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SUPERSEDED BY:
AS 2805.1-1997

AS 2805.1—1991

Australian Standard®

Electronic funds transfer—Requirements for interfaces

Part 1: Communications

STANDARDS AUSTRALIA

This Australian Standard was prepared by Committee IT/5, Financial Transaction Systems. It was approved on behalf of the Council of Standards Australia on 9 November 1990 and published on 28 March 1991.

The following interests are represented on Committee IT/5:

Australian Association of Permanent Building Societies

Australian Bankers Association

Australian Electrical and Electronics Manufacturers Association

Australian Federation of Credit Union Leagues

Australian Information Industry Association

Australian Institute of Petroleum

Life Insurance Federation of Australia

National Card Issuers

National Network Operators

Reserve Bank of Australia

Retail Traders Associations of Australia

Software and Services Industry Federation of Australia

Telecom Australia

This Standard was issued in draft form for comment as DR 87289.

AS 2805.1—1991

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First published as AS 2805.1—1985.
Second edition 1991.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY NSW
ISBN 0 7262 6650 7

PREFACE

This Standard was prepared by the Standards Australia Committee on Electronic Funds Transfer to supersede AS 2805, Part 1—1985, Communications interface and data representation. The Standards in the AS 2805 series are as follows:

Part 1—Communications

Part 2—Message structure, format and content

Part 3—PIN management and security

Part 4—Message authentication

Part 5—Data encryption algorithm

Part 6.1—Key management—Principles

Part 6.2—Key management—Transaction keys

Part 6.3—Key management—Session keys—Node to node

Part 6.4—Key management—Session keys—Terminal to acquirer

Part 7—Point of service message content

Part 8—Financial institution message content

It should be noted that in this AS 2805 series of Standards, definitions are specific to the Part in which they appear.

This Standard has been revised in the light of experience gained by existing providers of Electronic Funds Transfer at Point of Service (EFTPOS) systems and subsequent international developments. It is not intended to invalidate existing EFTPOS systems, but to provide a formal specification for the standardization of future EFTPOS systems.

This Standard differs from the previous edition in that it is written in the light of the evolving Open Systems Interconnection (OSI) Standards, which encompass the protocols necessary for intercommunication between heterogeneous computer systems. In particular, this Standard replaces the non-OSI protocols specified in the previous version with standard OSI protocols that perform similar functions. There is no difference in difficulty of implementation of the OSI and non-OSI protocols involved, and the slightly lower efficiency of bit usage of the OSI Connectionless Network protocol is not generally significant. The OSI Connectionless Network protocol and the similar Internetwork protocol are the most widely used connectionless network protocols in the world. The OSI Connectionless Network protocol has been chosen as part of the United States and Australian Government OSI profiles for requirements for Government software purchases. The requirement became mandatory for the United States Government in August, 1990.

The major impact of this changed approach has been revision of the functions of the network layer. In particular, a protocol has been added in the network layer that—

- retains the capability of AS 2805.1—1985 to multiplex multiple transactions onto single real or virtual network level circuits; and

- retains the capability of AS 2805.1—1985 to route messages over a variety of network implementations;

while adding features that—

- allow the use of the Australian Standard on network addressing, AS 2994/Supp 2 (ISO 8348/ASS 2);

- allow removal of unduly old messages;

- provide for error detection; and

- allow implementations with requirements consistent with those of other connectionless applications.

Appendix Z contains a section on data representation. This Appendix will be superseded when parts of this Standard covering the presentation and application layers are developed. It is numbered to allow the addition of new appendices in a logical sequence.

CONTENTS

FOREWORD

This Standard addresses special requirements for the use of communication networks that apply between Electronic Funds Transfer system terminals and application nodes. It does not address network level requirements for node to node communication as existing general purpose Standards adequately cover such cases.

Care has been taken to allow for the greatest possible flexibility in the implementation of the network and user functions and the construction of this Standard is such as to allow multiple choices in sub-network implementation. This permits networks exhibiting a range of performance and cost to be realized and provides for orderly and timely adoption of new technology as it becomes available.

Because of the new requirements for addressing and internetwork protocols, special network implementations are not required, and system implementations are not constrained to using an addressing scheme designed to suit a special network architecture.

This Standard also includes a number of items that are noted for further study. Generally they are not able to be completed at this time because the underlying Standards are not finalized.

STANDARDS AUSTRALIA

Australian Standard

Electronic funds transfer—Requirements for interfaces

Part 1: Communications

1 SCOPE This Standard defines the communications services provided for Electronic Funds Transfer (EFT) applications. It specifies common communication interfaces by which electronic messages relating to EFT services may be exchanged between terminals and application nodes. Services supplied by financial service providers to their customers or clients are not the subject of this Standard.

2 REFERENCED AND RELATED DOCUMENTS

2.1 Reference documents The following documents are referred to in this Standard.

AS
1189 Data processing—Vocabulary
1189.9 Part 9: Data communication (ISO 2382:9)

1776 Information processing—7-bit coded character set for information exchange (ISO 646)

2571 Information processing systems—Data communications—High-level data link control procedures elements of procedures

2572 Information processing—Data communications—High-level data link control procedures—Frame structure

2748 Data communication—25-pin DTE/DCE interface connector and pin assignments

2751 Information processing systems—High-level data link control procedures—Consolidation of classes of procedures (ISO 7809)

2777 Information processing systems—Open Systems Interconnection—Basic reference model (ISO 7498)

2805 Electronic funds transfer—Requirements for interfaces
2805.2 Part 2: Message structure, format and content

2994 Information processing systems—Data communications—Network service definition
2994/Supp 1 Supplement 1—Network layer addressing (ISO 8348/ADD 2)

3512 Information processing systems—Data communication—High-level data link control procedures—Description of the 1984 X.25 LAPB-compatible DTE data link procedures (ISO 7776)

3612 Data communication—37-pin and 9-pin DTE/DCE interface connectors and pin assignments (ISO 4902)

3621 Information processing systems—Data communications—X.25 packet level protocol for data terminal equipment (ISO 8208).

3682 Information processing systems—data communications—Protocol for providing the connectionless-mode network service (ISO 8473)

ISO
8473/ADD1 Information processing systems—Data communications—Addendum to ISO 8473 covering provision of the connectionless-mode sub-network service

8802 Information processing systems—Local area networks

CCITT
V.22 1200 bits per second duplex modem standardized for use in the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits.

V.22bis 2400 bits per second duplex modem using the frequency division technique standardized for use on the general switched telephone network and on point-to-point 2-wire leased telephone-type circuits

V.24 List of definitions for interchange circuits between data terminal equipment and data circuit-terminating equipment

V.28 Electrical characteristics for unbalanced double-current interchange circuits

V.29 9600 bits per second modem standardized for use on point-to-point 4-wire leased telephone-type circuits