

**US Comments on ISO/IEC CD 2375: 1999-11-05  
(SC2 N3390)**

The US votes against the adoption of ISO/IEC CD 2375 because it fails to satisfy five US requirements. If these requirements are accommodated, the US will change its vote to approval.

The US is willing to provide assistance to the editor with revising CD 2375.

In this paper, the following abbreviations are used:

- SA – Sponsoring Authority
- RA – Registration Authority
- JAC – Joint Advisory Committee

**US Requirements for CD 2375**

**1. The Standard Must Uphold the Rights of Interested Parties**

The registration must not violate the rights of parties with an interest in a coded character set proposed for registration:

- The Sponsoring Authority shall obtain permission from the developer or publisher of a coded character set to apply for registration of that set or to update an existing registration. This requirement does not apply if the SA is a National Standards Body proposing the registration of one of its national standards. This requirement is waived if the developer or publisher no longer exists and has no successor organization.
- If a character set proposed for registration is intended to be a coded character set for a particular application, the Sponsoring Authority shall obtain the endorsement of the developer of that application.
- The RA cannot reproduce copyrighted material in the 2375 registry without permission of the owner of the copyright. If the proposed registration is for a coded character set for which ISO is the copyright owner, then no copyright release is required. For all other cases, including when the SA is the owner of the copyright, the registration request shall include permission for ISO to reproduce the copyrighted materials in the 2375 Registry.
- The SA for an existing registration is responsible for deciding whether or not to add a mapping to the registration and for providing that mapping. A mapping for an existing registration may be proposed by the original SA or another organization. If the mapping sponsor is not the original SA for the registration, the mapping sponsor shall obtain permission from the original SA and the developer or publisher of the original coded character set.

Rationale:

A SA must not initiate registration of a coded character set without the knowledge and permission of the organization most concerned with use of that set. Here is an example of this:

- Michael Everson cleared the Irish (NSAI) application for registration of the US ANSEL character set (ANSI/NISO Z39.47) with Pat Harris, Executive Director of NISO.

Similarly, a SA must not propose a mapping for an existing registration without the knowledge and permission of the organizations most concerned with use of that set, namely the original SA for the registration and the developer or publisher of the original coded character set.

Microsoft and Apple consider the code pages developed for use with their respective products to be proprietary. They both strenuously oppose use of the registration process to provide an unauthorized source of coded character sets for use with their respective products.

- Registration No. 210, Sami complete 8-bit graphic character set no. 1, was intended for use “primarily in Windows applications.” Microsoft (as a member company of the US NCITS/L2) opposed the registration.
- Registration No. 211, Sami complete 8-bit graphic character set no. 2, was intended “primarily for Macintosh-compatible computers.” Apple (as a member company of the US NCITS/L2) opposed the registration.

The RA now requires submission of "reference material". Making such documentation available worldwide via the RA's WWW site introduces the copyright issue. Therefore, ISO/IEC 2375 must obtain copyright permission from the copyright owner if the RA is to reproduce the character set in its database. If the SA fails to provide copyright clearance, then the RA cannot register a coded character set.

## **2. Registration Is Not a Fast Path to Standardization**

The standard must emphasize that registration is not a fast path to ISO standardization. The body of the standard should explicitly state this to emphasize the importance of this principle. The US suggests adding the following text.

[start of text]

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.

[end of text]

Rationale:

CD 2375 states in the Introduction: "Registration provides a standardized identifier for a coded character set but it should not be regarded as [a] procedure to standardize a coded character set — it is not a standardization procedure." ISO/IEC 2375 needs to emphasize this point more forcefully in the main body of the standard and not merely in the Introduction.

CD 2375 does not address the issue of using registration to justify the addition of "characters" that do not otherwise conform to WG2 requirements for additions to ISO/IEC 10646. WG 2 has stated its requirements for adding characters to ISO/IEC 10646. Sponsoring Authorities should be aware that having a coded character set registered in the ISO/IEC 2375 registry provides no justification for adding characters from this set to ISO/IEC 10646.

