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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

Reference number
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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
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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

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.

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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.

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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.

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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.

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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.

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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.

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12.9 The Registration Authority shall process approved applications in accordance with Clause 14.

12.10 When an application for registration is rejected, the Registration Authority shall inform the Sponsoring Authority and provide the reason for the rejection.

13 Technical review of mapping to ISO/IEC 10646

13.1 The Registration Authority shall circulate the registration application and mapping first to the members of the RA-JAC for a technical review of the mapping. The period of this review shall be not more than two months.

13.2 The RA-JAC shall evaluate the mapping for technical suitability according to Annex A.2.

13.3 The RA-JAC shall report the results of its evaluation to the Registration Authority and shall describe any technical concerns with the proposed mapping.

13.4 The Registration Authority shall inform the Sponsoring Authority of any changes to the mapping recommended by the RA-JAC.

13.5 If the Sponsoring Authority disagrees with the recommendations of the RA-JAC, and the disagreement cannot be resolved, then the Registration Authority shall not include the mapping from the Sponsoring Authority in the registration.

13.6 The Registration Authority shall circulate the mapping to the members of the subcommittee concerned with coded character sets for review in accordance with Clause 12.6.

13.7 The RA-JAC, in consultation with the Sponsoring Authority, may assist the Registration Authority to resolve comments on the mapping.

13.8 If the Sponsoring Authority disagrees with the recommendations to resolve the comments, and the disagreement cannot be resolved, then the Registration Authority shall not include the mapping from the Sponsoring Authority in the registration.

14 Processing of an approved application

14.1 The Registration Authority shall assign the escape sequence.

– Final bytes shall be allocated by the Registration Authority in ascending order. This allocation shall only be made immediately prior to publication of the registration, that is, after completion of all procedural steps.

– The Registration Authority shall, when appropriate, assign a second intermediate byte in addition to the final byte, as specified in ISO/IEC 2022.

– No final byte(s) shall be reserved for future registration applications.

– A final byte once allocated to a registered character or coded character set shall never be re- allocated for another registration.

14.2 When the mapping to ISO/IEC 10646 in a registration is approved, the Registration Authority shall record the date of approval and shall then make the mapping available in machine-readable form. See Annex A.2 for details about the format for the mapping.

14.3 The Registration Authority shall publish the approved registration in the International Register.

14.4 The Registration Authority shall notify the Sponsoring Authority of the publication of the registration.

14.5 The Registration Authority shall announce publication of the registration (and mapping if present) to interested parties (see Clause 6.2.4).

15 Appeals

15.1 Appeals against registration

15.1.1 The Registration Authority shall accept appeals only from the subcommittee concerned with coded character sets if at least four member bodies of the subcommittee object to a forthcoming publication of a registration by the Registration Authority.

15.1.2 The Registration Authority shall accept appeals from the subcommittee concerned with coded character sets for the following reasons only:

– disagreement with the Registration Authority on whether the application meets the technical or administrative requirements for a registration in Clauses 12.3 and 12.4;

– disagreement when the Registration Authority grants a waiver according to Clause 17.1.2.

15.2 Appeals against rejection of application

The Registration Authority shall accept appeals from the Sponsoring Authority against rejection of an application for the following reasons only:

– disagreement with the Registration Authority on whether the application meets the technical or administrative requirements for a registration in Clauses 12.3 and 12.4;

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– disagreement when the Registration Authority refuses to grant a waiver according to Clause 17.1.2.

15.3 Invalid reasons for appeals

The following objections shall be considered invalid as grounds for an appeal:

– one or more registrations exist with identically the same field of application (see Annex B.3);

– the coded character set in the registration application is incompatible with International Standards;

– an allegation is made that the technical content of the registration does not achieve its alleged purpose;

– the "origin" field contains the name of a commercial organization or a trade mark;

– editorial comments are rejected by the Registration Authority;

– the Sponsoring Authority and the RA-JAC disagree on the mapping to ISO/IEC 10646;

– an allegation by members of the subcommittee concerned with coded character sets that the mapping to ISO/IEC 10646 has one or more mistakes.

15.4 Procedure for filing an appeal

Appeals shall be filed with the Registration Authority by registered mail, facsimile, or electronic mail either

– within 30 days of receipt of the refusal of the Registration Authority, or

– within 30 days after the end of the circulation period to the member bodies according to Clause 12.6.

15.5 Resolution of an appeal

15.5.1 Within 30 days after receipt of an appeal, the Registration Authority shall submit the appeal to the members of the RA-JAC (see Clause 10).

15.5.2 If four-fifths of the members of the RA-JAC consider the appeal from a Sponsoring Authority to be administratively or technically justified, the Registration Authority shall approve the registration application.

15.5.3 If four-fifths of the members of the RA-JAC consider the appeal from the subcommittee concerned with coded character sets to be administratively or technically justified, the Registration Authority shall disapprove the registration application.

