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Universal Mobile Telecommunications System (UMTS);
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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)
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Contents

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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

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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.