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Title:	Working Draft (WD) ISO/IEC 18022 <i>IT-Enablement for Widely-Used Coded Domains</i>
Source:	Project Editor: Dr. Jake V. Th. Knoppers Canaglobe International Inc. (mpereira@istar.ca)
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Project Editor's Notes

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1. Reason for Time Delays in Progress of Work - Dependence on Progress of Work of ISO/IEC 11179-3:200n and ISO/IEC 15944-1:200n Reaching the FDIS Stage

- 1.1 The source, rationale and business case for the need for this ISO/IEC 18022 standard is found in the identification of high priority standardization work items of the Report of the ISO/IEC JTC1 Business Team on Electronic Commerce {See ISO/IEC JTC1 N 5296} and the resulting NWI (New Work Item) proposal which was accepted. {See ISO/IEC JTC1 N 5847}
- 1.2 The two primary foundation standards for ISO/IEC 18022 standards development work are the ISO/IEC 11179 multipart standard (of SC32/WG2) and the ISO/IEC 15944 multipart standard (of SC32/WG1).
- 1.3 When this NWI was proposed and accepted, it was assumed that ISO/IEC 11179-3 which was up for revision would not be as radically revised as it is now and that ISO/IEC 11179-1:1999 would serve as a basis for concepts, terms, definitions, etc., in new ISO/IEC 18022.
- 1.4 The assumed ISO/IEC 11179-1:1999 base standard for ISO/IEC 18022 will now be revised in accordance with work on ISO/IEC 11179-3:200n which is not yet stable but is expected to reach FDIS status before end 2001 (or early 2002). {See further below and SC32 N0534}

The major revision in the ISO/IEC 11179 multipart standard has caused a two-

year delay in progress of work on ISO/IEC 18022.

- 1.5 When this new standardization project was announced early 2000 {See 32 N0464}, it was also assumed that ISO/IEC 15944-1, the other foundation standard for ISO/IEC 18022 would reach FDIS status if not IS status in 2000. There has been a year delay in ISO/IEC 15944-1 reaching FDIS/IS status. This has also caused a delay in progress of work on ISO/IEC 18022.
- 1.6 Finally, at the time this NWI was proposed and accepted, the two part ISO/IEC 7826:1994 standard was in existence and scheduled for its five-year cyclical review. It was anticipated that this ISO/IEC 7826:1994 standard would be revised and updated and that this NWI would benefit from such work.

Instead, JTC1/SC32/WG2 balloted to withdraw ISO/IEC 7826 even though a significant number of P-member bodies had voted to revise and maintain ISO/IEC 7826 even though Part 2 was not being used.

Consequently, this standard is forced to fill some of the resulting gaps. The titles of the two parts of ISO/IEC 7826:1994 are:

"Information technology -- General structure for the interchange of code values -- Part 1: Identification of coding schemes".

"Information technology -- General structure for the interchange of code values -- Part 2: Registration of coding schemes".

1.7 Past Resource Constraints on Time of Project Editor

The Project Editor of ISO/IEC 18022 has during the past two years been required to dedicate an unforeseen and extraordinary amount of time in support of progressing (a) the SC32/WG1 work on ISO/IEC 15944-1 to FDIS status; and, (b) the SC32/WG2 work on ISO/IEC 11179-3 as part of the Canadian Advisory Committee (CAC). This is in addition to participating in work of ISO/IEC JTC1 SC17, SC27, and SC32 as well as several ISO TCs.

Now that ISO/IEC 15944-1 has reached FDIS stage and ISO/IEC 11179-3 is expected to reach FDIS stage within several weeks, development work on ISO/IEC 18022 can progress very rapidly for two reasons: (a) the foundation base standards ISO/IEC 15944-1 and ISO/IEC 11179-3 will be stable; and, (b) the Project Editor as well as SC32/WG1 and SC32/WG2 members are free to devote serious time and resources to development of ISO/IEC 18022.

2. **Revised Work Plan (based on Current Progress of Work on ISO/IEC 11179-3 and ISO/IEC 15944-1)**

2.1 1st Draft CD Document

As soon as a FDIS ISO/IEC 11179-3:200n document is issued, this WD will be amended to incorporate relevant aspects of FDIS ISO/IEC 11179-3:200n (especially terms and definitions).

This WD will also be updated to incorporate:

- input from the SC32/WG2 (and SC32/WG1) October, 2001 meetings in Victoria, British Columbia, Canada;
- integration of relevant aspects of other ISO/IEC standards; and,
- contributions to ISO/IEC 18022 work.

2.2 A 1st Draft CD ISO/IEC 18022 will be prepared and issued as a SC32 document within one month after issuance of the FDIS ISO/IEC 11179-3:200n document.

2.3 It is assumed that the FDIS ISO/IEC 11179-3:200n document will go out for FDIS ballot prior to 31 January, 2002. If so, then this 1st draft CD ISO/IEC 18022 document will be issued on or before 28 February, 2002.

2.4 If so, comments and contributions received on the 1st draft CD ISO/IEC 18022 prior to 31 March, 2002 will be incorporated in a 2nd draft CD ISO/IEC 18022 which will be posted to the SC32 website no later than 12 April, 2002. This 2nd draft CD ISO/IEC 18022 will serve as the basis for discussion at the Spring, 2002 SC32/WG2 meeting in Korea.

2.5 Based on discussions on the 2nd draft CD and instruction to the Project Editor, (e.g., resolutions of SC32/WG2 (harmonized with SC32/WG1)), the Project Editor will prepare within one month following the Korea meetings, a document which will be issued for CD ballot by the SC32 secretariat.

2.6 Due to the dependency of ISO/IEC 18022 on progress of work of ISO/IEC 11179-3 and ISO/IEC 15944-1 reaching FDIS phase, the target dates for ISO/IEC 18022 are now:

Stage	Date
CD	2002-05
FCD	2002-10*
FDIS	2003-03*
IS	2003-06*
	*
	Exact month dependent on date of SC32/WG2 meetings.

3. Linkage to and Use of SC32/WG2 Work and Especially the ISO/IEC 11179 Family of Standards

3.1 As already noted earlier in document 32 N 0534 and also above, development of ISO/IEC 11179-3:200n reaching the FDIS stage.

3.2 This WD will be updated following resolution of ballot comments on:

- FCD ISO/IEC 11179-3:200n *"Information Technology - Data Management and Interchange (Mdr) - Part 3: Registry metamodel (Mdr3)"*. {See 32 N0643 for the text of the FCD ISO/IEC 11179-3 and 32 N0691 for the Summary of Voting/Table of Replies};
- FPDTR 2094-1:200n *"Information Technology - Data Management and Interchange - Procedures for achieving metadata registry Mdr content consistency - Part 1: Data Elements"*. {See 32N0648 for the text of FPDTR 20943-1:200n and 32N0693}

3.3 It is anticipated that the ballot comments on FCD ISO/IEC 11179-3 will be successfully resolved and a FDIS ballot document will be issued well prior to the JTC1/SC32 Plenary Sprint, 2002 in Korea. This FDIS ISO/IEC 11179-3 document will serve as a primary input in the preparation of a draft CD document for ISO/IEC 18022 prior to the Korea Plenary.

It is anticipated that as a result of the Korea SC32/WG2 meeting a CD ISO/IEC 18022 will be issued for ballot.

3.4 The parts of the ISO/IEC 11179 multipart standard are currently not harmonized nor its related technical reports (TRs).

The most current set of ISO/IEC 11179 terms and definitions is found in the existing international standard (IS) ISO/IEC 11179-1:1999 (E) *"Information technology - Specification and standardization of data elements. Part 1: Framework for the specification and standardization of data elements"* (as well as an associated Technical Report ISO/IEC TR 15452:2000 (E) *"Information technology - Specification of data value domains"*).

3.5 The FCD ISO/IEC 11179-3:200n has been positioned as the pivot for a significant revisions and change in scope of the "original" family of ISO/IEC 11179 standards. The contents of the original ISO/IEC 11179-3:1994 will be preserved. The many users of the existing 1994 ISO/IEC 11179-3 standard will find in Annex F of FCD ISO/IEC 11179-3:200n a useful mapping between ISO/IEC 11179-3:1994 and ISO/IEC 11179-3:200n. This Annex F can also

serve as a migration strategy for users of existing to new, revised ISO/IEC 11179.

4. Linkage to and Use of SC32/WG2 Work and Especially the ISO/IEC 15944 Family of Standards

- 4.1 The other primary foundation standards for ISO/IEC 18022 are: (1) 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*»); and (2) ISO/IEC 15944, i.e., "*Information Technology - Business Agreement Semantic Descriptive Techniques*".

The importance of this SC32/WG1 work on Open-edi is that it:

- adds/incorporates "commitment" exchange in addition to existing SC32/WG2 and ISO/IEC JTC1 standardization work on information exchange;
- is business transaction-based (whether for profit or not for profit). The three components of the business transaction model are "Person", "Process" and, "Data";
- it focuses on business transactions among peers, i.e., Persons as entities able to make commitment exchange;
- it involves interworking of other types of entities namely objects, events, and processes, but not entities as ideas;
- it incorporates "behaviours", i.e., as business processes, in the form of scenarios, scenario attributes and scenario components, i.e., roles and information bundles;

A "role" is defined as:

- **role:** a specification which models an external intended behaviour (as allowed within a scenario) of an Open-edi Party.
- **rôle:** spécification qui modélise le comportement externe attendu d'un partenaire d'EDI-ouvert dans le cadre permis par un scénario. ISO/IEC 14662:1997 (4.1.2.1)

An "information bundle" is defined as:

- **Information Bundle (IB):** the formal description of the semantics of the information to be exchanged by Open-edi Parties playing roles in an Open-edi scenario.
- **Faisceau d'informations) (IB, Information Bundle):** description formelle de la valeur sémantique des informations échangées entre partenaires d'EDI-ouvert jouant un rôle dans un scénario d'EDI-ouvert. ISO/IEC 14662:1997 (4.1.2.2)
- information bundles in turn are composed of one or more semantic components defined as:

semantic component (SC): a unit of information unambiguously defined in the context of the business goal of the business transaction.

A SC may be atomic or composed of other SCs.

Composant sémantique (SC, Semantic Component): unité d'information définie de manière non ambiguë dans le contexte de l'objectif d'affaires de la transaction d'affaires.

Un SC peut être atomique ou composé d'autres SC.

ISO/IEC 14662:1997 (4.1.2.2)

- Open-edi focuses on data elements whose permissible values are predefined and structured. {See FDIS ISO/IEC 15944-1, Clause 5.4 "Rules Governing the Data Component" and Annex G (Informative) "Business Transaction Model: Data Component", document 32N 0653 sent to ITTF}

4.2 Relevant text from ISO/IEC 15944-1 will be incorporated in ISO/IEC 18022.

5. Notes on Title of ISO/IEC 18022

5.1 The original title of ISO/IEC 18022 as found in the ISO/IEC JTC1 approved NWI {See JTC1 N 5847} is "Identification, Mapping and IT-enablement of Existing Standards for Widely Used Encodable Value Domains".

This title was a verbatim reproduction of a high priority item for new standardization work identified by the ISO/IEC JTC1 "Business Team on Electronic Commerce".

5.2 At subsequent meetings of SC32/WG2, various transforms of this original title

were discussed but not satisfactorily resolved.

- 5.3 The title of WD ISO/IEC 18022 is one which must reflect the scope and purpose of ISO/IEC 18022. The alternative is to revert to and use the original title of ISO/IEC 18022 as approved by JTC1.

For example, at the request of the Project Editor at the May, 2000 SC32/WG2 meeting in New York, the title was amended to "Identification, Mapping and IT-enablement of Standards for Widely Used Coded Value Domains". {See 32N0488, Resolution WG2/6: Work Item Name Change}.

Then at the October, 2000 meeting in Helsinki SC32/WG2 resolved to change the name of the work item to "IT-enablement of Coded Domains". {See 32N0552, Resolution WG02/13}. [Note: This name change was not made at the request of the Project Editor who was also very involved in SC32/WG2 work and could not be in two places at the same time].

There is a need for a stable title. The focus of this standard is to serve as a methodology and tool for the IT-enablement of existing standards of a "codes representing x" nature which are widely used especially by those outside the body which develops such a code set for its own purposes and maintains it for its own use. Consequently, a more appropriate title is "IT-Enablement for Widely-Used Coded Domains". This is the title of the WD.

6. Use of UML (Unified Modelling Language)

- 6.1 In the period between this initial WD and the progressing of work towards a draft CD stage for the Spring, 2002 SC32/WG2 Korea meeting, appropriate UML models will be developed. Douglas Mann has agreed to undertake this work in support of the development of ISO/IEC 18022. This work will also ensure alignment with UML models found in ISO/IEC FDIS ISO/IEC 15944-1 and UML models resulting from FCD ISO/IEC 11179-3 reaching FDIS stage.

7. Standard ISO/IEC Presentation Format

- 7.1 Time/resource constraints did not permit the addition of standard ISO/IEC presentation of this WD. This work will be completed as part of the CD document preparation.

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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 technologies, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. 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.

This ISO/IEC 18022 was prepared by the ISO/IEC Joint Technical Committee ISO/IEC JTC 1, *Information Technology*, Subcommittee SC32, *Data Management and Interchange*.

0 INTRODUCTION

0.1 PURPOSE AND OVERVIEW

The need for this standard finds its origin in the recommendation for standards urgently needed of the ISO/IEC JTC1 Business Team on Electronic Commerce (BT-EC) to support electronic commerce.

