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Functional architecture and information flows to support
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Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	10
1 Scope	11
2 References	11
3 Definitions, symbols and abbreviations	12
3.1 Definitions	12
3.2 Symbols.....	13
3.3 Abbreviations	13
4 Introduction	13
5 Architectural requirements	13
5.1 Media routing requirements	13
5.2 MCVideo group affiliation and MCVideo group de-affiliation	13
5.3 Device inventory requirements.....	14
5.4 Device discovery requirements (off-network).....	14
5.5 Bearer management	14
5.5.1 General.....	14
5.5.2 EPS bearer considerations	14
5.5.3 EPS unicast bearer considerations for MCVideo.....	14
5.5.4 MBMS bearer management	15
5A Involved business relationships.....	15
6 MCVideo Functional model.....	15
6.1 Functional model description	15
6.1.1 On-network functional model	15
6.1.2 Off-network functional model	15
6.2 Functional entities description.....	16
6.2.1 General.....	16
6.2.2 MCVideo service application plane.....	16
6.2.2.1 General	16
6.2.2.2 Common services core	16
6.2.2.3 MCVideo application service.....	16
6.2.2.3.1 MCVideo client	16
6.2.2.3.2 MCVideo server	16
6.2.2.3.3 Media distribution function	17
6.2.2.3.4 Media mixer	17
6.2.2.3.5 MCVideo user database.....	17
6.2.2.3.6 Transmission control server.....	17
6.2.2.3.7 Transmission control participant	18
6.3 Reference points	18
6.3.1 Reference point MCVideo-1 (between the MCVideo client and the MCVideo server)	18
6.3.2 Reference point MCVideo-2 (between the MCVideo server and the MCVideo user database).....	18
6.3.3 Reference point MCVideo-3 (between the MCVideo server and the MCVideo server)	18
6.3.4 Reference point MCVideo-4 (between the transmission control participant and the transmission control server).....	18
6.3.4A Reference point MCVideo-5 (unicast between the media distribution function and the EPS)	18
6.3.4B Reference point MCVideo-6 (between the MCVideo server and the EPS)	18
6.3.5 Reference point MCVideo-7 (between the media distribution function and the media mixer)	19
6.3.6 Reference point MCVideo-8 (between the media distribution function and the media mixer)	19
6.3.7 Reference point MCVideo-9 (between the transmission control participant and the transmission control server).....	19
6A Identities	19