15.5.4 If four-fifths of the members of the RA-JAC cannot agree on how to resolve an appeal, then the appeal shall be submitted to the P-members of the subcommittee concerned with coded character sets for vote according to the Procedures for the technical work of ISO/IEC JTC 1.

16 Corrections

16.1 The Registration Authority in conjunction with the Sponsoring Authority (and the Owner of Origin and/or Copyright Owner, as applicable) shall correct material errors to the information included in a registration, for example typographical errors and errors in the character shapes (glyphs), as soon as detected.

16.2 The Registration Authority shall add the date of the correction to the corrected pages, add the date and reason for the change to the cover page, and publish the new corrected pages of the registration.

17 Revisions

17.1 Revisions to the coded character set

17.1.1 In general, no changes to the description of a coded character set in a registration are permitted, as this would be contrary to the principles on which the registrations are based. An exception to this is the case of upwardly compatible versions as specified by ISO/IEC 2022.

17.1.2 Under exceptional conditions, the Registration Authority may grant a waiver of Clause 17.1.1 to organizations issuing internationally recognized and worldwide implemented standards. However, for these types of registrations to receive a waiver, the first application papers and the International Register shall mention the possibility that such a registration may be modified in the future without the allocation of a new escape sequence.

17.1.3 When a new registration application is based on a revision to a registered standard such that the revised coded character set is not identical to the originally registered coded character set standard and when Clause 17.1.2 does not apply, then the Registration Authority shall create a new registration. The Registration Authority shall also add cross-reference notes to the two registrations.

17.2 Addition of or revision to the 10646 mapping

17.2.1 If the original registration did not include a mapping to ISO/IEC 10646, the Sponsoring Authority may submit a mapping to the Registration Authority for addition to the registration. The Registration Authority

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shall process the proposed mapping as if it had been included in the original application.

17.2.2 The Sponsoring Authority shall prepare an application to add or revise the mapping to ISO/IEC 10646 and submit the application and mapping table to the Registration Authority. The application shall identify the approved registration and state whether

– a mapping table is being added

– an existing mapping table is being revised

17.2.3 The Registration Authority shall submit the new or revised mapping table to the same review process that the mapping would have undergone if it had been submitted with the original registration application (see Clause 12.4 (sixth list item) and Clause 13).

17.2.4 The Registration Authority shall publish an approved mapping in accordance with Clause 14.2.

17.2.5 The Registration Authority shall notify the Sponsoring Authority of publication of the new or revised mapping.

17.2.6 The Registration Authority shall announce publication of the additional or revised mapping to interested parties (see Clause 6.2.4).

18 Withdrawal

18.1 Withdrawal is a formal declaration by which the Sponsoring Authority informs the Registration Authority that it withdraws its support of a registration application or of an existing registration that it has sponsored.

18.2 Such a declaration may, but need not, be accompanied by a statement of the reasons for the withdrawal.

18.3 Withdrawal of an application for registration

18.3.1 When the Registration Authority is notified, it shall take no further action to process the application.

18.3.2 If the application for registration is being circulated for comment according to Clause 12.6, the Registration Authority shall notify the members of the subcommittee concerned with coded character sets that the application has been withdrawn by the Sponsoring Authority.

18.4 Withdrawal of an existing registration

18.4.1 After withdrawal, the registration shall remain in the International Register and continue to be identified by the allocated escape sequence.

18.4.2 The Registration Authority shall issue a new cover page for the registration after the date of withdrawal and shall note in the International Register that the Sponsoring Authority withdrew the registration and, if available, include the reason for withdrawing the registration.

18.4.3 The Registration Authority shall inform the interested parties (see Clause 6.2.4) of the withdrawal of a registration.

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Annex A
(normative)
Details of registrations in the International Register

A.1 Content of a registration

Each registration shall include the cover page and, except for ISO and ISO/IEC coded character set standards, a description of the coded character set. The registration may, as an option, also include a mapping to ISO/IEC 10646.

A.1.1 Cover page

The cover page shall be provided for all registrations.

A.1.1.1 The Sponsoring Authority shall provide the following elements of the cover page:

- the type of coded character set registration
  - graphic coded character set
    - 94-character graphic character set
    - 96-character graphic character set
    - multiple-octet graphic character set
  - control functions
    - C0-control character set
    - C1-control character set
    - single control function (ISO/IEC 2022, F_s escape sequence)
  - coding systems not conformant with ISO/IEC 2022
    - coding system that uses the standard return
    - coding system that does not use the standard return
- a short name for the coded character set
- a short description
- the Sponsoring Authority
- the Owner of Origin of the character or coded character set
- a general indication of the intended field of application
- the description shall state if any of the following conditions apply:
  - a mapping to ISO/IEC 10646 is included
  - the coded character set is intended for use in combination with one or more other registered sets
  - the coded character set is intentionally a subset or a superset of one or more other registered sets (If the coded character set is a part of one or more standards, reference(s) to the standard(s) shall be included either in the short description or under “origin”.)
  - the registration is for a coding system not conformant with ISO/IEC 2022 and the ISO/IEC 2022 standard return (escape sequence ESC 2/5 4/0) applies
  - where a publicly available document describing the coding system not conformant with ISO/IEC 2022 can be obtained if the registration does not include the code table and list of character names
  - the registration may be subject to future modification (see Clause 17.1.2)
  - the registration is a revision to a previously registered standard. If so, then the identity of that coded character set shall be given (see Clause 17.1.3).

