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**Information technology —
Metadata Interoperability and Bindings (MDIB) —
Part 80: Common provisions for profiles**

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Foreword

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ISO/IEC 20944-80 was prepared by Technical Committee ISO/IEC JTC1, *Information Technology*, Subcommittee SC32, *Data Management and Interchange*.

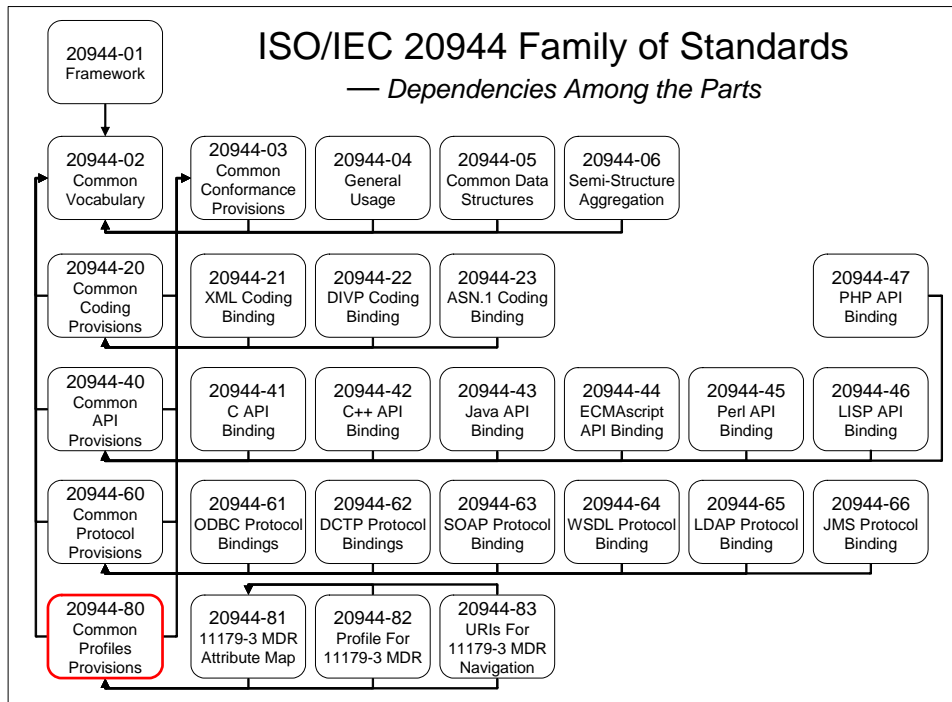
ISO/IEC 20944 consists of the following parts, under the general title *Information technology — Metadata Interoperability and Bindings (MDIB)*:

- *Part 01: Framework*
- *Part 02: Common vocabulary*
- *Part 03: Common provisions for conformance*
- *Part 04: Generic usage*
- *Part 05: Common data structures and services*
- *Part 06: Semi-structured aggregation*
- *Part 20: Common provisions for coding bindings*
- *Part 21: XML coding binding*
- *Part 22: DIVP coding binding*
- *Part 23: ASN.1 coding binding*
- *Part 40: Common provisions for application programming interface (API) bindings*
- *Part 41: C API binding*

- *Part 42: C++ API binding*
- *Part 43: Java API binding*
- *Part 44: ECMAScript API binding*
- *Part 45: Perl binding*
- *Part 46: LISP binding*
- *Part 47: PHP binding*
- *Part 60: Common provisions for protocol bindings*
- *Part 61: ODBC protocol binding*
- *Part 62: DCTP protocol binding*
- *Part 63: SOAP protocol binding*
- *Part 64: WSDL protocol binding*
- *Part 65: LDAP protocol binding*
- *Part 66: JMS protocol binding*
- *Part 80: Common provisions for profiles*
- *Part 81: Attribute mapping for 11179-3 metadata registry metamodel*
- *Part 82: Profile for 11179-3 metadata registry metamodel*
- *Part 83: Uniform Resource Identifier (URI) suffixes for 11179-3 metadata registry metamodel navigation*

Introduction

The following diagram shows the organization of the ISO/IEC 20944 family of standards with this Part highlighted.



Organization of ISO/IEC 20944 family of standards.

This Part of ISO/IEC 20944 concerns provisions that are common to the profiles, i.e., Parts 80 to 89. The profiles have commonality in their specification of subsets, supersets, and applications of the 20944 standards.

Information technology — Metadata Interoperability and Bindings (MDIB) — Part 80: Common provisions for profiles

Editor's Note: Each part of 20944 is marked with a common sequence number ("[Release Sequence #N]") to indicate they are synchronized and harmonized among themselves. The mark "[Release Sequence #N]" does *not* imply that there are a complete set of N-1 prior drafts for any particular Part.

1 Scope

This part specifies the common provisions for profiles using the 20944 family.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC Guide 2, *Standardization and related activities — General vocabulary*

ISO/IEC TR 10000-1, *Information technology — Framework and taxonomy of International Standardized Profiles — Part 1: General principles and documentation framework*

ISO/IEC 20944-01:—¹, *Information technology — Metadata Interoperability and Bindings (MDIB) — Overview*²

ISO/IEC 20944-02:—³, *Information technology — Metadata Interoperability and Bindings (MDIB) — Common vocabulary*

3 Terms and definitions

For the purposes of this document, the terms, abbreviations, and definitions given in Part 02 and the following apply.

¹ To be published.

² The current drafts of the 20944 series are available at "<http://metadata-standards.org/20944>".

³ To be published.

