	Receive Floor Idle message (R: Floor Idle).....	104



6.5.5.3.3	Receive Floor Taken message (R: Floor Taken) .....	104
6.5.5.3.4	Receive Floor Request message (R: Floor Request) .....	104
6.5.5.3.5	Receive Floor Granted message (R: Floor Granted).....	104
6.5.5.3.6	Receive Floor Deny message (R: Floor Deny).....	104
6.5.5.3.7	Receive Floor Queue Position Info message (R: Floor Queue Position Info) .....	105
6.5.5.3.8	Receive Floor Queue Position Request message (R: Floor Queue Position Request).....	105
6.5.5.3.9	Receive RTP media packets (R: RTP media).....	105
6.5.5.3.10	Receive Floor Release message (R: Floor Release) .....	105
6.5.5.3.11	Receive split instruction (R: Split) .....	106
6.5.5.4	State: 'P: has permission' .....	106
6.5.5.4.1	General .....	106
6.5.5.4.2	Receive RTP media packets .....	106
6.5.5.4.3	Receive Floor Release message.....	106
6.5.5.4.4	Receive Floor Ack message .....	106
6.5.5.4.5	Receive Floor Idle message .....	107
6.5.5.4.6	Receive Floor Taken message .....	107
6.5.5.4.7	Receive Floor Revoke message.....	107
6.5.5.4.8	Receive split instruction (R: Split) .....	107
6.5.5.5	In any state .....	107
6.5.5.5.1	General .....	107
6.5.5.5.2	Receive Floor Ack message (R: Floor Ack).....	107
6.5.5.5.3	MCPTT session release step 1 (MCPTT call release - 1).....	108
6.5.5.6	State: 'P: Releasing' .....	108
6.5.5.6.1	General .....	108
6.5.5.6.2	MCPTT session release step 2 (MCPTT call release - 2).....	108
7	Off-network floor control .....	108
7.1	General .....	108
7.2	Floor participant procedures.....	109
7.2.1	Floor participant procedures at MCPTT session initialization.....	109
7.2.1.2	Determine off-network floor priority .....	109
7.2.2	Floor participant procedures at MCPTT call release .....	111
7.2.3	Floor participant state diagram – basic operation .....	111
7.2.3.1	General .....	111
7.2.3.2	State: 'Start-stop'.....	112
7.2.3.2.1	General .....	112
7.2.3.2.2	MCPTT call established – originating MCPTT user .....	113
7.2.3.2.3	MCPTT group call established – terminating MCPTT user .....	113
7.2.3.2.4	MCPTT private call established – terminating MCPTT user .....	113
7.2.3.2.5	Send Floor Request message (PTT button pressed) .....	113
7.2.3.2.6	Receive Floor Taken message (R: Floor Taken) .....	113
7.2.3.2.7	Receive Floor Granted message (R: Floor Granted to other) .....	114
7.2.3.2.8	Receive RTP media (R: RTP media).....	114
7.2.3.2.9	MCPTT broadcast call established – terminating MCPTT user .....	114
7.2.3.3	State: 'O: silence' .....	114
7.2.3.3.1	General .....	114
7.2.3.3.2	Send Floor Request message (PTT button pressed) .....	115
7.2.3.3.3	Receive RTP media (R: RTP media).....	115
7.2.3.3.4	Receive Floor Granted message (R: Floor Granted to other) .....	115
7.2.3.3.5	Receive Floor Request message (R: Floor Request) .....	116
7.2.3.3.6	Receive Floor Taken message (R: Floor Taken) .....	116
7.2.3.3.7	Timer T230 (Inactivity) expired .....	116
7.2.3.4	State: 'O: has no permission' .....	116
7.2.3.4.1	General .....	116
7.2.3.4.2	Sending Floor Request message (PTT button pressed) .....	116
7.2.3.4.3	Receive Floor Release message (R: Floor Release) .....	117
7.2.3.4.4	Timer T203 (End of RTP media) expired.....	117
7.2.3.4.5	Receive Floor Granted message (R: Floor Granted to other) .....	117
7.2.3.4.6	Receive RTP media (R: RTP media).....	117
7.2.3.5	State: 'O: has permission' .....	118
7.2.3.5.1	General .....	118
7.2.3.5.2	Send RTP Media packets (S: RTP Media) .....	118