A.1.1.2 The Registration Authority shall provide the following elements of the cover page:

- the registration number
- the date of registration
- the allocated escape sequence(s)
- whenever a registration is revised, the date of the revision, and description of each change
- if the Sponsoring Authority withdrew the registration, the date of the withdrawal (and the reason, if it is available)
- if the registration is for a revision of a standard that was previously registered, the new registration shall be identified on the cover page of the original registration and the original registration shall be noted on the cover page of the new registration (see Clause 17.1.3)

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A.1.2 Coded character set

The description of the coded character set shall contain both a code table and a list of character names. A description of the coded character set is not required to be included in the registration for an ISO or ISO/IEC coded character set standard or a coding system not conformant with ISO/IEC 2022 but documented in a publicly available document (see Annex B.1). All other registration applications shall describe the coded character set.

A.1.2.1 Code table

A.1.2.1.1 Graphic character set

For 94-character coded graphic character sets, the layout of the code table should be that shown in Annex D.1. For 96-character coded graphic character sets, the layout of the code table should be that shown in Annex D.2. For multiple-octet coded graphic character sets, the layout should be multiple code tables of 16 rows by 16 columns or 24 rows by 24 columns as shown in Annex D.3.

NOTE – It may be appropriate to use multiple code tables with other arrangements, as necessary. ISO-IR 169, for instance, uses code tables of 24 rows by 8 columns.

A.1.2.1.2 Control functions

For C0 sets the layout of the tables should be that shown in Annex D.4. For C1 sets, the table should be that given in Annex D.5. For C1 sets the two-character escape sequences of type ESC Fs shall be listed for 7-bit coding.

A.1.2.1.3 Non-conformant graphic character sets

The layout of code tables for coding systems not conformant with ISO/IEC 2022 (see Annex B.1) is not defined by this international standard. However, Annex D.6 provides an example of a layout for an 8-bit coded character set not conformant with ISO/IEC 2022.

A.1.2.2 List of character names

A.1.2.2.1 Graphic character sets

For graphic character sets, the list of character names shall show all the code positions in the code table and indicate the name of the character allocated to each code position as the name appears in the coded character set being registered. Combining characters shall be identified as such, by adding the text “(combining character)” immediately following the character name.

A.1.2.2.2 Control functions

For character sets of control functions, the list of character names shall show the control functions of the set by indicating the name and definition for each code position in the code table as the name appears in the coded character set being registered. Following the list of character names, a registration shall list the control functions of the set indicating the name and definition for each code position.

A.1.2.2.3 Unused positions

Unused positions shall be shown in the list of character names. An unused positions shall be indicated by the text “(This position shall not be used)” instead of a character name. For a contiguous range of unused positions, the list may show the range of code positions as a single entry, where the code position shows the first code position in the range, the word “to”, and the last code position, and the text for the character name shall be “(These positions shall not be used)”.

A.1.2.2.4 Notes in the list of character names

When absolutely required for the understanding of a graphic character, a short note for the character may be included in the list of character names.

A.2 Mapping to ISO/IEC 10646

A.2.1 A mapping of the characters in the coded character set in the registration to ISO/IEC 10646 equivalents may be included in the registration as an option. If such a mapping is included, then the following requirements apply.

A.2.2 The mapping shall identify the coded character set mapped to ISO/IEC 10646, e.g., by name and registration number.

A.2.3 The mapping should include the date of creation.

A.2.4 The mapping shall identify the applicable part and edition of ISO/IEC 10646 plus any amendments and corrigenda on which the mapping is based.

A.2.5 The mapping to ISO/IEC 10646 shall be in machine-readable form. In addition to the required machine readable copy of the mapping, a registration application should also include a printed copy identical to the content of the machine-readable form. When an application for registration includes a mapping, the machine-readable form shall be supplied as an attachment to the application (unless the application references the location on the Internet where the machine readable form is available).

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A.2.6 The mapping shall equate each character in the coded character set to exactly one of these alternatives:

– a single character in ISO/IEC 10646

– a combining sequence in ISO/IEC 10646

– no ISO/IEC 10646 character

– optionally, when no equivalent character is in ISO/IEC 10646, a character in either the private use area or private use planes of ISO/IEC 10646

A.2.7 Unused code positions in the coded character set shall not be included in the mapping table.

A.2.8 For each character in the registration, the mapping shall contain the following two elements:

– the code position in the registered coded character set.