6B	Application of functional model to deployments	19
7	Procedures and information flows	19
7.1	Group call	19
7.1.1	General	19
7.1.2	On-network group call	19
7.1.2.1	General	19
7.1.2.2	Information flows for group call in on-network	19
7.1.2.2.1	Group call request (MCVideo client – MCVideo server)	19
7.1.2.2.2	Group call request (MCVideo server – MCVideo client)	20
7.1.2.2.3	Group call response (MCVideo server – MCVideo client)	20
7.1.2.2.4	Group call response (MCVideo client – MCVideo server)	20
7.1.2.2.5	Group call release request (MCVideo server – MCVideo client)	21
7.1.2.2.6	Group call release request (MCVideo client – MCVideo server)	21
7.1.2.2.7	Group call release response (MCVideo client – MCVideo server)	21
7.1.2.2.8	Group call rejoin request (MCVideo client – MCVideo server)	21
7.1.2.2.9	Group call rejoin response (MCVideo server – MCVideo client)	22
7.1.2.2.10	Group call join request (MCVideo client – MCVideo server)	22
7.1.2.2.11	Group call join response (MCVideo server – MCVideo client)	22
7.1.2.2.12	Group call leave request (MCVideo server – MCVideo client)	23
7.1.2.2.13	Group call leave response (MCVideo client – MCVideo server)	23
7.1.2.2.14	MCVideo emergency alert request	23
7.1.2.2.15	MCVideo emergency alert response	24
7.1.2.2.16	MCVideo emergency state cancel request	24
7.1.2.2.17	MCVideo emergency state cancel response	24
7.1.2.2.18	MCVideo emergency group call request	24
7.1.2.2.19	MCVideo emergency group call response	25
7.1.2.2.20	MCVideo emergency group call cancel request	25
7.1.2.2.21	MCVideo emergency group call cancel response	25
7.1.2.2.22	MCVideo imminent peril group call request	26
7.1.2.2.23	MCVideo imminent peril group call response	26
7.1.2.2.24	MCVideo imminent peril group call cancel request	26
7.1.2.2.25	MCVideo imminent peril group call cancel response	26
7.1.2.3	Group call within one MC system	27
7.1.2.3.1	Group call models	27
7.1.2.3.1.1	Pre-arranged group call	27
7.1.2.3.1.2	Chat group call	31
7.1.2.3.2	Exiting group call due to de-affiliation	35
7.1.2.4	Broadcast group call	36
7.1.2.4.1	General	36
7.1.2.4.2	Common broadcast group call procedure	36
7.1.2.5	Emergency and imminent peril procedures	37
7.1.2.5.1	MCVideo emergency group call	37
7.1.2.5.1.1	MCVideo emergency group call commencement	37
7.1.2.5.1.2	MCVideo group call upgraded to an MCVideo emergency group call	39
7.1.2.5.1.3	MCVideo emergency group call cancel	41
7.1.2.5.2	MCVideo imminent peril group call	43
7.1.2.5.2.1	MCVideo imminent peril group call commencement	43
7.1.2.5.2.2	Imminent peril group call upgrade	45
7.1.2.5.2.3	MCVideo imminent peril group call cancel	46
7.1.2.6	MCVideo emergency alert	48
7.1.2.6.1	General	48
7.1.3	Off-network group communications	48
7.1.3.1	General	48
7.1.3.2	Information flows for off-network group communications	48
7.1.3.2.1	Group communication announcement	48
7.1.3.2.2	Group communication answer response	49
7.1.3.2.3	MCVideo upgrade to emergency group communication	49
7.1.3.2.4	MCVideo emergency group communication cancel	50
7.1.3.2.5	MCVideo upgrade to imminent peril group communication	50
7.1.3.2.6	MCVideo imminent peril group communication cancel	50
7.1.3.2.7	MCVideo emergency alert announcement	50