7.2.3.5.3	Receive Floor Release message (R: Floor Release) .....	118
7.2.3.5.4	Receive Floor Request message (R: Floor Request) .....	119
7.2.3.5.5	Send Floor Release message (PTT button released with no pending request in queue) .....	119
7.2.3.5.6	Send Floor Granted message (PTT button released with pending request(s) in queue) .....	120
7.2.3.5.7	Receive Floor Request message with pre-emption indication (R: Floor Request with pre-emption).....	120
7.2.3.5.8	Receive Floor Queue Position Request message (R: Floor Queue Position Request).....	121
7.2.3.5.9	Transmission time limit warning (Timer T206 expires).....	121
7.2.3.5.10	Transmission time limit reached with pending request(s) in queue (Timer T207 expires) .....	121
7.2.3.5.11	Transmission time limit reached with no pending request in queue (Timer T207 expires).....	122
7.2.3.6	State: 'O: pending request' .....	122
7.2.3.6.1	General .....	122
7.2.3.6.2	Receive RTP media (R: RTP media).....	122
7.2.3.6.3	Receive Floor Queue Position Info message (R: Floor Queue Position Info) .....	123
7.2.3.6.4	Receive Floor Deny message (R: Floor Deny).....	124
7.2.3.6.5	Send Floor Release message (PTT button released).....	124
7.2.3.6.6	Send Floor Taken message (Timer T201 expired N times).....	125
7.2.3.6.7	Receive Floor Granted message (R: Floor Granted to me).....	125
7.2.3.6.8	Receive Floor Granted message (R: Floor Granted to other) .....	126
7.2.3.6.9	Timer T201 (Floor Request) expired (Timer T201 expired) .....	127
7.2.3.6.10	Receive Floor Request message (R: Floor request).....	127
7.2.3.6.11	Receive Floor Taken message (R: Floor Taken) .....	127
7.2.3.7	State: 'O: pending granted' .....	127
7.2.3.7.1	General .....	127
7.2.3.7.2	Receive RTP media (R: RTP Media) .....	128
7.2.3.7.3	Timer T205 (Floor Granted) expired (timer T205 expired).....	128
7.2.3.7.4	Timer T205 (Floor Granted) expired N times with pending request(s) in the queue (Timer T205 expired N times AND pending request(s) in queue) .....	128
7.2.3.7.5	Timer T205 (Floor Granted) expired N times with no pending request in the queue (Timer T205 expired N times AND no pending request in queue) .....	128
7.2.3.7.6	Timer T233 (Pending user action) expires with no pending request in the queue (Timer T233 expired AND no pending request in queue) .....	129
7.2.3.7.7	Timer T233 (Pending user action) expires with pending request(s) in the queue (Timer T233 expired AND pending request(s) in queue).....	129
7.2.3.7.8	PTT button pressed.....	129
7.2.3.7.9	Receive Floor Release message (R: Floor Release) .....	129
7.2.3.7.10	Receive Floor Request message (R: Floor Request) .....	130
7.2.3.8	State: 'O: queued'.....	130
7.2.3.8.1	General .....	130
7.2.3.8.2	Receive RTP media (R: RTP media).....	130
7.2.3.8.3	Receive Floor Queue Position Info message (R: Floor Queue Position Info) .....	130
7.2.3.8.4	Receive Floor Deny message (R: Floor Deny).....	131
7.2.3.8.5	User indication for release of pending request .....	131
7.2.3.8.6	Receive Floor Granted message (R: Floor Granted to me).....	131
7.2.3.8.7	Timer T233 (Pending user action) expires .....	132
7.2.3.8.8	User indication for accept of pending request .....	132
7.2.3.8.9	Receive Floor Granted message (R: Floor Granted to other) .....	132
7.2.3.8.10	Timer T203 (End of RTP media) expires .....	133
7.2.3.8.11	Send Floor Queue Position Request message (R: Request queue position info).....	133
7.2.3.8.12	Timer T204 (Floor Queue Position request) expires .....	133
7.2.3.8.13	Timer T204 (Floor Queue Position request) expires N times.....	133
7.2.3.9	In any state .....	134
7.2.3.9.1	General .....	134
7.2.3.9.2	Receive MCPTT call release (R: MCPTT call release).....	134
8	Coding .....	134
8.1	Introduction .....	134
8.1.1	General.....	134
8.1.2	RTCP: APP message format.....	134
8.1.3	Application specific data field .....	136
8.1.4	Handling of unknown messages and fields.....	136
8.2	Floor control.....	136

