

Australian Standard™

**Information technology— Specification
of data value domains**

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PREFACE

This Standard was prepared by the Standards Australia Committee IT-027, Data Management and Interchange.

This Standard is identical with, and has been reproduced from, ISO/IEC TR 15452:2000, *Information technology—Specification of data value domains*.

The objective of this Standard is to provide identification, specification, development and reuse of enumerated, bounded data value domains for data elements to facilitate electronic data interchange and data sharing for use by electronic commerce and database designers.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO/IEC		Australian Standard	
11179	Information technology— Specification and standardization of data elements	11179	Information technology—Metadata registries (MDR)
11179-3	Part 3: Basic attributes of data elements	11179.3	Part 3: Registry metamodel and basic attributes
11179-4	Part 4: Rules and guidelines for the formulation of data definitions	11179.4	Part 4: Formulation of data definitions
11179-5	Part 5: Naming and identification principles for data elements	11179.5	Part 5: Naming and identification principles for data elements
11179-6	Part 6: Registration of data elements	11179.6	Part 6: Registration

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INTRODUCTION

A standardized process of definition and application of data value domains will assist in the sharing and reuse of information across national and international organizations, especially with regard to electronic commerce such as medical commerce and EDI applications.

This Technical Report addresses practical issues encountered in documenting and sharing data. It facilitates the exchange of data values among organizations that use different names, and possibly different languages for equivalent data values.

As new generations of information interchange tools are developed, new technology will enable data to be located faster and more efficiently. Ontologies and other structures for meanings of data elements and data element values will need ways of relating values across these structures. New constructs such as the Global Information Infrastructure must be accommodated. Sets of reusable domain values, with unique identifiers assigned to each value, will provide a mechanism for facilitating this development. This philosophy encourages the assembly of data elements from reusable parts and facilitates the elimination of language barriers.

AUSTRALIAN STANDARD

Information technology — Specification of data value domains**1 Scope**

This Technical Report covers the identification, specification, development and reuse of enumerated, bounded data value domains for data elements. A data value domain in this context refers to the possible valid values of a data element concept and its associated data elements. An enumerated domain is one for which all values can be explicitly expressed in a structured or unstructured set. A bounded domain implies knowledge of the upper and lower limits of the value set.

Major issues addressed include:

Specifying attributes of data value domains and, where applicable, each value within the domain; including assigning a unique identifier to each value in the value domain.

Describing attributes for "conceptual values" of a data element concept domain and "represented values" for a data element derived from it.

Defining reuse of value domains which can be defined and specified in a standardized way and can be applied as components of many data elements.

This Technical Report complements and extends the attributes of data elements specified in ISO/IEC 11179, *Information technology - Specification and standardization of data elements*, especially *Part 3: Basic attributes of data elements*.

This Technical Report is meant to assist users of ISO/IEC 11179. This series of standards is currently undergoing significant revision. When this revision work is completed, the content of this Technical Report will be either amended or integrated into the 11179 series of standards.

2 References

ISO/IEC 11179-3:1994, *Information technology - Specification and standardization of data elements - Part 3: Basic attributes of data elements*.

ISO/IEC 11179-4:1995, *Information technology - Specification and standardization of data elements - Part 4: Rules and guidelines for the formulation of data definitions*.

ISO/IEC 11179-5:1997, *Information technology - Specification and standardization of data elements - Part 5: Naming and identification principles for data elements*.

ISO/IEC 11179-6, *Information technology - Specification and standardization of data elements - Part 6: Registration of data elements*.

3 Terms and definitions

For the purposes of this Technical Report, the following definitions apply.

3.1 attribute: A characteristic of an object or entity.

3.2 conceptual domain: A set of possible valid value meanings of a data element expressed without representation.