– the corresponding ISO/IEC 10646 code position or combining sequence.

A.2.9 If a mapping to ISO/IEC 10646 does not exist for a character in the registration, then the mapping shall make this clear, for example the word “none” may replace the ISO/IEC 10646 code position. As an alternative, when the mapping for a character in the registration matches no ISO/IEC 10646 character, then the mapping may specify a code position in the private use area of the Basic Multilingual Plane or one of the private use planes of ISO/IEC 10646. Since use of private use areas requires an agreement between the sender and receiver about the meaning of the code positions in the private use area, use of private use areas is discouraged. Consequently, if a code position from the private use area or planes is specified, the mapping should highlight this, for example, with the text “(Private use character)”.

A.2.10 If combining characters are included in the registration, the mapping documentation shall indicate whether the base character precedes or follows the corresponding combining character or characters in the combining sequence for the registered coded character set.

A.2.11 The description of the mapping shall be precise and unambiguous. The description should also describe alternate mappings and special situations an implementer should consider. The following guidelines may be used but are not required since they may not be appropriate to all situations:

– The mapping for each character should be in a single line of text.

– Each line of text in an individual character mapping should contain the elements specified in the same order. A character from the registration needs to be clearly separated and distinguishable from the corresponding character or characters in ISO/IEC 10646. For example, registration code positions could be separated from the corresponding ISO/IEC 10646 code position or code positions by the character tabulation control character of ISO/IEC 6429 (CHARACTER TABULATION (HT)). Code positions for combining sequences could be separated from each other by a COMMA.

– Code positions should use hexadecimal (base 16) notation (the digits “0” through “9”, and the Latin letters “A” through “F” (or “a” through “f”).

– The machine-readable format of the mapping shall be limited to the repertoire for ISO/IEC 646 IRV and the three characters CHARACTER TABULATION (HT), CARRIAGE RETURN (CR), and LINE FEED (LF) from ISO/IEC 6429.

– Records should be ordered by the code position of the character in the registration.

A.2.12 After the mapping records, the mapping may include supplementary information for clarification, e.g., when a special situation may warrant an alternate mapping for a character.

A.2.13 The mapping shall include the date that the mapping was accepted by the Registration Authority.

A.2.14 The Registration Authority may specify additional presentation and information guidelines for the mapping in its “Practice of the Registration Authority” (see Clause 6.2.5).

A.2.15 Annex E shows an example of a mapping.

A.3 Repertoire

For graphic coded character sets, the registration specifies only the characters of the set and their coded representations, as shown in the code table of the registration. It does not specify a repertoire of characters which can be obtained by combining the characters of the set, for example by means of backspace sequences, or of combining sequences.

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Annex B
(normative)
Coded character sets with special consideration

B.1 Coding systems not conformant with ISO/IEC 2022

B.1.1 A coding system not conformant with ISO/IEC 2022 can be registered only if

– the application identifies the publicly available document that describes the coded character set, or

– the application includes the code table and list of character names.

B.1.2 If the registration does not include the code table and list of character names, the cover page shall indicate where a publicly available document describing the coding system can be obtained.

B.1.3 Although the coding system is not conformant with ISO/IEC 2022, the registered escape sequence for the coding system shall be in accordance with ISO/IEC 2022.

B.2 Identical sets

B.2.1 If a new application for registration contains a coded character set identical with an already-registered coded character set, it shall not be registered, because it is already identified by an escape sequence.

B.2.2 Two coded character sets are deemed to be identical if

– both sets are of the same type, for example, both a C0 or both a C1 coded character set

– the number of characters is the same

– the names of the characters are the same according to the terminology of the Registration Authority

– the same code positions (values) are used for the same characters

– the definitions of control characters are functionally equivalent (a more restricted definition is not considered equivalent)

– graphic characters have the same geometric shape apart from typographic variations between fonts

B.3 Multiple registrations for the same application

Provided that identical registrations do not occur (see Annex B.2), a given application (for example a programming language or a natural language) may have multiple coded character sets in the International Register.

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Annex C
(normative)
Criteria for the allocation of ESC F_s sequences

C.1 ISO/IEC 2022 provides for a very limited number of ESC F_s sequences. Priority in the allocation of ESC F_s sequences will be given to control functions used for general code extension purposes.

C.2 Other candidates for ESC F_s representation should be of a general nature with broad applicability. The action of such control functions should be largely independent of the graphic or control character sets invoked at the time.

C.3 The control function should be logically independent from other control functions, except if it forms one half of a complementary pair, for example in an ON/OFF action.

C.4 The only Sponsoring Authority for single control functions represented by ESC F_s shall be the subcommittee concerned with coded character sets (see Clause 5.) Other Sponsoring Authorities, under Clause 9 of this International Standard, which want to request to register ESC F_s escape sequences shall first submit such requests to the subcommittee concerned with coded character sets.

