

INTERNATIONAL
STANDARD

ISO/IEC
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AMENDMENT 1
1994-12-15

**Information technology — Computer graphics —
Metafile for the storage and transfer of picture
description information —**

Part 3:
Binary encoding

AMENDMENT 1: Rules for profiles

*Technologies de l'information — Infographie — Métafichier de stockage et de
transfert des informations de description d'images —*

Partie 3: Codage binaire

AMENDEMENT 1: Règles pour profils



Reference number
ISO/IEC 8632-3:1992/Amd.1:1994(E)

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 1 to International Standard ISO/IEC 8632-3:1992 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee 24, *Computer graphics and image processing*.

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Information technology — Computer graphics — Metafile for the storage and transfer of picture description information —

Part 3:
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AMENDMENT 1: Rules for profiles

Page iii
Add to Contents:

"10 Encoding rules, proforma, and Model Profile	
10.1 General principles	
10.1.1 Encodings	
10.1.2 Metafile defaults	
10.2 Profile Proforma tables	"

Clause 9, page 59
Add a new sentence before the first sentence:

"Conformance of metafiles to ISO/IEC 8632 is defined in terms of profiles."

Change the first sentence to read:

"A metafile conforms to this binary encoding if it conforms to a profile and meets the following requirements."

Change the first bullet item to read:

- "— Each metafile element described in this part is coded in the manner described in this International Standard and a profile."

Add a new clause 10 after page 59

"10 Encoding rules, proforma, and Model Profile

10.1 General principles

10.1.1 Encodings

Precisions are defined consistently with the principles of the encodings, not necessarily for inter-encoding translation. Where both considerations might apply, compatibility with the principles of the encoding are considered first and inter-encoding translation second.

10.1.2 Metafile defaults

Clause 8 addresses all elements which have default values. While no profile can change these values, an equivalent effect may be achieved by use of the METAFILE DEFAULTS REPLACEMENT element. Profiles may require that a metafile contain a METAFILE DEFAULTS REPLACEMENT element with well-defined content.

10.1.3 Floating point values

Profiles shall prohibit the values NaN, positive infinity, and negative infinity for ANSI/IEEE 754 floating point numbers (see 5.5). For 32-bit floating point, NaN corresponds to $e=255$ and $f \neq 0$. For 64-bit floating point, NaN corresponds to $e=2047$ and $f \neq 0$. For 32-bit floating point, positive and negative infinity are defined respectively by $s=0$ and $s=1$, with $e=255$ and $f=0$. For 64-bit floating point, positive and negative infinity are defined respectively by $s=0$ and $s=1$, with $e=2047$ and $f=0$.

10.2 Profile Poforma tables

The Profile Proforma is contained in table 12 and table 13. These tables, when completed by the author of the profile, contain the normative specifications of the profile.

The PPF tables have 3 columns:

- The first identifies the element to be addressed.
- The second is the template for the profile writer to complete.
- The third is the completed specification for the Model Profile.

Each element to be addressed comprises a "row" of the table.

The first column of each row contains:

- 1) A unique identifier for that row, T.n.m, indicating that this is row "m" of table "n". For example, row T.12.2 is the second row of table 12 (for the REAL PRECISION element).
- 2) The name of the element for that row, for example, REAL PRECISION.
- 3) The lowest metafile version (v1, v2, or v3) for which each element is defined.
- 4) References to other sections of this clause, for additional normative or informative material.

A second column is the PPF template for profile authors. Each row contains:

- 5) A check box indicating that all specifications for this row for this profile are exactly the same as those for this row in the Model Profile.

- 6) Check boxes to indicate whether the element is required, permitted, or prohibited in metafiles conforming to the profile. If the check box choice is limited, then only the allowable check boxes are given. For example, if the element shall not be prohibited, then the "prohibited" check box is omitted.
- 7) One or more specific specifications which are to be addressed by all profile authors.
- 8) A general category, "Other:", in which profile authors may add any additional specifications which are consistent with the rules for profiles in this clause.

A third column is the Model Profile specification. Each row contains:

- 9) A checked box indicating the element status.
- 10) The specifications of the Model Profile.

The check box to indicate the element status (i.e., required, permitted, or prohibited) shall be consistent with the element status in the PPF completed for part 1 of ISO/IEC 8632.

If the "Same as Model Profile" box is checked for a row, then no further information need be supplied for the profile in that row — all specifications for that row match the Model Profile.

Otherwise, the profile shall have complete information for all column 2 items within a row. It is acceptable in most cases to simply refer to the Model Profile, with the words "as Model Profile".

Rules presented as statements and ending with a semicolon (":"), shall be completed with specific information. In most cases, these rules may be prefaced with "Profiles shall specify...". Rules presented as questions and ending with a question mark ("?"), are optional, and shall be completed with either specific information or the word "none". In most cases, these rules may be prefaced with "Profiles may specify any ...".

The category "Other:" shall be completed with either: the word "none"; or, with specific information.

It is possible that specific information for some items may be too much to fit into the table space provided. In this case, the table entry shall specify (assuming that this is row T.n.m), "see Attachment n.m", and the specification shall be put into an attachment labelled "Attachment n.m".

Profile authors shall complete all required information in the template, column 2 of the PPF tables. Profiles may contain any other specifications, parameter restrictions, etc., unless explicitly prohibited by the rules of this clause and the PPF tables.

Table 12 - Delimiter elements

Element	Specifications - PPF		Specifications - Model Profile	
	Same as Model Profile ☐		Element is: Required ☐ Permitted ☒	
T.12.1			Any restrictions on the parameter value?	
no-op [v1]			Other: <i>None.</i>	
References: 7.2				

Table 13 - Metafile descriptor elements

Element	Specifications - PPF	Specifications - Model Profile
T.13.1 INTEGER PRECISION [v1] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 8, 16, or 32. Other: None.
T.13.2 REAL PRECISION [v1] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Prohibited ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? (1, 16, 16) or (0, 9, 23). Other: None.
T.13.3 INDEX PRECISION [v1] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 8, 16, or 32. Other: None.

Table 13 - Metafile descriptor elements (continued)

Element	Specifications - PPF	Specifications - Model Profile
T.13.4 COLOUR PRECISION [v1] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 8 or 16. Other: None.
T.13.5 COLOUR INDEX PRECISION [v1] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 8 or 16. Other: None.
T.13.6 NAME PRECISION [v2] References: 7.3	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 16 or 32 Other: None.

Table 14 - Control elements

Element	Specifications - PPF	Specifications - Model Profile
T.14.1 VDC INTEGER PRECISION [v1] References: 7.5	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? 16 or 32. Other: None.
T.14.2 VDC REAL PRECISION [v1] References: 7.5	Same as Model Profile ☐ Element is: Required ☐ Permitted ☐ Prohibited ☐ Any restrictions on the parameter value? Other:	Element is: Required ☐ Permitted ☒ Any restrictions on the parameter value? (1, 16, 16) or (0, 9, 32). Other: None.