7.1.3.2.8	MCVideo emergency alert cancel announcement	51
7.1.3.3	Group communication setup	51
7.1.3.3.1	General	51
7.1.3.3.2	Procedure.....	51
7.1.3.4	Passive join to group communication	52
7.1.3.4.1	General	52
7.1.3.4.2	Procedure.....	53
7.1.3.5	Active join to group communication.....	54
7.1.3.5.1	General	54
7.1.3.5.2	Procedure.....	54
7.1.3.6	Broadcast group communication.....	55
7.1.3.7	Group communication release due to inactivity.....	55
7.1.3.8	Emergency and imminent peril procedures.....	56
7.1.3.8.1	Emergency group communication.....	56
7.1.3.8.2	MCVideo imminent peril.....	56
7.1.3.9	MCVideo emergency alert	57
7.1.3.9.1	General	57
7.2	Private call.....	57
7.2.1	General.....	57
7.2.2	Private call on-network.....	57
7.2.2.1	General	57
7.2.2.2	Information flows for private call in on-network.....	57
7.2.2.2.1	MCVideo private call request (MCVideo client – MCVideo server).....	57
7.2.2.2.2	MCVideo private call request (MCVideo server – MCVideo client).....	58
7.2.2.2.3	MCVideo private call response (MCVideo client – MCVideo server).....	58
7.2.2.2.4	MCVideo private call response (MCVideo server – MCVideo client).....	59
7.2.2.2.5	MCVideo call end request.....	59
7.2.2.3	Private call within one MC system	59
7.2.2.3.1	Private call setup in automatic commencement mode.....	59
7.2.2.3.2	Private call setup in manual commencement mode.....	61
7.2.2.3.2.1	Description.....	61
7.2.2.3.2.2	Procedure	61
7.2.2.3.3	Private call release.....	62
7.2.2.3.3.1	Client initiated.....	62
7.2.2.3.3.2	Server initiated.....	63
7.2.3	Off-network private communications.....	64
7.2.3.1	General.....	64
7.2.3.2	Information flows for off-network private communications.....	64
7.2.3.2.1	Private communication request	64
7.2.3.2.2	Private communication answer response.....	65
7.2.3.2.3	Private communication release request.....	65
7.2.3.2.4	Private communication release response.....	66
7.2.3.3	Use of ProSe for off-network private communications.....	66
7.2.3.4	Automatic commencement private communication.....	66
7.2.3.4.1	General	66
7.2.3.4.2	Procedure.....	66
7.2.3.5	Manual commencement private communication.....	68
7.2.3.5.1	General	68
7.2.3.5.2	Procedure – Communication accepted	68
7.2.3.5.3	Procedure – Communication rejected/ignored	70
7.2.3.6	Private communication release.....	71
7.2.3.6.1	General	71
7.2.3.6.2	Procedure.....	71
7.3	Video pull.....	72
7.3.1	General.....	72
7.3.2	On-network video pull	72
7.3.2.1	General	72
7.3.2.2	Information flows for on-network video pull.....	72
7.3.2.2.1	MCVideo pull from server request.....	73
7.3.2.2.2	MCVideo pull from server response.....	73
7.3.2.2.3	MCVideo pull from server complete request	73
7.3.2.2.4	MCVideo pull from server complete response.....	73

7.3.2.3	One-to-one video pull	73
7.3.2.3.1	General	73
7.3.2.3.2	One-to-one video pull – call setup.....	74
7.3.2.3.3	One-to-one video pull – call release	75
7.3.2.4	One-from-server video pull.....	75
7.3.2.4.1	General	75
7.3.2.4.2	Procedure.....	75
7.3.3	Off-network video pull	76
7.3.3.1	General	76
7.3.3.2	Information flows for off-network video pull	76
7.3.3.3	Video pull to self	76
7.3.3.3.1	General	76
7.3.3.3.2	Procedure.....	76
7.4	Video push.....	78
7.4.1	General.....	78
7.4.2	On-network video push.....	78
7.4.2.1	General	78
7.4.2.2	Information flows for on-network video push.....	78
7.4.2.2.1	Remote video push request.....	78
7.4.2.2.2	Remote video push response	79
7.4.2.2.3	Remote video push release request.....	79
7.4.2.2.4	MCVideo push to server request	79
7.4.2.2.5	MCVideo push to server response.....	80
7.4.2.2.6	MCVideo push to server complete request.....	80
7.4.2.2.7	MCVideo push to server complete response	80
7.4.2.3	One-to-one video push	80
7.4.2.3.1	General	80
7.4.2.3.2	One-to-one video push – call setup	80
7.4.2.3.3	One-to-one video push – call release.....	81
7.4.2.4	One-to-server video push	82
7.4.2.4.1	General	82
7.4.2.4.2	Procedure.....	82
7.4.2.5	Remotely initiated video push.....	83
7.4.2.5.1	General	83
7.4.2.5.2	Remotely initiated video push – call setup	83
7.4.2.5.3	Remotely initiated video push – call release by authorized user	84
7.4.2.6	Remotely initiated video push to group	85
7.4.2.6.1	General	85
7.4.2.6.2	Remotely initiated video push to group – call setup.....	85
7.4.2.6.3	Remotely initiated video push to group – call release by authorized user.....	86
7.4.3	Off-network video push	87
7.4.3.1	General	87
7.4.3.2	Information flows for off-network video push.....	87
7.4.3.2.1	Remote video push request.....	87
7.4.3.2.2	Video push trying response	87
7.4.3.2.3	Notification of video push	88
7.4.3.3	Video push to another MCVideo user.....	88
7.4.3.3.1	General	88
7.4.3.3.2	Procedure.....	88
7.4.3.4	Remotely initiated video push.....	89
7.4.3.4.1	General	89
7.4.3.4.2	Procedure.....	89
7.4.3.5	Remotely initiated video push to a group.....	91
7.4.3.5.1	General	91
7.4.3.5.2	Procedure.....	91
7.5	Capability information sharing.....	92
7.5.1	General.....	92
7.5.2	On-network capability information sharing.....	92
7.5.2.1	General	92
7.5.2.2	Information flows for on-network capability information sharing.....	92
7.5.2.2.1	Update MCVideo capabilities info request.....	92
7.5.2.2.2	Update MCVideo capabilities info response	92

