

ISO/IEC JTC 1/SC 32 N 0672

Date: 2001-09-04

REPLACES: --

<p>ISO/IEC JTC 1/SC 32</p> <p>Data Management and Interchange</p> <p>Secretariat: United States of America (ANSI)</p> <p>Administered by Pacific Northwest National Laboratory on behalf of ANSI</p>
--

DOCUMENT TYPE	Other document (Open)
TITLE	Need for a standard "default" convention for referencing ISO 639-2: "Codes for the representation of names of languages" in Open-edi business transactions and e-commerce, e-business, etc.
SOURCE	JTC 1/SC32 / WG 1
PROJECT NUMBER	
STATUS	To TC37/SC2 for review and advice/decision
REFERENCES	
ACTION ID.	ACT
REQUESTED ACTION	
DUE DATE	
Number of Pages	16
LANGUAGE USED	English
DISTRIBUTION	P & L Members SC Chair WG Conveners and Secretaries

Douglas Mann, Secretariat, ISO/IEC JTC 1/SC 32

Pacific Northwest National Laboratory *, 901 D Street, SW., Suite 900, Washington, DC, 20024-2115, United States of America

Telephone: +1 703 379 6915 x 111; Facsimile: +1 703 379 8934; E-mail: MannD@battelle.org

available from the JTC 1/SC 32 WebSite <http://www.jtc1sc32.org/>

*Pacific Northwest National Laboratory (PNL) administers the ISO/IEC JTC 1/SC 32 Secretariat on behalf of ANSI



2001-08-03

FINLAND POST
EDI services

P.O.BOX 7021

FIN-00011 Posti
Finland

Direct Line : +358 204 51 4559
Direct Fax : +358 204 51 4525
e-mail: hannu.pelkonen@posti.fi

**ISO/IEC JTC 1/
SC32/WG 1**

OPEN-EDI

**TITLE : Need for a standard “default” convention for referencing ISO 639-2:
“Codes for the representation of names of languages” in Open-edi
business transactions and e-commerce, e-business, etc.**

SOURCE : ISO/IEC JTC1/SC32/WG1

STATUS : Liaison request to ISO TC37/SC2

ACTION : For review, decision and reply by TC37/SC2 to JTC1/SC32/WG1

Remarks:

This is a liaison request to ISO TC37/SC2 for advice as to which of the two "standard" code sets in ISO 639-2 is to be used as the default standard for use in Open-edi business transactions, (e.g., e-commerce, e-business, e-banking, etc.). This liaison document is also sent to ISO TC46/SC4 which is the co-author of ISO 639-2. It is also copied to JTC1 SC2, SC17, SC31, SC32, SC35 & SC36 as well as ISO TC68, TC104, TC154, TC178, TC204, TC211, TC215, the International Information Centre for Terminology (Infoterm) and others who use ISO 639-2 in support of global interoperability and cultural adaptability.

Executive Summary

1. This is a liaison request from ISO/IEC JTC1/SC32/WG1 to ISO TC37/SC2 for advice as to which of the two "standard" code sets in ISO 639-2, i.e., "639-2/B" or "639-2/T", is to be used as the default standard for use in Open-edi business transactions, (e.g., e-commerce, e-business, e-banking, etc.), for the identification and referencing of languages.

2. Alternatively, ISO TC37/SC2 could reply that this is for SC32/WG1 to decide (as per Clause 4.1 in ISO 639-2).

3. In its standards development work supporting the needs of electronic commerce administration, etc., ISO/IEC JTC1/SC32/WG1 wants to make ISO 639-2:1998 (E/F) a normative reference in support of its Open-edi standards work.

Within ISO/IEC information technology standards, SC32 focuses on "data management and interchange" and WG1 on "Open-edi". {See further Annex A *Scope of ISO/IEC JTC1/SC32/WG1 - "Open-edi"*}.