8.2.1	Introduction.....	136
8.2.2	Floor control messages .....	137
8.2.2.1	General .....	137
8.2.2.2	Void.....	137
8.2.3	Floor control specific fields .....	137
8.2.3.1	Introduction.....	137
8.2.3.2	Floor Priority field .....	138
8.2.3.3	Duration field .....	138
8.2.3.4	Reject Cause field .....	139
8.2.3.5	Queue Info field .....	139
8.2.3.6	Granted Party's Identity field .....	140
8.2.3.7	Permission to Request the Floor field .....	140
8.2.3.8	User ID field.....	141
8.2.3.9	Queue Size field .....	141
8.2.3.10	Message Sequence Number field .....	142
8.2.3.11	Queued User ID field .....	142
8.2.3.12	Source field .....	142
8.2.3.13	Track Info field .....	143
8.2.3.14	Message Type field .....	144
8.2.3.15	Floor Indicator field .....	144
8.2.3.16	SSRC field.....	145
8.2.4	Floor Request message .....	146
8.2.5	Floor Granted message .....	146
8.2.6	Floor Deny message.....	148
8.2.6.1	General .....	148
8.2.6.2	Rejection cause codes and rejection cause phrase.....	150
8.2.7	Floor Release message.....	150
8.2.8	Floor Idle message .....	151
8.2.9	Floor Taken message .....	152
8.2.10	Floor Revoke message .....	153
8.2.10.1	General .....	153
8.2.10.2	Floor revoke cause codes and revoke cause phrases .....	154
8.2.11	Floor Queue Position Request message .....	155
8.2.12	Floor Queue Position Info message .....	156
8.2.13	Floor Ack message.....	157
8.3	Pre-established session call control .....	158
8.3.1	Introduction.....	158
8.3.2	Pre-established session call control message .....	158
8.3.3	Pre-established session call control fields.....	158
8.3.3.1	Introduction.....	158
8.3.3.2	Media Streams field .....	159
8.3.3.3	MCPTT Session Identity field.....	159
8.3.3.4	Warning Text field .....	160
8.3.3.5	MCPTT Group Identity field.....	160
8.3.3.6	Answer State field.....	161
8.3.3.7	Inviting MCPTT User Identity field.....	161
8.3.3.8	Reason Code field .....	162
8.3.3.9	Handling of unknown fields and messages .....	162
8.3.3.10	PCK I_MESSAGE field.....	163
8.3.4	Connect message .....	163
8.3.5	Disconnect message .....	164
8.3.6	Acknowledgement message.....	165
8.4	MBMS subchannel control.....	165
8.4.1	Introduction.....	165
8.4.2	MBMS subchannel control messages .....	166
8.4.3	MBMS subchannel control specific fields .....	166
8.4.3.1	Introduction.....	166
8.4.3.2	MCPTT Group ID field.....	166
8.4.3.3	MBMS Subchannel field.....	166
8.4.3.4	TMGI field .....	167
8.4.3.5	Void.....	168
8.4.4	Map Group To Bearer message .....	168