### 3. Mapping Requirements Need Additional Specifications

Requirements for mapping are inadequately specified. In particular:

- The procedures do not address the situation where the supplier of the mapping and the experts reviewing the mapping reach an impasse. Although, such an occurrence should be rare, the standard must provide for such an eventuality.
- Implementers need a soft-copy of the table for implementation.
- Users of the mapping for a registration need to be made aware of any controversial or alternate mappings.
- The space provided (one cell) for a mapping on the form assumes that where a 10646 mapping exists, it is always a single character; however, some conversions may require the use of combining sequences.

Discussion:

The Japanese NB wrote: "As far as Japan understand is that the ownership of character shape (in print), character name and mapping to UCS are with Sponsoring Authority." The Japanese NB position conflicts with an earlier US recommendation that mapping be reviewed by qualified experts to ensure that the proposed mapping is reasonable: "If mapping is done by people who lack the appropriate expertise, the result can be mappings with erroneous and[/or] contentious content, as evidenced by many of the proposed registrations being reviewed." The US feels that ultimate "ownership" of the mapping in a registration lies with the owner of the 2375 standard (SC 2) and that 2375 needs to include a review process to ensure that a proposed mapping is at least reasonable. The review process is intended to protect the developers who use the registrations by preventing "incorrect" character mappings and by identifying character mappings with alternatives. Presumably, if the review process identifies real errors, the SA will agree to correct them and resubmit a corrected proposal. More likely, some characters will have alternative mappings. The US believes that, as the owner of the 2375 registry, SC 2 through the RA and the JAC has an obligation to make those alternatives known in the registration, even over the possible objections of the SA.

The US proposes that any disagreements between the SA and the JAC be resolved by (a) retaining the mapping preferred by the SA, and (b) identifying the controversy and documenting the alternative mappings in the registration. This solution ensures that the SA controls its submission for the registration (character shapes, character names, and its preferred mapping), but also ensures that the registration identifies problematic mappings to developers. Here is an example of a procedure to do this: If the JAC identifies a concern with the mapping, it would contact the SA (via the RA) with a proposed change so that the SA can decide whether to update the proposed registration or not. If the SA decides not to change the proposal and the JAC still disagrees with the SA on the mapping, the JAC would then document the controversy and the alternate mappings for addition to the proposed registration.

The US proposes that if registration includes the optional mapping to ISO/IEC 10646, that a machine-readable (soft-copy) of the mapping be required for the registration. For each implementer to recreate the mapping table from a printed document is a waste of time and subject to human errors. It makes sense for

the SA to do this once and for it to be included in the registration materials. The standard must document the format for this optional material.

The US proposes that the standard specify how alternate mappings for a particular character are to be documented in the mapping accompanying the proposed registration. For example, should the alternative be included immediately with the mapping for a particular character, or should all of the alternate mappings be included under a separate subheading of the mapping portion of the registration? (In cases where the SA and the JAC disagree, it may be easier to document any alternatives in a separate subsection.)

The US proposes that the concept of character mapping in a 2375 registration be extended to include the possibility of mapping one character in a source coded character set into a multiple character, combining sequence in ISO/IEC 10646. However, when both a single character and a combining-sequence mapping exist for a character in the proposed registration, the registration should list the single character mapping rather than the mapping to the combining sequence.

#### **4. RA Principles Accepted by SC 2 Must Be Included in the Standard**

- CD 2375 does not include the exception that "reference material" is not needed when an ISO or ISO/IEC standard is being registered. This was principle 2.a. articulated by the RA (Registration Authority) in SC2 N 3381. The Japanese NB reemphasized this point at the draft review stage (SC2 WG3 N430). The US believes that this principle is reasonable and that it should be included in 2375.
- The standard should continue to reflect RA principle 2.b., Character shapes and character names of the "ORIGIN" should not be changed. The US believes that it may be confusing to the users if a registration were to have a different set of names from the names in the original document specifying the coded character set.