The Report of the ISO/IEC JTC1 Business Team on Electronic Commerce (BT-EC) in its Report to JTC1 identified a set of high priority work items for standardization. {See ISO/IEC JTC1 N5296}. The BT-EC Report states in Chapter 7.4.2 "Identification and IT-enablement of existing standards for widely used encodable value domains":

"Many of the value domains needed for use in Electronic Commerce are bounded sets in the sense that the value domain and the set of permitted values in that domain are pre-defined and enumerated in the standard. Most of these are of the nature of "codes representing X". From a global Electronic Commerce perspective, standardization work is required for the identification and referencing of such objects in an unambiguous, linguistically neutral, IT-processable and Electronic Commerce-facilitated manner. These standards need to be re-cast in a computer processable form in order to support more fully the objective of computational integrity, a key part of IT-enablement and in a manner which supports localization and multilingual requirements".

0.2 RESERVED

Project Editor's Note:

Text accompanying the three figures in Clause 0.2 is being prepared.

Figure 1 is taken from the NWI document (which was balloted). {See JTC1 N5847}.

Figure 2 is taken from Clause 5.1.5 "Business Transaction Model: Key Components" of ISO/IEC FDIS 15944-1.

Figure 3 is adapted from Clause 5.4 "Rules Governing the Data Component" of ISO/IEC FDIS 15944-1.

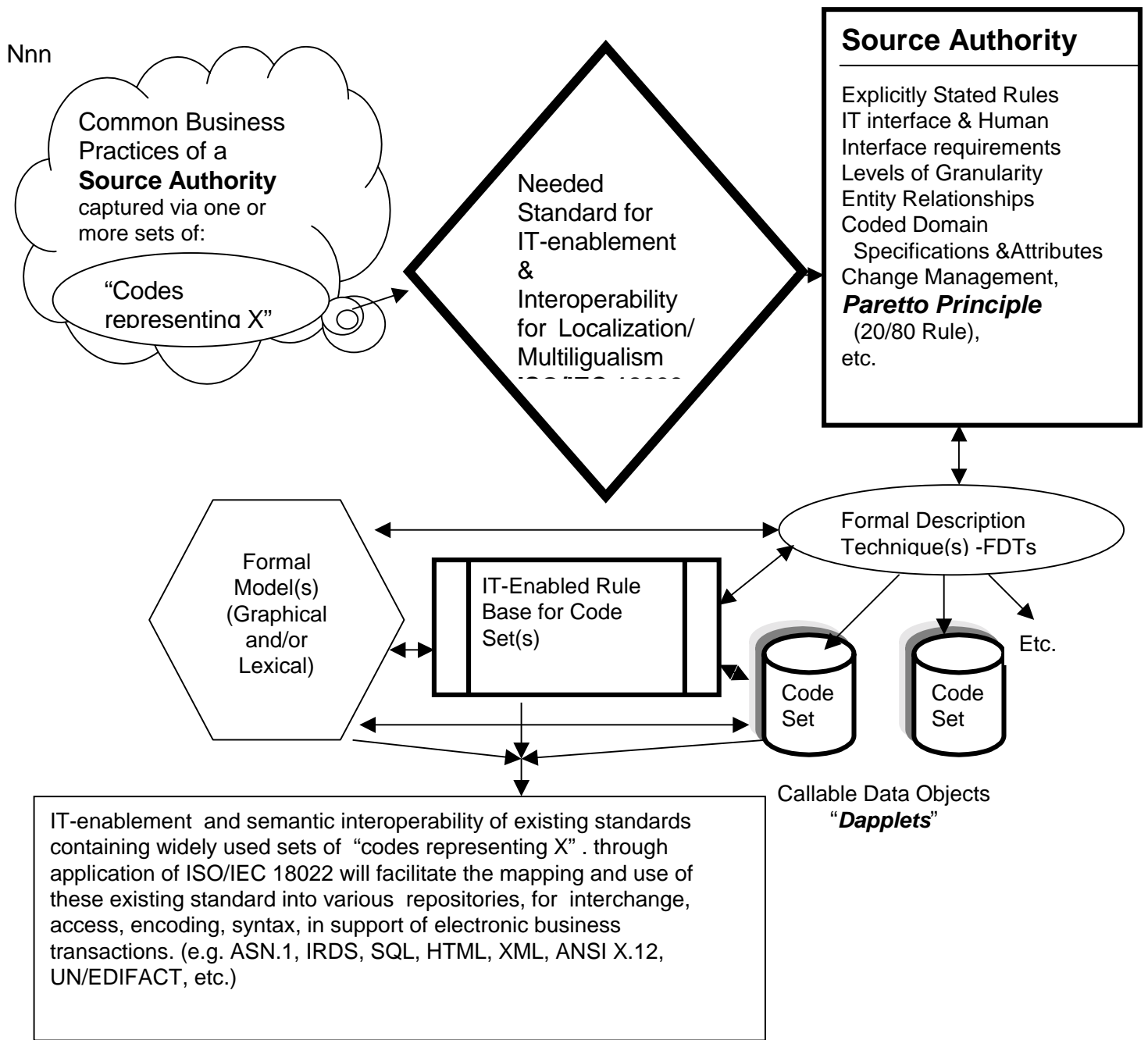
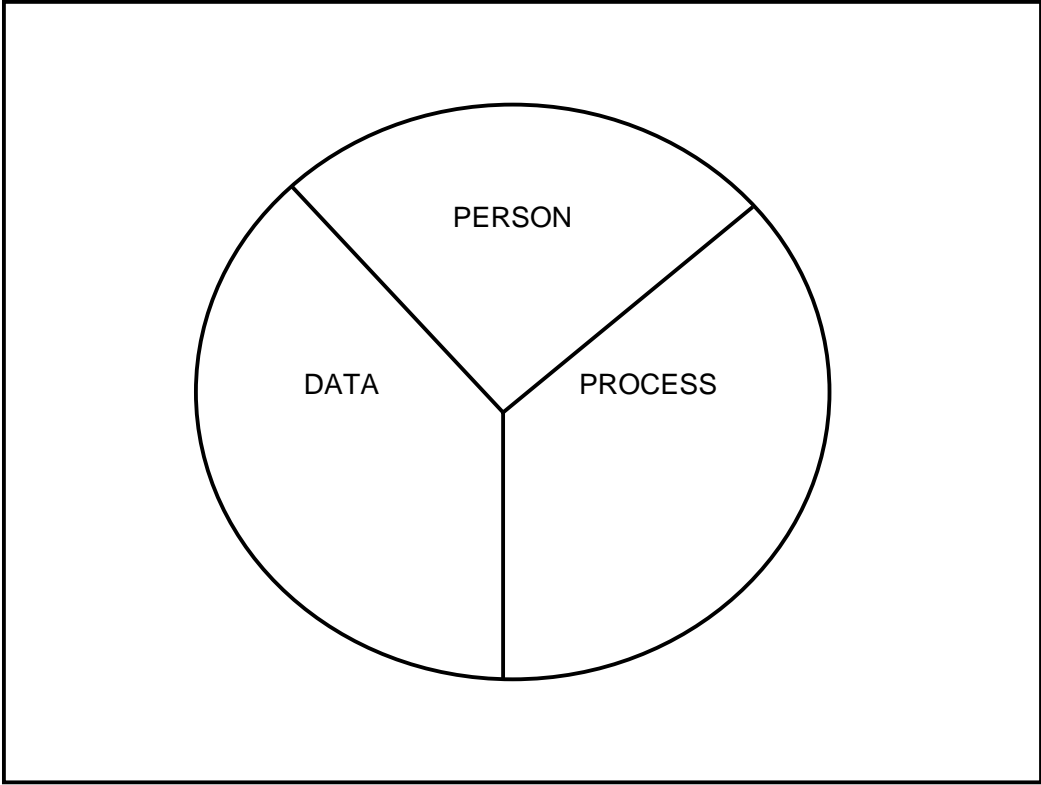
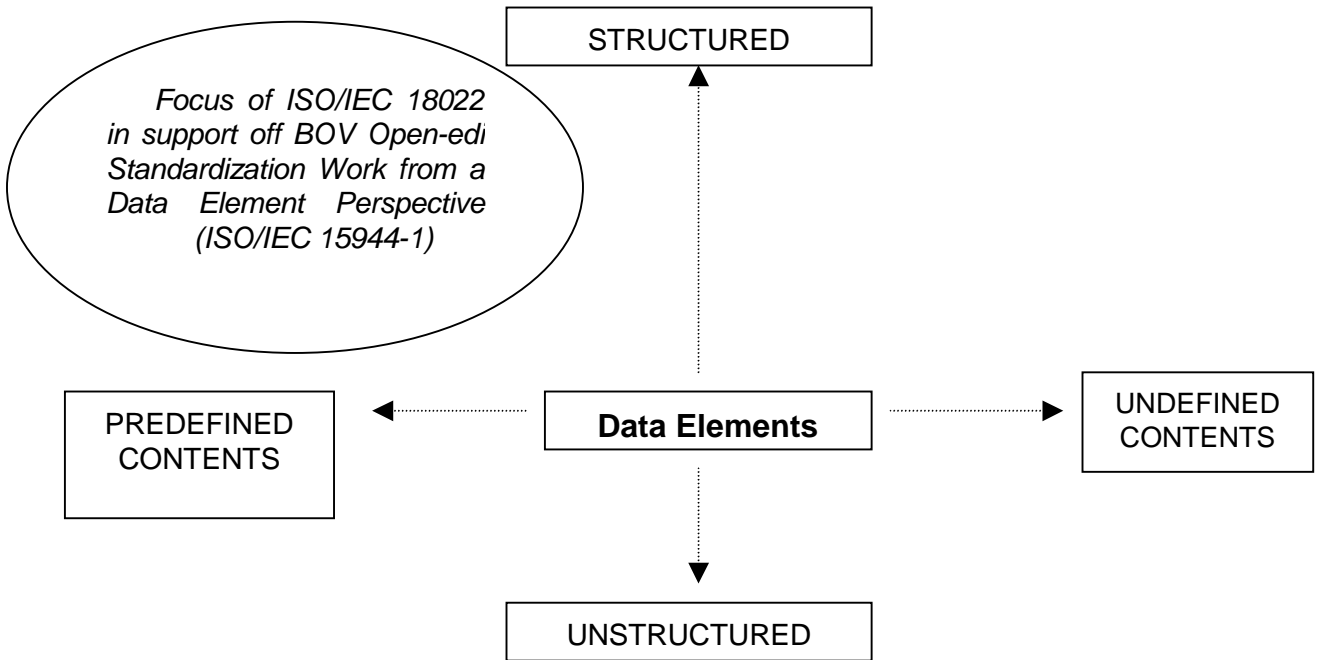


Figure 1 [title to be drafted for CD version]



18022 Figure 2 = Figure 7: Business Transaction Model - Fundamental Elements (Graphic Illustration)



18022 Figure 3 =Figure 22: Focus of BOV Open-edi Standardization Work from Data Element Perspective -Predefined Values and Structured Data Elements

0.3 USE OF "PERSON", "PERSON", "ORGANIZATION" AND "PARTY" IN THE CONTEXT OF BUSINESS TRANSACTION AND COMMITMENT EXCHANGE

In electronic business transactions, whether undertaken on a for profit or not for profit basis, the key element is commitment exchange among Persons made between and among machines (automata or computer programs) acting on behalf of Persons, who are the only entities able to make commitment. The construct of Person has been defined (in ISO/IEC 15944-1) in such a way that it is capable of having the potential legal and regulatory constraints applied to it. There are three broad categories, i.e., subtypes, of Persons as players in Open-edi and as possible Source Authorities for a Coded Domain: the Person as "individual", the Person as "organization", and the Person as "public administration".

The reader of this standard should understand that:

- the use of Person with a capital "P" represents Person as a defined term, i.e., as the entity within an Open-edi party that carry the legal responsibility for making commitment(s);
- "individual", "organization", and "public administration" are defined terms representing the three common subtypes of "Person"; and,
- the words "person(s)" and/or "party(ies)" are used in their generic contexts independent of roles of "Person" as defined subtypes in the ISO/IEC 15944-1 standard. A "party" to a business transaction has the properties and behaviours of a "Person".

0.4 BENEFITS OF USE OF ISO/IEC 18038

"Coded domain" is a coined term. It is used to cover and serve as a common bridge among existing terminology in different sectors and sources of requirements, i.e., legal perspective, a business perspective, an IT perspective, that of standardizers, etc. These include:

- "schedules", a term used in statutes and pursuant regulations for enumerated lists of organizations, products, procedures, etc., to which a law (or parts of a law) applies;
- "schedules" or "auxiliary tables" in information science which one attaches in the appropriate place to a concept/term in a thesaurus (or subject indexing scheme);
- "domains" in entity relationship modelling where a "coded domain" is known as an entity type functioning as a "domain"

- "object class" in object-oriented modelling;
- "reference tables" or "edit tables", "permitted value constraint tables", etc., in the various methodologies and approaches used for building IT-based applications;
- code sets, a term commonly used in business and EDI-based implementations¹; and,
- "value domains", the term used by standards development work of ISO/IEC JTC1 SC32 - "Data Management and Interchange", Working Group 2 - "Metadata".

A "coded domain" is the name given to code sets, tables, "value domains", etc., used in business transactions which have been IT-enabled so as to facilitate their use in Open-edi based electronic data interchanges and the making of commitments among the participating parties.

ISO/IEC 18022 serves as a methodology and tool for ensuring consistency in recording information (as well as its management, processing, access and retrieval) in a specified data element about an occurrence of the same "entity" within an information system and among heterogenous information systems of autonomous parties. Coded domains are intended to be used to all types of information systems irrespective whether or not the information systems are:

- manual (and paper-based);²
- computerized;
- stand-alone;
- shared applications on the same IT platform;
- utilized by and among different organizations with their own IT platforms;
- etc.