8.4.5	Unmap Group To Bearer message.....	169
9	Call setup control over pre-established session.....	169
9.1	General.....	169
9.2	MCPTT client.....	170
9.2.1	General.....	170
9.2.2	Call setup control over pre-established session state machine.....	170
9.2.2.1	General.....	170
9.2.2.2	State: 'Start-stop'.....	171
9.2.2.2.1	General.....	171
9.2.2.2.2	Pre-established session started.....	171
9.2.2.3	State: 'U: Pre-established session not in use'.....	171
9.2.2.3.1	General.....	171
9.2.2.3.2	Receive Connect message (R: Connect).....	171
9.2.2.3.3	Pre-established session stopped.....	171
9.2.2.3.4	Receive Disconnect message (R: Disconnect).....	171
9.2.2.3.5	Receive SIP 2xx response (R:2xx response).....	172
9.2.2.3.6	Receive SIP re-INVITE request (R: re-INVITE).....	172
9.2.2.4	State: 'U: Pre-established session in use'.....	172
9.2.2.4.1	General.....	172
9.2.2.4.2	Receive Connect message (R: Connect).....	172
9.2.2.4.4	Receive RTP media packets (R:RTP packet).....	172
9.2.2.4.5	Receive Disconnect message (R: Disconnect).....	172
9.2.2.4.6	Receive SIP 2xx response (R: 2xx response).....	173
9.3	Participating MCPTT function.....	173
9.3.1	General.....	173
9.3.2	Call setup control over pre-established session state machine for the participating MCPTT function.....	173
9.3.2.1	General.....	173
9.3.2.2	State: 'Start-stop'.....	174
9.3.2.2.1	General.....	174
9.3.2.2.2	Pre-established session started.....	174
9.3.2.3	State: 'G: Pre-established session not in use'.....	174
9.3.2.3.1	General.....	174
9.3.2.3.2	Receive SIP REFER request (R: SIP REFER).....	175
9.3.2.3.3	Receive SIP INVITE request (R: SIP INVITE).....	175
9.3.2.3.4	Pre-established session stopped.....	176
9.3.2.3.5	Receive SIP 200 (OK) response to the SIP re-INVITE request (R: 200 OK).....	176
9.3.2.4	State: 'G: Pre-established session in use'.....	177
9.3.2.4.1	General.....	177
9.3.2.4.2	Receive floor control message (R: Floor control message).....	177
9.3.2.4.3	Receive RTP media packets (R: RTP Media).....	177
9.3.2.4.4	Receive call session release indication from MCPTT client (R: Call Release from MCPTT client).....	177
9.3.2.4.5	Receive call session release indication from the controlling MCPTT function (R: Call Release from MCPTT server).....	177
9.3.2.4.6	Receive pre-established session stopped indication from the MCPTT client (R: Pre-established Session Stopped from MCPTT client).....	178
9.3.2.4.7	Receive Acknowledge message ((R: successful Ack) or (R: failure Ack)).....	178
9.3.2.4.8	Timer T55 (Connect) expired.....	178
9.3.2.4.9	Timer T55 (Connect) expired N times.....	178
9.3.2.4.10	Receive SIP 200 (OK) response (R: 200 OK).....	179
9.3.2.4.11	Receive failed SIP response from the controlling MCPTT function (R: Call Release from the MCPTT server).....	179
9.3.2.5	State: 'G: Call releasing'.....	179
9.3.2.5.1	General.....	179
9.3.2.5.2	Receive Acknowledge message (R: Ack).....	180
9.3.2.5.3	Timer T56 (Disconnect) expired.....	180
9.3.2.5.4	Timer T56 (Disconnect) expired N times.....	180
10	MBMS subchannel control procedure.....	180
10.1	General.....	180
10.2	MBMS subchannel control procedure for the participating MCPTT function.....	180