7.5.2.2.3	Get MCVideo capabilities info request	92
7.5.2.2.4	Get MCVideo capabilities info response	93
7.5.2.2.5	Subscribe MCVideo capabilities info request	93
7.5.2.2.6	Subscribe MCVideo capabilities info response	93
7.5.2.2.7	Notify MCVideo capabilities info request	93
7.5.2.2.8	Notify MCVideo capabilities info response	93
7.5.2.3	Update MCVideo capabilities information at the MCVideo server	94
7.5.2.4	Retrieve MCVideo capabilities information by the MCVideo client	94
7.5.2.5	Subscription and notification for MCVideo capabilities information	95
7.5.3	Off-network capability information sharing	95
7.5.3.1	General	95
7.5.3.2	Information flows for Off-network capability information sharing	96
7.5.3.2.1	Capability request	96
7.5.3.2.2	Capability announcement	96
7.5.3.2.3	Activity status request	96
7.5.3.2.4	Activity status announcement	97
7.5.3.3	Periodic capability announcements	97
7.5.3.3.1	General	97
7.5.3.3.2	Procedure	97
7.5.3.4	Request capabilities from client(s)	98
7.5.3.4.1	General	98
7.5.3.4.2	Request clients with particular capabilities	98
7.5.3.4.3	Request capabilities from a particular client	99
7.5.3.5	Request activity status from client(s)	100
7.5.3.5.1	General	100
7.5.3.5.2	Request activity status of group members	100
7.5.3.5.3	Request activity status from a particular client	101
7.6	Ambient viewing call	102
7.6.1	General	102
7.6.2	Information flows for ambient viewing call	102
7.6.2.1	Ambient viewing call request	102
7.6.2.2	Ambient viewing call response	102
7.6.2.3	Ambient viewing call release request	103
7.6.2.4	Ambient viewing call release response	103
7.6.2.5	Ambient viewing call release notification	103
7.6.3	Procedures	104
7.6.3.1	Remotely initiated ambient viewing call setup procedure	104
7.6.3.2	Locally initiated ambient viewing call setup procedure	105
7.6.3.3	Ambient viewing call release – server initiated	106
7.6.3.4	Ambient viewing call release – "viewing" user initiated	106
7.6.3.5	Ambient viewing call release – "viewed to" user initiated	107
7.7	Transmission control	108
7.7.1	Transmission control for on-network MCVideo service	108
7.7.1.1	General	108
7.7.1.2	Information flows for transmission control for on-network	108
7.7.1.2.1	General	108
7.7.1.2.2	Transmit media request	108
7.7.1.2.3	Transmit media granted	108
7.7.1.2.4	Transmit media rejected	109
7.7.1.2.5	Media transmission notification	109
7.7.1.2.6	Receive media request	109
7.7.1.2.7	Receive media response	109
7.7.1.2.8	Media reception notification	110
7.7.1.2.9	Queue position info	110
7.7.1.2.10	Transmission revoked	110
7.7.1.2.11	Queue position request	111
7.7.1.2.12	Transmit media cancel request	111
7.7.1.2.13	Transmit media cancel response	111
7.7.1.2.14	Transmit media cancel request notify	111
7.7.1.2.15	Transmit media end request	112
7.7.1.2.16	Transmit media end response	112
7.7.1.2.17	Remote transmit media request	112