4. A key aspect of business transactions (paper or electronic, for-profit or not-for-profit, etc.), is that they make extensive use of sets of "codes representing X". In addition, the combination of the global economy, the Internet and e-business, has raised the need to be able to support any human language at the user interface, anytime, anywhere in the world.

5. A key property of a business transaction is that it involves commitment exchange among "Persons", (as the only entities being able to make commitments), in addition to information exchange among their IT systems. [Note: The three sub-types of "Person" are "individual", "organization" and "public administration"]. Here the ability to be able to identify and reference unambiguously the use of any natural language (currently in use) from a human interface perspective, is crucial.

6. This liaison document is also sent to ISO TC46/SC4 which is the co-author of ISO 639-2. It is also copied to JTC1 SC2, SC17, SC31, SC32, SC35 & SC36 as well as ISO TC68, TC104, TC154, TC178, TC204, TC211, TC215, and others who use ISO 639-2 in support of global interoperability and cultural adaptability.

7. These standardization committees are requested to inform SC32/WG1: (1) if they use ISO 639-2 in their standardization work; and, (2) if so, whether code set "639-2/B" or "639-2/T" is the one commonly used in their domain.

Note: This liaison statement contains added explanatory text for those who may not be familiar with the development and present status of the standards for various sets of codes for the representation of names of languages, namely, ISO 639-1 and ISO 639-2.

1.0 Original Issue Pertaining to ISO 639 “Codes for the representation of names of languages”/«Codes pour la représentation des noms de langues»

- 1.1 The "original" ISO 639:1988 (First Edition) had a 2-alpha code set to represent the names of languages. Canada, the USA and other countries did not adopt this ISO 639 as a national standard in their countries because it lacked codes for recognized languages in their countries, (e.g., native or aboriginal languages)
- 1.2 In addition, many user communities felt that ISO 639 did not meet their needs.
- 1.3 Nevertheless, ISO 639 with its 2-alpha code set representing names of languages has become a very popular and widely used standard.
- 1.4 ISO 639 was prepared by and is the responsibility of ISO Technical Committee 37 (TC37).

2.0 Decision to Make ISO 639 a Two-Part Standard

In response to the need to be able to support codes for names of many more languages, ISO TC37/SC2 "Layout of vocabularies" decided to make ISO 639 a two-part standard with Part 2 directed at supporting the required expansion of the existing set of 2-alpha codes, i.e., through the introduction of a new set of 3-alpha codes.

Further, with respect to ISO 639-2: Part 2: Alpha-3 Code TC37/SC2 decided to do this jointly with ISO/TC46 "Information and documentation", Sub-committee (SC) 4 "Computer applications in information and documentation", i.e., ISO TC46/SC4.

The results are:

- (a) a revised and updated ISO 639 as ISO 639-1:2001 (E/F) “*Codes for the representation of names of languages - Part 1: Alpha-2 code*”/«*Codes pour la représentation de noms de langues - Partie 1: Code alpha-2*» (12 pages); and,
- (b) a new ISO 639-2 issued jointly with ISO/TC46/SC2 namely; ISO 639-2:1998 (E/F) “*Codes for the representation of languages - Part 2: Alpha-3 code*”/«*Codes pour la représentation des noms de langues - Partie 2: - Code alpha-3*» (67 pages).

3.0 New Issue - Unambiguous Use of ISO 639-2 in Support of (Electronic) Business Transactions, i.e., Open-edi based

3.1 Context: ISO/IEC JTC1 Approach - Generic and IT-enabled

- 3.1.1 ISO/IEC JTC1 "Information Technology Sub-Committee 32 "Data Management and Interchange", WG1 "Open-edi" develops generic standards in support of

electronic data interchange among autonomous parties and their heterogeneous information systems. These Open-edi standards serve as a common horizontal foundation irrespective of industry sector or area of application. {See further Annex A Scope of ISO/IEC JTC1/SC32/WG1}

The key characteristics of Open-edi based "business transactions" (whether on a "for-profit" or "not-for-profit" basis) include:

- actions are based upon following clear, predefined rules;
- commitment of the parties involved, i.e., "commitment exchange" (new) in addition to information exchange;
- communications among parties are automated;
- parties control and maintain their states, i.e., in their respective information systems;
- parties act autonomously; and,
- multiple simultaneous transactions can be supported.