C.5 Any application for registration for a new ESC F_s sequence shall include (a) a complete definition of the control function with an indication of the overall environment in which it will be used, and (b) justification for the need for a more efficient coding of the function via a registered ISO/IEC 2022 ESC F_s sequence.

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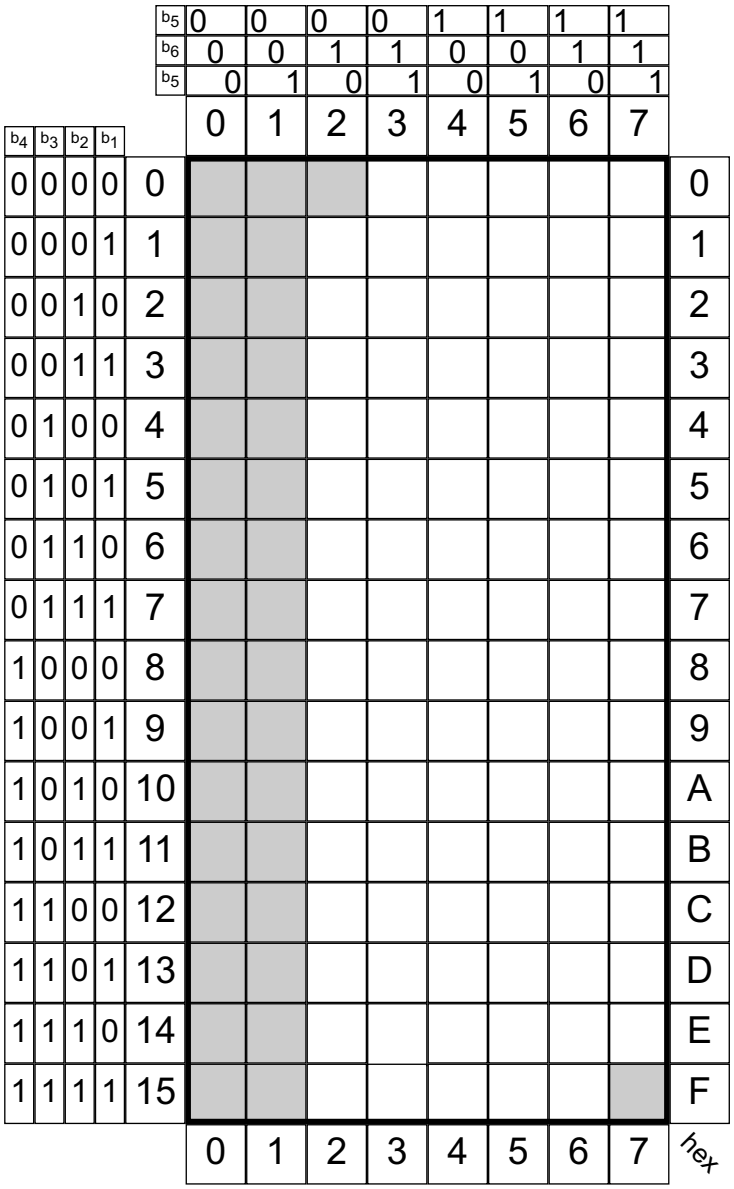
Annex D
(informative)
Layout of code tables

D.1 94-character graphic character sets

The shaded positions in the code tables correspond to code positions reserved in ISO/IEC 2022 for control characters. For registration of character sets not conforming to that standard such shading need not be included.



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D.2 96-character graphic character sets

The shaded positions in the code tables correspond to code positions reserved in ISO/IEC 2022 for control characters.

b_4	b_3	b_2	b_1		b_7 0	0	0	0	1	1	1	1	
					b_6 0	0	1	1	0	0	1	1	
					b_5 0	1	0	1	0	1	0	1	
					0	1	2	3	4	5	6	7	
0	0	0	0	0									0
0	0	0	1	1									1
0	0	1	0	2									2
0	0	1	1	3									3
0	1	0	0	4									4
0	1	0	1	5									5
0	1	1	0	6									6
0	1	1	1	7									7
1	0	0	0	8									8
1	0	0	1	9									9
1	0	1	0	10									A
1	0	1	1	11									B
1	1	0	0	12									C
1	1	0	1	13									D
1	1	0	1	14									E
1	1	1	1	15									F
					0	1	2	3	4	5	6	7	hex

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D.3.1 Multi-octet graphic character sets

Sixteen by sixteen presentation format.

b_4	b_3	b_2	b_1		b_8 0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
					b_7 0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
					b_6 0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
					b_5 0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
					00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
0	0	0	0	00																0
0	0	0	1	01																1
0	0	1	0	02																2
0	0	1	1	03																3
0	1	0	0	04																4
0	1	0	1	05																5
0	1	1	0	06																6
0	1	1	1	07																7
1	0	0	0	08																8
1	0	0	1	09																9
1	0	1	0	10																A
1	0	1	1	11																B
1	1	0	0	12																C
1	1	0	1	13																D
1	1	1	0	14																E
1	1	1	1	15																F
					0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F

hex

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D.3.2 Multi-octet graphic character sets

