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Australian Standard®

DATA COMMUNICATION—ARRANGEMENTS FOR DTE TO DTE PHYSICAL CONNECTION USING V.24 AND X.24 INTERCHANGE CIRCUITS (ISO/TR 7477)

This Australian Standard was prepared by Committee IS/1, Information Processing Systems. It was approved on behalf of the Council of the Standards Association of Australia on 27 October 1987 and published on 1 December 1987.

The following interests are represented on Committee IS/1:

Australian Association of Permanent Building Societies

Australian Bankers' Association

Australian Bureau of Statistics

Australian Computer Equipment Manufacturers Association

Australian Computer Society

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Australian Computing Services Association

Australian Information Industry Association

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PREFACE

This Standard was prepared by the Association's Committee on Information Processing Systems. It is identical with and has been reproduced from International Standard ISO/TR 7477—1985; drawn up by ISO TC 97, Information Processing Systems.

This Standard describes various arrangements for the interconnection of Data Terminal Equipment (DTE), without intermediate Data Circuit-terminating Equipment (DCE), in terms of electrical, mechanical, and functional characteristics.

The Standard applies to DTEs with interface circuits standardized in CCITT Recommendation V.24 for data transmission over telephone networks or with interface circuits standardized in CCITT Recommendation X.24 for transmission over public data networks.

The interconnections are restricted to point-to-point connections.

This Standard applies primarily to DTEs which employ the balanced electrical characteristics of CCITT Recommendation V.11 (X.27) for data signalling rates up to 10 Mbit/s. Additionally, it may be applied to DTEs employing the unbalanced electrical characteristics of CCITT Recommendation V.10 (X.26) for data signalling rates up to 100 kbit/s and of CCITT Recommendation V.28 for data rates below 20 kbit/s. Interworking between a DTE employing V.10 (X.26) and a DTE employing V.11 (X.27) or with a DTE employing V.28 is permitted.

The Standard is one of a series of Open Systems Interconnection (OSI) Standards which are currently under development or in the course of publication. Since OSI Standards are developmental, there may be some minor difficulties encountered in their implementation. For this reason, SAA will be providing a limited interpretation service to co-ordinate and disseminate information concerning difficulties which are identified in using this Standard.

For the purpose of this Australian Standard, the text of the ISO Standard given herein should be modified as follows:

(a) *Terminology.* The words 'Australian Standard' should replace the words 'International Standard' wherever they appear.

(b) *Cross-references.* The references to International Standards should be replaced by references to Australian Standards as follows:

Reference to International Standard	*Appropriate Australian Standard*
ISO 2110, Data Communication—25-pin DTE/DCE interface connector and pin assignments.	AS 2748, Data Communication—25-pin DTE/DCE interface connector and pin assignments.
ISO 4902, Data Communication—37-pin and 9-pin DTE/DCE interface connectors and pin assignments.	AS XXXX, Data Communication—37-pin and 9-pin DTE/DCE interface connectors and pin assignments.
ISO 4903, Data Communication—15-pin DTE/DCE interface connector and pin assignments.	No Australian equivalent.
CCITT Recommendations.	No Australian equivalents.

Contents

		Page
0	Introduction	5
1	Scope and field of application	6
2	References	6
3	Interconnection configurations	6
4	Interchange circuit requirements	7
5	Timing alternatives	11
6	Use of control procedures	11

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Data communication — Arrangements for DTE to DTE physical connection using V.24 and X.24 interchange circuits

Transmission des donnèes—Arrangements pour la connexion physique ETTD à ETTD utilisant des circuits de jonction V.24 et X.24

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

The main task of ISO technical committees is to prepare International Standards. In exceptional circumstances a technical committee may propose the publication of a technical report of one of the following types:

— type 1, when the necessary support within the technical committee cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development requiring wider exposure;

— type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical reports are accepted for publication directly by ISO Council. Technical reports types 1 and 2 are subject to review within three years of publication, to decide if they can be transformed into International Standards. Technical reports type 3 do not necessarily have to be reviewed until the data they provide is considered no longer valid or useful.

ISO/TR 7477 was prepared by Technical Committee ISO/TC 97, *Information processing systems.*

The reasons which led to the decision to publish this document in the form of a technical report type 2 are explained in the Introduction.

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0 Introduction

Consideration has been given to the existing DTE/DCE interface specifications which provide the mechanical, electrical, functional and procedural characteristics for the physical interconnection of DTEs to modems in telephone networks (CCITT V-series Recommendations) or to termination units of data networks (CCITT X-series Recommendations); a unique ISO requirement exists to further define the direct interconnection of such DTEs without intervening telecommunication facilities.

Also, in the DTE to DTE physical connection, the distance of interconnection may be considerably greater when compared with the usual short telephone/data network interconnections; an additional option to permit the alternate use of balanced type electrical characteristics is therefore required.