3.1.2 Two key base standards here are:

- ISO/IEC 14662:1997 (E) *Information technology - Open-edi Reference Model*

ISO/IEC 14662:1997 (F) *Technologies de l'information - Modèle de référence EDI-ouvert*

(This is a publicly available standard at <http://www.jtc1.org>)

- ISO/IEC FCD 15944-1 *Information Technology - Business Agreement Semantic Descriptive Techniques - Part 1: Operational Aspects of Open-edi for Implementation*

(Currently at FDIS ballot stage).

3.1.3 In addition, to supporting a generic and IT-enabled standards-based approach, two other standards development projects have been launched (based on the recommendations of "Priorities for Action" by the ISO/IEC JTC1 "Business Team on Electronic Commerce") {Ref: JTC1 N5296}; namely:

- ISO/IEC 18022 - *Information Technology - Identification, Mapping and IT-enablement of Standards for Widely Used Coded Value Domains*

Key reference documents here are JTC1 N5847, i.e., the NWI proposal and JTC1/SC32 N0486. This standard development project is a joint responsibility of ISO/IEC JTC1/SC32/WG1 "Open-edi" and WG2 "Metadata".

➤ **ISO/IEC 18038 - *Information Technology - Identification and Mapping of Various Categories of Jurisdictional Domains.***

Key reference documents here are JTC1 N5846, i.e., the NWI proposal, JTC1/SC32 N0486 and JTC1/SC32 N0535. This standard development project is the responsibility of ISO/IEC JTC1/SC32/WG1 "Open-edi".

Notes: 1) The Project Editor for both ISO/IEC 18022 and ISO/IEC 18038 is Dr. Jake V. Knoppers, < mpereira@istar.ca >

2) ISO/IEC JTC1 documents are available at <http://www.jtc1.org>, and those for Subcommittee 32 *Data Managements and Interchange* via the JTC1 website.

3.1.4 These standards also fully support the three strategic directions of ISO/IEC JTC1 for standards development; namely: ability to support "portability", "interoperability", and "cultural adaptability". The latter included the ability to provide multiple human language-based equivalences at the user interface to IT systems.

3.2 Business Transaction Needs

A key aspect of business transactions (paper or electronic) is that they make extensive use of sets of "codes representing X". In addition, the combination of the global economy, the Internet and e-business, has raised the need to be able to support any human language at the user interface, anytime, anywhere in the world. Whether or not this actually occurs and when and where this occurs is influenced by two key factors:

- (a) those providing goods and services determining what languages they wish to support, i.e., a private sector perspective and a corporate decision on where, to whom and/or in what language to market one's goods and services. Being successful in a market requires not only understanding the needs of clients, but also being able to communicate with them in their language. Thus multilingualism is good business, is good for business, and increasingly those developing products and services for the global marketplace are incorporating the ability to support multilingual human interfaces right from the start; and,
- (b) external constraints on a business transaction are primarily of a legal nature which prescribe the language(s) to be utilized when providing a good or service in a

defined jurisdiction.

Notes:

- (1) These are akin to existing requirements for product labelling, official language(s) use in a jurisdiction, etc.
- (2) A country can have one or more official languages. (South Africa has eleven (11)). A territory, state, province, canton, etc., as jurisdiction may have additional official language(s), (e.g., in the Nunavut territory in Canada, Inuktitut is an officially recognized language in addition to Canada's two official languages, English and French).

The ISO 639-2 Alpha-3 code sets support these business transaction requirements (and others as well). The ISO 639 Part 1: Alpha-2 code does not, i.e., it does not contain codes for many names of languages which are officially recognized languages in the global marketplace.