Twenty-four by twenty-four presentation format.

							b_7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
							b_6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
							b_5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
							b_4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1
							b_3	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0
							b_2	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
							b_1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
b_7	b_6	b_5	b_4	b_3	b_2	b_1		33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	
0	1	0	0	0	0	1	33																									21
0	1	0	0	0	1	0	34																									22
0	1	0	0	0	1	1	35																									23
0	1	0	0	1	0	0	36																									24
0	1	0	0	1	0	1	37																									25
0	1	0	0	1	1	0	38																									26
0	1	0	0	1	1	1	39																									27
0	1	0	1	0	0	0	40																									28
0	1	0	1	0	0	1	41																									29
0	1	0	1	0	1	0	42																									2A
0	1	0	1	0	1	1	43																									2B
0	1	0	1	1	0	0	44																									2C
0	1	0	1	1	0	1	45																									2D
0	1	0	1	1	1	0	46																									2E
0	1	0	1	1	1	1	47																									2F
0	1	1	0	0	0	0	48																									30
0	1	1	0	0	0	1	49																									31
0	1	1	0	0	1	0	50																									32
0	1	1	0	0	1	1	51																									33
0	1	1	0	1	0	0	52																									34
0	1	1	0	1	0	1	53																									35
0	1	1	0	1	1	0	54																									36
0	1	1	0	1	1	1	55																									37
0	1	1	1	0	0	0	56																									38
								21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	30	31	32	33	34	35	36	37	38	Hex

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D.4 C0 control function sets

The positions in the code tables correspond to code positions reserved in ISO/IEC 2022 for control characters.

b_7	0	0
b_6	0	0
b_5	0	1
	00	01

b_4	b_3	b_2	b_1				
0	0	0	0	00			0
0	0	0	1	01			1
0	0	1	0	02			2
0	0	1	1	03			3
0	1	0	0	04			4
0	1	0	1	05			5
0	1	1	0	06			6
0	1	1	1	07			7
1	0	0	0	08			8
1	0	0	1	09			9
1	0	1	0	10			A
1	0	1	1	11			B
1	1	0	0	12			C
1	1	0	1	13			D
1	1	1	0	14			E
1	1	1	1	15			F
					0	1	hex

b_8	0	0
b_7	0	0
b_6	0	0
b_5	0	1
	00	01

b_4	b_3	b_2	b_1				
0	0	0	0	00			0
0	0	0	1	01			1
0	0	1	0	02			2
0	0	1	1	03			3
0	1	0	0	04			4
0	1	0	1	05			5
0	1	1	0	06			6
0	1	1	1	07			7
1	0	0	0	08			8
1	0	0	1	09			9
1	0	1	0	10			A
1	0	1	1	11			B
1	1	0	0	12			C
1	1	0	1	13			D
1	1	1	0	14			E
1	1	1	1	15			F
					0	1	hex

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D.5 C1 control function sets

The positions in the code tables correspond to code positions reserved in ISO/IEC 2022 for control characters.

b_8		1	1	
b_7		0	0	
b_6		0	0	
b_5		0	1	
		08	09	
b_4	b_3 b_2 b_1			
0	0 0 0	00		0
0	0 0 1	01		1
0	0 1 0	02		2
0	0 1 1	03		3
0	1 0 0	04		4
0	1 0 1	05		5
0	1 1 0	06		6
0	1 1 1	07		7
1	0 0 0	08		8
1	0 0 1	09		9
1	0 1 0	10		A
1	0 1 1	11		B
1	1 0 0	12		C
1	1 0 1	13		D
1	1 1 0	14		E
1	1 1 1	15		F
		8	9	hex

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D.6 Example of an 8-bit graphic character set not conformant to ISO/IEC 2022

Eight-bit graphic character sets conformant to ISO/IEC 2022 require two separate entries in the International Register: registration of the graphic characters of the lower range as a 94-character graphic character set, and registration of the graphic characters of the upper range as a 96-character graphic character set. The following table may be used for the full 8-bit set of a coding system not conformant with ISO/IEC 2022.

NOTE: The shaded blocks in this example indicate general practice for such character sets. They do not imply conformance with ISO/IEC 2022.

b_4	b_3	b_2	b_1		b_8 0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	
					b_7 0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	
					b_6 0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	
					b_5 0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
					00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	
0	0	0	0	00																	0
0	0	0	1	01																	1
0	0	1	0	02																	2
0	0	1	1	03																	3
0	1	0	0	04																	4
0	1	0	1	05																	5
0	1	1	0	06																	6
0	1	1	1	07																	7
1	0	0	0	08																	8
1	0	0	1	09																	9
1	0	1	0	10																	A
1	0	1	1	11																	B
1	1	0	0	12																	C
1	1	0	1	13																	D
1	1	0	1	14																	E
1	1	1	1	15																	F
					0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	hex

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Annex E
(informative)
Example of a mapping table

Name: ISO 5426:1983 to ISO/IEC 10646-1:2000

Table version: 1.0

Date: 2000-11-02

General notes:

This table contains the finalized mapping of the characters of IS0 5426: 1983 to ISO/IEC 10646-1:2000, as agreed upon by ISO TC46/SC4/WG1 at its meeting on 2000-05-09.

