



TECHNICAL REPORT

**Universal Mobile Telecommunications System (UMTS);
LTE;
Multimedia telephony over IP Multimedia Subsystem (IMS);
Study on improved end-to-end Quality of Service (QoS)
handling for Multimedia Telephony Service for IMS (MTSI)
(3GPP TR 26.924 version 13.0.1 Release 13)**



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Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	7
Introduction	7
1 Scope	8
2 References	8
3 Definitions and abbreviations.....	9
3.1 Definitions	9
3.2 Abbreviations	9
4 Overview	9
5 Current QoS reservation mechanisms during session setup.....	10
5.1 System description	10
5.2 Simple SDP negotiation and bearer setup	11
5.3 Other system aspects	12
5.4 Relationship between QoS parameters and rate adaptation.....	12
5.4.1 Introduction.....	12
5.4.2 MBR=GBR bearer	13
5.4.3 MBR>GBR bearer	13
5.4.4 Different QoS settings in different networks	13
6 Use cases	14
6.1 General description.....	14
6.2 Use case A: Single fixed-rate speech codec	14
6.2.1 General description.....	14
6.2.2 Gap analysis.....	15
6.3 Use case B: Several fixed-rate speech codecs	16
6.3.1 General description	16
6.3.1.1 Overview	16
6.3.1.2 SDP impacts on media handling	16
6.3.1.3 Bearer allocation based on first SDP offer/answer.....	17
6.3.1.4 Bearer allocation based on second SDP offer/answer	19
6.3.2 Gap analysis after 1st SDP offer/answer.....	20
6.3.2.1 Common.....	20
6.3.2.2 IMS-A chooses Option 1; IMS-B chooses Option 1	20
6.3.2.3 IMS-A chooses Option 2; IMS-B chooses Option 2	21
6.3.2.4 IMS-A chooses Option 1; IMS-B chooses Option 2	21
6.3.2.5 IMS-A chooses Option 2; IMS-B chooses Option 1	22
6.3.2.6 Root-cause analysis when b=AS is used for resource reservation	23
6.3.2.7 Root-cause analysis when codec-specific information is used for resource reservation	24
6.3.2.8 Handling of over-allocation and under-allocation.....	24
6.3.3 Gap analysis after 2nd SDP offer/answer	24
6.4 Use case C: Single multi-rate speech codec (AMR), no extra bandwidth allocated for redundancy	25
6.4.1 General description.....	25
6.4.2 Gap analysis.....	28
6.5 Use case D: Single multi-rate speech codec (AMR) with extra bandwidth allocated for redundancy	28
6.5.1 General description.....	28
6.5.2 Gap analysis.....	30
6.6 Use case E: Several multi-rate speech codecs (AMR and AMR-WB).....	30
6.6.1 General description	30
6.6.2 Gap analysis.....	31
6.7 Use case F: Single video codec, symmetric usage	32