3.1

base standard

approved standard used for creating derived standards [adapted from ISO/IEC TR 10000-1]

3.2

implementation conformance statement

ICS

statement made by the supplier of an implementation or IT system claimed to conform to one or more specifications, stating which capabilities have been implemented, specifically including the relevant optional capabilities and limits [ISO/IEC TR 10000-1]

3.3

international standardized profile

ISP

internationally agreed-to, harmonized normative document which describes one or more profiles [adapted from ISO/IEC TR 10000-1]

3.4

IT system

set of IT resources providing services at one or more interfaces [ISO/IEC TR 10000-1]

3.5

profile

set of one or more base standards and/or ISPs, and, where applicable, the identification of chosen classes, conforming subsets, options and parameters of those base standards, or ISPs necessary to accomplish a particular function [ISO/IEC TR 10000-1]

NOTE ISPs may contain normative references to specifications other than International Standards; see document JTC1/N4047: *The Normative Referencing of Specifications other than International Standards in JTC1 International Standardized Profiles — Guidelines for ISP Submitters*.

4 Developing and using profiles

A profile is defined in ISO/IEC TR 10000-1 as a "set of one or more base standards and/or ISPs, and, where applicable, the identification of chosen classes, conforming subsets, options and parameters of those base standards, or ISPs necessary to accomplish a particular function".

Profiles reference other standards. References may be dated or undated.

4.1 General principles of a profile

The general principles of a profile are specified in ISO/IEC TR 10000-1, subclause 6.3.1:

6.3.1 General Principles

A profile makes explicit the relationships within a set of base standards used together (relationships which can be implicit in the definitions of the base standards themselves), and may also specify particular details of each base standard being used. A profile may refer to other International Standardized Profiles in order to make use of the functions and interfaces already defined by them, and thus limit its own direct reference to base standards. It follows that a profile

a) shall restrict the choice of base standard options to the extent necessary to maximise the probability of achieving the objective of the profile; for example to facilitate interworking between IT systems, or porting an application between them, where they have implemented different selections of options of the profile.

Thus a profile may retain base standard options as options of the profile provided that they do not affect interworking or portability.

b) shall not specify any requirements that would contradict or cause non-conformance to the base standards to which it refers;

c) may contain conformance requirements which are more specific and limited in scope than those of the base standards to which it refers. Whilst the capabilities and behaviour specified in a profile will always be valid in terms of the base standards, a profile may exclude some valid optional capabilities and optional behaviour permitted in those base standards.

Thus conformance to a profile implies by definition conformance to the set of base standards which it references. However, conformance to that set of base standards does not necessarily imply conformance to the profile.

While the last paragraph above summarizes one important aspect of interoperability and compatibility (i.e., conformance to the profile implies conformance to the base standard), from the perspective of the developer of profile, a more important interoperability and compatibility issue is item b above: [a profile] shall not specify any requirements that would contradict or cause non-conformance to the base standards to which it refers. This requirement has a profound effect upon profiles of data interchange standards because profiles inherit certain *implicit* requirements from base standards.

4.2 Main elements of a profile definition

The main elements of a profile definition are specified in ISO/IEC TR 10000-1, subclause 6.3.2:

6.3.2 Main elements of a profile definition

The definition of a profile shall comprise the following elements:

a) a concise definition of the scope of the function for which the profile is defined and the user requirements which it will satisfy, which is capable of being used as an Executive Summary of the profile;

b) an illustration of the scenario within which the profile is applicable, giving, where possible, a diagrammatic representation of the IT systems, applications and interfaces which are relevant;

c) normative reference to a single set of base standards or ISPs, including precise identification of the actual texts of the base standards or ISPs being used; also identification of any approved amendments and technical corrigenda (errata), conformance to which is identified as potentially having an impact on achieving interoperability or portability using the profile;

d) specifications of the application of each referenced base standard or ISP, stating the choice of classes or conforming subsets, and the selection of options, ranges of parameter values, etc, and reference to registered objects;

e) a statement defining the requirements to be observed by IT systems claiming conformance to the profile, including any remaining permitted options of the referenced base standards or ISPs, which thus become options of the profile;

f) if relevant, a reference to the specification of conformance tests for the profile;

g) informative reference to any amendments or technical corrigenda to the base standards referenced in the profile, which have been determined to be not applicable to the profile, and to any other relevant source documents

4.3 Derived standards

A derived standard is a normative document that has provisions in common with a base standard. In comparison to profiles, a derived standard makes no requirements concerned the relationship between conformance to the base standard and conformance to the derived standard (or vice versa). This an implementation that conforms to the derived standard is not required to conform to the base standard (and vice versa).

4.4 Copy/paste vs. incorporation via normative reference

From the perspective of standards interpretation and the meaning of a profile, there is no difference between copying and pasting normative wording into the profile vs. incorporating provisions via normative reference (i.e., reference to Clause, subclause, etc.). This non-distinction applies to both profiles and derived standards.

The decision of copy/paste vs. incorporation via normative reference is affected by standards maintenance and the availability of base standards. Generally, incorporation via normative reference is preferred because (1) it minimizes the editing and review work of the profile or derived standard, (2) the maintenance is (largely) the responsibility of the committee that developed the base standard, (3) technical corrigenda and amendments of the base standard may be incorporated into the profile or derived standard without modifying (and balloting) the new document. In some cases copy/paste may be preferable, such as (1) when, due to the structure of the base standard, the normative referencing is complex or impractical, (2) when the normative wording in the base document may be unavailable, such as references to specifications other than international standards (see document JTC1/N4046 and JTC1/N4047).