¹ See further for example, the ECCC Guidelines. These Guidelines contain or reference well over 43 different code sets. The ANSI X.12 standards for EDI utilize/reference over 450 code sets.

² "Manual (paper-based)" is purposely noted under information systems for three reasons. First of all, the term "system" and a systematic approach is quite independent of the use of computers. For example, a well (re-) organized manual and paper-based system making extensive use of coded domains will yield significant productivity gains in cost-efficiencies and effectiveness. Here, one should note the maxim of "systematization before automation".

Second, coded domains are a very useful tool for paper-based information systems and applications particularly to support a codified approach to data collection, inventory management, production flow control, statistical or administrative information, etc.).

Thirdly, widespread distribution and use of coded domains represent common user needs, minimizes costs, ensures consistency and facilitates exchange of "quality" information even without the use of computer systems.

A coded domain is also a tool for supporting simultaneously both IT interface needs and human interface needs including localization requirements and multilingual equivalencies. The use of unambiguous linguistically neutral codes serves not only as the common IT-interface but also as the common pivot to which can be linked as many different multilingual textual equivalents, (e.g., "representations"), can be linked as are required for human interface requirements.

Key benefits of ISO/IEC 18038 can be summarized as follows:

- (1) provide greater unambiguity and preciseness of data in business transactions;
- (2) minimization of data entry costs and duplication of efforts and supporting simplification of data capture processes;
- (3) be equally suitable for manual and electronic use, i.e., in both commerce and e-commerce;
- (4) provide for linguistic neutrality while at the same time supporting multilingual equivalencies in support of human interface requirements, i.e., those needed to support cultural adaptability and semantic interoperability;
- (5) facilitate and ensure (global) interoperability of data among heterogenous computer systems of autonomous organizations;
- (6) reduce the need for human intervention in machine-to-machine environments;
- (7) much more efficient and effective search, retrieval and use of data;
- (8) modularity, re-useability of commonly used and shared data, i.e., as callable "lego-blocks";
- (9) support rule-based change management and "computational integrity" defined by ISO/IEC JTC1 Business Team on Electronic Commerce (BT-EC) as:

"computational integrity: the expression of standards in a form that ensures precise description of behaviour and semantics in a manner that allows for automated processing to occur, and the managed evolution of such standards in a way that enables dynamic introduction by the next generation of information systems".

1 SCOPE

This international standard is a methodology and tool for the IT-enablement of widely used standards of a "codes representing X" nature, i.e., coded domains, resulting from common business practices which: (1) are rule-based; (2) have a Source Authority; and, (3) are utilized in support of commitment exchange among Persons engaged in Open-edi based business transactions through their IT systems. The focus here is on the Business Operational View (BOV) perspective of a business transaction and coded domains which are utilized in several sectors in e-commerce.

This standard serves as a link between "information bundles (IBs)" and Semantic Components (SCs) of ISO/IEC 14662 and 15944-1 and that of "data element", "metadata", and "metadata items" of ISO/IEC 11179.

In addition to the existing strategic directions of "portability" and "interoperability", the added strategic direction of ISO/IEC JTC1 of "cultural adaptability" is supported in this standard.

The focus here is on data elements whose permitted values are predefined by a Source Authority and where their semantics are identified and referenced via an identifier. With such ID codes can be associated multiple human interface equivalents in many forms and languages. Use of this standard therefore facilitates semantic interoperability requirements in support of "cultural adaptability".

1.1 KEY ELEMENTS OF A CODED DOMAIN

A primary purpose of this international standard is to specify the key elements of an IT-enabled coded domain, whose membership is determined by a Source Authority, for use in support of electronic data interchange (EDI) among autonomous parties engaged in commitment exchange. The approach taken is that of the separation of the IT interface requirements of semantic interoperability from their (multiple) human interface linguistic equivalents. This will also ensure that level of certainty and explicitness required in the completeness of the semantics of the recorded information interchange is appropriate to the goal of the business transaction, i.e., the unambiguous requirement.¹⁴

1.2 EXCLUSIONS

1.2.1 Registration Aspects

This standard does not have a "Part 2: Registration". The reasons for this include:

- (1) The fact that most ISO/IEC, ISO and IEC standards as well as ITU

Recommendations of a "codes representing x" nature, including identification and numbering, already have their own application and registration procedures, (e.g., those already referenced in Clause 2 including standards such as ISO 639 and ISO 3166, ISO/IEC 6532, 7812, etc.).

- (2) The fact that most of the widely used non-ISO/IEC/ITU "de facto" standards and conventions of a "codes representing x" nature, which are widely used, also already have well-established application and registration procedures as well as a Source Authority, (e.g., the Harmonized System (HS) of the World Custom Organization, etc.).
- (3) The fact that ISO/IEC JTC1/SC32 "Data Management and Interchange" have two "generic" standards which can be utilized either on their own and/or in support of (1) and (2) above; namely:
 - with respect to specification and registration of data elements and metadata through use of the ISO/IEC 11179 multipart standards [Name to be inserted following resolution of ballot comments on FCD ISO/IEC 11179-3 after the JTC1/SC32/WG2 October, 2001 editing meeting].
 - with respect to the specification and registration of components of an Open-edi business transaction including scenarios, scenario attributes, roles, information bundles and semantic components through the use of the ISO/IEC 15944 multipart standard ISO/IEC 15944-1 *Information Technology - Business Agreement Semantic Descriptive Techniques - Part 1: Operational Aspects of Open-edi for Implementation*, and Part 2: *"Registration of Scenarios, Scenario Attributes and Scenario Components"*.

1.2.2 IT Systems Environment

This standard does not assume nor endorse any specific system environment, database management system, database design paradigm, system development methodology, data definition language, command language, system interface, user interface, computing platform, or any technology required for implementation", i.e., it is information technology neutral. [statement adapted from ISO/IEC FCD 11179-3:200n, p. 1]

2 NORMATIVE REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Collective Standard are encouraged to investigate the possibility of applying the most recent addition of the standards indicated below.

Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 639:1998 (E/F) Code for the representation of names of languages/Code pour la représentation des noms de langue

ISO FDIS 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

ISO 639-2:1998 (E/F) Codes for the representations of names of languages - Part 2: Alpha-3 code/Codes pour la représentation des noms de langue - Partie 2: Code alpha-3

ISO 704:2000 (E) Terminology work - Principles and methods
ISO 704:2000 (F) Travail terminologique - Principes et méthodes

ISO 1087-1:2000 (E/F) Terminology work - Vocabulary - Part 1: Theory and application/Travaux terminologiques - Vocabulaire - Partie 1: Théorie et application

ISO 1087-2:2000 (E/F) Terminology work - Vocabulary - Part 2: Computer applications/Travaux terminologiques - Vocabulaire - Partie 2: Applications logicielles.

ISO/IEC 2382:1976-2000 (E/F) Information Technology - Vocabulary, Parts 1-34/Technologies de l'inforamtion - Vocabulaire, Parties 1-34

ISO 2788:1986 (E) Documentation - Guidelines for the establishment and development of monolingual thesauri

ISO 2788:1986 (F) Documentation - Principes directeurs pour l'établissement et le développement de thesaurus monolingues

ISO 3166-1:1997 (E) Codes for the representation of names of countries and their subdivisions - Part 1: Country codes

ISO 3166-1:1997 (F) Codes pour la représentations des noms de pays et de leur subdivisions - Partie 1: Codes pays

ISO 3166-2:1998 (E) Codes for the representation of countries and their subdivisions - Part 2: Country subdivision code

ISO 3166-2:1998 (F) Codes pour la représentation des noms de pays et de leurs

subdivisions - Partie 2: Code pour les subdivisions de pays

ISO 3166-3:1999 (E) Codes for the representation of countries and their subdivisions - Part 3: Code for formerly used names of countries

ISO 3166-3:1999 (F) Codes pour la représentation des noms de pays et de leurs subdivisions - Partie 3: Code pour les noms de pays antérieurement utilisés

ISO 4217:2001 (E/F) Codes for the representation of currencies and funds/Codes pour la représentation des monnaies et types de fonds

ISO 5127-1:1983 (E) Documentation and information - Vocabulary - Part 1: Basic concepts

ISO 5127-1:1983 (F) Documentation et information - Vocabulaire - Partie 1: Notions fondamentales

ISO 5127-2:1983 (E) Documentation and information - Vocabulary - Part 2: Traditional documents

ISO 5137-2:1983 (F) Documentation et information - Vocabulaire - Partie 2: Iconic documents

ISO 5127-6:1983 (E) Documentation and information - Vocabulary - Part 6: Documentary languages

ISO 5137-6:1983 (F) Documentation et information - Vocabulaire - Partie 6: Langages documentaires

ISO 5127-11:1987 (E) Documentation and information - Vocabulary - Part 11: Audio-visual documents

ISO 5137-11:1983 (F) Documentation et information - Vocabulaire - Partie 11: Documents audiovisuels

ISO 5964:1985 (E) Documentation - Guidelines for the establishment and development of multilingual thesauri

ISO 5964:1985 (F) Documentation - Principes directeurs pour l'établissement et le développement de thesaurus multilingues

ISO/IEC 6523-1:1998 (E) Information Technology - Structure for the identification of organizations and organization parts Part 1 : Identification of organization identification schemes

ISO/IEC 6523-1:1998 (F) Technologies de l'information - Structures pour l'identification des organisations et des parties d'organisations - Partie 1: Identification des systèmes d'identification d'organisation

ISO/IEC 6523-2:1998 (E) Information Technology - Structure for the identification of organizations and organization parts Part 2: Registration of organizations identification schemes.

ISO/IEC 6523-2:1998 (F) Technologies de l'information - Structures pour l'identification des organisations et des parties d'organisations - Partie 2: Enregistrement des systèmes d'identification d'organisation

ISO 8583: 1993 Financial transaction card originated messages - Interchange message specifications

ISO 8601:2000 (E) Data elements and interchange formats - Information interchange - Representation of dates and times

ISO/IEC 9594.1-9:1995 Information technology - Open Systems Interconnection - The Directory. (This nine part standard was developed in collaboration with the ITU-T with the identical text published as ITU-T Recommendation X.500)

ISO 9735-1:1998 (E) Electronic data interchange for administration, commerce and transport (EDIFACT) -- Application level syntax rules (Syntax version number:4) -- Part 1: Syntax rules common to all parts, together with syntax service directories for each of the parts

ISO/IEC 9798-1:1997 Information technology - Security techniques - Entity authentication - Part 1: General

ISO/IEC 10164-15:2001 (E) Information technology -- Open Systems Interconnection -- Systems Management: Scheduling function. [also ITU-T Recommendation X.746]

ISO 10241:1997 (E) International terminology standards - Preparation and Layout
ISO 10241:1997 (F) Normes terminologiques internationales - Élaboration et présentation

ISO/IEC 11179-1:1999 (E) Information technology -- Specification and standardization of data elements - Part 1: Framework for the specification and standardization of data elements

ISO/IEC 11179-3:1994 (E) Information technology -- Specification and standardization of data elements -- Part 3: Basic attributes of data elements

ISO/IEC FCD 11179-3:200x (E) Information technology -- Data management and interchange - Metadata registries (MdR) -Part 3: Registry metamodel (MdR3) [32 N0643 2001-05-21]

ISO/IEC 11179-4:1995 Information technology -- Specification and standardization of data elements -- Part 4: Rules and guidelines for the formulation of data definitions

ISO/IEC 11179-5 Information technology -- Specification and standardization of data elements -- Part 5: Naming and Identification principles for data elements

ISO/IEC FCD 11581-5:2000 Information technology -- User system interfaces and symbols -- Icon symbols and functions -- Part 5: Tool icons

ISO/IEC FCD 13251:2001 (E) Collection of graphical symbols for office equipment
ISO/IEC FCD 13251:2001 (F) Collection de symboles graphiques pour équipement de bureau

ISO/IEC TR 14369:1999 (E) Information technology -- Programming languages, their environments and system software interfaces -- Guidelines for the preparation of Language-Independent Service Specifications (LISS)

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

ISO/IEC TR 15285:1998 (E) Information technology -- An operational model for characters and glyphs

ISO/IEC FDIS 15944-1 (E) Information Technology - Business Agreement Semantic Descriptive Techniques - Part 1: Operational Aspects of Open-edi for Implementation

ISO/IEC WD 15944-2 (E) Information Technology - Business Agreement Semantic Descriptive Techniques - Part 2: Registration of Scenarios, Scenario Attributes and Scenario Components

ISO/IEC WD 18038:2001 - Information Technology - Identification and Mapping of Various Categories of Jurisdictional Domains

ISO 19108:2000 (E) Geographic information - Temporal schema

ISO DIS 19115:2000 (E) Geographic information - Metadata

ISO/IEC 19501-1 (E/F) Information technology - Unified Modeling Language (UML) - Part 1: Specification/Technologies de l'information - Langage de modélisation unifié (UML) - Partie 1: Spécification

3 TECHNICAL NORMATIVE ELEMENTS

Project Editor's Notes on Terms/Definitions

1. *This standard maximizes, use of applicable terms and definitions drawn from many existing standards. Many of the terms and definitions presented here were already identified and discussed at earlier SC32/WG2 meetings, i.e., as needed to be incorporated in the working draft as being relevant, (e.g., see 32N0486 and 32N5234). During the WD stage and prior to the CD ballot stage, the terms/definitions listed below will be verified against the standards referenced to ensure that the updated version is referenced.*
2. *A significant input and basis for ISO/IEC 18022 work is that of ISO/IEC 11179 terms and definitions whose pivotal part, i.e., Part 3, is currently out for FCD ballot. {See JTC1/SC32 N0643}. The definitions of many of the FCD ISO/IEC 11179-3:200n terms are currently subject to resolution of FCD ballot comments. It is assumed that the work of the editing committee on the FCD ballot for ISO/IEC 11179-3 will be concluded either at the SC32/WG2 October, 2001 meetings in Victoria or shortly thereafter resulting in a FDIS ISO/IEC 11179-3:200n ballot document.*
3. *This WD already includes many terms/definitions taken from FCD ISO/IEC 11179-3. For many definitions for terms in the FCD ISO/IEC 11179-3 document, Canadian ballot comments not only represent the results of consultations among members of the Canadian Advisory Committee (CAC) for JTC1/SC32 but also among the Project Editor for ISO/IEC 11179-3 namely Ray Gates (Canada) and the Project Editor for ISO/IEC 18022, namely Jake Knoppers (Canada).*

Depending on resolution of FCD ISO/IEC 11179-3 ballot comments on terms and definitions this WD will incorporate additional terms and definitions from FCD ISO/IEC 11179-3.

