
**Information technology — Procedure for
registration of escape sequences and
coded character sets**

*Technologies de l'information — Procédure pour l'enregistrement des
séquences d'échappement et des jeux de caractères codés*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 2375 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 2, *Coded character sets*.

This first edition of ISO/IEC 2375 cancels and replaces ISO 2375:1985, which has been technically revised.

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Introduction

International standard coded character sets have been adopted for the interchange of information between information processing systems and within message transmission systems. However, circumstances occur where applications require characters which are not included in a single international standard character code or which are in a character code which is not an international standard.

Provision for additional characters is made by code extension techniques in which the additional coded character sets are identified by escape sequences. The procedures for code extension and the structure and use of escape sequences are fully documented in ISO/IEC 2022, which defines classes of escape sequences, but does not assign specific meanings to individual escape sequences. Instead, it depends on this standard, ISO/IEC 2375, and the associated International Registry, to assign the meanings.

This International Standard specifies the procedures to be followed in preparing and maintaining a register of specific escape-sequence meanings. The register associates escape sequences with specific coded character sets. The purpose of this register is to inform interested parties about coded character sets already developed and of the specific escape sequences assigned to them.

The publication of the register should promote compatibility in international information interchange and avoid duplication of effort in developing application-oriented coded character sets. Registration provides a standardized identifier for a coded character set, but it is not a procedure to standardize a coded character set. Nevertheless, as a matter apart from registration the coded character set may, but need not, be the subject of an international, national, or other standard. When such a standard is prepared after the registration of an escape sequence, it would be appropriate to specify the escape sequence which identifies the coded character set in the standard itself.

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Information technology – Procedure for registration of escape sequences and coded character sets

1 Scope

1.1 This International Standard specifies the procedures to be followed for preparing, maintaining, and publishing a register of escape sequences and of the coded character sets they identify.

1.2 The registration process specified in ISO/IEC 2375 is *not* a procedure for standardization of characters or coded character sets. Organizations that wish ISO and/or IEC to create an international standard for a coded character set or that wish ISO and/or IEC to code additional characters into ISO/IEC 10646 need to follow the ISO/IEC procedures for doing so. In particular,

- Registration of a coded character set according to the procedures specified by this standard implies no commitment by ISO and/or IEC to adopt the coded character set as an ISO/IEC standard.
- The existence of a character in an approved registration does not imply a commitment by ISO and/or IEC to encode that character into ISO/IEC 10646.

1.3 ISO/IEC 2022 describes the escape sequences referenced in this International Standard, except for escape sequences reserved in ISO/IEC 2022 for private use.

1.4 The use of these escape sequences includes code extension, that is, the provision of additional sets of characters, or of additional control functions, in accordance with ISO/IEC 2022.

1.5 An escape sequence registered in accordance with this International Standard serves as an identification of the character, the set of characters, or the control function associated with it in the register.

1.6 The registration itself does not specify the rules in accordance with which a character or character set identified by an escape sequence is to be used. Rather, the registration identifies the documents (for example, standards) which specify such rules.

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 646: 1991, *Information technology – ISO 7-bit coded character set for information interchange*

ISO/IEC 2022: 1994, *Information technology – Character code structure and extension techniques*

ISO/IEC 4873: 1991, *Information technology – ISO 8-bit code for information interchange – Structure and rules for implementation*

ISO/IEC 6429: 1992, *Information technology – Control functions for coded character sets*

ISO/IEC 6937: 2001, *Information technology – Coded graphic set for text communication – Latin alphabet*

ISO/IEC 10646-1: 2000, *Information technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane*

ISO/IEC 10646-2: 2001, *Information technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 2: Supplementary Planes*

ISO/IEC Directives – Procedures for the technical work of ISO/IEC JTC 1

<http://www.jtc1.org/directives/main.htm>

ISO/IEC 2375:2003

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

bit combination

An ordered set of bits used for the representation of characters.

3.2

byte

A bit string that is operated upon as a unit.

