
**Information technology — User
interfaces — Procedures for the
registration of cultural elements**

*Technologies de l'information — Interfaces utilisateur — Procédures
pour l'enregistrement des éléments culturels*

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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 15897 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

This second edition cancels and replaces the first edition (ISO/IEC 15897:1999), which has been technically revised. ISO/IEC 15897:1999 was the result of a “fast-track” adoption of ENV 12005:1996.

This second edition adds support for registering specifications meant for machine processing, such as ISO/IEC TR 14652 specifications, SGML and XML. It enlarges the group of organizations that may be Sponsoring Authorities, and an effort has been made to align it with the registration procedures of ISO/IEC 2375. The changes to the first edition are outlined in Annex H.

Introduction

Cultural differences throughout the world make it necessary to adapt IT equipment to each local culture. Standard methods being developed by ISO/IEC JTC 1/SC 35 make such adaptation easier. Registering the local conventions in a globally available registry makes it still easier. CEN/TC 304 was the first committee to start work on such a registry and the European prestandard ENV 12005:1996 was the result. ISO/IEC 15897:1999 was the result of the “fast-track” adoption of DS/ENV 12005, a Danish Standards Association standard publication equivalent to ENV 12005.

This International Standard registers amongst other items Narrative Cultural Specifications and Repertoiremaps, POSIX Locales and POSIX Charmaps as defined in ISO/IEC/IEEE 9945, and other machine-parsable Cultural Specifications such as ISO/IEC TR 14652 FDCC-sets, Charmaps and Repertoiremaps, and Cultural Specifications in SGML or XML.

The registration will be free-of-charge and the registered cultural elements will also be freely available on the Internet (see 6.3). This will make information on cultural conventions freely and easily available to producers in the IT market. Some of these specifications may even be applied without any change by downloading the formatted specifications and processing them, for example by POSIX-compliant software.

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Information technology — User interfaces — Procedures for the registration of cultural elements

1 Scope

This International Standard specifies the information that can appear in a Cultural Specification and defines the procedures for registering such specifications. The Cultural Specifications can include freeform Narrative Cultural Specifications and Repertoiremaps as described in this International Standard, POSIX Locales and Charmaps conforming to ISO/IEC/IEEE 9945, and other machine-parsable specifications such as FDCC-sets, Repertoiremaps and Charmaps following the recommendations of ISO/IEC TR 14652, and Cultural Specifications formatted using SGML or XML. The registry is in printed and electronic form.

Each cultural convention registration has unique identifiers in a particular standard format defined in this International Standard. A numeric identifier and a token identifier are assigned to each registered cultural convention specification, POSIX Locale, POSIX Charmap and Repertoiremap, FDCC-set and ISO/IEC TR 14652 Charmap, and other machine-processable descriptions of cultural conventions. These identifiers are for unique identification of the Cultural Specification, and are intended to be used with POSIX Locale handling mechanisms and possibly other Locale and Charmap usage, such as in programming languages, database handling and communication protocols and for identification and specification by human operators.

The field of application of this International Standard is to provide reference for implementers, procurers, users, and standardization organizations to determine cultural requirements in a given cultural environment. Registered items using certain POSIX formal specification methods can also be used by POSIX-conformant operating systems and other software capable of using such specifications.

NOTE The title of this International Standard contains the term “cultural elements”. The preferred term in this International Standard is “cultural conventions”, but the term “cultural elements” is retained in the title for consistency with earlier versions of this International Standard.

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 639-1, *Codes for the representation of names of languages — Part 1: Alpha-2 code*

ISO 639-2, *Codes for the representation of names of languages — Part 2: Alpha-3 code*

ISO/IEC 646, *Information technology — ISO 7-bit coded character set for information interchange*

ISO 3166 (all parts), *Codes for the representation of names of countries and their subdivisions*

ISO 4217, *Codes for the representation of currencies and funds*

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 8824 (all parts), *Information technology — Abstract Syntax Notation One (ASN.1)*

ISO/IEC 8825 (all parts), *Information technology — ASN.1 encoding rules*

ISO/IEC/IEEE 9945, *Information technology — Portable Operating System Interface (POSIX®) Base Specifications, Issue 7*

ISO/IEC 10646, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

3 Terms and definitions

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

3.1

Locale

definition of the subset of a user's environment that depends on language and cultural conventions

NOTE See Clause 7 of ISO/IEC 9945-1:2003 for a specification of the Locale file format.