4. *Terms and definitions pertaining to Contact Person, Location, address (physical or electronic), etc., are not yet included in this WD. There is a whole set of ballot comments on FCD ISO/IEC 11179-3 recommending a systematic and integrated approach to this family of terms and definitions involved.*

It is expected that these FCD ISO/IEC 11179-3 ballot comments will be successfully resolved at the SC32/WG2 FCD ISO/IEC 11179-3 editing meeting. The relevant final FDIS ISO/IEC 11179-3:200n terms and definitions will be incorporated in the proposed CD ISO/IEC 18022.

5. *Consequently, prior to going to CD phase, this standard will incorporate additional terms and definitions from FDIS ISO/IEC 11179-3:200n as applicable and appropriate, i.e., as based on successful resolution of FDIS ISO/IEC 11179-*

3:200n ballot comments.

6. *The current set of terms and definitions presented here integrates:*

- (1) *those drawn from existing ISO/IEC, ISO and other standards with the source standard being referenced; and,*
- (2) *those introduced as part of this standard.*

Prior to, or during the CD ballot phase, Annex A will be updated and the "missing" ISO French equivalent terms and definitions provided. This development of ISO French language equivalents will also serve as an "ISO 9000" quality control check.

3.1 DEFINITIONS

3.1.001 **agent**

a Person acting for another Person in a clearly specified capacity in the context of a business transaction.

NOTE:

Excluded here are agents as "automatons" (or robots, bobots, etc.). In ISO/IEC 14662, "automatons" are recognized and provided for but as part of the Functional Service View (FSV) where they are defined as an "Information Processing Domain (IPD)". ISO/IEC 15944-1 (3.1.01)

3.1.002 **Application Program Interface (API)**

a boundary across which application software uses facilities of programming languages to invoke services. ISO/IEC 14662:1997 (3.1.1)

3.1.003 **attribute**

a characteristic of an object or entity. ISO/IEC 11179-3:200n (3.1.1)

3.1.004 **attribute capsule**

an attribute that encapsulates other attributes. ISO/IEC 11179-3:200n (3.1.2)

3.1.005 **(attribute) value**

a specific occurrence of an attribute.

Example: "Blue" is an attribute value for the attribute "color". ISO/IEC 2382-17:1999 (17.02.11)

3.1.006 **attribute value**

a representation of an instance of an attribute. ISO/IEC 11179-3:1994 (3.2 E) (3.5 F)

3.1.007 authentication

the provision of assurance of the claimed identity of an entity. ISO/IEC 10181-2:1996

3.1.008 authenticity

the property that ensures that the identity of a subject or resource is the one claimed. Authenticity applies to entities such as users, processes, systems and information. ISO/IEC TR 13335-1:1996 (3.3)

3.1.009 business

a series of processes, each having a clearly understood purpose, involving more than one organisation, realised through the exchange of information and directed towards some mutually agreed upon goal, extending over a period of time. ISO/IEC 14662:1997 (3.1.2)

3.1.010 Business Operational View (BOV)

a perspective of business transactions limited to those aspects regarding the making of business decisions and commitments among organisations, which are needed for the description of a business transaction. ISO/IEC 14662:1997 (3.1.3)

3.1.011 business transaction

a predefined set of activities and/or processes of organisations which is initiated by an organisation to accomplish an explicitly shared business goal and terminated upon recognition of one of the agreed conclusions by all the involved organisations although some of the recognition may be implicit. ISO/IEC 14662:1997 (3.1.4)

3.1.012 buyer

a Person who aims to get possession of a good, service and/or right through providing an acceptable equivalent value, usually in money, to the Person providing such a good, service and/or right. ISO/IEC 15944-1 (3.1.08)

3.1.013 character

a member of a set of elements that is used for the representation, organization or control of data.

NOTE - Characters may be categorized as follows:

Types and Examples:

graphic character: (e.g., digit, letter, ideogram, special character)

control character: (e.g., transmission control, character, format effector, code extension character, device control character). ISO/IEC 2382-4:1999 (04.01.01)

3.1.014 character set

a finite set of different characters that is complete for a given purpose.

Example: The international reference version of the character set of ISO 646. ISO/IEC 2382-4:1999 (04.01.02)

3.1.015 characteristic

abstraction of a property of an object or of a set of objects.

NOTE - Characteristics are used for describing concepts. ISO 1087-1:2000 (3.2.4)

3.1.016 code

data representation in different forms according to a pre-established set of rules.

NOTE 1:

In this standard the "pre-established set of rules" are determined and enacted by a Source Authority and must be explicitly stated. ISO 639-2:1998 (3.1)

3.1.017 coded character set

a set of unambiguous rules that establishes a character set and the relationship between the characters of the set and their coded representation. (ISO/IEC 10646-1:1993) ISO/IEC TR 15285:1998 (3.2)

3.1.018 coded domain

a domain (1) for which the boundaries are defined and explicitly stated as a rule-base of a Source Authority; and, (2) for which each entity which qualifies as a member of that domain is identified through one or more codes, one of which must be an ID code.

NOTES -

- (1) A coded domain in turn can consist of two or more coded domains, i.e., through the application of the inheritance principle of object classes.
- (2) Entities which are members of a coded domain are referred to as instances of a class in UML.

3.1.019 coded domain object class

a set of things in the real world that are identified with explicit boundaries and meaning and whose properties and behaviours follow the same set of rules as established by a Source Authority.

NOTES

- (1) A coded domain object class can be considered a peculiar/specialized subtype of object class.
- (2) A coded domain object class focuses on things in the real world and not on sets

of ideas, abstractions, etc. These are addressed as parts of conceptual domains.

- (3) In this standard "sets of things in the real world" are deemed to be "entities" in the form of persons, objects, events, and processes. An entity can be, and often is, a member of more than one coded domain object class.

3.1.019 **coded set**

a set of elements which is mapped on to another set according to a code.

Example: A list of the names of airports which is mapped on to a corresponding set of three-letter abbreviations. ISO/IEC 2382-4:1999 (04.02.02)

3.1.020 **coded Domain Registration Schema**

the formal definition of both (1) the data fields contained in the specification of an entity forming part of a coded domain including the allowable contents of those fields; and, (2) the rules for the assignment of identifiers.

3.1.021 **coded Domain Source Authority**

a Person usually an organization which sets the rules governing a coded domain.

NOTES

- (1) For widely used coded domains the coded Domain Source Authority is often a jurisdiction.
- (2) Specific sectors, (e.g., banking, transport, geomatics, agriculture, etc.), may have particular coded Domain Source Authority(ies) whose coded domains are used in many other sectors.
- (3) A coded Domain Source Authority usually also functions as a Registration Authority but can use an agent, i.e., another Person, to execute the registration function on its behalf.

3.1.22 **coding scheme**

collection of rules that maps the elements of one set on to the elements of a second set.

NOTES

1. The elements may be characters or character strings.
2. The first set is the coded set and the second is the code element set.
3. "coding scheme" is preferred to "code" in this part of ISO/IEC 7826 as the latter has several (deprecated) meanings. [ISO 2382-4]
4. In this standard, the "collection of rules" for mapping the elements of another set

of codes are determined and enacted by the Source Authority and must be explicitly stated. [Adapted from ISO/IEC 7826-1:1994 (3.3)] ISO/IEC 7826-1:1994 (3.3)

3.1.023 commitment

the making or accepting of a right, obligation, liability or responsibility by a Person that is capable of enforcement in the jurisdiction in which the commitment is made. ISO/IEC 15944-1 (3.1.09)

3.1.024 composite identifier

an identifier functioning as a single unique identifier consisting of one or more other component identifiers, and one or more other component data elements, whose interworking are rule-based.

NOTES

- (1) Most widely used composite identifiers consist of the ID of the overall identification/numbering schema, (e.g., ISO/IEC 6532, ISO/IEC 7812, ISO/IEC 7506, UPC/EAN, ITU-R E.164, etc.), which is often assumed, the ID the issuing organization (often based on a block numeric numbering schema), the ID of the entities forming part of members of each issuing organization.
- (2) Identifiers (in business transactions) are for the most part composite identifiers.

3.1.025 composite type

a data type that has a data structure composed of the data structures of one or more data types and that has its own set of permissible operations.

Example: A data type "complex number" may be composed of two "real number" data types.

NOTE - The operations of a composite type may manipulate its occurrences as a unit or may manipulate portions of these occurrences. ISO/IEC 2382-17:1999 (17.05.10)

3.1.026 computational integrity

the expression of standards in a form that ensures precise description of behaviour and semantics in a manner that allows for automated processing to occur, and the managed evolution of such standards in a way that enables dynamic introduction by the next generation of information systems. ISO/IEC JTC1 Report on the Business Team on Electronic Commerce Clause 6.2 (JTC1 N5437)

3.1.027 computer program

means data representing instructions or statements that, when executed in a computer system, causes the computer to perform a function.

3.1.028 computer service

includes data processing and the storage or retrieval of data.

3.1.029 computer system

means a device that, or a group of interconnected or related devices one or more of which,

- (a) contains computer programs or other data, and
- (b) pursuant to computer programs,
 - (i) performs logic and control, and
 - (ii) may perform any other function.

3.1.030 concept

unit of knowledge created by a unique combination of characteristics.

NOTE - Concepts are not necessarily bound to particular languages. They are, however, influenced by the social or cultural background which often leads to different categorizations. ISO 1087-1:2000 (3.2.1)

3.1.031 constraint

a rule, explicitly stated, that prescribes, limits, governs or specifies any aspect of a business transaction.

NOTES:

1. Constraints are specified as rules forming part of components of Open-edi scenarios, i.e., as scenario attributes, roles, and/or information bundles.
2. For constraints to be registered for implementation in Open-edi, they must have unique and unambiguous identifiers.
3. A constraint may be agreed to among parties (condition of contract) and is therefore considered an "internal constraint". Or a constraint may be imposed on parties, (e.g., laws, regulations, etc.), and is therefore considered an "external constraint". ISO/IEC 15944-1 (3.1.11)

3.1.032 consumer

a buyer who is an individual to whom consumer protection requirements are applied as a set of external constraints on a business transaction.

NOTES:

1. Consumer protection is a set of explicitly defined rights and obligations applicable as external constraints on a business transaction.
2. The assumption is that a consumer protection applies only where a buyer in a business transaction is an individual. If this is not the case in a particular

jurisdiction, such external constraints should be specified as part of scenario components as applicable.

3. It is recognized that external constraints on a buyer of the nature of consumer protection may be peculiar to a specified jurisdiction. ISO/IEC 15944-1 (3.1.12)

3.1.033 data

representations of recorded information that are being prepared or have been prepared in a form suitable for use in a computer system. Based on Canadian Criminal Code Section 342 and ISO/IEC 2382

3.1.034 data

a reinterpretable representation of information in a formalized manner suitable for communication, interpretation, or processing.

NOTE - Data can be processed by humans or by automatic means. ISO/IEC 2382-1:1993 (01.01.02)

3.1.035 data (in a business transaction)

representations of recorded information that are being prepared or have been prepared in a form suitable for use in a computer system. ISO/IEC 15944-1 (3.1.14)

3.1.036 data element

a unit of data for which the definition, identification, representation and permissible values are specified by means of a set of attributes. ISO/IEC 11179-3:200n (3.3.35)

3.1.037 data element (in organization of data)

a unit of data that is considered in context to be indivisible.

Example: The data element "age of a person" with values consisting of all combinations of 3 decimal digits.

NOTE - Differs from the entry 17.06.02 in ISO/IEC 2382-17. ISO/IEC 2382-04:1998 (04.07.01)

3.1.038 data element attribute

an attribute of a data element. ISO/IEC 11179-3:200n (3.1.6)

3.1.039 data element value

a value out of a set of permissible values pertaining to a data element. ISO/IEC 11179-3:1994 (3.6)

3.1.040 dataset

identifiable collection of data.

NOTE:

A dataset may be a smaller grouping of data which, though limited by some constraint such as spatial extent or feature type, is located physically within a larger dataset. Theoretically, a dataset may be as small as a single feature or feature attribute contained within a larger dataset. A hard copy map or chart may be considered a dataset. ISO DIS 19115:2001 (4.2)

3.1.041 dataset series

collection of datasets sharing the same product specification. ISO DIS 19115:2001 (4.3)

3.1.042 definition

a statement which describes a concept and permits its differentiation from other concepts within a system of concepts. (Note: See ISO 1087) ISO/IEC 11179-3:200n (3.1.7)

3.1.043 designation

representation of a concept by a sign which denotes it.

