**ISO/IEC JTC 1/SC 2/WG 3
7-bit and 8-bit codes and their extension
SECRETARIAT : ELOT**

DOC TYPE :	Revised Committee Draft
TITLE :	Committee Draft for the revision of ISO 2375
SOURCE :	Edwin Hart, Joan Aliprand, Michael Everson
PROJECT:	JTC 1.02.04.00.00
STATUS :	
ACTION ID :	ACT
DUE DATE :	-----
DISTRIBUTION :	P, O and L Members of ISO/IEC JTC 1/SC 2 WG Conveners, Secretariats ISO/IEC JTC 1 Secretariat ISO/IEC ITTF
MEDIUM :	Def
NO OF PAGES :	27

Source: Michael Everson

Title: Committee Draft for the revision of ISO 2375

Date: 1999-11-05

Revised: 2000-09-08 by Edwin Hart & Joan Aliprand

(CD-2375-body-074)

Purpose of Revision: Reorganize standard

Status: Committee draft

TITLE PAGE

To be provided by ITTF

Contents

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 nongovernmental, 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 JTC1. Draft International Standards adopted by the joint technical committee are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 2375 was prepared by Joint Technical Committee ISO/IEC JTC1, *Information technology,* Subcommittee SC2, *Coded character sets.*

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 that are not included in a single international standard character code or that 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 characters or 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 ISO/IEC 2375 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 as part of the standard itself.

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

1 Scope

1.1 This International Standard s pecifies the procedures to be followed by the Registration Authority responsible for preparing, maintaining, and publishing a register of escape sequences and of the coded character sets they identify.

1.2 The registration process spe cified in ISO/IEC 2375 is *not* a procedure for standardization of characters or coded character sets. Organizations that wish ISO to create an international standard for a coded character set or that wish ISO to code additional characters into ISO/IEC 10646 shall follow the ISO 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 to adopt the coded character set as an ISO standard.

— The existence of a character in an approved registration does not imply a commitment by ISO to encode that character into ISO/IEC 10646.

2 Field of application

2.1 ISO/IEC 2022 describes the escape sequences referenced in this International Standard, with the exception of escape sequences reserved in ISO/IEC 2022 for private use.

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

2.3 An escape sequence registe red in accordance with this International Standard shall serve as an identification of the character, the set of characters, or the control function associated with it in the register.

2.4 The registration itself does n ot specify the rules in accordance with which a character or character set identified by an escape sequence is to be used. Rather, the registration shall identify the documents (for example, standards), which specify such rules.

3 Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of ISO/IEC 2375. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on ISO/IEC 2375 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 646: 1991, *Information processing – 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 10646-1: 2000, *Information technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane.*

ISO Directives – Part 1: Procedures for the technical work, 3rd Edition, 1995.

4 Definitions

For the purposes of this International Standard, the following definitions apply.

4.1 bit combination: An ordered set of bits used for the representation of characters.

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

4.3 coded character set: A set of unambiguous rules that establishes a character set and the one-to-one relationship between each character of the set and its coded representation (bit combination).

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

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

4.6 combining character: A member of an identified subset of the coded character set intended for graphical 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 6927).

4.7 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 6927).

4.8 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.

4.9 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.

4.10 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.

4.11 octet: An ordered sequence of eight bits considered as a unit.

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

5 Identification of registration

5.1 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.

5.2 Exception for reference to international and national standards

Reference to an international or national standard in the Register should be made by using the identifier assigned by ISO/IEC or ISO (for international standards) or the national body (for national standards). The registration identification 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".

6 ISO/IEC supervisory body

The ISO/IEC JTC1 subcommittee concerned with coded character sets (particularly, ISO/IEC 646, ISO/IEC 2022, ISO/IEC 4873, and ISO/IEC 10646) has administrative responsibility for this standard and the content of the register. At the time of publication, subcommittee ISO/IEC JTC1/SC2, Coded character sets, has this responsibility.

7 Registration Authority

7.1 Appointment

7.1.1 The Registration Authority s hall be an organization nominated by the ISO/IEC JTC1 subcommittee concerned with coded character sets and appointed by ISO/IEC JTC1 to act as the Registration Authority for the purpose of this International Standard.

7.1.2 The Registration Authority s hall be an organization actively participating in the work of the subcommittee concerned with coded character sets.