7.7.1.2.18	Remote transmit media response	112
7.7.1.2.19	Remote transmit media end request.....	113
7.7.1.2.20	Remote transmit media end response	113
7.7.1.2.21	Media reception end request.....	113
7.7.1.2.22	Media reception end response	113
7.7.1.2.23	Media reception override notification	113
7.7.1.2.24	Transmit media end notify.....	114
7.7.1.3	Transmission control within one MC system for MCVideo service	114
7.7.1.3.1	Transmission control during an MCVideo session	114
7.7.1.3.2	Reception control during an MCVideo session	115
7.7.1.3.2A	End media reception – receiving user initiated.....	117
7.7.1.3.2B	End media reception – transmission control server initiated	117
7.7.1.3.2C	Reception control on overridden – mandatory mode.....	118
7.7.1.3.2D	Reception control on overridden – negotiated mode	119
7.7.1.3.3	Transmission revoke during an MCVideo session	120
7.7.1.3.4	Queue position during an MCVideo session	121
7.7.1.3.5	Transmit media request cancellation from the video transmission queue	122
7.7.1.3.5.1	Transmit media request cancellation from the queue – MCVideo user initiated	122
7.7.1.3.5.2	Transmit media request cancellation from the queue - transmission control server initiated ..	123
7.7.1.3.6	End a media transmission during an MCVideo session.....	124
7.7.1.3.6.1	End a media transmission – MCVideo user initiated	124
7.7.1.3.6.2	End a media transmission – transmission control server initiated	125
7.7.1.3.6.3	End a media transmission – remote MCVideo user initiated.....	126
7.7.1.3.7	Remotely initiated media transmission during an MCVideo session	127
7.7.2	Off-network transmission control	127
7.7.2.1	General	127
7.7.2.2	Information flows for off-network transmission control.....	128
7.7.2.2.1	Transmission request	128
7.7.2.2.2	Transmission granted.....	128
7.7.2.2.3	Transmission release	129
7.7.2.2.4	Transmission rejected.....	129
7.7.2.2.5	Transmission revoked.....	129
7.7.2.2.6	Transmission arbitration taken	130
7.7.2.2.7	Transmission arbitration release	130
7.7.2.3	Initializing transmission control – single arbitrator approach.....	130
7.7.2.3A	Initializing transmission control – self arbitration approach	131
7.7.2.4	Transmission permission granted.....	132
7.7.2.5	Transmission permission rejected	133
7.7.2.6	Releasing transmission permission	134
7.7.2.7	Transmission override.....	135
7.7.2.8	Transmission override (revoke self).....	136
7.7.2.9	Transmission arbitration release.....	137
7.7.2.9.1	Transmission arbitration release	137
7.7.2.9.2	Transmission arbitration release with delegation	138
7.7.2.10	Simultaneous transmission requests.....	139
7.8	MCVideo service configuration	140
7.9	Affiliation and de-affiliation to/from MCVideo group(s)	140
7.10	Use of MBMS transmission (on-network)	141
7.10.1	Information flows for MBMS Transmission	141
7.10.1.1	General	141
7.10.1.2	MapGroupToBearer	141
7.10.1.3	UnmapGroupFromBearer	141
7.10.2	Use of pre-established MBMS bearers	141
7.10.3	Use of dynamic MBMS bearer establishment	142
7.10.4	Video call connect and disconnect over MBMS.....	142
7.10.4.1	General	142
7.10.4.2	Procedure	142
7.10.4.2.1	Call connect over MBMS	142
7.10.4.2.2	Call disconnect over MBMS	144
7.10.5	Switching from MBMS bearer to unicast bearer	144
7.11	Simultaneous session for MCVideo calls (on-network).....	145
7.12	User authentication and authorization for MCVideo service	145