NOTE - In terminology work three types of designations are distinguished: symbols, appellations and terms. ISO 1087-1:2000 (3.4.1)

3.1.044 distinguishing identifier

data that unambiguously distinguishes an entity in the authentication process. ISO/IEC 10181-2:1996

3.1.045 Electronic Data Interchange (EDI)

the automated exchange of any predefined and structured data for business purposes among information systems of two or more organisations. ISO/IEC 14662:1997 (3.1.5)

3.1.046 entity

any concrete or abstract thing that exists, did exist, or might exist, including associations among these things.

Example: A person, object, event, idea, process, etc...

NOTE - Please observe that an entity exists whether data about it are available or not. ISO/IEC 2382-17:1999 (17.02.05)

3.1.047 entity authentication

the corroboration that the entity is the one claimed. ISO/IEC 9798-1:1997 (3.3.11)

3.1.048 (entity) identification

a method of using one or more attributes whose attribute values uniquely identify each occurrence of a specified entity. ISO/IEC 2382-17:1996 (17.02.14)

3.1.049 enumerated domain

a value domain that is specified by a list of all Permissible Values. ISO/IEC 11179-3:200n (3.3.72)

3.1.050 exchange code set

a set of codes identified in a coded domain as being suitable for information exchange as shareable data.

NOTE

- (1) Examples here are the 2-alpha and 3-alpha codes in ISO 3166-1.

3.1.051 external constraint

a constraint which takes precedence over internal constraints in a business transaction, i.e., is external to those agreed upon by the parties to a business transaction.

NOTES:

1. Normally external constraints are created by law, regulation, orders, treaties, conventions or similar instruments.
2. Other sources of external constraints are those of a sectorial nature, those which pertain to a particular jurisdiction or a mutually agreed to common business conventions, (e.g., INCOTERMS, exchanges, etc.).
3. External constraints can apply to the nature of the good, service and/or right provided in a business transaction.
4. External constraints can demand that a party to a business transaction meet specific requirements of a particular role. Examples here include:
 - only a qualified medical doctor may issue a prescription for a controlled drug;
 - only an accredited share dealer may place transactions on the New York Stock Exchange;
 - hazardous wastes may only be conveyed by a licensed enterprise.
5. Where the information bundles (IBs), including their Semantic Components (SCs) of a business transaction are also to form the whole of a business transaction, (e.g., for legal or audit purposes), all constraints must be recorded.

For example, there may be a legal or audit requirement to maintain the complete set of recorded information pertaining to a business transaction, i.e., as the information bundles exchanged, as a "record".

6. A minimum external constraint applicable to a business transaction often

requires one to differentiate whether the Person, i.e., that is a party to a business transaction, is an "individual", "organization", or "public administration". For example, privacy rights apply only to a Person as an "individual". ISO/IEC 15944-1 (3.1.23)

3.1.052 Formal Description Technique (FDT)

a specification method based on a description language using rigorous and unambiguous rules both with respect to developing expressions in the language (formal syntax) and interpreting the meaning of these expressions (formal semantics). ISO/IEC 14662:1997 (3.1.6)

3.1.053 Functional Service View (FSV)

a perspective of business transactions limited to those information technology interoperability aspects of IT Systems needed to support the execution of Open-edi transactions. ISO/IEC 14662:1997 (3.1.7)

3.1.054 glyph

a recognizable abstract graphic symbol which is independent of any specific design (ISO/IEC 9541-1:1991) ISO/IEC TR 15285:1998 (3.5)

3.1.055 human interface equivalent

a representation of the semantics of an ID code of a coded domain in a formalized manner suitable for communication to and understanding by humans.

NOTES:

- (1) In most cases there will be multiple human interface equivalent representations as required to meet localization requirements, i.e., those of a linguistic nature, jurisdictional nature and/or sectorial nature.
- (2) Human interface equivalents include representations in various forms or formats, (e.g., in addition to written text those of an audio, symbol (and icon) nature, glyphs, audio, image, etc.).

3.1.056 ID Code

ID Code (1) an identifier assigned by the Source Authority to a member of a coded domain.

NOTES -

- (1) The rules governing the assignment of an ID code resides with the Source Authority and forms part of the SA's Coded Domain Registration Schema.
- (2) Un UML modelling notation an ID code is viewed as an instance of an object class.

- (3) Associated with the ID code can be:
 - (3.1) one or more equivalent codes;
 - (3.2) one or more equivalent representation especially in the form of human equivalent linguistic expressions.

ID code: (2) a code which functions as an identifier of an entity which is a member of a coded domain. ID codes must be unique within their Coded Domain Registration Schema.

ID code: (3) an identifier assigned by the Source Authority for a coded domain.

NOTES

- (1) The rules for assignment of an ID code reside with the Source Authority and form part of a SA Registration Schema.
- (2) Within each SA Registration Schema, ID codes assigned must be unique

Project Editor's Notes:

Three variant definitions and notes of an ID code need to be integrated into a single definition and set of notes. This should be completed prior to the CD phase.

3.1.057 **identification**

a rule-based process, explicitly stated, involving the use of one or more attributes, i.e., data elements, whose value (or combination of values) are used to identify uniquely the occurrence or existence of a specified entity. ISO/IEC 15944-1 (3.1.26)

3.1.058 **identifier (in business transaction)**

an unambiguous, unique and a linguistically neutral value, resulting from the application of a rule-based identification process. Identifiers must be unique within the identification scheme of the issuing authority.

NOTES -

NOTE 1 - Although an identifier is a single value, this single value may be composed of one or more atomic components. For example, the last number or terminal digit can be a "check" digit, or intelligence may be built into the identifier according to the business rules governing the identification process and the assignment of identifiers by the issuing organization.

NOTE 2 - An identifier as a single value can include a combination of the identifier

of the issuing organization and the identification number assigned by that issuing organization, i.e., standards such as ISO/IEC 6523, 7501, 7812, etc., are based on this principle.

NOTE 3 - Whether an identifier used in a business transaction has built-in intelligence or not is determined by the agreed upon rule base of the issuing authority. Many existing international (and national) standards exist resulting in what are considered "intelligent identifiers". Organizations which wish to map such intelligent identifiers to "non-intelligent identifiers" in their internal applications can use ISO/IEC TR 15452 - "Information Technology - Specification of data value domains". ISO/IEC 15944-1 (3.1.27)

3.1.059 identifier (in metadata)

a linguistically neutral sequence of characters, capable of uniquely identifying that with which it is associated, within a specified context. ISO/IEC 11179-3:200n (3.1.9)

3.1.060 individual

a Person who is a human being, i.e., a natural person, who acts as a distinct indivisible entity or is considered as such. ISO/IEC 15944-1 (3.1.28)

3.1.061 information (in information processing)

knowledge concerning objects, such as facts, events, things, processes, or ideas, including concepts, that within a certain context has a particular meaning. ISO/IEC 2382-1:1993 (01.01.01)

3.1.062 Information Bundle (IB)

the formal description of the semantics of the information to be exchanged by Open-edi Parties playing roles in an Open-edi scenario. ISO/IEC 14662:1997 (4.1.2.2)

3.1.063 internal constraint

a constraint which forms part of the commitment(s) mutually agreed to among the parties to a business transaction.

NOTE: Internal constraints are self-imposed. They provide a simplified view for modelling and re-use of scenario components of a business transaction for which there are no external constraints or restrictions to the nature of the conduct of a business transaction other than those mutually agreed to by the buyer and seller. ISO/IEC 15944-1 (3.1.32)

3.1.064 issuing organization (IO)

body that assumes responsibility for the administration of a specific coding scheme. ISO/IEC 7826-2:1994 (3.1)

3.1.065 IT-enablement

the transformation of current standards utilized in commerce, (e.g., code tables), from a

manual to computational perspective so as to be able to support computational integrity. ISO/IEC JTC1 Report on the Business Team on Electronic Commerce Clause 6.2 (JTC1 N5437)

3.1.066 IT interface equivalent

a computer processable identification of [text being drafted including computational integrity]

3.1.067 jurisdiction

a distinct legal and/or regulatory framework which is a source of external constraints on Persons, their behaviour and the making of commitments including those involving business transactions.

3.1.068 language

system of signs for communication, usually consisting of a vocabulary and rules. (From ISO 5127-1)

NOTE:

In this standard, language refers to "natural languages" or special languages but not "programming languages". ISO/IEC 11179-3:200n (3.2.15)

3.1.069 language code

combination of characters used to represent a language or languages. ISO 639-2:1998 (3.2)

3.1.070 list

an ordered set of data elements. ISO/IEC 2382-4:1999 (04.08.01)

3.1.071 localization

pertaining to or concerned with anything that is not global and is bound through specified sets of parameters of:

- (a) a linguistic nature including natural and special languages and associated multilingual requirements;
- (b) jurisdictional nature, i.e., legal, regulatory, geopolitical, etc.;
- (c) a sectorial nature, i.e., industry sector, scientific, professional, etc.;
- (d) a human rights nature, i.e., privacy, disabled/handicapped persons, etc.; and/or,
- (e) consumer behaviour requirements.

Within and among "locales", interoperability and harmonization objectives also apply. ISO/IEC JTC1 Report on the Team on Electronic Commerce (BT-EC), p.25 (ISO/IEC JTC1 N5437)

3.1.072 location

a place (either physical or electronic) that can be defined as an address. TBITS/NCTTI-

3.1.073 medium

physical material which serves as a functional unit, in or on which information or data is normally recorded, in which information or data can be retained and carried, from which information or data can be retrieved, and which is non-volatile in nature.

NOTES:

- (1) This definition is independent of the material nature on which the information is recorded and/or technology utilized to record the information, (e.g., paper, photographic, (chemical), magnetic, optical, ICs (integrated circuits), as well as other categories no longer in common use such as vellum, parchment (and other animal skins), plastics, (e.g., bakelite or vinyl), textiles, (e.g., linen, canvas), metals, etc.).
- (2) The inclusion of the "non-volatile in nature" attribute is to cover latency and records retention requirements.
- (3) This definition of "medium" is independent of:
 - a) form or format of recorded information;
 - b) physical dimension and/or size; and,
 - c) any container or housing that is physically separate from material being housed and without which the medium can remain a functional unit.
- (4) This definition of "medium" also captures and integrates the following key properties:
 - a) the property of medium as a material in or on which information or data can be recorded and retrieved;
 - b) the property of storage;
 - c) the property of physical carrier;
 - d) the property of physical manifestation, i.e., material;
 - e) the property of a functional unit; and,
 - f) the property of (some degree of) stability of the material in or on which the information or data is recorded. ISO/IEC 15944-1 (3.1.32)

3.1.074 metadata

data about data elements, including their data descriptions, and data about data ownership, access paths, access rights and data volatility. ISO/IEC 2382-17:1999 (17.06.05)

data about data. ISO/IEC FCD 11179-3:200n

3.1.075 metadata entity

set of metadata elements describing the same aspect of data.

- NOTE 1 May contain one or more metadata entities
NOTE 2 Equivalent to a class in UML terminology. ISO DIS 19115:2001 (4.7)

3.1.076 **metadata section**

subset of metadata which consists of a collection of related metadata entities and metadata elements. ISO DIS 19115:2001 (4.8)

3.1.077 **model**

abstraction of some aspect of reality. ISO DIS 19115:2001 (4.9)

3.1.078 **multilingualism**

the ability to support not only character sets specific to a (natural) language (or family of languages) and associated rules but also localization requirements, i.e., use of a language from jurisdictional, sectorial and consumer marketplace perspectives.

3.1.079 **name**

designation of an object by a linguistic expression. ISO 1087:1990 (5.3.1.3) * Also cited in 15944-1 (3.1.33)

3.1.080 **object**

anything perceivable or conceivable.

NOTE - Objects may be material (e.g. engine, a sheet of paper, a diamond), or immaterial (e.g. conversion ratio, a project play) or imagined, (e.g., a unicorn). ISO 1087-1:2000 (3.1.1)

3.1.081 **object class**

a set objects. A set of ideas, abstractions, or things in the real world that can be identified with explicit boundaries and meaning and whose properties and behavior follow the same rules. ISO/IEC 11179-1:1999 (3.45)

3.1.082 **Open-edi**

electronic data interchange among multiple autonomous organisations to accomplish an explicit shared business goal according to Open-edi standards. ISO/IEC 14662:1997 (3.1.9)

3.1.083 **Open-edi Party (OeP)**

an organisation that participates in Open-edi.

NOTE:

Often in this ISO/IEC 15944-1 standard referred to generically as "party" or "parties" for any entity modeled as playing a role in Open-edi scenarios. ISO/IEC 14662:1997 (3.1.11)

3.1.084 Open-edi scenario

a formal specification of a class of business transactions having the same business goal. ISO/IEC 14662:1997 (3.1.12)

3.1.085 Open-edi standard

a standard that complies with the Open-edi Reference Model. ISO/IEC 14662:1997 (3.1.10)

3.1.086 Open-edi Support Infrastructure (OeSI)

a model of the set of functional capabilities for Open-edi systems which, when taken together with the Decision Making Applications, allows Open-edi Parties to participate in Open-edi transactions. ISO/IEC 14662:1997 (4.2.1)

3.1.087 Open-edi support organization

an organization, acting on behalf of an Open-edi Party(ies) to provide necessary support enabling execution of Open-edi transactions, but which is not modelled as a role(s). ISO/IEC 14662 (4.2.2)

3.1.088 Open-edi system

an information technology system which enables an Open-edi Party to participate in Open-edi transactions. ISO/IEC 14662:1997 (4.2.1)

3.1.089 organization

a unique framework of authority within which a person or persons act, or are designated to act, towards some purpose.