6.7.1	General description	32
6.7.2	Gap analysis.....	33
6.7.3	Root-cause analysis.....	35
6.8	Use case G: Single video codec, asymmetric usage, sending video with a bitrate matching the codec level	35
6.8.1	General description	35
6.8.2	Gap analysis.....	36
6.8.3	Root-cause analysis.....	36
6.9	Use case H: Single video codec, asymmetric usage, sending video with a bitrate lower than the supported codec level	37
6.9.1	General description	37
6.9.2	Gap analysis.....	38
6.9.3	Root-cause analysis.....	38
6.10	Use case I: Multiple video codecs	39
6.10.1	General description	39
6.10.2	Gap analysis.....	41
6.10.3	Root-cause analysis.....	41
6.11	Use case J: Single video codec, symmetric usage, bitrate variations	41
6.11.1	General description	41
6.11.2	Gap analysis.....	46
6.12	Use case K: Several multi-rate speech codecs (AMR, AMR-WB and EVS), small difference in EVS usage between operators.....	46
6.12.1	General description	46
6.12.2	Gap analysis.....	47
6.13	Use case L: Several multi-rate speech codecs (AMR, AMR-WB and EVS), large difference in EVS usage between operators.....	47
6.13.1	General description.....	47
6.13.2	Gap analysis.....	48
7	Recommended requirements	48
7.1	Discussion on individual recommended requirements	48
7.1.1	General.....	48
7.1.2	Use case A: Single fixed-rate speech codec.....	48
7.1.3	Use case B: Several fixed-rate speech codecs.....	48
7.1.4	Use case C: Single multi-rate speech codec (AMR), no extra bandwidth allocated for redundancy.....	49
7.1.5	Use case D: Single multi-rate speech codec (AMR) with extra bandwidth allocated for redundancy.....	50
7.1.6	Use case E: Several multi-rate speech codecs (AMR and AMR-WB)	50
7.1.7	Use case F: Single video codec, symmetric usage	50
7.1.8	Use case G: Single video codec, asymmetric usage, sending video with a bitrate matching the codec level	50
7.1.9	Use case H: Single video codec, asymmetric usage, sending video with a bitrate lower than the supported codec level.....	51
7.1.10	Use case I: Multiple video codecs	51
7.1.11	Use case J: Single video codec, symmetric usage, bitrate variations	51
7.1.12	Use case K: Several multi-rate speech codecs (AMR, AMR-WB and EVS), small difference in EVS usage between operators	51
7.1.13	Use case L: Several multi-rate speech codecs (AMR, AMR-WB and EVS), large difference in EVS usage between operators	52
7.2	Discussion on proposed requirements for new SDP attributes	52
7.3	Discussion on proposed general requirements for the solution	52
7.4	Summary of proposed requirements.....	53
7.5	Definition of new bandwidth information parameters.....	54
7.5.1	Overview	54
7.5.2	Maximum Supported Bandwidth.....	54
7.5.3	Maximum Desired Bandwidth.....	54
7.5.4	Minimum Desired Bandwidth.....	55
7.5.5	Minimum Supported Bandwidth.....	55
8	Potential solution(s).....	55
8.1	Potential solution A: Session re-negotiation	55
8.1.1	Introduction.....	55
8.1.2	Description of the solution.....	56

8.1.3	Compliance with proposed requirements.....	56
8.1.4	Impact on networks and terminals	56
8.2	Potential solution B: New bandwidth modifiers in SDP offer and answer without SDP MiscCapNeg	57
8.2.1	Introduction.....	57
8.2.2	Description of the solution.....	57
8.2.2.1	General solution	57
8.2.2.2	New bandwidth modifiers	57
8.2.2.3	Procedures.....	58
8.2.2.4	Session negotiation example	58
8.2.2.5	Modifying the bandwidth information in the SDP offer	60
8.2.2.6	Resource reservation in different networks.....	60
8.2.3	Compliance with proposed requirements.....	61
8.2.4	Impact on networks and terminals	61
8.3	Potential solution C: New bandwidth modifiers and SDPMiscCapNeg in SDP offer and answer.....	61
8.3.1	Introduction.....	61
8.3.2	Description of the solution.....	61
8.3.2.1	General solution	61
8.3.2.2	Procedures.....	62
8.3.2.3	Session negotiation example	62
8.3.2.4	Modifying the bandwidth information in the SDP offer	63
8.3.2.5	Resource reservation in different networks.....	64
8.3.3	Compliance with proposed requirements.....	64
8.3.4	Impact on networks and terminals	64
8.4	Potential solution D: New attribute for bandwidth information in SDP offer and answer for each RTP payload type	65
8.4.1	Introduction.....	65
8.4.2	Description of the solution.....	65
8.4.2.1	General solution	65
8.4.2.2	New attribute.....	65
8.4.2.3	Procedures.....	66
8.4.2.4	Session negotiation example	66
8.4.2.5	Modifying the bandwidth information in the SDP offer	66
8.4.2.6	Resource reservation in different networks.....	67
8.4.3	Compliance with proposed requirements.....	67
8.4.4	Impact on networks and terminals	67
8.5	Potential solution E: New bandwidth modifiers only in SDP answer	67
8.5.1	Introduction.....	67
8.5.2	Description of the solution.....	67
8.5.2.1	General solution	67
8.5.2.2	New bandwidth modifiers	67
8.5.2.3	Session negotiation example	67
8.5.2.4	Modifying the bandwidth information in the SDP offer	68
8.5.2.5	Resource reservation in different networks.....	68
8.5.3	Compliance with proposed requirements.....	68
8.5.4	Impact on networks and terminals	68
8.6	Potential solution F: New SDP attribute in SDP offer and answer for entire media line	68
8.6.1	Introduction.....	68
8.6.2	Description of the solution.....	68
8.6.2.1	General solution	68
8.6.2.2	New SDP attribute	69
8.6.2.3	Procedures.....	69
8.6.2.4	Session negotiation example	69
8.6.2.5	Modifying the bandwidth information in the SDP offer	69
8.6.2.6	Resource reservation in different networks.....	70
8.6.3	Compliance with proposed requirements.....	70
8.6.4	Impact on networks and terminals	70
8.7	Potential solution G: New SDP attribute only in SDP answer	70
8.7.1	Introduction.....	70
8.7.2	Description of the solution.....	70
8.7.2.1	General solution	70
8.7.2.2	New SDP attribute	71
8.7.2.3	Procedures.....	71