7.13	Support for multiple devices	146
7.14	Location information (on-network)	146
Annex A (normative):	MCVideo related configuration data	147
A.1	General	147
A.2	MCVideo UE configuration data	147
A.3	MCVideo user profile configuration data.....	148
A.4	MCVideo related Group configuration data.....	155
A.5	MCVideo service configuration data.....	157
Annex B (informative):	Change history	159
History		162

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 - 3 or greater indicates TSG approved document under change control.
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1 Scope

This document specifies the functional model, procedures and information flows needed for the mission critical video (MCVideo) service. Support for both MCVideo group streaming and MCVideo private streaming operating in on-network and off-network modes of operation is specified.

The corresponding service requirements are defined in 3GPP TS 22.280 [2], and 3GPP TS 22.281 [3].

The present document is applicable primarily to mission critical video service using E-UTRAN access based on the common functional architecture for mission critical services defined in 3GPP TS 23.280 [6] and the EPC architecture defined in 3GPP TS 23.401 [8].

The MCVideo service can be used for public safety applications and also for general commercial applications e.g. utility companies and railways.

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 22.280: "Mission Critical Common Requirements (MCCoRe); Stage 1".
- [3] 3GPP TS 22.281: "Mission Critical Video services over LTE".
- [4] 3GPP TS 23.002: "Network Architecture".
- [5] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [6] 3GPP TS 23.280: "Common functional architecture to support mission critical services; Stage 2".
- [7] 3GPP TS 23.303: "Proximity-based services (ProSe); Stage 2".
- [8] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".
- [9] 3GPP TS 23.468: "Group Communication System Enablers for LTE (GCSE_LTE); Stage 2".
- [10] Void
- [11] 3GPP TS 23.203: "Policy and charging control architecture".
- [12] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification".
- [13] 3GPP TS 29.468: "Group Communication System Enablers for LTE (GCSE_LTE); MB2 reference point; Stage 3".
- [14] 3GPP TS 33.180: "Security of the mission critical service".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

MCVideo client: An instance of an MC service client that provides the client application function for the MCVideo service.

MCVideo group: An MC service group configured for MCVideo service.

MCVideo group affiliation: An MC service group affiliation for MCVideo.

MCVideo group de-affiliation: An MC service group de-affiliation for MCVideo.

MCVideo group home system: The mission critical system where the MCVideo group is defined.

MCVideo group host server: The MCVideo server within a mission critical system which provides centralised support for MCVideo services of an MCVideo group defined in a MCVideo group home system.

MCVideo ID: An instance of an MC service ID within the MCVideo service.

MCVideo server: An instance of an MC service server that provides the server application function for the MCVideo service.

MCVideo service: A video communication service supporting applications for mission critical organizations and mission critical applications for other businesses and organizations (e.g., utilities, railways) with strong security, high availability, reliability and priority handling.

MCVideo system: The collection of applications, services, and enabling capabilities required to provide Mission Critical video for a Mission Critical Organization.

MCVideo UE: An MC service UE that can be used to participate in MCVideo services.

MCVideo user: An MC service user who is authorized for MCVideo services via an MCVideo UE.

Transmission control: Video transmitting control mechanism in an MCVideo service that determines which participants have the authority to transmit video, and determines the onward downlink video transmission during an video call.

For the purposes of the present document, the following terms and definitions given in 3GPP TS 22.280 [2] apply:

Mission Critical
Mission Critical Applications
Mission Critical Service
Mission Critical Organization
Mission Critical System

For the purposes of the present document, the following terms and definitions given in 3GPP TS 22.281 [3] apply:

Real Time
Real Time Video

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.280 [6] apply:

MC service client
MC service group
MC service group affiliation
MC service group de-affiliation
MC service group home system