3.2

FDCC-set

set of Formal Definitions of Cultural Conventions

definition of the subset of a user's information technology environment that depends on language, territory, or other cultural customs

NOTE See Clause 4 of ISO/IEC TR 14652:2004 for a specification of the FDCC-set format.

3.3

Charmap

text file describing a coded character set

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NOTE See 6.4 of ISO/IEC 9945-1:2003 for a description of the POSIX Charmap file format.

3.4

text file

human-readable file that contains characters organized into one or more lines

3.5

cultural convention

cultural element

data item for computer use that may vary depending on language, territory, or other cultural circumstances

3.6

Cultural Specification

Narrative Cultural Specification, POSIX Locale, FDCC-set, POSIX Charmap, Repertoiremap, or other machine-processable description of cultural conventions such as ISO/IEC TR 14652 FDCC-sets, Charmaps or Repertoiremaps, or Cultural Specifications in SGML or XML

3.7

Narrative Cultural Specification

narrative description of culturally dependent information pertaining to information technology

NOTE Such information may be useful when designing computer systems and software. See Clauses 10, 11 and 12.

3.8**Repertoiremap**

definition of a mapping between character names and characters for the repertoire of characters used in a Locale

NOTE This is further described in Clause 13.

3.9**profile**

⟨of a standard⟩ set of specifications of values of parameters in the standard, selections of optional items of the standard, or the recommendations concerning implementation-related matters of the standard

3.10**token identifier**

string uniquely identifying the Cultural Specification, constructed from various key attributes of the specification

NOTE This is further described in Clause 15.

4 International Register**4.1 Content**

The International Register of Cultural Specifications (ISO-IR-15897) shall consist of two parts: a set of registrations of Cultural Specifications, and indices to the registrations.

4.2 Format

The International Register (IR) shall be available in electronic format through the Internet, and optionally on other electronic media. It may also be made available on paper.

Directions for access to the International Register on the Internet are given in 6.3.

4.3 Indices to the registrations

The International Register shall contain indices to the registrations by:

- the registration number;
- the token identifiers;
- the type of Cultural Specification(s) in a registration;
- the culture to which a registration applies;
- the sponsoring authority of a registration;
- other indices as deemed appropriate by the Registration Authority, or as requested by the subcommittee with administrative responsibility for this International Standard (see Clause 5, ISO/IEC Supervisory Body).

4.4 Identification of an approved registration

Each approved registration must have a unique registration number and one or more unique token identifiers.

4.4.1 Structure of the identifiers

The structure of a registration number is one or more digits, without leading zeroes. The structure of a token identifier is given in Clause 15.

4.4.2 Reference to an approved registration

A reference to an approved registration should be made by using one of its unique token identifiers, a part of its token identifier with for example part or all of the version number excluded as described in Clause 15, or the prefix ISO-IR-15897 followed by a HYPHEN and the registration number, or one of the mechanisms listed in Annex C. Examples of token identifiers are listed in Clause 14. An example of using the ISO-IR-15897 prefix with the registration number 37 is ISO-IR-15897-37.

4.5 No modification nor deletion of registrations

The contents of an individual registration shall never be changed or deleted once the application for registration has been approved (except for name additions). Even the correction of editorial errors will make a new registration necessary. This is contrasted with a standard which must be reviewed and/or revised periodically. If an existing entry in the registry is based on a standard that subsequently is revised, the existing registry entry is not changed. If a Sponsoring Authority desires recognition of such a revision, a new registration shall be made by following the normal procedures. Withdrawal of part of an existing registration is prohibited by 21.3.1.

A registration has a version number as part of its token identifier, defined in Clause 15. By registering a Cultural Specification with a higher version number, a specification may be updated, and applications referring to the registration without the precise version will get the latest update, while applications referring the precise version, or the registration number, will get the older specification. The rules for the versioning mechanism are specified in Clause 15.

5 ISO/IEC supervisory body

The ISO/IEC JTC1 subcommittee concerned with internationalization has administrative responsibility for this International Standard and the content of the register.

NOTE At the time of publication, subcommittee ISO/IEC JTC1/SC35, User interfaces, has this responsibility.

6 Registration Authority

6.1 Appointment

6.1.1 The Registration Authority (RA) shall be an organization nominated by the ISO/IEC supervisory body for this International Standard and appointed by the ISO and IEC councils to act as the Registration Authority for this International Standard.

6.1.2 The Registration Authority shall be an organization actively participating in the work of the ISO/IEC supervisory body for this International Standard.