10.2.1	General.....	180
10.2.2	State: 'Start-stop' .....	181
10.2.2.1	General .....	181
10.2.2.2	Send Map Group To Bearer message (R: Floor Request or Floor Taken) .....	182
10.2.3	State: 'M: A conversation is active' .....	182
10.2.3.1	General .....	182
10.2.3.2	Send Floor Idle message (R: Floor Idle) .....	182
10.2.3.3	Send Floor Taken message (R: Floor Taken).....	183
10.2.3.4	Send any other floor control message (R: Any other message).....	184
10.2.3.5	Send RTP media packet over the MBMS subchannel (R: RTP packet).....	184
10.2.3.7	Timer T15 (Conversation) expired.....	184
10.2.3.8	Timer T16 (Map Group To Bearer) expired .....	184
10.2.3.9	Timer T17 (Unmap Group To Bearer) expired .....	185
10.2.3.10	Timer T17 (Unmap Group To Bearer) expired Nth time .....	185
10.2.3.11	End conversation over the MBMS bearer (End conversation).....	185
10.2.3.12	Group call released.....	185
10.3	MBMS subchannel control procedure for the MCPTT client .....	185
10.3.1	General.....	185
10.3.2	Conversation over a pre-activated MBMS bearer is started.....	186
10.3.3	Receive floor control messages and RTP media packets over a MBMS subchannel .....	186
10.3.4	Conversation ended.....	186
11	Configurable parameters .....	186
11.1	Timers .....	186
11.1.1	Timers in the on-network floor participant .....	186
11.1.2	Timers in the off-network floor participant .....	187
11.1.3	Timers in the floor control server .....	190
11.1.4	Timers in the participating MCPTT function.....	192
11.2	Counters .....	194
11.2.1	Counters in the on-network floor participant.....	194
11.2.2	Counters in the off-network floor participant .....	195
11.2.3	Counters in the controlling MCPTT function .....	195
11.2.4	Counters in the participating MCPTT function .....	196
12	Extensions within the present document .....	197
12.1	Session description types defined within the present document.....	197
12.1.1	General.....	197
12.1.2	SDP "fmtp" attribute for MCPTT .....	197
12.1.2.1	General .....	197
12.1.2.2	Semantics .....	197
12.1.2.3	Syntax .....	198
13	Media plane security .....	198
13.1	General .....	198
13.2	Derivation of SRTP/SRTCP master keys .....	201
13.3	Media plane encryption and decryption .....	201
13.3.1	General.....	201
13.3.2	The participating MCPTT function .....	201
13.3.3	The MCPTT client.....	203
13.3.4	The controlling MCPTT function .....	207
13.3.5	The non-controlling MCPTT function.....	208
14	SDP offer/ answer procedures .....	209
14.1	General .....	209
14.2	Generating an SDP offer .....	209
14.2.1	General.....	209
14.2.2	"mc_queueing" fmtp attribute.....	210
14.2.3	"mc_priority" fmtp attribute .....	210
14.2.4	"mc_granted" fmtp attribute .....	210
14.2.5	"mc_implicit_request" fmtp attribute.....	210
14.3	Generating the SDP answer.....	210
14.3.1	General.....	210
14.3.2	"mc_queueing" fmtp attribute.....	210