A second key factor is that the primary property of a business transaction is that it involves commitment exchange among "Persons", as the only entities being able to make commitments, in addition to information exchange among their IT systems. [Note: The three sub-types of "Person" are "individual", "organization" and "public administration".] Here the ability to be able to reference the use of any natural language (currently in use) from a human interface perspective, is crucial. In addition, external constraints of a legal nature on a business transaction may prescribe the use of an official language(s) at the human interface in order for a commitment(s), i.e., as a set of rights and obligations, to be legally binding and enforceable. {See further ISO/IEC FDIS 15944-1:2001}

Consequently, in its standards development work supporting the needs of e-commerce, e-business, e-administration, etc., ISO/IEC JTC1/SC32/WG1 wants to make ISO 639-2:1998 (E/F) a normative reference in support of its Open-edi standards work.

3.3 Issue Requested to be Resolved: Which of the two sets of codes in ISO 639-2 are to used in support of Open-edi, e-commerce, e-business, etc.?

3.3.1 Current situation of ISO 639-2 as stated in Clause 1 "Scope"/«Domaine d'application» ISO 639-2:

"...provides two sets of three-letter alphabetic codes for the representation of names of languages, one for the terminology applications and the other for bibliographic applications. The code sets are the same except for twenty-five languages¹ that have a variant language code because the criteria used for formulating them (See 4.1)..."

¹ This is a typo. The correct number is twenty-three (23) as stated in Clause 4.1. {See further Annex D}

The two code sets are identified as:

"ISO 639-2/B" for bibliographic applications, i.e., "Code set B",

"ISO 639-2T" for terminology applications, i.e., "Code set T".

Quoting the Introduction to ISO 639-2,

"Both code lists are to be considered as open lists. The codes were devised for use in terminology, lexicography, information and documentation, (i.e. for libraries, information services, and publishers) and linguistics. This part of ISO 639 also includes guidelines for the creation of language codes and their use in some applications."

Quoting Clause 4.1 the:

"criteria for selecting the form of a language code for code set B were:

- . *preference of the countries using the language;*
- . *established usage of codes in national and international bibliographic databases; and,*
- . *the vernacular or English form of the language.*

Code set T was based on:

- . *the vernacular form of the language; or,*
- . *preference of the countries using the language".*

There are twenty-three language names that have variant codes assigned depending on the code set chosen"

Further, ISO 639-2 states in Clause 4.1:

"The bibliographic or terminology code set must be used in its entirety, and the choice of the set used must be made clear by exchanging partners prior to information interchange. Users shall refer to ISO 63902/B for the code set for bibliographic applications and ISO 639-2/T for the code set for terminology applications".

3.3.2 Existing Problem in Utilizing/Referencing ISO 639-2 from an Open-edi (e-commerce, e-business, etc.), business transaction perspective

From a global, worldwide Open-edi and e-commerce perspective, one needs to be able to reference a single set of codes representing names of languages to be utilized at the IT interface.

ISO 639-2 contains two candidate code sets and requires one to choose one of the two code sets and then use the one chosen in its entirety. Unfortunately, from an Open-edi perspective (and e-commerce/e-business perspective), there are twenty-three (23) language names that have variant codes assigned depending on the code set chosen. Some of these variant codes apply to languages which have extensive use world-wide (e.g. Chinese, French, German, etc.). {See further Annex D}.

This causes significant confusion and ambiguities for use of ISO 639-2 in support of Open-edi. For example:

- for referencing the French language in business transaction, does one use the code "fra" as found in ISO 639-2/T or the code "fre" as found in ISO 639-2/B; or,
- for referencing the German language in business transactions does one use the code "deu" as found in ISO 639-2/T; or the code "ger" as found in ISO 639-2/B?

Question to TC37/SC2

Which of these two, i.e., "2/B" or "2/T" is or should be the common default code set to be referenced for use in Open-edi, e-commerce, e-business? Can TC37/SC2 provide guidance here? One can continue to use both code sets but one needs to have one of the two as the common default for use in Open-edi standardization work.

