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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 13236 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 33, *Distributed application services*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.641.

Annex A forms an integral part of this International Standard. Annexes B to E are for information only.

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The purpose of this Recommendation | International Standard is to provide a common basis for the coordinated development and enhancement of the wide range of standards that specify or reference Quality of Service (QOS) requirements or mechanisms in an Information Technology (IT) environment. It offers a means of developing or enhancing standards relating to QOS and provides concepts and terminology that will assist in maintaining the consistency of related standards. This Recommendation | International Standard is complementary to existing ITU-T Recommendations which define performance objectives and network signalling of QOS and it is not the intention of this Framework to lead to a need to revise any such Recommendations.

The initial work in developing this Framework for QOS was done with the objective of supplementing and clarifying the description of QOS contained in the Basic Reference Model of Open Systems Interconnection (OSI) (see ITU-T Rec. X.200 | ISO/IEC 7498-1). It is recognised, however, that management of QOS is important not only in OSI communications but also in a much wider context, and that there is value in encouraging a common approach to QOS that can extend to other IT and communications architectures, to distributed processing in general and to Open Distributed Processing (ODP) in particular.

Hence this Recommendation | International Standard is structured and written in such a way as to make it easy for many communities to adopt its approach, concepts, terminology and definitions. Its concepts and terms are defined without reference to any particular architecture, so that they can be adopted and applied by other communities to a variety of architectures and protocols. This general treatment is supplemented by examples from OSI, ODP and elsewhere.

To assist the OSI community, Annex A defines how the general framework applies to the specific case of OSI communications, both peer-to-peer and multi-peer.

This QOS Framework contains an introduction, a scope and field of application and a set of QOS-related definitions and abbreviations. The concepts of QOS are introduced in clause 5, which also highlights user requirements. Clause 6 defines QOS characteristics with respect to the user requirements. Clauses 7, 8 and 9 cover QOS management, QOS mechanisms and the expression of specific QOS requirements, respectively. QOS verification is discussed in clause 10, and conformance, consistency and compliance are discussed in clause 11.

Annexes are provided which stipulate:

- the model of QOS for OSI;
- statistical derivations of characteristics;
- a standards structure with respect to QOS;
- a discussion of the issue of 'cost'; and
- a bibliography.

Other standards communities are encouraged to study this Recommendation | International Standard and, in the interests of consistency, to consider the adoption of the parts that are relevant to their field, when this can be accomplished to good effect, without destabilisation of existing Recommendations | International Standards.