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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Quality of service
architecture for audiovisual and multimedia services

An architecture for end-to-end QoS control and signalling

ITU-T Recommendation H.360

ITU-T H-SERIES RECOMMENDATIONS
AUDIOVISUAL AND MULTIMEDIA SYSTEMS

CHARACTERISTICS OF VISUAL TELEPHONE SYSTEMS	H.100–H.199
INFRASTRUCTURE OF AUDIOVISUAL SERVICES	
General	H.200–H.219
Transmission multiplexing and synchronization	H.220–H.229
Systems aspects	H.230–H.239
Communication procedures	H.240–H.259
Coding of moving video	H.260–H.279
Related systems aspects	H.280–H.299
Systems and terminal equipment for audiovisual services	H.300–H.349
Directory services architecture for audiovisual and multimedia services	H.350–H.359
Quality of service architecture for audiovisual and multimedia services	H.360–H.369
Supplementary services for multimedia	H.450–H.499
MOBILITY AND COLLABORATION PROCEDURES	
Overview of Mobility and Collaboration, definitions, protocols and procedures	H.500–H.509
Mobility for H-Series multimedia systems and services	H.510–H.519
Mobile multimedia collaboration applications and services	H.520–H.529
Security for mobile multimedia systems and services	H.530–H.539
Security for mobile multimedia collaboration applications and services	H.540–H.549
Mobility interworking procedures	H.550–H.559
Mobile multimedia collaboration inter-working procedures	H.560–H.569
BROADBAND AND TRIPLE-PLAY MULTIMEDIA SERVICES	
Broadband multimedia services over VDSL	H.610–H.619

For further details, please refer to the list of ITU-T Recommendations.

ITU-T Recommendation H.360

An architecture for end-to-end QoS control and signalling

Summary

End-to-end quality of service (QoS) and service priority require coordination of resources and quality control mechanisms at all points in a multimedia system. Procedures for achieving this entail a combination of information flows and functionality at various levels in the system. This Recommendation provides a reference architecture for defining and analysing mechanisms and procedures for achieving end-to-end QoS and service priority control.

Source

ITU-T Recommendation H.360 was approved on 15 March 2004 by ITU-T Study Group 16 (2001-2004) under the ITU-T Recommendation A.8 procedure.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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CONTENTS

Page

1	Scope	1
2	References.....	1
2.1	Normative references.....	1
2.2	Informative reference	1
3	Definitions	1
4	Abbreviations and acronyms	2
5	Generic QoS architecture.....	3
5.1	Functional planes.....	3
5.2	Decomposition of MM systems into administrative domains.....	4
5.3	QoS classification at service, application and network levels.....	4
5.4	QoS budgets.....	6
5.5	Functional entities and reference points	7
6	QoS control and signalling procedures.....	9
6.1	General framework.....	9
6.2	Classification of QoS signalling types	10
6.3	QoS signalling procedures.....	13

ITU-T Recommendation H.360

An architecture for end-to-end QoS control and signalling

1 Scope

This Recommendation contains a reference architecture for controlling the QoS and service priority of multimedia services in networks which are comprised of combinations of switched circuit and packet domains, wireless and wireline technologies, and conventional and packet-based terminals. The reference architecture is functionally defined. This Recommendation uses a domain-based approach which allows issues of administrative control and security also to be considered.

This Recommendation is concerned with end-to-end QoS control in multimedia systems made up of multiple and disparate administrative domains and QoS mechanisms. Detailed mechanisms for generic QoS control in individual networks are not described here but may be found in ITU-T Y-series Recommendations.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

2.1 Normative references

- ITU-T Recommendation G.1010 (2001), *End-user multimedia QoS categories*.
- ITU-T Recommendation M.2301 (2002), *Performance objectives and procedures for provisioning and maintenance of IP-based networks*.
- ITU-T Recommendation Y.1540 (2002), *Internet protocol data communication service – IP packet transfer and availability performance parameters*.
- ITU-T Recommendation Y.1541 (2002), *Network performance objectives for IP-based services*.

2.2 Informative reference

- IEEE Standard 802.1D-1998, *Information technology – Telecommunications information exchange between systems – Local and metropolitan area – Common specifications: Media access control (MAC) bridges*.

3 Definitions

This Recommendation defines the following terms:

3.1 application service: A network-based service involving the transmission and/or processing of multimedia information.

3.2 Application Service Provider (ASP): A Service Provider providing Application Services.

NOTE – The same business entity may act as both Network Operator and Application Service Provider.

3.3 end user: An entity employing Application Services.