In ISO 5426, combining characters precede the base character.

The following code positions are unassigned in IS0 5426:1983 and do not appear in the mapping table:

33, 34, 35, 5C, 60, 63, 64, 65, 67, 6B, 6D, 6E, 6F, 70, 74, 77, 7D, 7E

Notes for implementers follow the mapping table.

Format: Two tab-separated columns

Column #1 is the ISO 5426 code (in hex as XX)

Column #2 is the ISO/IEC 10646 value (in hex as U+XXXX)

The entries are in the order of code positions in ISO 5426.

20	U+0020
21	U+00A1
22	U+201E
23	U+00A3
24	U+0024
25	U+00A5
26	U+2020
27	U+00A7
28	U+2032
29	U+2018
2A	U+201C
2B	U+00AB
2C	U+266D
2D	U+00A9
2E	U+2117
2F	U+00AE
30	U+02BB
31	U+02BC
32	U+201A
36	U+2021
37	U+00B7
38	U+2033
39	U+2019
3A	U+201D
3B	U+00BB
3C	U+266F
3D	U+02B9
3E	U+02BA
3F	U+00BF
40	U+0309
41	U+0300
42	U+0301
43	U+0302
44	U+0303
45	U+0304
46	U+0306
47	U+0307
48	U+0308
49	U+0308
4A	U+030A
4B	U+0315
4C	U+0312
4D	U+030B
4E	U+031B
4F	U+030C
50	U+0327
51	U+031C
52	U+0326
53	U+0328
54	U+0325
55	U+032E
56	U+0323
57	U+0324
58	U+0332
59	U+0333
5A	U+0329
5B	U+032D
5D	U+FE20
5E	U+FE21
5F	U+FE23
61	U+00C6

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62	U+0110
66	U+0132
68	U+0141
69	U+00D8
6A	U+0152
6C	U+00DE
71	U+00E6
72	U+0111
73	U+00F0
75	U+0131
76	U+0133
78	U+0142
79	U+00F8
7A	U+0153
7B	U+00DF
7C	U+00FE

Notes for Implementers on Specific ISO 5426 Characters (Informative)

48 TREMA, DIAERESIS & 49 UMLAUT
These two characters are unified in this mapping. If the distinction between the characters must be preserved for a particular application, U+0308 should be used for one and a Private Use value for the other.

5D LEFT HALF OF LIGATURE SIGN AND OF DOUBLE TILDE
This character is used in two different ways. As the left half of the ligature sign, it is used with various letters in transliterations of languages of Eastern Europe and the former Soviet Union written in Cyrillic script. (The example of use shows transliterated Russian.) As the left half of the double tilde, it is used with the letter “n” (upper or lower case) in the ligature “ng with tilde” of Tagalog.

This character is mapped to U+FE20 COMBINING LIGATURE LEFT HALF because it is more commonly used in transliterations representing Cyrillic letters, and because the ISO 5426 example of use is as the left half of a ligature sign.

It is possible to devise a more exact mapping for this character by taking the other half into account:

IF 0x5D and its base character in the ISO 5426 source string is followed by 0x5F (right half of double tilde)

THEN map 0x5D to U+FE22
ELSE map 0x5D to U+FE20

* covers both use of 0x5D as left half of ligature and pathological condition of an unpaired half *

Alternatively, the pair of “halves” representing either the ligature used in romanization of Cyrillic script or the “double tilde” of Tagalog can be mapped to the corresponding “double diacritic” character, U+0361 COMBINING DOUBLE INVERTED BREVE or U+0360 COMBINING DOUBLE TILDE, instead of to the compatibility “halves” by examining following characters. Unpaired “halves” should be mapped to the appropriate compatibility “half” according to the table above.

62 SLASH D — CAPITAL LETTER
This ISO 5426 letter is “used in Croatian, Icelandic, etc.” and is mapped to U+0110 LATIN CAPITAL LETTER D WITH STROKE, one of the three possible choices.

If more precise language-based mapping is needed, coded language information in the bibliographic record may be used to map 62 to the appropriate character: U+00D0 LATIN CAPITAL LETTER ETH (Icelandic), U+0110 LATIN CAPITAL LETTER D WITH STROKE (Croatian, Sami), or U+0189 LATIN CAPITAL LETTER AFRICAN D.