Alternative Response

Alternatively, ISO TC37/SC2 could reply that this is for SC32/WG1 to decide (as per Clause 4.1 in ISO 639-2).

3.4 Impact on Other International Standards Development

3.4.1 ISO/IEC 18038 *"Information technology - Identification and Mapping of Various Categories of Jurisdictional Domains"*

Major sources of external constraints on business transactions are requirements of various categories of jurisdictional domains.

This standard under development by JTC1/SC32/WG1 requires the ability to be able to reference any "official" language(s) in use at any geo-political level of jurisdiction. Here ISO 639-1 is insufficient and an ISO 639-2 code set is needed. This standard will contain as a Normative Annex a matrix of: (1) nation-states, i.e. entities which are full members of the United Nations, (or recognized as such i.e. the Holy See & Switzerland); and, (2) the officially recognized languages in each of these jurisdictions, a.k.a. countries. This Normative Annex will be based on using the 3 digit numeric codes of ISO 3166-1, and the 3-alpha code set of ISO 639-2.

Taking Canada (country code =124) and Austria (country code = 040) as but two examples of a general problem, does one identify and reference

- **the use of French as an official language in Canada as “124:fra” or 124:fre” ?**
- **the use of German as an official language in Austria as “040:deu” or “040:ger”?**

[Note: Many more real world examples of this nature exist.]

Taking an example from the Harmonized System (HS) of the World Customs Organization (WCO) for the classification and codification of commodities for the purpose of import/export, an edible potato is coded as “0701”. The single, common global unique and linguistically neutral IT-interface identifier would be of a nature of “XX:WCO:HS:0701” (depending on the syntax used). But how would one state/enumerate the multiple human linguistic equivalents in various jurisdictions. The approach here would be to use jurisdiction code + language code. However, within the use of the same natural language, the human interface linguistic equivalents may well vary among different jurisdictions. (See further Annex B).

For example, the human interface linguistic equivalent for “potato” differs in German-speaking jurisdictions. In Germany it is “kartoffel”, while in Austria it is “erdapfel”. The 3-digit country code for Germany is “276” and that for Austria “040”.

For Austria and Germany respectively, the specifications would be:

- Using 639-2/B,
`<XX:WCO:HS:0701><040:ger=erdapfel>*`
`<XX:WCO:HS:0701><276:ger=kartoffel>*`
- Using 639-2/T,
`<XX:WCO:HS:0701><040:deu=erdapfel>*`
`<XX:WCO:HS:0701><276:deu=kartoffel>*`

* Note: Syntax is illustrative only.

For Open-edi standardization in support of electronic business transactions, a single default code set is required. [Note: ebXML uses SC32/WG1 standards as foundation standards. Successful resolution of this issue will impact them as well].

3.4.2 ISO/IEC 18022 “*Information technology - Identification, Mapping and IT-enablement of Widely Used Coded Value Domains*”

Business transactions (paper or electronic), international or local, make extensive use of sets of codes. The code sets, especially those of an international nature, are often accompanied by an "international" English language-based term or meaning.

However, at the local human language-based interface level be it paper-based, (e.g., product labelling) and/or computer screen-based user interface, there is a need to be able to support/represent multiple language equivalents from a human user interface perspective.

The approach taken by JTC1/SC32/WG1 (and many other standardization committees) is:

- (1) to maximize the use of unambiguous, unique and linguistically neutral identifiers from an IT-interface perspective (including computer processability) ; and,
- (2) to ensure, that for each such identifier, to be able to support at the human interface multiple localization and multilingual equivalents

Here also an ISO 639-2 Alpha-3 code is required to identify the language(s) supported at the human interface and a decision needs to be taken on which one, ISO 639-2/B or ISO 639-2/T?

Annex A - Scope of ISO/IEC JTC1/SC32/WG1 - "Open-edi"

Scope:

Standardization in the field of generic information technology standards for open electronic data interchange needed to attain global interoperability among the information technology systems used by organizations. Such interoperability is viewed from both business and information technology perspectives.

