



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.1000

(11/2001)

SERIES G: TRANSMISSION SYSTEMS AND MEDIA,
DIGITAL SYSTEMS AND NETWORKS

Quality of service and performance

**Communications quality of service: A
framework and definitions**

ITU-T Recommendation G.1000



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Communications quality of service: A framework and definitions

Summary

This Recommendation gives a framework and definitions for communications quality of service so as to establish a uniform approach to quality of service across the ITU-T and eliminate the confusion resulting from different frameworks and inconsistent definitions. Improved consistency regarding quality of service is needed throughout the communications industry, especially in IP-related areas within and outside the ITU.

This Recommendation provides a practical "top-down" path from a general quality definition (ISO 8402) to a QoS definition (ITU-T Rec. E.800) to network performance (ITU-T Rec. I.350, and Y.1540) to a functional breakdown of all components of service quality (the QoS definition matrix of ETSI ETR 003). Additionally presented are four viewpoints of QoS that make the definitions and framework meaningful for everyone: users, vendors, network operators, service providers, etc.

This overall approach is believed to be highly useful because it encourages a consistent and uniform mapping between the top-down, framework definitions of QoS and the bottom-up, operational measures on network elements. Advantages of using this approach is that it not only helps identify QoS-related problems, but it also facilitates quantifying the problem from multiple views; the customer's (e.g. surveys and subjective tests) and the service provider's (network measurements). This helps assure that resolving the problem in one domain (e.g. the provider) also resolves it in the other (e.g. the customer).

Source

ITU-T Recommendation G.1000 was prepared by ITU-T Study Group 12 (2001-2004) and approved under the WTSA Resolution 1 procedure on 29 November 2001.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

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.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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