7.2 Responsibilities

7.2.1 The Registration Authority s hall maintain the ISO/IEC 2375 register of the meanings assigned to escape sequences.

7.2.2 The Registration Authority s hall manage the execution of the registration procedure, including processing of:

— applications for registration (as specified in Clauses 13 and 14);

— appeals (as specified in Clause 14.4);

— corrections and revisions to existing registrations (as specified in Clauses 17.5 and 19);

— withdrawal of existing registrations (as specified in Clause 20).

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

7.2.4 The Registration Authority s hall 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 the 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.

7.2.5 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.

7.2.6 One or more 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 8859, ISO/IEC 10646, and on other coding standards where required.

8 Owner of Origin

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

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

9 Copyright Owner

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

10 Sponsoring Authority

10.1 Identity

10.1.1 A Sponsoring Authority can submit 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 JTC1 subcommittee concerned with coded character sets, appointed by the subcommittee for purposes connected with code extension or the use of escape sequences

— any member body of ISO or IEC

— any organization having liaison status with ISO or IEC or with any of their technical committees or subcommittees

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

10.2 Responsibilities

10.2.1 A Sponsoring Authority is responsible for:

• Submission of applications for registration;

• Actions relating to approved registrations that it sponsored.

10.2.2 Submission of Applications for Registration

10.2.2.1 A Sponsoring Authority shall receive proposals concerning the meanings of escape sequences from within its respective countries or organizations.

10.2.2.2 This International Standard requires only that an application for registration meets the requirements of clause 13.3. 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.

10.2.2.3 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.

10.2.2.4 If a character set proposed for registration is intended to be a code page 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.

10.2.2.5 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.4 specifies the layout and contents of the mapping table.) The Sponsoring Authority should include the mapping table in the application for registration.

10.2.2.6 A Sponsoring Authority shall prepare an application for registration in the prescribed format in accordance with the "Practice of the Registration Authority" (see clause 7.2.5), Annexes A, B, and C, and forward the application to the Registration Authority.

10.2.2.7 When requested by the Registration Authority, a Sponsoring Authority shall make updates and corrections to an application registration.

10.2.3 Responsibilities of Sponsoring Authority for its approved registrations

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

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

10.2.3.3 A Sponsoring Authority may request the Registration Authority to withdraw a registration as specified in clause 20.

11 The Registration Authority's Joint Advisory Committee

11.1 Composition

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

NOTE: The RA-JAC may consult experts from interested organizations, for example, the Unicode Consortium and JTC1 SC2/WG2/IRG.

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

11.2 Appointment

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

11.2.2 The subcommittee shall app oint or confirm the members of the RA-JAC at its plenary meetings.

11.3 Responsibilities

11.3.1 The responsibilities of the R A-JAC shall be as follows:

11.3.2 The RA-JAC shall examine e ach application that contains a mapping to ISO/IEC 10646 for technical suitability according to clause 14 prior to circulation to members of the subcommittee concerned with coded character sets as specified in clause 6.

11.3.3 The RA-JAC shall consider a ppeals received by the Registration Authority.

11.3.4 The RA-JAC shall act as me diator between the Registration Authority and the appealing party or parties.

12 Application for registration

12.1 Component parts of an application

12.1.1 The Sponsoring Authority sh all submit the cover sheet as specified in Annex A for all applications for registration.

12.1.2 Only the cover page is requi red for an application to register an ISO or ISO/IEC coded character set standard or a complete coding system (see clause 15) documented in a publicly available document. All other registration applications require a copy of the coded character set.

12.1.3 If applicable, the Sponsoring Authority shall submit permissions and endorsements as specified in clauses 10.2.2.3 and 10.2.2.4.

12.1.4 The proposed mapping of th e characters in the character set in the application to ISO/IEC 10646 equivalents is optional. The Sponsoring Authority is strongly encouraged to provide the mapping (see annex A.4 for details).

13 Registration procedure

13.1 The Sponsoring Authority sh all prepare an application for registration according to clause 12.

13.2 The Sponsoring Authority sh all submit an application for registration of a coded character set to the Registration Authority.

13.3 The Registration Authority s hall examine each application received. It shall ascertain that

— The application is formally in accordance with this International Standard and with ISO/IEC 2022, and, where applicable, with ISO/IEC 646 and ISO/IEC 4873.