#### **5. The SA Must Be Responsible for Providing the Optional Mapping into ISO/IEC 10646.**

The RA-JAC is a committee of volunteers who should not be held responsible for creating a mapping into ISO/IEC 10646 for the SA. Although the SA may ask the RA-JAC for assistance with the mapping table, the RA-JAC must not be responsible for creating the entire table unless the RA-JAC agrees to do so.

### **Additional US Comments**

#### **1. Users of the 2375 Registry Need an Index Ordered by Escape Sequences into the Registrations**

Users of the standard should not need to read every registration to find the one that corresponds to a particular ISO/IEC 2022 escape sequence. The US therefore recommends that (a) the RA add an index to the registrations by ISO/IEC 2022 escape sequences, and (b) the standard reflect this need in the description of the registry.

#### **2. Correct Sentence in Clause C.4**

The last sentence of Clause C.4 reverses the intent of Annex C. The sentence should read, "Any candidate for such allocation shall first be submitted to this subcommittee as the Sponsoring Authority for escape Fs (ESC Fs) sequences." rather than ending in "... as the Sponsoring Authority for escape sequences *other than* ESC Fs.", which reverses the intent of the statement in the context of Annex C.

### 3. Simplify Annex E

Annex E could be simplified by defining the minimal requirements and then using the illustrations as examples rather than having them specify the precise format for the code tables.

The SA should not be required to redraw the code table to precisely the format of the examples of Annex E provided the code table meets minimal requirements for format, organization, and legibility. The minimal requirement is that the information be arranged in a table where the indices and the shape of the characters are clearly legible. ISO also uses the convention that the columns represent the high-order digit of the code position and the rows represent the low-order digit of the code position. The code table should use either decimal or hexadecimal digits, or both, as labels for the rows and columns. Specifying the column and row indices in binary should not be a requirement. Here is some suggested text for Annex E.

[start of text]

The minimum requirement for the code table is for the character shapes to be arranged in the cells of a table where the high-order digit, or digits, index the columns and the low-order digit indexes the rows. The column and row indices, and the character shapes in the table shall be of sufficient size and print quality so that they are clearly distinguishable. Code tables shall be arranged as follows:

- 32 control characters (2 columns by 16 rows)
- 95 or 96 graphic characters (6 columns by 16 rows),
- 191 or 192 graphic characters (embedded in 16 columns by 16 rows)
- 256 graphic characters (16 columns by 16 rows)

The row and column indices shall be labeled in decimal or hexadecimal digits, or both. A code table for the registration may optionally display the column and row indices in binary.

[end of text]

If the editor decides not to accept the above comment, then the revised Annex E need to include the template for a  $16 \times 16$  table for multi-byte coded character sets.

### 4. Addition to Annex H

Annex H (which lists the principal differences from the previous edition) needs to note that this edition adds the option of including a mapping to ISO/IEC 10646 in registrations. Even if it is optional, this is a major change to the content of the registry, and it needs to be noted as such in this Annex.

### 5. Potential Conflict of Interest

If a member of the JAC also represents the SA, should this member be required to abstain on votes on proposals from his or her SA?

### 6. Usability of the Standard

The standard would be easier to use if parts were relocated to group discussions of similar topics together. The Annex of this document has comments on how the CD might be reorganized to improve usability.

**Annex to US Comments on ISO/IEC CD 2375: 1999-11-05  
One Possible Way to Reorganize the Structure of CD 2375**

*Current Contents*

Foreword

Introduction

1. Scope
2. Field of application
3. Normative references
4. Definitions
5. Registration Authority
6. Sponsoring Authorities
7. Registration procedure
8. Review procedure
9. Withdrawal procedure
10. Correction procedure
11. Revision procedure
12. Appeal procedure

Annex A: Registration Authority

Annex B: International Register

Annex C: Criteria for the allocation of ESC Fs sequences

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

Annex E: Layout of code tables

Annex F: Flowchart showing the registration process

Annex G: Example registration

Annex H: Principal differences in editions

*Proposed Organizational Topics*

The proposed reorganization moves the exiting content of CD 2375 into the following broad topics.