3.3

character

A member of a set of elements used for the organization, control, or representation of data.

3.4

coded character set; code

A set of unambiguous rules that establishes a character set and the relationship between the characters of the set and their coded representation.

3.5

code position

That part of a code table identified by its column and row coordinates.

3.6

code table

A table showing the characters allocated to each bit combination in a code.

3.7

combining character

A member of an identified subset of the coded character set intended for combination (a) with the preceding non-combining graphic character, or with a sequence of combining characters preceded by a non-combining character (as, for example, in ISO/IEC 10646), or (b) with the following non-combining graphic character, or with a sequence of combining characters followed by a non-combining character (as, for example, in ISO/IEC 6937).

3.8

combining sequence

A sequence of graphic characters consisting of (a) a non-combining character followed by one or more combining characters (as, for example, in ISO/IEC 10646), or (b) a non-combining character preceded by one or more combining characters (as, for example, in ISO/IEC 6937).

3.9

control function

An action that affects the recording, processing, transmission, or interpretation of data, and that has a coded representation consisting of one or more bit combinations.

3.10

escape sequence

A string of bit combinations that is used for control purposes in code extension procedures. The first of these bit combinations represents the control function ESCAPE.

3.11

graphic character

A character, other than a control function, that has a visual representation normally handwritten, printed, or displayed, and that has a coded representation consisting of one or more bit combinations.

3.12

octet

An ordered sequence of eight bits considered as a unit.

3.13

repertoire

A specified set of characters that are each represented by one or more bit combinations of a coded character set.

4 International Register

4.1 Content of the International Register

The International Register of Coded Character Sets to be used with Escape Sequences ("International Register" or "IR") shall consist of three parts: a set of registrations, mapping tables associated with registrations, and indices to the registrations.

4.2 Format of the International Register

The International Register shall be available in electronic format through the Internet, and optionally on other electronic media. It may also be made available on paper. The mapping tables to ISO/IEC 10646 for the registrations shall be made available in a machine readable format.

4.3 Location of the International Register

The International Register is located on the Internet. Clause 6.3 identifies the Registration Authority and the location of the register.

4.4 Indices to the registrations

The International Register shall contain indices to the registration of coded character sets by

- the registration number
- the escape sequence assigned by the Registration Authority
- the coded character set identifier assigned by the Owner of Origin if provided by the Sponsoring Authority
- the type of coded character set registration
- the coded character set registrations which include a mapping
- other indices as deemed appropriate by the Registration Authority or as requested by the subcommittee concerned with coded character sets

4.5 Reference to an existing registration

A reference to an existing registration should be made by using the prefix "ISO-IR" followed by a SPACE and the registration number.

Examples:

ISO-IR 16

identifies the particular version of ISO/IEC 646 for the Portuguese language registered on 1976-12-30.

ISO-IR 48

identifies the set of control functions registered on 1981-07-15.

4.6 Exception for reference to international and national standards

Reference to an international or national standard in the International Register should be made by using the identifier assigned by ISO/IEC, ISO, or ITU (for international standards) or the national body (for national standards). The registration number should not be used to refer to international or national standards.

Examples:

“ISO/IEC 8859-14” is preferred to “ISO-IR 199”.

“JIS X 0208-1990” is preferred to “ISO-IR 168”.

5 ISO/IEC supervisory body

The ISO/IEC JTC 1 subcommittee concerned with coded character sets (particularly, ISO/IEC 646, ISO/IEC 2022, ISO/IEC 4873, ISO/IEC 6429, and ISO/IEC 10646) has administrative responsibility for this standard and the content of the International Register.

NOTE: At the time of publication, it is subcommittee ISO/IEC JTC 1/SC 2, Coded character sets, which has this responsibility.

6 Registration Authority

6.1 Appointment

6.1.1 The Registration Authority shall be an organization nominated by the ISO/IEC JTC 1 subcommittee concerned with coded character sets and appointed by ISO and IEC to act as the Registration Authority for the purpose of this International Standard.

