AS/NZS 13236:2000
ISO/IEC 13236:1998

Australian/New Zealand Standard™

Information technology—
Quality of service: Framework

Standards Australia

STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT/1, Information Systems—Interconnection. It was approved on behalf of the Council of Standards Australia on 3 December 1999 and on behalf of the Council of Standards New Zealand on 3 December 1999. It was published on 7 March 2000.

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Australian/New Zealand Standard™

Information technology—Quality of service: Framework

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT/1, Information Systems—Interconnection. This Standard is identical with and has been reproduced from ISO/IEC 13236:1998.

The objective of this Standard is to provide designers of IT systems with a common basis for the coordinated development and enhancement of the wide range of Standards that specify or reference quality of service requirements or mechanisms.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the annex to which they apply. A normative annex is an integral part of a Standard, whereas an informative annex is only for information and guidance.

As this Standard is reproduced from an International Standard, the following applies:

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References to International Standards should be replaced by references to equivalent Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian or Australian/New Zealand Standard*	
ISO/IEC		AS/NZS	
7498	Information technology—Open Systems Interconnection—Basic Reference Model	2777	Information processing systems—Open Systems Interconnection—Basic reference model
7498-1	Part 1: The Basic Model	2777.1	Part 1: The basic model
		AS	
		2777	Information processing systems—Open Systems Interconnection—Basic reference model
7498-4	Part 4: Management Framework	2777.4	Part 4: Management framework
10164	Information technology—Open Systems Interconnection—Systems management	—	
10164-15	Part 15: Scheduling function	—	
10731	Information technology—Open Systems Interconnection—Basic Reference Model: Conventions for the definition of OSI services	—	
10746	Information technology—Open distributed processing—Reference Model	—	
10746-2	Part 2: Foundations	—	
CCITT			
Rec.X.140	General Quality of Service parameters for communication via public data networks	—	

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INFORMATION TECHNOLOGY – QUALITY OF SERVICE: FRAMEWORK

1 Scope

This QOS Framework is a structured collection of concepts and their relationships which describes QOS (Quality of Service) and enables the partitioning of, and relationships between, the topics relevant to QOS in Information Technology (IT) to be expressed by a common means of description. In particular, this QOS Framework is directed at IT systems and their use in providing Open Distributed Processing services.

This QOS Framework is intended to assist those designing and specifying IT systems, and those defining communications services and protocols, by providing guidance on QOS applicable to systems, services and resources of various kinds. It describes how QOS can be characterized, how QOS requirements can be specified, and how QOS can be managed.

This QOS Framework defines terminology and concepts for QOS in IT. It introduces the concept of QOS characteristics, which represent the fundamental aspects of QOS that are to be managed in various ways; and it defines a number of QOS characteristics of particular importance. These definitions are independent of how QOS is represented or controlled in a real system.

This Framework describes how QOS requirements can be expressed, and identifies a number of QOS mechanisms (such as three-party negotiation) that can be used as components of QOS management functions to meet QOS requirements of various kinds. It also describes the circumstances in which various combinations of mechanisms may be appropriate.

This QOS Framework provides a basis for the specification of extensions and enhancements to existing or planned standards, as a result of the need for, and application of, the QOS concepts defined in this Recommendation | International Standard. It is not the intent of this Recommendation | International Standard to destabilise any existing Recommendations | International Standards; rather, it is intended that this QOS Framework may be used by:

- developers of new or revised IT-related standards which define or use QOS mechanisms; and
- IT users expressing requirements for QOS.

This QOS Framework does not attempt to provide a basis for the specification of performance objectives or network signalling of QOS in public communications networks. The QOS aspects of these communications services are addressed by other ITU-T Recommendations.

The intent of this Recommendation | International Standard is to provide a common vocabulary to both service providers and service users. Nothing in this Recommendation | International Standard should be construed as placing requirements on either service providers or service users. It is hoped that a common approach and vocabulary for QOS will assist multiple service providers to deliver end-to-end QOS to end-systems.

This QOS Framework specifically excludes the detailed specification of QOS mechanisms. It is not the intent of this Recommendation | International Standard to serve as an implementation specification, to be a basis for appraising the conformance of implementations, or to define particular services and protocols. Rather, it provides a conceptual and functional framework for QOS which allows independent teams of experts to work productively on the development of Recommendations | International Standards.

As applied to OSI, this QOS Framework is consistent with the OSI Basic Reference Model in that it describes operations and mechanisms which are assignable to layers as specified in the OSI Basic Reference Model. It is consistent with the OSI Management Framework (see ITU-T Rec. X.700 | ISO/IEC 7498-4) and the Systems Management Overview (see ITU-T Rec. X.701 | ISO/IEC 10040) in its assignment of functions to management entities. In Annex A, this QOS Framework presents a model of QOS for OSI which identifies the entities that participate in the management of QOS, defines the flow of QOS-related information between them and describes how this information is used.