6.2 Responsibilities

6.2.1 The Registration Authority shall maintain the International Register of Cultural Specifications and assign their numeric and token identifiers.

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

- applications for registration (as specified in Clauses 16 and 17);
- appeals (as specified in Clause 18);
- corrections and revisions to existing registrations (as specified in Clauses 19 and 20);
- withdrawal of existing registrations (as specified in Clause 21).

The exact responsibilities of the Registration Authority are described in detail in Clauses 16 and 17.

6.2.3 The contents of this register shall be available to ISO/IEC JTC 1 members and to the general public, both in printed and electronic form. In particular, the contents of the register shall be made available over the Internet.

6.2.4 One or more technical representatives of the Registration Authority may attend the meetings of the subcommittee with administrative responsibility for this International Standard and of appropriate working group(s) reporting to this subcommittee if required.

6.3 Identity

The identity of the designated Registration Authority and where the Registration Authority has published the ISO/IEC 15897 Register on the Internet is available at:

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

NOTE The initial Registration Authority was designated to be:

The Danish UNIX-systems User Group (DKUUG)
 Fruebjergvej 3
 DK-2100 København Ø
 Danmark
 email: culturalregister@dkuug.dk

The data of the cultural register was initially available at:

<http://www.dkuug.dk/cultreg/>

7 Sponsoring Authority

7.1 Identity

A Sponsoring Authority is an organization that may submit applications for registration of Cultural Specifications to the Registration Authority. Applications for registration of Cultural Specifications may be made by the following bodies:

- a) any Member Body of ISO/IEC JTC1, for applications limited to the territory or territories for which they have authority;
- b) any National Member, Associate, or Affiliate of CEN, for applications limited to the territory or territories for which they have authority;
- c) ISO/IEC JTC 1 and its Subcommittees and Working Groups, for any applications;
- d) any other organisation, for any applications.

7.2 Responsibilities

The responsibilities of a Sponsoring Authority shall be:

- a) to receive applications concerning Cultural Specifications from a Source of Information (see Clause 8) operating in the area over which the Sponsoring Authority has jurisdiction;
- b) to prepare applications for the registration of the Cultural Specifications according to the procedures and specifications in Clause 15;
- c) to assure that free distribution of the Cultural Specification is permitted without charge;
- d) if any material in an application is under copyright, to obtain copyright clearance for the copyrighted material from the copyright holder, including permission to redistribute the copyrighted material as part of the Cultural Specification without restriction and without charge by the copyright holder;
- e) Sponsoring Authorities may submit any applications for registration of the types Charmaps, Repertoiremaps, and Machine-parsable character set descriptions to support their other Cultural Specifications;
- f) to effect such rationalization or coordination of all applications under consideration as the Sponsoring Authority may desire;
- g) to submit applications for the registration of Cultural Specifications to the Registration Authority;
- h) to announce the result of the registration procedure within its respective country, region, or organizations.

8 Source of Information

8.1 Identity

The Source of Information is the organization or individual responsible for the Cultural Specification.

8.2 Responsibilities

The responsibilities of a Source of Information shall be:

- a) to prepare a Cultural Specification;
- b) if any material in a Cultural Specification is under copyright, to assure that free distribution of the Cultural Specification is permitted;
- c) to submit the Cultural Specification to an appropriate Sponsoring Authority.

9 The Registration Authority's Joint Advisory Committee

9.1 Membership

The Joint Advisory Committee (RA-JAC) shall consist of a representative of the Registration Authority and four other members who shall be representatives from the national member bodies on the subcommittee concerned with the maintenance of this International Standard or representatives from organizations with a liaison membership to this subcommittee.

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

9.2 Appointment

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The subcommittee responsible for maintaining this International Standard shall appoint the members of the RA-JAC, except for the RA representative, which is appointed by the RA.

The subcommittee responsible for maintaining this International Standard shall appoint or confirm the members of the RA-JAC at its plenary meetings, except for the representative of the RA.

9.3 Responsibilities

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

- a) to determine whether an application for registration meets the technical requirements of Clause 14;
- b) to provide expert technical advice on comments if requested by the Registration Authority;
- c) to consider and vote on appeals received by the Registration Authority;
- d) to act as a mediator between the Registration Authority and the appealing party, or parties.
- e) In addition, the RA-JAC may add comments to a registration.