— The proposed coded character set is not identical to a coded character set already registered. See clause 15.2.

— The application for registration meets the presentation practice of the Registration Authority. See clause 7.2.5.

— If the application is for registration of a single additional control function to be represented by the F_S escape sequence (see ISO/IEC 2022), in accordance with Annex B, the application is from the subcommittee concerned with coded character sets.

13.4 The Registration Authority s hall inform the Sponsoring Authority of any changes needed to meet the administrative requirements of clause 13.3.

13.5 The Registration Authority s hall circulate any registration application with a mapping to ISO/IEC 10646 first to the members of the RA-JAC for a technical review of not more than three months. Clause 14 specifies the review procedure.

13.6 The Registration Authority s hall inform the Sponsoring Authority of any required technical changes identified by the RA-JAC in its review.

13.7 When an application for regi stration has passed the administrative and technical review, 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.

13.8 The Registration Authority s hall consider comments received and, when appropriate, shall incorporate them in the final registration or reject the application.

13.9 The Registration Authority s hall process approved applications in accordance with Clause 17.

14 Technical review of m apping to 1SO/1EC 10646

14.1 The RA-JAC shall examine a ny mapping included in an application for technical suitability.

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

14.3 If the Sponsoring Authority d isagrees with the RA-JAC concerns about the mapping, then the Registration Authority shall include the mapping from the Sponsoring Authority and note any alternative mapping recommendations from the RA-JAC in the registration.

14.4 If the registration application does not include a mapping to ISO/IEC 10646, the RA-JAC shall not create such a mapping. Although at the request of the Sponsoring Authority, the RA-JAC may provide assistance in preparing a mapping, the RA-JAC shall not be required to do so.

15 Coded character sets with special consideration

15.1 Complete coding systems

15.1.1 A complete coding system c an be registered only if:

— the application identifies the publicly available document that describes the complete coding system, or

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

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

15.1.3 To be registered, a complete coding system does not need to be in accordance with ISO/IEC 2022. However, the registered escape sequence for the complete coding system shall be in accordance with ISO/IEC 2022.

15.2 Identical sets

15.2.1 If a new application for regis tration 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.

15.2.2 Two coded character sets ar e deemed to be identical if

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

11

— 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 aesthetic variations between fonts

— any combining characters are in the same positions

15.3 Multiple registrations for the same application

Provided that identical registrations do not occur (see clause 15.2), a given application (for example a programming language or a natural language) may have multiple coded character sets in the register.

16 Appeals

16.1 Appeals against registration

16.1.1 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.

16.1.2 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 clause 13.3.

— disagreement when the Registration Authority grants a waiver according to clause 19.2.

16.2 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 clause 13.3.

— disagreement when the Registration Authority refuses to grant a waiver according to clause 19.2.

16.3 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 clause 15.3)

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

— an allegation is made that 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

16.4 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

— before the end of the circulation period to the member bodies according to clause 13.7.

16.5 Resolution of an appeal

16.5.1 Within 30 days after receipt of an appeal, the Registration Authority shall submit the appeal to the members of the RA-JAC. See clause 11.

16.5.2 If four-fifths of the members of the RA-JAC consider the appeal administratively or technically justified, the Registration Authority shall approve the registration application.

16.5.3 If the matter cannot be resolved by the RA-JAC, the appeal shall be submitted to the P-members of the subcommittee concerned with coded character sets for vote according to the *Directives for the technical work of ISO*.

16.5.4 When necessary, the RA-JAC may edit the documents to be submitted to a vote by the subcommittee concerned with coded character sets.

17 Processing of approved application

17.1 The Registration Authority shall assign the escape sequence.

— Final characters 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.

— No final character(s) shall be reserved for future registration applications.

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

17.2 The Registration Authority shall make the mapping for a coded character set that has been registered (including any technical comments from the RA-JAC) available in machine-readable form. See annex A.4.

17.3 The Registration Authority shall publish the approved registration in the ISO/IEC 2375 register.

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

17.5 The Registration Authority shall promulgate to the list of interested parties (see clause 7.2.4) the meaning that has been assigned to each escape sequence.

18 Corrections

18.1 The Registration Authority in conjunction with the Sponsoring Authority shall correct material errors, for example typographical errors and errors in the character shapes (glyphs), as soon as detected.