8.7.2.4	Session negotiation example	71
8.7.2.5	Modifying the bandwidth information in the SDP offer	71
8.7.2.6	Resource reservation in different networks	71
8.7.3	Compliance with proposed requirements	71
8.7.4	Impact on networks and terminals	72
8.8	Potential solution H: Bitrate variations	72
8.8.1	Introduction.....	72
8.8.2	Description of the solution.....	72
8.8.3	Compliance with proposed requirements.....	73
8.8.4	Impact on networks and terminals	73
9	Conclusion and recommendations.....	73
Annex A: Determining suitable averaging window length.....		74
A.1	Introduction	74
A.2	Suitable averaging window for video.....	74
A.2.1	Reasonable video encoder configuration.....	74
A.2.2	Normal transmission.....	74
A.2.3	Sending a large I frame	75
A.2.4	Compensating for a large I frame	75
A.2.5	Sending an even larger I frame.....	76
A.2.6	Using a longer averaging window	77
A.2.7	Selection of averaging window length	77
A.3	Other services	78
A.3.1	Conversational speech using EVS VBR.....	78
A.3.2	Streaming and other non-conversational services	78
Annex B: Change history		80
History		81

Foreword

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Introduction

Multimedia Telephony for IMS (MTSI) is a standardized service for conversational telephony, TS 22.173 [2]. The media handling and interaction are specified in TS 26.114 [3]. MTSI has been specified such that the user experience of multimedia telephony is equivalent to or better than corresponding circuit-switched telephony services while still having efficient resource usage. Multimedia telephony also exploits the richer capabilities of IMS where media components can be used symmetrically or asymmetrically in different directions.

1 Scope

TS 26.114 define media handling and interaction for the Multimedia Telephony Service for IMS (MTSI) including mechanisms for the negotiation of bandwidth using the SDP bandwidth modifiers. The present study investigates potential improvements for the end-to-end QoS handling with the purpose to improve the network resource allocation for variable bit-rate codecs, rate-adaptive codecs and asymmetric sessions (i.e. different bitrates for different directions). The study will focus on SDP extensions and the interaction with the policy control.

The present document:

- 1 – Identifies high-level use cases
- 2 – Evaluates for these use cases the current limitations and the expected benefits
- 3 – Establishes recommended high-level functional requirements and related recommended technical requirements
- 4 – Discusses potential solutions
- 5 – Studies impact of potential solutions on networks and terminals

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.
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- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.173: "IP Multimedia Core Network Subsystem (IMS) Multimedia Telephony Service and supplementary services; Stage 1".
- [3] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction".
- [4] 3GPP TS 23.203: "Policy and charging control architecture".
- [5] 3GPP TS 29.212: "Policy and Charging Control (PCC); Reference points".
- [6] 3GPP TS 29.213: "Policy and charging control signalling flows and Quality of Service (QoS) parameter mapping".
- [7] 3GPP TS 29.214: "Policy and charging control over Rx reference point".
- [8] IETF RFC 4566 (2006): "SDP: Session Description Protocol", M. Handley, V. Jacobson and C. Perkins.
- [9] IETF RFC 3264 (2002): "An Offer/Answer Model with the Session Description Protocol (SDP)", J. Rosenberg and H. Schulzrinne.
- [10] IETF RFC 3890 (2004): "A Transport Independent Bandwidth Modifier for the Session Description Protocol (SDP)", M. Westerlund.