6.1.2 The Registration Authority shall be an organization actively participating in the work of the subcommittee concerned with coded character sets.

6.2 Responsibilities

6.2.1 The Registration Authority shall maintain the International Register.

6.2.2 The Registration Authority shall manage the execution of the registration procedure, including processing of:

- applications for registration (as specified in Clauses 11, 12, 13, and 14);
- appeals (as specified in Clause 15);
- corrections and revisions to existing registrations (as specified in Clauses 16 and 17);
- withdrawal of existing registrations (as specified in Clause 18).

6.2.3 The Registration Authority shall make the contents of this register available to any interested party. In particular, the contents of this register shall be made available over the Internet.

6.2.4 The Registration Authority shall maintain an up-to-date list of the parties interested in receiving a paper copy of the International Register. New registrations and any other pertinent communication concerning this register shall be sent to all persons or organizations on this list. The Registration Authority may request from time to time that the interested parties confirm their continuing interest in receiving new registrations and may drop from the list those having not confirmed such interest.

6.2.5 The Registration Authority shall maintain a document called “Practice of the Registration Authority” to specify the specific form and presentation requirements for applications for registration (for example, fonts for the code table, terminology, identification of unused positions, etc.), so as to ensure a uniform presentation of all registrations and make comparison between them easier. The “Practice of the Registration Authority” shall be available over the Internet to all interested parties and may also be available in other electronic formats and on paper.

6.2.6 One or more technical representatives of the Registration Authority shall attend the meetings of the subcommittee concerned with coded character sets and of its working group(s) involved with the work on ISO/IEC 646, ISO/IEC 2022, ISO/IEC 4873, ISO/IEC 6429, ISO/IEC 10646, and on other coding standards where required.

6.3 Identity

ISO maintains a list of Maintenance Agencies and Registration Authorities on the Internet at

<http://www.iso.org/mara/> (en)

<http://www.iso.org/mara-fr/> (fr)

The ISO list identifies the Registration Authority and where the Registration Authority has published the International Register on the Internet.

NOTE: In the event that these URLs are changed, the user can search the ISO web site for "Registration Authorities" for the English version, or "organismes d'enregistrement" for the French version.

7 Owner of Origin

7.1 The Owner of Origin is the organization or individual responsible for the development of a coded character set.

7.2 The Owner of Origin has ultimate authority over the content of its coded character sets.

8 Copyright Owner

The Copyright Owner is the organization or individual holding the copyright for the publication that specifies a coded character set.

9 Sponsoring Authority

9.1 Identity

9.1.1 A Sponsoring Authority is an organization that submits applications concerning the meanings of escape sequences to the Registration Authority. For the purposes of this International Standard, Sponsoring Authorities are limited to the following:

- any ISO or IEC technical committee or subcommittee
- any group within the ISO/IEC JTC 1 subcommittee concerned with coded character sets, appointed by the subcommittee for purposes connected with code extension or the use of escape sequences
- any national body of ISO or IEC
- any organization having liaison status with ISO or IEC or with any of their technical committees or subcommittees

9.1.2 A Sponsoring Authority may, but need not, be the Owner of Origin and/or the Copyright Owner.

9.2 Responsibilities

9.2.1 A Sponsoring Authority is responsible for:

- Submission of applications for registration;
- Actions related to approved registrations which it sponsored.

9.2.2 Submission of Applications for Registration

9.2.2.1 A Sponsoring Authority receives proposals concerning the meanings of escape sequences from within its country, countries, or organizations.

9.2.2.2 This International Standard requires only that an application for registration meets the requirements of Clauses 12.3 and 12.4. However, a Sponsoring Authority may specify additional requirements to be met for a proposed registration to receive its support. Such additional requirements are the responsibility of each Sponsoring Authority and not of the Registration Authority.

9.2.2.3 If the Sponsoring Authority is not the Copyright Owner, then the Sponsoring Authority shall obtain copyright permission from the Copyright Owner so that the Registration Authority may reproduce the publication that specifies the coded character set in the International Register if the application for registration is approved. If the application is for registration of an ISO or ISO/IEC standard, this requirement is waived. If the Copyright Owner no longer exists and has no successor organization, this requirement is waived.

