AS 14813.6(Int)—2001
ISO/TR 14813-6:2000
(Expires 5 May 2003)

Interim Australian Standard™

Transport information and control systems—Reference model architecture(s) for the TICS sector

Part 6: Data presentation in ASN.1

Standards Australia

This Interim Australian Standard was prepared by Committee IT-023, Transport Information and Control Systems. It was approved on behalf of the Council of Standards Australia on 21 March 2001 and published on 5 May 2001.

The following interests are represented on Committee IT-023:

Australian Automobile Association

Australian Bus and Coach Association

Australian Electrical and Electronic Manufacturers Association

Australian Information Industry Association

AUSTROADS

Consumers Federation of Australia

Department of Transport and Regional Development (Australia)

Federal Chamber of Automotive Industries

ITS Australia

Ministry of Transport New Zealand

Telstra Corporation Limited

University of Auckland (New Zealand)

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 99546.

Interim Australian Standard™

Transport information and control systems—Reference model architecture(s) for the TICS sector

Part 6: Data presentation in ASN.1

First published as AS 14813.6(Int)—2001.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3862 1

PREFACE

This Australian Interim Standard was prepared by Joint Standards Australia/Standards New Zealand Committee IT-023 Transport Information and Control Systems.

There was a consensus among the representatives on the Joint Committee to produce it as an Australian Standard. This Interim Standard is identical with and has been reproduced from ISO/TR 14813-6:2000, *Transport information and control systems—Reference model architecture for the TICS sector*, Part 6: *Data presentation in ASN.1*.

The objective of this Interim Standard is to give designers of transport information and control systems a specification to adopt ASN.1 as its normal syntax notation.

This Interim Standard is Part 6 of AS 14813, *Transport information and control systems—Reference model architecture(s) for the TICS sector*, which will be published as Interim Standards as follows:

Part 1: TICS fundamental services
Part 2: Core TICS reference architecture
Part 3: Example elaboration
Part 4: Reference model tutorial
Part 5: Requirements for architecture description in TICS Standards
Part 6: Data presentation in ASN.1 (this Standard)

Standards Australia invites comment on this Interim Standard from persons and organizations concerned with the subject. The date for expiry of comment is 5 May 2003 at which time (or earlier) this Interim Standard will be confirmed, withdrawn or revised in the light of comments received.

During the life of this document the Committee will monitor all comment as it is received.

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

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

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this International Standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

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	
8824	Information technology—Abstract syntax notation one (ASN.1)	8824	Information technology—Abstract syntax notation one (ASN.1)
8824-1	Part 1: Specification of basic notation	8824.1	Part 1: Specification of basic notation
8824-2	Part 2: Information object specification	8824.2	Part 2: Information object specification
8824-3	Part 3: Constraint specification	8824.3	Part 3: Constraint specification
8824-4	Part 4: Parameterization of ASN.1 specifications	8824.4	Part 4: Parameterization of ASN.1 specifications
8825	Information technology—ASN.1 encoding rules	8825	Information technology—ASN.1 encoding rules
8825-1	Part 1: Specification of basic encoding rules (BER), Canonical encoding rules (CER) and distinguished encoding rules (DER)	8825.1	Part 1: Specification of basic encoding rules, canonical encoding rules and distinguished encoding rules
8825-2	Part 2: Specification of packed encoding rules (PER)	8825.2	Part 2: Specification of packed encoding rules

ISO/IEC		AS/NZS	
9834	Information technology— Open Systems Interconnection— Procedures for the operation of OSI registration authorities	4153	Information technology— Open Systems Interconnection— Procedures for the operation of OSI registration authorities
99834-1	Part 1: General procedures	4153.1	Part 1: General procedures

CONTENTS

Page

AUSTRALIAN STANDARD

Transport information and control systems — Reference model architecture(s) for the TICS sector — Part 6: Data presentation in ASN.1

1 Scope

1.1 This document establishes the requirement that ASN.1 shall be the normal syntax notation to be used in Standards in the TICS Sector, and to provide a common message form for such ASN.1 based data elements, such that reference to the relevant TICS ISO Standard may be achieved. This Standard provides guidance as to the usage of ASN.1 within the TICS Sector, and makes provision for other extant Standardised syntax notations (such as EDIFACT).

1.2 This document is designed to provide an 'enabling' structure for use in the TICS/RTTT sector. It enables users of ASN.1 structures to reference specific Standards wherein specific data messages (and their syntax notation) are determined. The use of a Standard form of notation is designed to allow interoperability between different commercial systems, and to allow migration of data to other systems, and to later generations of systems.

1.3 This standard notation provides methods of identification of the relevant Standard in which a TICS message, expressed in ASN.1 notation, is described, and thereby enables understanding and interpretation of the message.

1.4 Vision statement. This document envisions a low overhead and minimum maintenance means of identifying the Standard of all ASN.1 message structures in an interoperable environment within the TICS Sector.

1.5 Mission statement. This document is to provide guidance to identify the relevant Standard wherein a particular ASN.1 message may be understood and used.

1.6 This document is procedural in nature affecting data presentation in ASN.1. As such it is concerned only with data architecture, and the whole content of the document falls into this category. Consideration of other architectural aspects as such, are therefore not appropriate in this document.

1.7 Specific implementation requirements, other than those determined in the syntax notations identified above, are beyond the scope of this document.

This document also provides a means where particular sector requirements, or existent Standards, that require particular message forms that have traditionally been expressed in other notations (e.g. EDIFACT), may be referenced, with the purpose of actual usage from a TICS Sector application. Thus it presents an unambiguous system for identifying all the different data types that, in such a way that it may easily be interpreted to/from other notations where appropriate.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/TR 14813. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/TR 14813 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.