Within this context the scope includes:

- methodology and framework for identification and modelling of business activities through business scenarios and their components, such as roles, information bundles, and semantic components;
- identification and specification of formal description techniques for describing classes of business requirements and their contextual and semantic specifications;
- identification and specification of formal description techniques for developing business scenarios and their components;
- identification and specification of information technology services and service interfaces for accomplishing business transactions;
- identification and specification of facilities to manage business scenarios and their components.

Note: Priority is on work required to support the needs of electronic commerce, electronic administration, electronic business, etc. The basis of work is the Open-edi Reference Model (ISO/IEC 14662).

Convenor:	
Hannu Pelkonen	Electronic Address:
Finland Post Ltd. EDI - Services P.O. Box 702 FIN-00011 POSTI FINLAND	Tel: +358 204 51 4559 Fax: +359 204 51 4525 E-mail: hannu.pelkonen@posti.fi
Website for JTC1/SC32/WG1 Document Register:	Website for JTC1/SC32:
www.tieke.fi/sc32/wg1	http://jtc1sc32.org

Annex B Example 1: International Commerce - “e-potato”

(taken and adapted from ISO/IEC JTC1/SC32 N0486)

Example 1 focuses on human understandable representation of what could be an IT-enabled version of the global standard for international trade in goods based on the Harmonized System (HS) of the World Customs Organization (WCO). [The WCO was formerly known as the Cooperative Customs Council (CCC)].

The example presented here is that of a “potato” (fresh or chilled) for which the HS code is “0701”.

The HS of the WCO would have a “jurisdiction mapping, category, etc. ID” for the HS (schema) as the source authority (to come out of the NWI on Jurisdictions i.e., new ISO/IEC 18038, which in turn will piggy-back on ISO 3166 and ISO/IEC 6523 as well as the Vienna convention). Below “XX:WCO” represents the unique ID for the “Source Authority” while “HS” represents the ID of the schema within the WCO, rules, etc., for the “codes representing...X”. Within this coded value domain “0701” is the “pivot” code value for “potato”, i.e., the unique, unambiguous and linguistically neutral identifier to be utilized in Open-edi business transaction. Associated with this pivot code value are multiple human linguistic equivalent values (or representations).

The example demonstrates:

- a jurisdiction, in this case a country, having more than one language of use and thus multilingual human interface equivalents; and,
- differences in uses of the same natural language in various countries and thus different human interface equivalences within a natural language.

Common IT Interface ID	Country Code - Numeric Code & Short Name Equivalent (English)	Human Interface: Localization and Multilingual Equivalents within each Jurisdiction
XX:WCO:HS :0701	124 CANADA	(en)*: potato (fr): pomme de terre (ik): patiti
XX:WCO:HS :0701	464 MEXICO	(es): papa
XX:WCO:HS :0701	724 SPAIN	(es): patata
XX:WCO:HS :0701	040 AUSTRIA	(de): erdapfel
XX:WCO:HS :0701	276 GERMANY	(de): kartoffel
XX:WCO:HS :0701	056 BELGIUM	(fr): pomme de terre (nl): aardappel
XX:WCO:HS :0701	246 FINLAND	(fi): peruna (sv): potatis

Notes: The “structure” of the example is illustrative. Eventually, all the attributes will end up as columns in a database using a more formalized approach. One could then take this formalized approach and represent it using XML syntax.

* These are the Alpha-2 codes of ISO 639-1.

Annex C Example 2: Country Codes and Equivalent Multiple “Official” Names based on ISO 3166 level 1 and ISO 639-1.
(taken and adapted from ISO/IEC JTC1/SC32 N0486)

This example demonstrates not only the six (6) ISO human interface linguistically equivalent expressions (of which two are also used as ISO alpha codes) to the single one (1) linguistically neutral common numeric code (the pivot code value) for each permitted instance in ISO 3166-1, but also the “official” human interface linguistic equivalent(s) in the source jurisdictions.