18.2 The Registration Authority s hall add the date of the correction to the corrected pages, add the date and reason for the change to the cover sheet, and publish the new corrected pages of the registration.

19 Revisions

19.1 In general, no changes to re gistrations 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.

19.2 Under exceptional condition s, the Registration Authority may grant a waiver of clause 19.1 to international, governmental organizations issuing internationally recognized and worldwide implemented standards. However, for these types of registrations to receive a waiver, the first application papers and the register shall mention the possibility that such a registration may be modified in the future without the allocation of a new escape sequence.

19.3 When a new registration app lication 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 19.2 does not apply, then the Registration Authority shall create a new registration. The Registration Authority shall also issue a note to the original registration to identify the new registration.

20 Withdrawal

20.1 Withdrawal is a formal decla ration 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.

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

20.3 Withdrawal of an application for registration

20.3.1 When the Registration Autho rity is notified, it shall take no further action to process the application.

20.3.2 If the application for registra tion is being circulated for comment according to clause 13.7, the Registration Authority shall notify the members of the subcommittee concerned with coded character sets that the application has been withdrawn.

20.4 Withdrawal of an Existing Re gistration

20.4.1 After withdrawal, the registra tion shall remain in the register and continue to be identified by the allocated escape sequence.

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

20.4.3 The Registration Authority s hall inform the interested parties of the withdrawal of a registration.

Table of Contents of Annexes

Annex A
(normative)

International register

A.1 Content of the International Register

The International Register shall consist of two parts: a set of registrations, and indices to the registrations.

A.2 Format of the International Register

The International Register (IR) shall be available in electronic format and may also be available on paper.

A.3 Content of a registration

Each registration shall comprise the following parts, as applicable, depending on the type of registration:

— Cover page

— Description of the coded character set

— Mapping to ISO/IEC 10646

A.3.1 Cover page

The cover page shall be provided for all registrations. (The sample registration in Annex D includes a cover page.)

A.3.1.1 The Sponsoring Authority sh all provide the following elements of the cover page:

— the type of registration

— a short name for the character or 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 will 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, the standard or standards shall be included either in the short description or under "origin".)

– the registration is for a complete coding system and the return escape sequence ESC 2/5 4/0 applies

– if the registration for a complete coding system does not include the code table and list of character names, the cover page shall state where a publicly available document describing the complete coding system can be obtained

– the registration may be subject to future modification (see clause 19.2).

– the registration is a revision to a previously registered standard

A.3.1.2 The Registration Authority s hall provide the following elements of the cover page:

— the registration number

— the date of registration

— the allocated escape sequence

— if the registration were changed, the date 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 coded character set that was previously registered, the new registration shall be identified on the cover sheet of the original registration and the original registration shall be noted on the cover sheet of the new registration

A.3.2 Description of the coded c haracter set

The description of the coded character set shall contain both a code table and a list of character names. Clause 12.1.2 specifies when the description of the coded character set is not required.

A.3.2.1 Code table

A.3.2.1.1 Graphic character set

For 7-bit coded character sets, the layout of the code table shall be that given in annex C.1, and C.2. For 8-bit (single-octet) coded character sets, the layout of the code table shall be that give in annex C.3. For multiple-octet coded character sets, the layout shall be multiple code tables of 16 rows by 16 columns as in annex C.4.

A.3.2.1.2 Control functions

For C0 sets the layout of the tables shall be that given in annex C.5. For C1 sets the two-character escape sequences of type ESC F_s shall be listed for 7-bit coding. For 8-bit coding, the table shall be that given in annex C.6.

A.3.2.2 List of character names

A.3.2.2.1 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 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.3.2.2.2 Control functions

For character sets of control functions, the list of character names shall show the control functions of the set 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, registrations of control character sets shall list the control functions of the set indicating their name and definition for each position.

A.3.2.2.3 Unused positions

Unused positions shall be shown in the list of character names. Instead of a character name, unused positions shall be indicated by the text "(This position shall not be used)". 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.3.2.2.4 Notes in the list of charact er 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.4 Mapping to ISO/IEC 10646

A.4.1 A mapping of the characters in the coded character set in the registration to ISO/IEC 10646 equivalents shall be optional.

A.4.2 The mapping shall identify th e applicable part and edition of ISO/IEC 10646 plus any amendments and corrigenda on which the mapping is based.

