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# INTERNATIONAL STANDARD

# ISO/IEC 13252

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## Information technology — Enhanced communications transport service definition

*Technologies dell'information — Définition du service de transport de  
communications amélioré*

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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 734 10 79  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

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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 13252 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.605.

Annex A forms an integral part of this International Standard.

## Introduction

This Recommendation | International Standard defines a transport service, named Enhanced Communications Transport Service (ECTS), which provides for a multicast capability and enhanced Quality of Service (QoS). This Recommendation | International Standard defines a wide range of services ranging from unreliable unicast with best-effort QoS to reliable multicast with guaranteed QoS. In this way, this Recommendation | International Standard is meant to provide for a uniform and universal service interface between transport protocols and applications of the present and the future information age, especially for those applications requiring versatile and powerful multimedia group communication capabilities underneath. Figure Intro.1 depicts the general architectural block diagram showing how ECTS relates to other protocols in the transport, application as well as network layers.

ECTP in Figure Intro. 1 is a protocol which is supposed to support all the services defined by this Recommendation | International Standard. ECTP is (to be) defined in a separate Recommendation | International Standard.

Note that not all the transport protocols shown in Figure Intro. 1 support all the services defined by ECTS. For example, TCP provides a best-effort reliable unicast service; UDP supports a best-effort unreliable multicast service. MTP, RMP, and SRM support reliable multicast but with null QoS. RTP provides means for exchanging synchronization information but does not define mechanisms to provide the synchronization itself.

ECTP, a companion protocol to ECTS, further will utilize, wherever possible, the multicast capabilities of the underlying network infrastructures. For example, in operation in Internet, ECTP will make extensive use of the multicast capabilities of IPv4 and IPv6 and rely on RSVP for QoS provisioning by network resource reservation. As another example, in operation over intrinsic ATM networks, ECTP will rely on the ATM capabilities for both multicast and QoS.

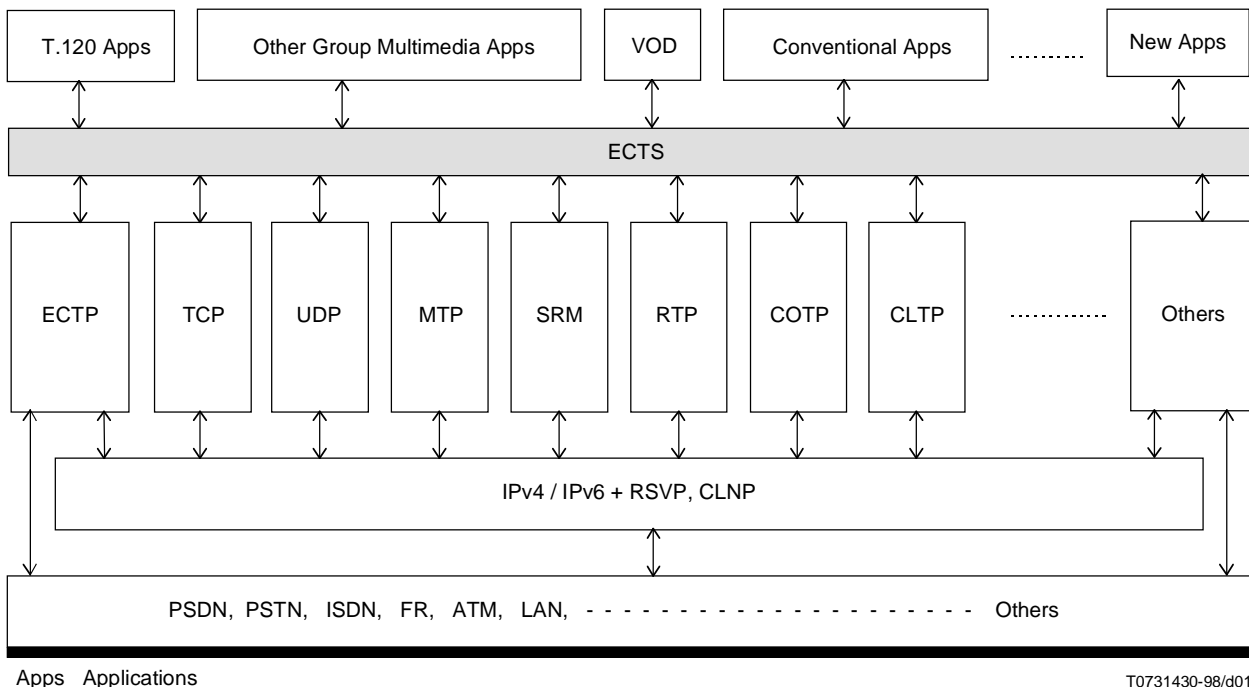


Figure Intro. 1 – Architectural block diagram for ECTS

**INTERNATIONAL STANDARD****ITU-T RECOMMENDATION****INFORMATION TECHNOLOGY –  
ENHANCED COMMUNICATIONS TRANSPORT SERVICE DEFINITION****1 Scope**

This Recommendation | International Standard defines in an abstract way the externally visible service provided by the Transport Layer in terms of:

- a) the primitive actions and events of the service;
- b) the parameter data associated with each primitive action and event;
- c) the relationship between, and the valid sequences of, these actions and events.

The service defined in this Recommendation | International Standard is that which is provided by the Enhanced Communications Transport Protocol (in conjunction with the Network Service) and which may be used by any application protocol. The service can also be provided by other protocols possibly each supporting a subset of the services defined herein.

The primitives specified in this Recommendation | International Standard support a connection-mode service and a connectionless service. In some cases of connectionless-mode service supporting enhanced communications, certain operations may also be necessary prior to the commencement of data transfer, e.g. agreement on quality of service.

For the data transfer phase of either connection-mode or connectionless-mode services, there may be a range of data-ordering characteristics.

No implication is made in this Recommendation | International Standard regarding the inclusion or exclusion of any of the above characteristics given the service primitives specified herein.

**2 Normative references**

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

**2.1 Identical Recommendations | International Standards**

- ITU-T Recommendation X.200 (1994) | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection - Basic Reference Model: The Basic Model*.
- ITU-T Recommendation X.210 (1993) | ISO/IEC 10731:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: Conventions for the definition of OSI services*.
- ITU-T Recommendation X.214 (1995) | ISO/IEC 8072:1996, *Information technology – Open Systems Interconnection – Transport service definition*.
- ITU-T Recommendation X.641 (1997) | ISO/IEC 13236:1998, *Information technology – Quality of Service: Framework*.
- ITU-T Recommendation X.802 (1995) | ISO/IEC TR 13594:1995, *Information technology – Lower layers security model*.