NOTE: The kinds of organizations covered by this International Standard include the following examples:

- a) an organization incorporated under law;
- b) an unincorporated organization or activity providing goods and/or services including:
 - 1) partnerships;
 - 2) social or other non-profit organizations or similar bodies in which ownership or control is vested in a group of individuals;
 - 3) sole proprietorships
 - 4) governmental bodies
- c) groupings of the above types of organizations where there is a need to identify these in information interchange. ISO/IEC 6523-1: 1998 (3.1)

3.1.090 organization part

any department, service or other entity within an organization, which needs to be identified for information interchange. ISO/IEC 6523-1:1998 (3.2)

3.1.091 organization Person

an organization part which has the properties of a Person and thus is able to make commitments on behalf of that organization.

NOTE:

- (a) an organization can have one or more organization persons.
- (b) an organization person is deemed to represent and act on behalf of the organization and to do so in a specified capacity.
- (c) an organization person can be a "natural person" such as an employee or officer of the organization.
- (d) an organization person can be a legal person, i.e., another organization. ISO/IEC 15944-1 (3.1.45)

3.1.092 permissible value

an expression of a value meaning in a specific value domain. ISO/IEC 11179-3:200n (3.3.96)

3.1.093 persona

the set of data elements and their values by which a Person wishes to be known and thus identified in a business transaction. ISO/IEC 15944-1 (3.1.46)

3.1.094 Person

an entity, i.e., a natural or legal person, recognized by law as having legal rights and duties, able to make commitment(s), assume and fulfil resulting obligation(s), and able of being held accountable for its action(s).

NOTES:

- (1) Synonyms for "legal person" include "artificial person", "body corporate", etc., depending on the terminology used in competent jurisdictions.
- (2) Person is capitalized to indicate that it is being utilized as formally defined in the standards and to differentiate it from its day-to-day use.
- (3) Minimum and common External Constraints applicable to a business transaction often require one to differentiate among three common subtypes of Person, namely "individual", "organization", and "public administration". ISO/IEC 15944-1 (3.1.47)

3.1.095 Person Authentication

the provision of the assurance of a Recognized Person Identity (rPi) (sufficient for the purpose of the business transaction) by corroboration. ISO/IEC 15944-1 (3.1.48)

3.1.096 personal information

any information about an identifiable individual that is recorded in any form, including electronically or on paper.

NOTE - Some examples would be information about a person's religion, age, financial transactions, medical history, address, or blood type.

3.1.097 **pivot code set**

the set of codes in a coded domain which is made publicly known and available, the most stable, representing the defined semantics. Most often it is the same as the ID code.

NOTES

- (1) The use of the pivot code as distinguished from the ID code supports the requirement of a Source Authority to maintain internally and on a confidential basis the ID code of its members. Here the pivot code.
- (2) At times a coded domain has more than one valid code set, (e.g., ISO 639, ISO 3166, etc.).

For example in ISO 3166-1 the 3-digit numeric code is the pivot. The 2-alpha and 3-alpha code sets can change when the name of the entity referenced is changed by that entity.

3.1.098 **preferred term**

term recommended by an authoritative body. ISO 1087:1990 (5.6.1)

3.1.099 **process**

a series of actions or events taking place in a defined manner leading to the accomplishment of an expected result. ISO/IEC 15944-1 (3.1.51)

3.1.100 **property**

a peculiarity common to all members of an object class. ISO/IEC 11179-1:1999 (3.48)

3.1.101 **public administration**

an entity, i.e., a Person, which is an organization and has the added attribute of being authorized to act on behalf of a regulator. ISO/IEC 15944-1 (3.1.52)

3.1.102 **recognized Person identity (rPi)**

the identity of a Person, i.e., Person identity, established to the extent necessary for a specific purpose in a business transaction. ISO/IEC 15944-1 (3.1.53)

3.1.103 **recorded information**

any information that is recorded on or in a medium irrespective of form, recording medium or technology utilized, and in a manner allowing for storage and retrieval.

NOTES -

- (1) This is a generic definition and is independent of any ontology, (e.g., those of "facts" versus "data" versus "information" versus "intelligence" versus

- "knowledge", etc.).
- (2) Through the use of the term "information," all attributes of this term are inherited in this definition.
 - (3) This definition covers:
 - (a) any form of recorded information, means of recording, and any medium on which information can be recorded; and,
 - (b) all types of recorded information including all data types, instructions or software, databases, etc. ISO/IEC 15944-1 (3.1.49)

3.1.104 Registration Authority (RA)

a Person responsible for the maintenance of one or more Registration Schemas including the assignment of a unique identifier for each recognized entity in a Registration Schema. ISO/IEC 15944-1 (3.1.55)

3.1.105 registration authority (RA)

body responsible for maintaining the register of coding schemes and for the issuance of international coding scheme identifiers (ICSIs). ISO/IEC 7826-2:1994 (3.3) [Deprecated now that ISO 7826 has been withdrawn]

3.1.106 registration authority identifier (RAI)

an identifier assigned to a registration authority. ISO/IEC 11179-1:1999 (3.57)

3.1.107 Registration Schema (RS)

the formal definition of both the data fields contained in the specification of a persona of a Person and the allowable contents of those fields, including the rules for the assignment of identifiers. (This may also be referred to as a profile of a persona). ISO/IEC 15944-1 (3.1.56)

3.1.108 regulator

a Person who has authority to prescribe external constraints which serve as principles, policies or rules governing or prescribing the behaviour of Persons involved in a business transaction as well as the provisioning of goods, services, and/or rights interchanged. ISO/IEC 15944-1 (3.1.57)

3.1.109 repertoire

a specified set of characters that are represented in a coded character set. (ISO/IEC 10646-1:1993)ISO/IEC TR 15285:1998 (3.16)

3.1.110 retention period

the length of time for which data on a data medium is to be preserved. ISO/IEC 2382-12:1988 (12.04.11)

3.1.111 role

a specification which models an external intended behaviour (as allowed within a scenario) of an Open-edi Party. ISO/IEC 14662:1997 (4.1.2.1)

3.1.112 scenario attribute

the formal specification of information, relevant to an Open-edi scenario as a whole, which is neither specific to roles nor to information bundles. ISO/IEC 14662:1997 (4.1.2.3)

3.1.113 seller

a Person who aims to hand over voluntarily or in response to a demand, a good, service and/or right to another Person and in return receives an acceptable equivalent value, usually in money, for the good, service and/or right provided. ISO/IEC 15944-1 (3.1.60)

3.1.114 semantic component (SC)

a unit of information unambiguously defined in the context of the business goal of the business transaction.

A SC may be atomic or composed of other SCs. ISO/IEC 14662:1997 (4.1.2.2)

3.1.115 shareable data

data that has precise identifiers, meaning, structures, and values. ISO/IEC 11179-3:200n (3.2.26)

3.1.116 specification

[text being drafted] needed to distinguish between (1) to describe = description; (2) to specify = specification.

3.1.117 sponsoring authority (SA)

body recognized in accordance with the requirements of this part of ISO/IEC 7826, to receive proposals from issuing organizations for the registration of coding schemes and to submit applications to the registration authority. ISO/IEC 7826-2:1994 (3.2)

3.1.118 standards

documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose.

[This is the generic definition of "standards" of the ISO and IEC (and now found in the ISO/IEC JTC1 Directives, Part 1, Section 2.5:1998) {See also ISO/IEC Guide 2: 1996 (1.7)} <<<http://www.iso.ch/infoe/intro.html>>>]

3.1.119 storage

the retention of data in a storage device. ISO/IEC 2382-12:1988 (12.02.04)

3.1.120 storage device

a functional unit into which data can be placed, in which they can be retained, and from which they can be retrieved. ISO/IEC 2382-1:1993 (01.01.10)

3.1.121 **term**

designation of a defined concept in a special language by a linguistic expression.

NOTE - A term may consist of one or more words i.e. simple term, or complex term (5.5.6)] or even contain symbols. ISO 1087:1990 (5.3.1.2)

3.1.122 **third party**

a Person besides the two primarily concerned in a business transaction who is agent of neither and who fulfils a specified role or function as mutually agreed to by the two primary Persons or as a result of external constraints.

NOTE - It is understood that more than two Persons can at times be primary parties in a business transaction. ISO/IEC 15944-1 (3.1.63)

3.1.123 **text**

data in the form of characters, symbols, words, phrases, paragraphs, sentences, tables, or other character arrangements, intended to convey a meaning and whose interpretation is essentially based upon the reader's knowledge of some natural language or artificial language.

Example: A business letter printed on paper or displayed on a screen. ISO/IEC 2382-23:1994 (23.01.01)

3.1.124 **unambiguous**

the level of certainty and explicitness required in the completeness of the semantics of the recorded information interchanged appropriate to the goal of a business transaction. ISO/IEC 15944-1 (3.1.64)

3.1.125 **value domain**

a set of permissible values. It provides representation, but has no implication as to what data element concept the values may be associated with nor what the values mean. ISO/IEC 11179-3:200n (3.3.135)

3.1.126 **value item**

a representation of a value meaning in a specific value domain. The actual value. ISO/IEC 11179-3:200n (3.3.143)

3.1.127 **value meaning**

the meaning or semantic content of a value. ISO/IEC 11179-3:200n (3.3.144)

3.1.128 **value meaning identifier**

the unique identifier for a value meaning. ISO/IEC 11179-3:200n (3.3.148)

3.1.129 **value meaning set**

the relationship between a conceptual domain and a set of value meanings. ISO/IEC

11179-3:200n (3.3.149)

3.1.130 **vendor**

a seller on whom consumer protection requirements are applied as a set of external constraints on a business transaction.

NOTES:

1. Consumer protection is a set of explicitly defined rights and obligations applicable as external constraints on a business transaction.
2. It is recognized that external constraints on a seller of the nature of consumer protection may be peculiar to a specified jurisdiction. ISO/IEC 15944-1 (3.1.65)

3.2 SYMBOLS AND ABBREVIATIONS

[TO BE COMPLETED PRIOR TO CD STAGE]

4 FUNDAMENTAL PRINCIPLES AND ASSUMPTIONS

Project Editor's Notes:

Present text in Clause 4 is of a the nature of a rough outline only. Significant parts of the text in Clause 4 are taken from ISO/IEC 14662 and ISO/IEC 15944-1. Text will be refined and gaps completed for the CD version. It is likely that expected FDIS 11179-3 once completed will be a source of additional text for Clause 4. Contributions on Clause 4 are invited.

4.1 IT-ENABLEMENT REQUIRES ABILITY TO SUPPORT CHARACTERISTICS OF OPEN-EDI

Rule nn:

For a coded domain to be considered as having the properties and behaviours of IT-enabled it must be able to support the characteristics of Open-edi.

A key objective of this standard is to ensure that for existing standards of a “codes representing X” nature can be utilized in electronic business transactions among parties engaged in Open-edi. Open-edi pertains to flows of information using information bundles which cause pre-defined (or pre-definable) changes in the states of the IT systems of the parties to such electronic data interchanges. Parties using Open-edi make the commitment that they will adhere to the predefined rules associated with the registered associated scenario attributes, roles and information bundles (including registered semantic components).

There are a number of characteristics by which Open-edi is recognized and defined. {See further Clause 4 in ISO/IEC 15944-1}. These are:

- actions based on following predefined and agreed upon rules
- exchanges of information among parties involve the making of commitments
- communications among the parties are automated
- parties control and maintain their states
- parties act autonomously
- multiple simultaneous transactions can be supported.

4.2 NEED TO BE ABLE TO USE CODED DOMAINS IN SUPPORT OF COMMITMENT EXCHANGE

Rule nn:

[text in process of being drafted]

Open-edi is a class of electronic information flows which involves the interworking of

predefined types and states of commitments of the parties concerned These involve tasks or functions to be carried out, obligations to be entered into, etc. In Open-edi, all commitments must be stated clearly and unambiguously and be understood by all parties concerned . Commitments are of several types and exist at several levels. The obligations arising from commitments can be fulfilled either directly by the Persons making the commitments or through agents acting on their behalf.

It is common practices in making commitments as part of well-defined business transactions to reference and use (1) one or more coded domains (from a predefined catalogue of coded domains suitable for that business transaction); and, (2) within such coded domains specific permitted values, i.e. as ID Codes. The choices made serve as a “shorthand” from a human interface perspective for the commitments made among the participating parties and are also used among their IT systems. It is therefore vital that for any standard of a “codes representing X” nature used in support of commitment exchange that the semantics of the permitted values referenced be unambiguous from both IT-interoperability and semantic interoperability perspectives.

4.3 CODED DOMAINS TO BASED ON CLEAR, PREDEFINED RULES, I.E. BE "RULE-BASED"

Rule nn:

[text in process of being drafted]

Open-edi based electronic business transactions require the use of clear and pre-defined rules, principles and guidelines. These rules formally specify the role(s) of the parties involved and the expected behaviour(s) of the parties as seen by the other parties when engaging in Open-edi based business transactions. Open-edi rules are applied to:

- content of information flows; and,
- the order and behaviour of information flows themselves.

The combination of both of these provides a complete specification of the relationships among the parties since it requires them to achieve a common understanding of the semantic understanding of the information interchanged.

Rule nn:

[text in process of being drafted]

This standard focuses on facilitating and ensuring required unambiguity and semantic completeness of the content of information flows where such contents is based on the use of permitted values forming part of well-formed and rule-based coded domains derived from existing standards of a “codes representing X” nature.

4.4 SEPARATION OF THE IT INTERFACE FROM HUMAN INTERFACE REQUIREMENTS

Rule nn:

[text in process of being drafted]

From an IT-interface requirements perspective, including IT-enabled versions of sets of “codes representing X” nature, it is important that a standard be able to support computational integrity if it is to be used in electronic business transactions where the use of such standards form an essential component of commitment exchange.