A.4.3 The mapping to ISO/IEC 106 46 shall be in machine-readable form. (A registration application may also include a printed copy of the mapping.)

A.4.4 The mapping equates 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

A.4.5 Unused code positions in the coded character set shall have no record in the mapping table.

A.4.6 For each character in the reg istration, the mapping shall contain the following two elements:

— the code position in the coded character set using hexadecimal digits.

— the corresponding code position or sequence of code positions for a combining sequence in ISO/IEC 10646 using the ISO/IEC 10646 short identifier notation.

A.4.7 If a mapping to ISO/IEC 106 46 does not exist for a character in the registration, then the word "none" shall replace the ISO/IEC 10646 code position.

A.4.8 The mapping shall be structu red as follows:

— Each mapping record shall be in a single line of text.

— Each record in an individual character mapping shall contain the elements specified in annex A.4.5 in the same order. Each element shall be separated from the next element by the CHARACTER TABULATION control character U+0009 (frequently called a horizontal tab character) of ISO/IEC 6429. Code positions for combining sequences shall be separated by a comma.

— Records shall be ordered by the code position of the character in the registration

A.4.9 The mapping shall include th e date that the registration was approval by the RA.

A.4.10 The Registration Authority, o n behalf of the subcommittee concerned with coded character sets, may add alternate mapping information to the registration.

A.4.11 The Registration Authority m ay specify additional information for the mapping in its "Practices of the Registration Authority" (see clause 7.2.5).

A.4.12 Annex E shows an example of a mapping.

A.5 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

— other indices as deemed appropriate by the Registration Authority or as requested by the subcommittee concerned with coded character sets

A.6 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.

Annex B

(normative)

Criteria for the allocation of ESC F$_s$ sequences

B.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.

B.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.

B.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.

B.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 6.) Other Sponsoring Authorities, under clause 10 of this International Standard, that want to request to register ESC F$_s$ escape sequences shall first submit such requests to the subcommittee concerned with coded character sets.

B.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 specially efficient coding of the control function.

Annex C

(informative)

Layout of code tables

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.

Annex D
(informative)

Example registration

See following pages.

Annex E
(informative)

Example mapping table

Name: IS0 5426: 1983 to ISO/IEC 10646-1:2000

Table version: 1.0

Date: 2000-08-12

Author: Joan Aliprand

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/TC 46/SC 4/WG 1 at its
meeting on 2000-05-09.

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 ISO 5426 order.

```
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
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 mapped to U+FE20 COMBINING LIGATURE LEFT HALF. Two alternative mappings are possible: a more exact mapping that takes the base character into account, and one (described under the following characters) that maps to the whole form "double diacritic" character instead of to the compatibility "halves."

The left half of the ligature sign is used with various letters in transliterations (the example of use shows transliterated Russian). The left half of the double tilde is intended for use with the letter "n" (upper or lower case) in the ligature "ng with tilde" of Tagalog.

When the base character is taken into account, a more sophisticated mapping is possible, i.e.,

IF the base character in the ISO 5426 source data = N|n

THEN map 5D to U+FE22

ELSE map 5D to U+FE20

62 SLASH D – CAPITAL LETTER

This ISO 5426 is "used in Croatian, Icelandic, etc." and is mapped to one of the possible choices, to U+0110 LATIN CAPITAL LETTER D WITH STROKE.

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, U+0110 LATIN CAPITAL LETTER D WITH STROKE, or U+0189 LATIN CAPITAL LETTER AFRICAN D.

Annex F
(informative)

Principal differences between this fourth edition of ISO/IEC 2375 (2000-xx-xx) 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 6, "ISO supervisory body"

  - Clause 8, "Owner of Origin"

  - Clause 9, "Copyright Owner"

  - Clause 14, "Technical review of registration applications"

  - Clause 15, "Coded character sets with special consideration"

- Clause 16 "Appeals" has been consolidated and simplified (but has the same content).

- This edition in Annex A.4 adds an option to include a mapping from the characters in a registration to ISO/IEC 10646.

- Annex E was added to provide an example mapping to ISO/IEC 10646.

- Layouts of the code tables are no longer specified by reference to an external document but are instead presented in Annex C.

- The term "non-spacing character" has been updated to the term "combining character" in clause 4.

- The possibility to attach code tables and character names to registrations of complete coding systems has been added to clause 15. In such cases a publicly available document, describing the coding system, is not now needed.