9.2.2.4 If a character set proposed for registration is intended for a particular application, the Sponsoring Authority shall obtain the endorsement of the developer of that application to register the coded character set. If the application is for registration of an ISO or ISO/IEC standard, this requirement is waived. If the organization that developed the application either no longer exists or cannot be identified, the requirement is waived.

9.2.2.5 If the Sponsoring Authority changes the description of the coded character set (for example, by redrawing the code table and/or list of character names), the Sponsoring Authority shall obtain the endorsement of the Owner of Origin if the Owner of Origin can be identified and still exists. If the Owner of Origin no longer exists or cannot be identified, then the Sponsoring Authority shall include both the redrawing and the document used as the source for the redrawing in the application.

9.2.2.6 When convenient and applicable, a Sponsoring Authority should prepare a table mapping the characters proposed in the registration to ISO/IEC 10646 equivalents where they exist. (Annex A.2 describes the information to be provided in the mapping table.) The Sponsoring Authority should include the mapping table in the application for registration.

9.2.2.7 A Sponsoring Authority shall prepare an application for registration in the prescribed format in accordance with the "Practice of the Registration Authority" (see Clause 6.2.5), Clause 11 and Annexes A and D, and forward the application to the Registration Authority.

9.2.3 Responsibilities of Sponsoring Authority for its approved registrations

9.2.3.1 A Sponsoring Authority shall announce the outcome of a registration application within its respective country, or countries, or organizations.

9.2.3.2 When a Sponsoring Authority identifies an error or omission in a registration or a mapping, it shall notify the Registration Authority of the error and provide corrected materials so that the Registration Authority may correct the registration.

9.2.3.3 The Sponsoring Authority is responsible for monitoring revisions to ISO/IEC 10646 and submitting a revised mapping table as needed, for example, when characters in a registration are added to ISO/IEC 10646.

9.2.3.4 A Sponsoring Authority may request the Registration Authority to withdraw a registration as specified in Clause 18.

10 The Registration Authority's Joint Advisory Committee

10.1 Role

The Registration Authority's Joint Advisory Committee (RA-JAC)

- advises the Registration Authority on technical matters,
- mediates appeals, and
- evaluates mappings to ISO/IEC 10646.

10.2 Composition

10.2.1 The Registration Authority's Joint Advisory Committee (RA-JAC) shall consist of a technical representative of the Registration Authority and four other members who shall be technical representatives from national bodies on the subcommittee concerned with coded character sets or technical representatives from organizations with a liaison relationship to the subcommittee. The RA-JAC reports to the subcommittee concerned with coded character sets.

10.2.2 The chair of the RA-JAC shall be the representative of the Registration Authority.

10.3 Appointment

10.3.1 The subcommittee concerned with coded character sets shall appoint the members of the RA-JAC.

10.3.2 The subcommittee shall appoint or confirm the members of the RA-JAC at its plenary meetings.

10.4 Responsibilities

10.4.1 The responsibilities of the RA-JAC shall be as follows:

10.4.2 The RA-JAC shall consider appeals received by the Registration Authority (see Clause 15).

10.4.3 The RA-JAC shall act as mediator between the Registration Authority and the appealing party or parties.

10.4.4 For those applications which include a mapping to ISO/IEC 10646, the RA-JAC reviews and validates the mapping. See Clause 13.

10.4.5 The RA-JAC shall not change the mapping provided with an application without the permission of the Sponsoring Authority.

10.4.6 At the request of the Sponsoring Authority, the RA-JAC may provide assistance in preparing a mapping to ISO/IEC 10646. However, the RA-JAC shall not be required to create the mapping. In addition, if a registration application does not include a mapping, the RA-JAC shall not create the mapping.