10 Types and relationships of Cultural Specifications

10.1 Types of Cultural Specifications

A number of types of Cultural Specifications can be registered according to this International Standard:

- 1) Narrative Cultural Specification
- 2) POSIX Locale
- 3) POSIX Charmap
- 4) Repertoiremap
- 5) Machine-parsable Cultural Specification
- 6) Machine-parsable coded character set specification

Type 1 is for Narrative Cultural Specifications, further specified in Clause 11 and 12.

Types 2 and 3 are for POSIX specification of cultural conventions defined in ISO/IEC/IEEE 9945.

Type 4 is for Repertoiremaps. Clause 13 defines the format of a Repertoiremap included in an application for cultural registration.

NOTE As far as Repertoiremaps according to ISO/IEC TR 14652 are also in accordance with Clause 13, these can also be registered as Type 4.

Types 5 and 6 are for specification of cultural conventions in a machine-parsable format, such as specified in ISO/IEC TR 14652, XML or SGML table formats. Any format is allowed as long as it is machine parsable and adheres to the following rules: It is a ISO/IEC TR 14652 FDCC-set, a ISO/IEC TR 14652 Charmap, or the first line of the file identifies the file format.

10.2 Relations between registration types

Registration types are related as follows:

10.2.1 The Narrative Cultural Specification

The Narrative Cultural Specification specifies cultural conventions in narrative form in any of the official ISO/IEC JTC 1 languages English, French and/or Russian, and it may give equivalent specifications in other languages. It may thus address issues which have not yet been codified by formal methods for specifications of cultural conventions. If parts of a Narrative Cultural Specification have been specified also in POSIX Locale or Charmap format, this Locale or Charmap should be referenced in the specification.

10.2.2 POSIX Locale

The POSIX Locale shall specify appropriate aspects of a Narrative Cultural Specification in formal POSIX syntax. The POSIX Locale shall refer to either one or more POSIX Charmaps it can use, or to a Repertoiremap.

When a POSIX Locale is submitted, it should be accompanied by a corresponding Narrative Cultural Specification. The Narrative Cultural Specification and the POSIX Locale shall not be in contradiction.

10.2.3 POSIX Charmap

The POSIX Charmap shall specify aspects of a Narrative Cultural Specification or a POSIX Locale that relate to coded character sets. A POSIX Charmap may refer to POSIX Locales, Narrative Cultural Specifications, or Repertoiremaps that it uses, but such references are not required.

10.2.4 Repertoiremap

A Repertoiremap is used as a tool to enable a POSIX Locale or a Narrative Cultural Specification to be independent of coded character sets, and to remove the requirement for POSIX Charmaps when registering a POSIX Locale. It need not refer to other Cultural Specifications.

10.2.5 Other machine-parsable Cultural Specifications

Some aspects of a Narrative Cultural Specification may be specified in formal syntax as an ISO/IEC TR 14652 FDCC-set, or other machine-parsable Cultural Specification, which may refer to the corresponding Narrative Cultural Specification. A ISO/IEC TR 14652 FDCC-set may refer to the Repertoiremap being used, and should also list one or more Charmaps that can be used.

10.2.6 Other machine parsable character set specifications

In the case of a ISO/IEC TR 14652 Charmap, or other machine-parsable character set descriptions it shall specify aspects of a Narrative Cultural Specification or an FDCC-set that relate to coded character sets. A Charmap may refer to the Repertoiremap being used, and may refer to the FDCC-set or the Narrative Cultural Specifications using the Charmap.

NOTE It is the intention to allow more formal specification methods in future revisions of this International Standard when they become standardized methods; for the time being these specifications can be registered as type 1, 5 or 6.

11 Format of a Narrative Cultural Specification

The format of a Narrative Cultural Specification shall contain clauses describing the following cultural conventions, which may also be described in a POSIX Locale, or an FDCC-set, or other machine-parsable Cultural Specification:

- 1) [Alphanumeric deterministic ordering](http://standards.iso.org/standards/catalog/standards/sist/295a5499-0f6a-4014-886f-48b28675c477/iso-iec-15897-2011)
- 2) Classification of characters
- 3) Numeric formatting
- 4) Monetary formatting
- 5) Date and time conventions
- 6) Affirmative and negative answers

The Narrative Cultural Specification may also include other culturally dependent information, limited to the following list:

- 7) National or cultural Information Technology terminology
- 8) National or cultural profiles of standards
- 9) Character set considerations
- 10) Sorting and searching rules
- 11) Transformation of characters
- 12) Character properties
- 13) Use of special characters