14.3.3	"mc_priority" fmp attribute .....	211
14.3.4	"mc_granted" fmp attribute .....	211
14.3.5	"mc_implicit_request" fmp attribute.....	211
14.4	Offerer processing of the SDP answer .....	211
14.5	Modifying the media plane control channel .....	212
14.6	The use of SDP offer / answer procedures in off-network mode .....	212
14.6.1	General .....	212
14.6.2	fmp attribute "mc_queueing" .....	212
<b>Annex A (informative): Signalling flows .....</b>		<b>213</b>
A.1	Scope of signalling flows .....	213
A.2	Introduction .....	213
A.2.1	General .....	213
A.2.2	Key required to interpret signalling flows.....	213
A.3	On-network floor control signalling flows.....	214
A.3.1	General .....	214
A.3.2	Floor request when the floor is idle .....	214
A.3.3	Floor request when floor is taken and queueing is not applied .....	215
A.3.4	Floor request when floor is taken and queueing is applied.....	216
A.3.5	Pre-emptive floor request when floor is taken.....	218
A.4	Off-network floor control signalling flows .....	219
A.4.1	General .....	219
A.4.2	Off-network floor control during an MCPTT group call.....	219
A.4.2.1	Floor request when the floor is idle .....	219
A.4.2.2	Floor request when floor is taken and queueing of floor requests is not applied.....	220
A.4.2.3	Floor request when floor is taken and queueing is applied .....	221
A.4.2.4	Pre-emptive floor request when floor is taken .....	223
A.5	Pre-established session signalling flows .....	224
A.5.1	General .....	224
A.5.2	Call Initialization.....	224
A.5.2.1	Originating Side when initialization accepted .....	224
A.5.2.2	Originating Side when initialization rejected.....	226
A.5.2.3	Termination Side when call initialization accepted .....	227
A.5.3	Call release .....	228
A.6	MBMS subchannel control signalling flows .....	229
A.6.1	General .....	229
A.6.2	Announcing MBMS subchannels.....	229
A.6.3	Initiating a conversation and requesting floor, originating side .....	232
A.6.4	Releasing floor and ending a conversation.....	233
<b>Annex B (informative): Media encapsulation for end-to-end distribution using MBMS bearers .....</b>		<b>236</b>
<b>Annex C (Informative): Floor control state machine transitions tables .....</b>		<b>238</b>
C.1	Introduction .....	238
C.2	Off-network tables.....	238
C.2.1	Off-network call floor control state machine transitions .....	238
<b>Annex D (informative): Change history .....</b>		<b>243</b>
History .....		251

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# Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> 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

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- x the first digit:
  - 1 presented to TSG for information;
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  - 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.

---

# 1 Scope

The present document specifies the media plane control protocols and interactions with the media needed to support Mission Critical Push To Talk (MCPTT).

The present document specifies protocol for using pre-established session to setup calls, floor control and managing MBMS subchannels over MBMS bearers on-network and off-network protocols for floor control.

Mission critical communication services are services that require preferential handling compared to normal telecommunication services, e.g. in support of police or fire brigade. Floor control provides a mechanism for managing the right to transmit at a point in time during an MCPTT call.

The MCPTT service and its associated media plane control protocols can be used for public safety applications and also for general commercial applications (e.g., utility companies and railways).

The present document is applicable to User Equipment (UE) supporting the floor participant functionality, setting up calls using pre-established SIP sessions and using MBMS bearers for group communication and to floor control servers supporting these functions in the MCPTT system.

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# 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 TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 24.379: "Mission Critical Push To Talk (MCPTT) call control Protocol specification".
- [3] IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications".
- [4] 3GPP TS 24.483: "Mission Critical Services (MCS) Management Object (MO)".
- [5] 3GPP TS 23.379: "Functional architecture and information flows to support mission critical communication services; Stage 2".
- [6] 3GPP TS 29.468: "Group Communication System Enablers for LTE (GCSE\_LTE); MB2 Reference Point; Stage 3".
- [7] IETF RFC 5761: "Multiplexing RTP Data and Control Packets on a Single Port".
- [8] IETF RFC 3711: "The Secure Real-time Protocol (SRTP)".
- [9] 3GPP TS 25.446: "MBMS synchronization protocol (SYNC)".
- [10] 3GPP TS 29.281: "General Packet Radio System (GPRS) Tunnelling Protocol User Plane (GTPv1-U)".
- [11] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core Network protocols; Stage 3".
- [12] 3GPP TS 24.481: "Mission Critical Services (MCS) group management Protocol specification".
- [13] 3GPP TS 24.484: "Mission Critical Services (MCS) configuration management protocol specification".