10.4.7 The RA-JAC shall examine each application that contains a mapping to ISO/IEC 10646 according to Clause 13 prior to circulation to members of the subcommittee concerned with coded character sets, as specified in Clause 12.6.

10.4.8 The RA-JAC, in conjunction with the Sponsoring Authority, shall review comments on the mapping received from the members of the subcommittee concerned with codes and character sets and decide whether to accommodate the comments and if so, how to accommodate them.

11 Application for registration

11.1 Component parts of an application

11.1.1 The Sponsoring Authority shall submit the cover page as specified in Annex A.1.1 for all applications for registration. Only the cover page is required for an application to register an approved ISO or ISO/IEC coded character set standard.

11.1.2 Registration applications, except those for approved ISO or ISO/IEC coded character set standards, require a description of the coded character set (as specified in Annex A.1.2). Registration applications for coding systems not conformant with ISO/IEC 2022 (see Annex B.1) shall include a document describing the coded character set even if the registration will reference a publicly available document to describe the coded character set.

11.1.3 If applicable, the Sponsoring Authority shall submit permissions and endorsements as specified in Clauses 9.2.2.3, 9.2.2.4, and 9.2.2.5.

11.1.4 The Sponsoring Authority may provide a mapping to ISO/IEC 10646 (as specified in Annex A.2) but the provision of such a mapping is optional.

12 Registration procedure

12.1 The Sponsoring Authority shall prepare an application for registration according to Clause 11.

12.2 The Sponsoring Authority shall submit an application for registration of a coded character set to the Registration Authority.

12.3 The Registration Authority shall examine each application received. It shall ascertain that

- The proposed coded character set is not identical to a coded character set already registered. See Annex B.2.
- The application for registration of a single additional control function to be represented by the F_S escape sequence (see ISO/IEC 2022) is from the subcommittee concerned with coded character sets. See Annex C.

When requested by the RA, the RA-JAC may provide an opinion on whether an application satisfies these requirements. If the application fails to meet either of these requirements, the application shall be rejected.

12.4 The Registration Authority shall also ascertain that

- The application is formally in accordance with this International Standard and, where applicable, with ISO/IEC 2022, ISO/IEC 646 and ISO/IEC 4873.
- The application for registration is legible and meets the presentation practice of the Registration Authority. See Clause 6.2.5.
- The application includes the elements required from the Sponsoring Authority for the cover page. See Clause 11.1.1.

- The application for registration includes the required description of the coded character set. See Clause 11.1.2.
- The application for registration includes any required copyright permissions and endorsements. See Clause 11.1.3.
- When an application for registration includes a mapping to ISO/IEC 10646, the mapping shall be in machine-readable form and shall meet the other presentation provisions of Annex A.2.

When requested by the RA, the RA-JAC may provide an opinion on whether an application satisfies these requirements. If the application for registration fails to meet any of these requirements, the Registration Authority shall inform the Sponsoring Authority of the changes needed to meet the requirement(s). If the Registration Authority requires that the code table and/or list of character names be redrawn, then Clause 9.2.2.5 applies.

12.5 If the application for registration includes a mapping not created by the subcommittee concerned with coded character sets, then the procedures in Clause 13 apply.

12.6 After an application for registration and any accompanying mapping have passed review by the Registration Authority and by the RA-JAC, the Registration Authority shall circulate the application to the members of the subcommittee concerned with coded character sets for a three-month information and comment period.

This clause does not apply if the subcommittee concerned with coded character sets is the Sponsoring Authority of an application for registration of one of its own coded character sets.

When difficulties with the mapping cannot be resolved in a timely manner, the Registration Authority should separate the application for registration from the mapping, and circulate only the application for registration to members of the subcommittee concerned with coded character sets. In such a case, the mapping will be processed separately in accordance with Clause 13.

12.7 The Registration Authority shall consider all comments received. The Registration Authority should request the RA-JAC to provide expert technical advice on the comments. The Registration Authority may incorporate comments resulting from the review specified in Clause 12.6 into the final registration.

12.8 The Registration Authority shall approve or reject the application for registration.