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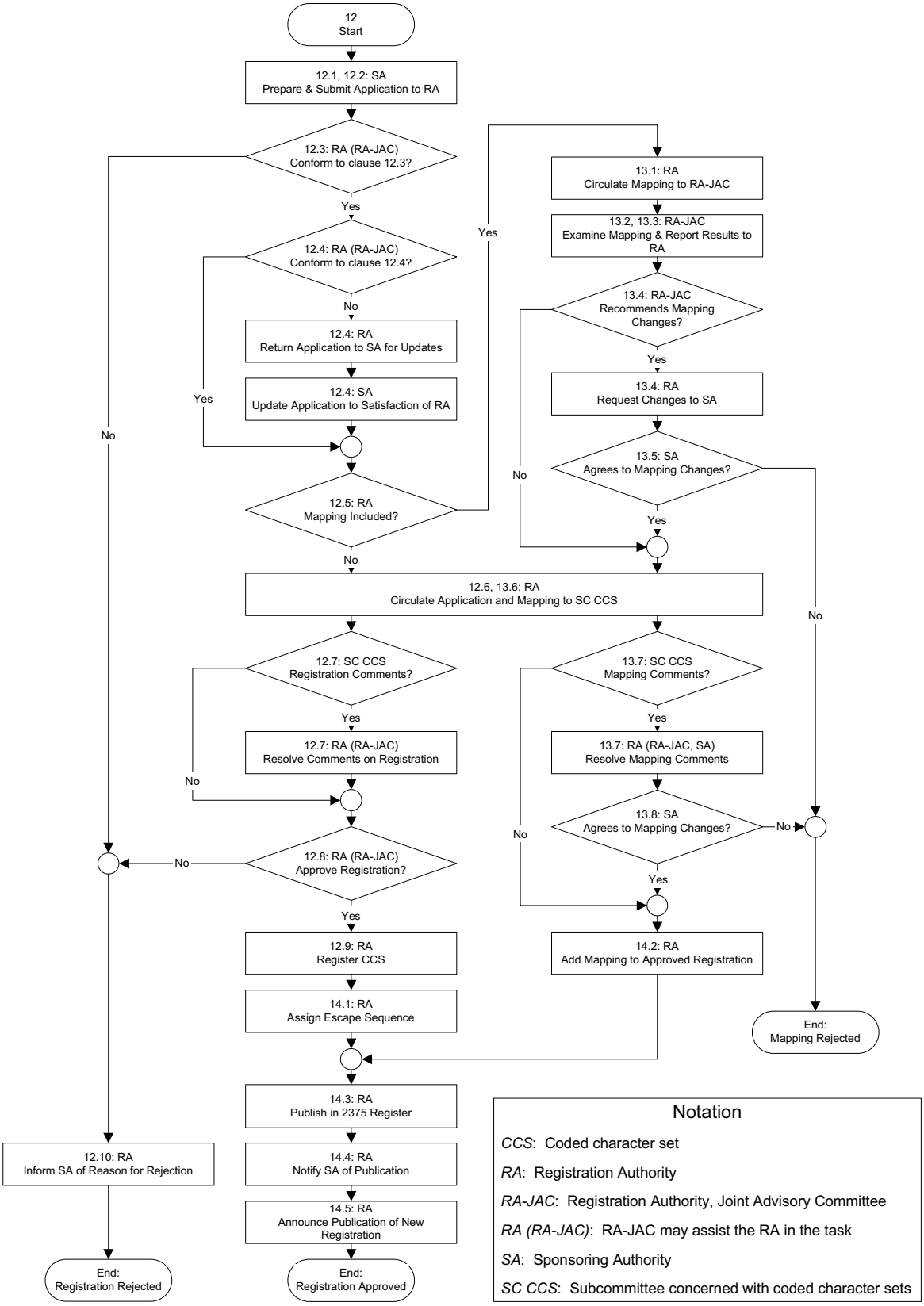
Annex F
(informative)
Flow chart of registration process



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Annex G
(informative)
Principal differences between this first edition of ISO/IEC 2375 and the third edition of ISO 2375 (1985-11-01)

- The standard has been reorganized to make it easier to use.
- New clauses were added
  - Clause 4, “International Register”
  - Clause 5, “ISO/IEC supervisory body”
  - Clause 7, “Owner of Origin”
  - Clause 8, “Copyright Owner”
  - Clause 13, “Technical review of mapping to ISO/IEC 10646”
- Clause 15 “Appeals” has been consolidated and clarified.
- This edition adds an option to include a mapping from the characters in a registration to ISO/IEC 10646.
- Annex B, “Coded character sets with special consideration” consolidates this information in one place.
- Annex D provides examples of the layouts of code tables to reduce the need to reference an external document.
- The term “non-spacing character” has been updated to the term “combining character” in Clause 3. For clarification, the term “complete coding systems” was replaced by the term “coding systems not conformant with ISO/IEC 2022”.
- The registration documentation required for coding systems not conformant with ISO/IEC 2022 has been reduced. In such cases a publicly available document describing the coding system is not required for the registration but is required as part of the application.
- The flow chart of the registration process has been added in Annex F.

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