1. Fundamentals
2. Interested Parties
3. Registration Procedures
4. Modifications To Approved Registrations
5. Specifications For Component Parts Of Application For Registration

Note to the Editor: The headings in all caps in the following outline are not intended to be headings in 2375, but are merely provided as a guide so we can see the high-level structure and be sure that (a) related things are discussed together, and (b) the standard follows a top-to-bottom sequence of information.

**FUNDAMENTALS**

Foreword

Introduction

1. Scope  
OK

2. Field of application  
Add Clause 5.3

3. Normative references  
Add Amendments to ISO/IEC 10646 citation or substitute citation to 2nd edition.

4. Terminology  
Add: coded character set

5. Identification of Registration  
Clause B.6

## INTERESTED PARTIES

6. ISO Supervisory Body  
Proposed text: The ISO/IEC JTC1 subcommittee concerned with coded character sets has administrative responsibility for this standard.

7. Registration Authority  
7.1. Role  
Clause 5.2  
Needs a parallel clause to cover the mapping tables

7.2. Authorization  
Clause 5.1 and A.1

7.3. Functions  
Muddled up with registration procedure  
A.2 is obsolete  
A.3 may be superseded by this revision

8. Owner of Origin  
The Owner of Origin is the organization or individual responsible for the development of a coded character set.  
The Owner of Origin has ultimate authority over the content of its character sets. (Clause 6.5, modified)  
\*\*\*Comment to the Editor "Origin" reflects RA usage in ISO/IEC JTC1 SC2 N 3381 \*\*\*

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

10. Registration Sponsor ("Sponsoring Authority")

10.1. Identity  
Clause 6.1

10.2. Functions  
In this order: 6.2, 6.2.1, 6.2.2, 6.2.3, 6.3, 6.4, 6.2.4

10.3. Obligations

10.3.1. Copyright Clearance

The Registration Sponsor 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 Copyright Owner no longer exists and has no successor organization, this requirement is waived.

#### 10.3.2. Clearances by Application Developer

If a character set proposed for registration is intended to be a code page for a particular application, the Registration Sponsor shall obtain the endorsement of the developer of that application to register the coded character set.

### 11. Joint Advisory Committee

#### 11.1. Identity

Clauses D.2

#### 11.2. Appointment

Clause D.1

#### 11.3. Functions

Clauses 8.1, 8.3, 8.4. (8.2 is redundant), D.3.1, D.3.2, D.3.3,

Need to add prohibition against the JAC creating mappings to 10646 if not part of application unless requested by the SA. Although the JAC intends not to do this, including an explicit prohibition responds to a concern of the Japanese NB.

## REGISTRATION PROCEDURES

### 12. Application Procedures

#### 12.1. Application agent

The Registration Sponsor submits an application for registration of a coded character set to the Registration Authority.

#### 12.2. Component parts of application

The application for registration shall consist of the first item and the other items as required:

- a) cover sheet
- b) the coded character set to be registered as originally published (showing original shapes of characters and original character names)
- c) permissions and endorsement (as specified in new Clause 10.3)
- d) optionally, a proposed mapping of the characters in the proposed coded character set to equivalent characters in ISO/IEC 10646-1:2000.

Specifications for each part are given in Clauses XX – XX.

##### 12.2.1. Requirements for component parts

The SA shall submit the cover sheet for all applications for registration.

The coded character set as originally published is not required when the application is for registration of an ISO or ISO/IEC standard. Clause B.1.5, first paragraph. A copy of the coded character set is required in all other cases.

Clearances as specified in Clause 10.3 shall be submitted if applicable. If the application is for registration of an ISO or ISO/IEC standard, Clause 10.3.1 is waived and Clause 10.3.2 does not apply.

The proposed mapping to ISO/IEC 10646 characters is optional. It is strongly recommended that the SA include the mapping.

### 13. Review Procedures

#### 13.1. Review by Registration Authority

Clauses 7.1, 7.3 (7.2 is redundant)

Is the RA supposed to review proposed mappings initially? Perhaps to verify that they conform to formatting and other requirements? (If non-conformant, the proposal is returned to Sponsor just as cover sheet, etc.)