Common IT Interface ID	Human Interface : Localization and Multilingual Equivalents			
ISO:3166:246*	ISO Alpha-2**:	FI	ISO Alpha-3**:	FIN
ISO:3166:246	ISO Short Name(en):	Finland	ISO Long Name (en)***:	Republic of Finland
ISO:3166:246	ISO Short Name(fr):	Finlande	ISO Long Name (fr):	République de Finlande
ISO:3166:246	Local Short Name(fi):	Suomi	Local Long Name(fi):	Suomen tasavalta
ISO:3166:246	Local Short Name(sv):	Finland	Local Long Name(sv):	Republiken av Finland
ISO:3166:246	ISO Alpha-2:	BE	ISO Alpha-3:	BEL
ISO:3166:246	ISO Short Name(en):	Belgium	ISO Long Name (en):	Kingdom of Belgium
ISO:3166:246	ISO Short Name (fr):	Belgique	ISO Long Name (fr):	Royaume de Belgique
ISO:3166:246	Local Short Name(nl):	Belgie	Local Long Name(nl):	Koninkrijk van België
ISO:3166:246	Local Short Name(fr):	Belgique	Local Long Name(fr):	Royaume de Belgique
ISO:3166:246	ISO Alpha-2:	TR	ISO Alpha-3:	TUR
ISO:3166:246	ISO Short Name(en):	Turkey	ISO Long Name (en):	Republic of Turkey
ISO:3166:246	ISO Short Name (fr):	Turquie	ISO Long Name (fr):	République turque
ISO:3166:246	Local Short Name(tr):	Turkiye	Local Long Name(tr):	Turkiye Cumhuriyeti

Notes: The “structure” of the example is illustrative. Eventually, all the attributes will end up as columns in a database using a more formalized approach. One could then take this formalized approach and represent it using XML syntax.)

* These are the Numeric-3 codes of ISO 3166-1. They are more stable than their corresponding Alpha-2 and Alpha-3 codes.

** These are the Alpha-2 and Alpha-3 codes taken from ISO 3166-1, which are currently the equivalences for the Numeric-3 code in ISO 3166-1.

*** These are the Alpha-2 codes of ISO 639-1.

Annex D - List of Names of Languages having variant ISO 639-2 Alpha-3 Codes

This list is based on ISO 639-2 "Table 1 - Alpha-3 codes arranged alphabetically by English name of language"/«Tableau 1 - Code alpha-3 classé alphabétiquement par le nom de la langue en anglais»

English name Nom anglais	French Name Nom français	ISO 639-2/B Bibliographic code Codet bibliographique	ISO 639-2/T Terminology code Codet terminologique
Albanian	albanais	alb	sqi
Armenian	arménien	arm	hye
Basque	basque	baq	eus
Burmese	birman	bur	mya
Chinese	chinois	chi	zho
Croatian	croate	scr	hrv
Czech	tchèque	cze	ces
Dutch	néerlandais	dut	nld
French	français	fre	fra
Georgian	géorgien	geo	kat
German	allemand	ger	deu
Greek, modern (post 1453)	grec moderne (après 1453)	gre	ell
Icelandic	islandais	ice	isl
Macedonian	macédonien	mac	mkd
Malay	malais	may	msa
Maori	maori	mao	mri
Persian	persan	per	fas
Romanian	roumain	rum	ron
Serbian	serbe	scc	srp
Slovak	slovaque	slo	slk
Spanish	espagnol	spa	spa
Tibetan	tibétain	tib	bod
Welsh	gallois	wel	cym

Spanish is included here because the note "6)" in ISO 639-2, Table 1 states "After a period of five years from the publication of this standard, **esp** may be used as the ISO 639-2/T (terminology code) for Spanish". «Après une période de cinq ans suivant la publication de cette norme, **esp** pourra être utilisé autant que l'ISO 639-2/T (codet terminologique) pour l'espagnol.» That is, in 2003, the ISO 639-2/T code for Spanish will become "esp".