In this standard "computational integrity" is defined as:

computational integrity: *the expression of standards in a form that ensures precise description of behaviour and semantics in a manner that allows for automated processing to occur, and the managed evolution of such standards in a way that enables dynamic introduction by the next generation of information systems.*

intégrité informatique: *expression de normes sous une forme qui assure la description précise du comportement et de la sémantique d'une façon qui permet un traitement automatique, ainsi que l'évolution gérée de ces normes d'une manière qui permet une introduction dynamique par la génération suivante de systèmes informatiques.*

Rule nn:

Computational integrity combined with Open-edi based electronic business transactions, from a global/world-wide requirements perspective, requires the use of unique, linguistically neutral and (globally) unique identifiers for both the ID of a coded domain as well as for each of the codes representing permitted values/instance of members within a coded domain, i.e each ID code.

Use of unique, linguistically neutral and unambiguous identifiers for both the coded domain and the codes representing entities as members of a coded domain facilitates electronic data interchange and reference-ability among information systems as well as re-useability of the data. It also: (1) facilitates data integrity and data quality at the human interface; and, (2) ensures that the human interface equivalent can be tailored to the linguistic needs of human users and/or that of applicable jurisdictions.

4.5 [RESERVED FOR FUTURE USE]

5 RULES GOVERNING RULE-BASE AND IDENTIFICATION COMPONENT OF A CODED DOMAIN AND ITS ID CODES

5.1 INTRODUCTION

A key aspect of coded domains is that they are based on rules which are pre-defined and mutually agreed to. Users of such coded domains, by referencing a mutually agreed coded domain in a business transaction, adopt/inherit the rules set of the coded domain referenced. Rules are intended to capture as precisely and clearly as possible precise criteria and agreed to common business operational requirements. These rules also serve as a common set of understanding bridging the varied perspectives of the commercial framework, the legal framework, the information technology framework, standardizers, consumers, etc.

Coded domains are developed by Source Authorities for use by their members and/or for a particular domain of application. It is very common that a particular coded domains utilized by diverse sets of users having different perspectives but similar needs. Difficulties arise when a coded domain developed for a particular use by a Source Authority in a specified domain are utilized by other users in other domains including for purposes for which they were not intended.

A key element of IT-enabled standards of a “codes representing X” nature is that (when transformed into ISO/IEC 18022 conformant coded domains) that such coded domains are based on rules which are both clearly defined and explicitly stated.

5.2 SPECIFICATION OF A BOUNDARY OF A CODED DOMAIN AND INCLUSION OF ITS MEMBERS

Whether or not a real world entity is identified as an accepted/recognized member of a coded domain is determined by the rule-base of the Source Authority.

The Person(s) comprising a Source Authority are required to explicitly and formally state as precise criteria the business operational rules, including legal requirements, if any, governing the membership of its coded value domain(s). Such a rule-base of a Source Authority is deemed to be pre-defined and mutually agreed to by the Person(s) comprising the Source Authority. Included should be the agreed upon common business operational practices and related functional requirements.

[UNDER FURTHER DEVELOPMENT]

5.3 SPECIFICATION OF EXCLUSIONARY RULES FOR A CODED DOMAIN

Rule nn:

It is necessary to state exclusion criteria.

[to be developed further]

At times, it is more efficient and unambiguous to specify what is excluded than to enumerate what the entities which may be included.

5.4 SOURCE(S) OF RULE-BASE GOVERNING A CODED DOMAIN

Project Editor's Note:

This Clause will address those aspects where a Source Authority references and integrates source of requirements of its own making as well as those of the nature of external constraints.

5.5 RULES FOR THE ASSIGNMENT OF ID CODES

Rule nn:

For each coded domain, the rules for the assignment of ID codes must be specified.

Project Editor's Note:

This Clause and its sub-clauses will address aspects of systematic assignment of ID codes to entities deemed to be members of a Coded Domain.

5.5.1 Exhaustiveness of a Coded Domain

Rule nn:

A Source Authority shall state whether the set of entities enumerated as members of the coded domain is exhaustive or not.

It is up to a Source Authority to decide whether a coded domain is exhaustive or not. For example, ISO/IEC 5218 is deemed to be exhaustive while ISO/IEC 3166-1 makes allowances for users to add other real world entities to the code set, i.e., as user extensions.

5.5.2 Registration of User Extensions

A Source Authority for a coded domain can, if it so wishes, make provision for users of that coded domain to be able to add (and enumerate) other real world entities as members of that domain. Such additions by users are commonly known as "user extensions".

In the rules governing the assignment of ID codes for entities as members of a coded domain, a common practice is to set aside/reserve pre-determined set or block of ID codes for user extensions.

In order to avoid "collisions" among user extensions, they should be registered. User extensions which are widely used in turn become candidates for "full" membership of a coded domain.

5.5.3 Rules for Assignment of ID Codes for Entities as Members of a Coded Domain

Project Editor's Notes:

This section is under development. Existing ISO/IEC and ISO standards of a "codes representing X" nature are in progress of being analyzed to identify the most common practices of schemata for assignment of ID codes. Those already identified include:

- *simple sequential, i.e., as each member is accepted the next available ID code is assigned;*
- *block numeric, i.e., a pre-determined block numeric schema is utilized (often of a hierarchical nature and allowing for different levels of granularity);*
- *a classification system (whether or not block numeric based).*

5.5.4 Rules for Specifying Levels of Granularity

A key aspect of semantic interoperability among parties to a business transaction is agreement on the level of certainty and explicitness required, i.e., how "unambiguous" does one need to be. As such, a key success in the use of standards is the degree to which ambiguities in semantics of data and metadata can be removed. A major characteristic of cost-effective and efficient interchange of data among autonomous Persons with their heterogeneous information systems is paying attention to details. This need for preciseness in semantics known as "granularity" is not absolute but relates to the goals of the business transaction. The higher the degree of user requirements for granularity, the greater the need for precision in the semantics of the

information bundles interchanged and thus of coded domains referenced.

Practical experience has demonstrated that users have metadata and semantic component management and interchange requirements at differing levels of granularity. Often standards development suffers when users and suppliers fail to recognize that difficulties in reaching consensus are not of the nature of common requirements but rather that of accommodations which must be made for such standards to be able to interchange data at various levels of certainty or unambiguousness, i.e., levels of granularity.

Rules need to be developed for specifying levels of granularity of a coded domain and within a coded domain.

6 RULES FOR CHANGE MANAGEMENT OF A CODED DOMAIN AND ITS ID CODES

Project Editor's Notes:

This Clause is "under construction".

It includes temporal issues using ISO 8601 and ISO 19108 as its foundation standards along with date time/stamp requirements already identified in ISO 8583, standards having registration requirements similar to those needed here such as ISO 6523, ISO/IEC 7812, ISO/IEC 10646, etc., as well as standards work of JTC1 SC32 in the form of the ISO/IEC 11179 and ISO/IEC 15944 multipart standards.

It will also address change management issues for both coded domains themselves and particularly for their ID codes especially where a change has semantic implications.

Need for sub-clauses already identified include:

6.n1 Rules for Procedures for Maintenance

6.n2 Rules and Procedures for Change Management

Here change management issues to be addressed include:

- (a) a change in the ID code of a member with no change in its set of properties and/or behaviours;*
- (b) an ID code of a member remaining the same but with a change in its properties and/or behaviours;*
- (c) an ID code sub-divided into two or more discrete ID codes;*
- (d) two or more ID codes being collapsed into a single ID code;*
- (e) changes in "names" associated with an ID code;*
- (f) any combination of the above.*

Contributions are welcome.

7 RULES FOR SPECIFYING HUMAN INTERFACE EQUIVALENTS TO ID CODES IN CODED DOMAINS

Project Editor's Note:

This Clause like the others in WD 18022 is "under construction". Previous and existing contributions are in progress of being incorporated, and new contributions are being received. The text provided below and the titles of the sub-clauses already identified will likely be added to prior and during the CD ballot stage.

Added contributions are welcome.

7.1 MULTIPLE HUMAN INTERFACE EQUIVALENTS FOR AN ENUMERATED ID CODE IN A CODED DOMAIN

Rule nn:

One or more human interface equivalents can be associated with an ID code in a coded domain.

Human interface equivalents provide a representation of the semantics of ID code within the context on its coded domain.

Human interface equivalents can be in the form of terms, symbols (including icon symbols and functions) or glyphs. They can also be of an audio, image, nature as well as any form or format suitable for understanding by humans.

For example, in the coded domain schema ISOIEC 13251 whose title is "Collection of graphical symbols for office equipment", ID code 106 has associated with it from a human interface perspective first the symbol for "loud speaker"/«haut-parleur» and then the associated terms.

However, for the majority of widely used coded domains the human interface equivalents are represented through linguistic expressions in written forms and based on a natural language.

7.2 STANDARD STRUCTURE FOR SEMANTICS OF A HUMAN INTERFACE EQUIVALENT

Rule nn:

Support of semantic interoperability of natural language forms of human interface equivalents is facilitated through the use of a standard data structure as part of a coded domain.

For such a data structure the following data elements have already been identified:

- ID code of a Source Authority which governs a natural language in a specified context (often a jurisdiction). {See further Clause n.n and ISO/IEC 18038 Annex B}. This data element is therefore conditional;
- the code of the natural language based on ISO 639-2T. This is a mandatory data element;
- the linguistic equivalent itself, i.e., "main word";
- provision for a «mot lien» as may be applicable to a natural language, (e.g., in French, le, la, un, une, les, etc., or in Spanish, el, la, los, las, etc.). This is a conditional, subject to the gender code. (Often the gender code is used to establish the appropriate «mots liens»);
- a natural language gender code {See further Annex B below}.

Project Editor's Note:

There are different types of «mots liens», (e.g., (1) the base type as singular articles, then of a definitive and indefinite nature, followed by articles of a plural nature within the masculine, feminine and neuter genders. This text will be improved prior to the CD stage.

The data structure is presented in illustrative form in Figure n below.

Project Editor's Note:

The element "(a) ID Code of Source Authority" is presented here in a very simplistic, primitive manner of a composite data element. Its further expansion benefits from development work on ISO/IEC 18038.

Figure n Illustration of Elements of a Data Structure for Human Linguistic Equivalents - Written Form of an ID Code

	Element	Presence Type	Example
(a)	ID code of Source Authority	Conditional	124 (for Canada)
(b)	code of the natural language based on ISO	Mandatory	fra (for French)

	Element	Presence Type	Example
	639-2/T		
(c)	the linguistic equivalent itself, i.e., "Main word"	Mandatory	poutine
(d)	the gender code for the language	Mandatory	2 (for feminine)
(e)	the associated «mot lien»	Optional	une (la)

7.3 RULES GOVERNING LINGUISTIC (WRITTEN) REPRESENTATIONS AS HUMAN INTERFACE EQUIVALENTS OF ID CODES AS PERMITTED VALUES IN CODED DOMAINS

Rule n.n

A spoken official language may be supported by more than one writing system to convey the semantics of the information interchanged among IT systems as well as commitment exchange among Persons

An official language in a jurisdiction as spoken may be supported by more than writing system. Examples already identified include:

- (1) Serbian and Croatian which are the same spoken language but where the former in its written utilizes the Cyrillic alphabet in written presentations and the latter uses the Roman alphabet, a.k.a. as Latin-1 [Note for the CD version the specific relevant ISO character set standards will be referenced]
- (2) Inuktitut the official language of Nunavut, a territory in Canada, as a recent new distinct jurisdiction within Canada is also as spoken language which has two written forms. One is Roman Latin-1 based, the other is syllabic based . An example of the official names on Canadian territories of the ID codes identifying Canadian territories and provinces, a.k.a. as ISO 3166-2 "Administrative Subdivisions" is presented in Annex xx. [For the example to be incorporated in the upcoming CD version, see 32N???, ???]

8 [PRESENTLY RESERVED FOR FUTURE USE]

9. IT-ENABLED CODED DOMAIN TEMPLATE

Project Editor's Note:

Clause 9 is being modelled on a clauses 6.3 and 8.0 in ISO/IEC FDIS 15944-1. The purpose of an IT-enabled domain template is to ensure that all the information required from a Business Operational View (BOV) for a coded domain which is IT enabled and supports semantic interoperability is specified.

9.1 PURPOSE

9.2 TEMPLATE STRUCTURE AND CONTENT

10 REFERENCES

Project Editor's Notes:

Several references have been identified but time/resource constraints prevented their enumeration. This gap will be addressed prior to or during the CD ballot stage.

- ANNEX A (NORMATIVE) CONSOLIDATED LIST OF TERMS AND DEFINITIONS WITH CULTURAL ADAPTABILITY: ISO ENGLISH AND ISO FRENCH LANGUAGE EQUIVALENCY**
- ANNEX B (NORMATIVE) CODES REPRESENTING GENDER OF TERMS IN NATURAL LANGUAGES**
- ANNEX C (INFORMATIVE) CASE STUDY - EXAMPLE OF ISO 3166-1:1997 "CODES REPRESENTING THE CURRENT NAMES OF COUNTRIES, DEPENDENCIES AND OTHER AREAS OF PARTICULAR GEOPOLITICAL INTEREST"**
- ANNEX D (INFORMATIVE) CASE STUDY - EXAMPLE OF ISO 4217:2001 "CODES FOR THE REPRESENTATION OF CURRENCIES AND FUNDS"**
- ANNEX E (INFORMATIVE) CASE STUDY - EXAMPLE OF "E-POTATO"**
- ANNEX F (INFORMATIVE) CASE STUDY - EXAMPLE OF A CODED DOMAIN WITH TWO WRITING SYSTEMS FOR HUMAN INTERFACE EQUIVALENTS OF A SET OF ID CODES - CANADIAN PROVINCES AND TERRITORIES**
- ANNEX G (INFORMATIVE) USE OF UML AND XML**

ANNEX A (NORMATIVE) CONSOLIDATED LIST OF TERMS AND DEFINITIONS WITH CULTURAL ADAPTABILITY: ISO ENGLISH AND ISO FRENCH LANGUAGE EQUIVALENCY

Project Editor's Notes:

- (1) *Annex A Matrix will be updated to reflect the content of Clause 3.1 and all the French language equivalent terms and definitions provided.*
- (2) *During the development work of ISO/IEC 18022 some terms/definitions may be added as required. Further, for those terms/definitions for which ISO/IEC 18022 is the source, the definitions may change, i.e. be improved.*

Clause	Table of Contents	Page
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A.2	ISO English and ISO French	A-2
A.3	Cultural Adaptability and Quality Control	A-2
A.4	Organization of Annex A Consolidated List in Matrix Form	A-3
A.5	Consolidated List of ISO/IEC 18022 Terms and Definitions	A-4

A.1 Introduction

Users of this ISO/IEC 18022 standard may not have ready access to all standards referenced in either the ISO English language version or the ISO French language equivalent where available.