##### 13.1.1. Similar Sets

###### 13.1.1.1. Identical Sets



Clause B.1.6

13.1.1.2. Multiple registrations

Clause B.4.1

13.1.2. Outcome of review by Registration Authority

7.5 (in part) if application ok. 7.4 if application not ok.

13.2. Review by Joint Advisory Committee

Clauses 8.1, 8.3, 8.4 without notes, 8.5 without note. (Note D.3.1 refers to Clause 7 – error?)

13.2.1. Outcome of review by Joint Advisory Committee

7.5 (in part) if mapping ok. No provision for resolution of disagreement.

13.3. External review

Clause 7.5 (in part)

13.3.1. Outcome of external review

Clause 7.6 (Is the JAC consulted by the RA about external comments?)

14. Appeal Procedures

14.1. Against registration

Clause 12.1.1, second half

14.2. Against rejection of application

Clause 12.1.1, first half

14.2.1. Valid Grounds

Clauses 12.1.2, B.4.2, B.5 (non-grounds)

14.3. Against changes to proposed mappings

Is this clause needed? US position is that instead of an appeals procedure, disagreements shall be recorded as part of the mapping.

14.4. Procedures for filing an appeal

Clause 12.2, but specify registered mail and fax as alternatives to e-mail.

14.5. Resolution of an appeal

Clause 12.3, D.3.4, D.3.5 (reference to 10.3 should be to 12.3)

15. Processing of approved application

15.1. Assignment of meaning

Clauses 7.7, 7.8, B.2

15.2. Approval of proposed mapping

Proposed text: The Registration Authority shall make the approved mapping for a registration available in machine-readable form.

15.3. Relationship to existing registrations

Clause B.1.4

## MODIFICATIONS TO APPROVED REGISTRATIONS

16. Corrections

Clause 10

17. Revisions

Clause 11

18. Withdrawal

Combine Clauses 9 and B.3

## SPECIFICATIONS FOR COMPONENT PARTS OF APPLICATION FOR REGISTRATION

19. Cover page (Make this in to a new Annex, which is normative)

Clause B.1.1.1

If there is a specific form and layout, it should be reproduced in an Annex to the standard.

20. Coded character set

20.1. Repertoire

Clause B.1.7

20.2. Code tables

Clause B.1.1.2

20.3. Character names

Clauses B.1.1.3.1, B.1.1.3.2

20.4. Other information

Clauses B.1.1.3.3, B.1.1.3.4, B.1.2, B.1.3

21. Clearances (Permissions)

As specified in Clause 10.3 Obligations.

22. Proposed Mapping

Shall be in machine-readable form. Details regarding data elements and structure in Annex “E-plus” (this new Annex should be positioned immediately after Annex E. Contents to be specified). Printed form of the data is optional.

Annex A: Registration Authority

Incorporated into body of standard

Annex B: International Register

Leave the form of IR up to the RA.

Parts that apply to the application belong in specification of application documents

Annex C: Criteria for the allocation of ESC Fs sequences

OK except for C.4 which repeats the NOTE to Clause 6.1 and the last sentence should be corrected to read, "Any candidate for such allocation shall first be submitted to this subcommittee as the Sponsoring Authority for escape Fs (ESC Fs) sequences."

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

Incorporated into body of standard

Annex E: Layout of code tables

Needs to be extended to cover multi-byte sets, or simplified to simply describe the required data elements.

Annex F: Flowchart showing the registration process

Split into two parts – application for escape sequence and mapping

Annex G: Example registration

OK We had considered giving a pointer to the registry on the WWW. However, if you add a pointer to the web site and the RA changes, the standard may need to be updated to point to a different URL. Do we point people to the ISO/IEC JTC 1/SC 2 web page to find the pointer to the 2375 Registry?

Annex H: Principal differences in editions

Need to note that this edition adds the option of including a mapping to ISO/IEC 10646.