INTERNATIONAL STANDARD

# ISO/IEC 8481

Second edition
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# Information technology — Telecommunications and information exchange between systems — DTE to DTE direct connections

*Technologies de l'information — Télécommunications et échange d'information entre systèmes — Connexions directes de DTE à DTE*


Reference number
ISO/IEC 8481:1996(E)

# 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 8481 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology, Telecommunications and information exchange between systems.*

This second edition cancels and replaces the first edition (ISO 8481:1986), which has been technically revised.

Annex A of this International Standard is for information only.

## Introduction

This International Standard provides for the interconnection of Data Terminal Equipment (DTE) without any signal conversion, whereby a DTE is not attached to a Data Circuit-terminating Equipment (DCE), this being part of a telecommunication facility.

The desired DTE to DTE direct connection may be totally located at the user's premises. The aim is to relate these interconnections to the elements of the ITU-T and ISO/IEC standardised DTE/DCE interfaces, in order to avoid equipment proliferation.

The normative part of this standard provides for interconnection for both asynchronous and synchronous transmission, using CCITT Recommendation X.24 interchange circuits, including circuit X for synchronous transmission, and using ITU-T Recommendation V.11 electrical characteristics. An informative annex provides guidance for other cases of interconnection that, though acceptable under limited conditions, cannot be recommended for general use. These alternatives include timing arrangements for synchronous transmission, not reliant on circuit X being provided in both DTEs with ITU-T Recommendation V.11 electrical characteristics.

The informative annex does not cover direct connection between ISDN terminal equipments (type TE1) for which the complexity in the framing of the transmitted signal is such that no general method of interconnection can be recommended.

# Information technology - Telecommunications and information exchange between systems - DTE to DTE direct connections

## 1 Scope

This International Standard describes an arrangement for interconnection of Data Terminal Equipment (DTE), without intermediate Data Circuit-terminating Equipment (DCE), in terms of electrical, mechanical, and functional characteristics. This International Standard applies to DTEs with interface circuits standardised in CCITT Recommendation X.24 for transmission over public data networks. The interconnections are restricted to point-to-point connections.

NOTE - The extension to multipoint configurations is at present under study and would use electrical characteristics according to ISO/IEC 8482 - Information Technology - Telecommunications and Information Exchange between Systems - Twisted pair Multipoint interconnection.

This International Standard applies to DTEs which employ the balanced electrical characteristics of ITU-T V.11 for data signalling rates up to 10 Mbit/s.

The interconnection may be used for start-stop or synchronous transmission. For synchronous transmission, this International Standard applies to DTEs which use circuit X - DTE transmit element timing - and circuit S - Signal element timing - (see clause 5).

An informative annex provides information for the interconnection of DTEs with interface circuits according to ITU-T Recommendation V.24 or with electrical characteristics according to ITU-T Recommendations V.10 or V.28.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4903:1989, *Information technology - Data communication - 15-pole DTE/DCE interface connector and contact number assignments.*

ITU-T Recommendation V.11 (1994)[1)], *Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s.*

CCITT Recommendation X.24 (1989), *List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) on public data networks (PDN).*

1) Previously CCITT Recommendation.