This standard maximizes the use of existing standards where and whenever possible including relevant and applicable existing terms and definitions. This Annex A contains the consolidated list of the ISO English and ISO French language paired terms and definitions used in this standard including those terms and definitions introduced in this standard. The source is Clause 3.1 Definitions.

A.2 ISO English and ISO French

This standard recognizes that the use of English and French as natural languages is not uniform or harmonized globally. (Other examples include use of Arabic, German, Portuguese, Russian, Spanish, etc. as natural languages in various jurisdictions).

Consequently, the terms "ISO English" and "ISO French" are utilized here to indicate ISO specialized use of English and French as natural languages in the specific context of international standardization, i.e., as a "special language".

A.3 Cultural Adaptability

ISO/IEC JTC1 has added "cultural adaptability" as the third strategic direction which all standards development work should support. The two other existing strategic directions are "portability" and "interoperability". Not all ISO/IEC JTC1 standards are being provided in more than one language, i.e., in addition to "ISO/IEC English," in part due to resource constraints.

Terms and definitions are an essential part of a standard. This Annex serves to support the "cultural adaptability" aspects of standards as required by ISO/IEC JTC1. Its purpose is to ensure that if, for whatever reason, a ISO/IEC JTC1 standard is developed in one ISO/IEC "official" language only, at the minimum the terms and definitions are made available in more than one language.

A key benefit of translation of terms and definitions is that such work at providing bilingual/multilingual equivalency:

- should be considered a "quality control check" in that establishing an equivalency in another language ferrets out "hidden" ambiguities in the source language. Often it is only in the translation that ambiguities in the meaning, i.e., semantics, of the term/definition are discovered. Ensuring bilingual/multilingual equivalency of terms/definition should thus be considered akin to a minimum "ISO 9000-like" quality control check; and,
- is considered a key element in the widespread adoption and use of standards world-wide (especially by users of this standard who include those in various industry sectors, within a legal perspective, policy makers and consumer representatives, other standards developers, IT hardware and service providers, etc.).

A.4 Organization of Annex A

The terms/definitions are organized in matrix form in alphabetical order (English language). The columns in the matrix are as follows:

Col. No.	Use
1	ID as per ISO/IEC 18022 (3.1.nn)
2	Source. International standard referenced or ISO/IEC 18022
3	ISO English Language - Term
4	ISO English Language - Definition
5	ISO French Language - Term *
6	ISO French Language - Definition*

The primary reason for organizing the columns in this order is to facilitate the addition of equivalent terms/definitions in other languages as added sets of paired columns, (e.g., Spanish, Japanese, German, Russian, etc.).

- * Use of an asterisk (*) in Columns 5 and 6 indicates that the ISO standard referenced (other than ISO/IEC 18022) in Column (2) does not have an ISO French language version. For these terms and definitions, ISO/IEC 18022 is providing the ISO French language equivalent.

A.5 Consolidated List of ISO/IEC 18022 Terms and Definitions

Identification		ISO English Language		ISO French Language	
Term ID (1)	Source (2)	Term (3)	Definition (4)	Term (5)	Definition (6)
	ISO/IEC 15944-1 (3.1.01)	agent	<p>a Person acting for another Person in a clearly specified capacity in the context of a business transaction.</p> <p>NOTE:</p> <p>Excluded here are agents as "automatons" (or robots, bobots, etc.). In ISO/IEC 14662, "automatons" are recognized and provided for but as part of the Functional Service View (FSV) where they are defined as an "Information Processing Domain (IPD)".</p>	mandataire	<p>Personne agissant au nom d'une autre Personne à titre précis dans le contexte d'une transaction d'affaires.</p> <p>NOTE:</p> <p>Sont exclus les mandataires tels que les « automates » (ou les robots, bobots, etc.). Dans la norme ISO/CEI 14662, les « automates » sont pris en compte et prévus, mais à titre de Vue de services fonctionnels (FSV), où ils sont définis comme « domaine de traitement de l'information (IPD) ».</p>
	ISO/IEC 14662:1997 (3.1.1)	Application Program Interface (API)	a boundary across which application software uses facilities of programming languages to invoke services.	Interface de programme d'application (API, Application Program Interface)	frontière au travers de laquelle un logiciel applicatif fait appel, pour demander des services, aux moyens qu'offrent les langages de programmation.
	ISO/IEC 11179-3:200x (3.1.1)	attribute	a characteristic of an object or entity.	attribut	caractéristique d'un objet ou d'une entité.

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	ISO/IEC 11179-3:1994 (3.1)				
	ISO/IEC 11179-3:200x (3.1.2)	attribute capsule	an attribute that encapsulates other attributes		
	ISO/IEC 2382-17:1999 (17.02.11)	(attribute) value	a specific occurrence of an attribute. Example: "Blue" is an attribute value for the attribute "color".	valeur (d'attribut)	occurrence particulière d'un attribut. Exemple: "Bleu" est une valeur d'attribut pour l'attribut "couleur".
	ISO/IEC 11179-3:1994 (3.2 E) (3.5 F)	attribute value	a representation of an instance of an attribute.	valeur d'attribut	représentation d'un instance d'un attribut.
	ISO/IEC 10181-2:1996	authentication	the provision of assurance of the claimed identity of an entity.	authentification	attestation de l'identité revendiquée par une entité.
	ISO/IEC TR 13335-1:1996 (3.3) monolingual (English) only	authenticity	the property that ensures that the identity of a subject or resource is the one claimed. Authenticity applies to entities such as users, processes, systems and information.	authenticité	propriété assurant que l'identité d'un sujet ou d'une ressource est celle qui est prétendue. L'authenticité s'applique à des entités telles que des utilisateurs, des processus, des systèmes et des informations.
	ISO/IEC 14662:1997 (3.1.2)	business	a series of processes, each having a clearly understood purpose, involving more than	affaires	série de processus, ayant chacun une finalité clairement définie, impliquant plus d'une

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			one organisation, realised through the exchange of information and directed towards some mutually agreed upon goal, extending over a period of time.		organisation, réalisés par échange d'informations et tendant à l'accomplissement d'un objectif accepté par accord mutuel pour une certaine période de temps.
	ISO/IEC 14662:1997 (3.1.3)	Business Operational View (BOV)	a perspective of business transactions limited to those aspects regarding the making of business decisions and commitments among organisations, which are needed for the description of a business transaction.	Vue opérationnelle des affaires (BOV, Business Operational View)	vue perspective sur les transactions d'affaires, restreinte à ceux des aspects relatifs à la prise par les organisations de décisions et d'engagements concernant leurs affaires qui sont nécessaires pour décrire une transaction d'affaires.
	ISO/IEC 14662:1997 (3.1.4)	business transaction	a predefined set of activities and/or processes of organisations which is initiated by an organisation to accomplish an explicitly shared business goal and terminated upon recognition of one of the agreed conclusions by all the involved organisations although some of the recognition may be implicit.	transaction d'affaires	ensemble prédéterminé d'activités menées par des organisations et/ou de procédures qu'elles suivent, déclenché par une organisation qui vise à atteindre dans les affaires un but expressément partagé, terminé lorsqu'est observée une des conclusions convenues par toutes les organisations prenantes, bien que cette observation puisse

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
					être partiellement implicite.
	ISO/IEC 15944-1 (3.1.08)	buyer	a Person who aims to get possession of a good, service and/or right through providing an acceptable equivalent value, usually in money, to the Person providing such a good, service and/or right.	acheteur	Personne désirant acquérir un bien, service et/ou droit en fournissant une valeur équivalente acceptable, généralement de l'argent, à la Personne qui offre ce bien, service et/ou droit.
	ISO/IEC 2382-4:1999 (04.01.01)	character	a member of a set of elements that is used for the representation, organization or control of data. NOTE - Characters may be categorized as follows: Types and Examples: graphic character: (e.g., digit, letter, ideogram, special character) control character: (e.g., transmission control, character, format effector, code extension character, device control character)	caractère:	élément d'un ensemble employé pour constituer, représenter ou gérer des données. NOTE - Les caractères peuvent être classés comme suit: Types et exemples: ??????
	ISO/IEC 2382-4:1999	character set	a finite set of different characters that is complete for	jeu de caractères	ensemble fini de différents caractères considéré comme

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	(04.01.02)		a given purpose. Example: The international reference version of the character set of ISO 646.		complet à des fins déterminées. Exemple: La version internationale de référence du jeu de caractères de l'ISO 646.
	ISO 1087-1:2000 (3.2.4)	characteristic	abstraction of a property of an object or of a set of objects. NOTE - Characteristics are used for describing concepts.	caractère	propriété abstraite d'un objet ou d'un ensemble d'objets. NOTE - Les caractères servent à décrire les concepts.
	ISO 639-2:1998 (3.1)	code	data representation in different forms according to a pre-established set of rules. NOTE 1: In this standard the "pre-established set of rules" are determined and enacted by a Source Authority and must be explicitly stated.	code	représentation de données sous différentes formes, selon un jeu de règles préétablies.
	ISO/IEC TR 15285:1998 (3.2)	coded character set	a set of unambiguous rules that establishes a character set and the relationship between the characters of the set and their coded representation. (ISO/IEC 10646-1:1993)		

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
		coded domain	NEW		
	ISO/IEC 2382-4:1999 (04.02.02)	coded set	<p>a set of elements which is mapped on to another set according to a code.</p> <p>Example: A list of the names of airports which is mapped on to a corresponding set of three-letter abbreviations.</p>	jeu code	<p>ensemble d'éléments mis en correspondance avec un autre ensemble d'éléments selon un code.</p> <p>Exemple: Liste des noms des aéroports mise en correspondance avec leur représentation internationale en trois lettres.</p>
	ISO/IEC 7826-1:1994 (3.3)	coding scheme	<p>collection of rules that maps the elements of one set on to the elements of a second set.</p> <p>NOTES</p> <ol style="list-style-type: none"> 1. The elements may be characters or character strings. 2. The first set is the coded set and the second is the code element set. 3. "coding scheme" is preferred to "code" in this part of ISO/IEC 7826 as the latter has several (deprecated) meanings. [ISO 2382-4] 		

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			<p>4. In this standard, the "collection of rules" for mapping the elements of another set of codes are determined and enacted by the Source Authority and must be explicitly stated.</p> <p>[Adapted from ISO/IEC 7826-1:1994 (3.3)]</p>		
	ISO/IEC 15944-1 (3.1.09)	commitment	the making or accepting of a right, obligation, liability or responsibility by a Person that is capable of enforcement in the jurisdiction in which the commitment is made.	engagement	création ou acceptation d'un droit, d'une obligation, d'une dette ou d'une responsabilité par une Personne qui est apte à appliquer la juridiction conformément à laquelle l'engagement est pris.
	ISO/IEC 2382-17:1999 (17.05.10)	composite type	<p>a data type that has a data structure composed of the data structures of one or more data types and that has its own set of permissible operations.</p> <p>Example: A data type "complex number" may be composed of two "real number" data types.</p> <p>NOTE - The operations of a</p>	type composite	<p>type de données dont la structure est composée des structures de données d'un ou plusieurs types de données et qui dispose de son propre ensemble d'opérations permises.</p> <p>Exemple: Le type de données "nombre complexe" peut être composé de deux types de données "nombre réel".</p>

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			composite type may manipulate its occurrences as a unit or may manipulate portions of these occurrences.		NOTE - Le type de données "nombre complexe" peut être composé de deux types de données "nombre réel".
	ISO/IEC JTC1 Report on the Business Team on Electronic Commerce Clause 6.2 (JTC1 N5437) - WGEC N103 & N400	computational integrity	the expression of standards in a form that ensures precise description of behaviour and semantics in a manner that allows for automated processing to occur, and the managed evolution of such standards in a way that enables dynamic introduction by the next generation of information systems.	intégrité informatique	expression de normes sous une forme qui assure la description précise du comportement et de la sémantique d'une façon qui permet un traitement automatique, ainsi que l'évolution gérée de ces normes d'une manière qui permet une introduction dynamique par la génération suivante de systèmes informatiques.
	Criminal Code 347.1(2) - WGEC N400	computer program	means data representing instructions or statements that, when executed in a computer system, causes the computer to perform a function.	programme d'ordinateur	ensemble de données qui représentent des instructions ou des relevés et qui, lorsque traités par l'ordinateur, lui font remplir une fonction.
	Criminal Code 347.1(2) - WGEC N400	computer service	includes data processing and the storage or retrieval of data.	service d'ordinateur	s'entend notamment du traitement des données de même que de la mémorisation et du recouvrement ou du relevé des données.

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	Criminal Code 347.1(2) - WGECC N400	computer system	means a device that, or a group of interconnected or related devices one or more of which, (a) contains computer programs or other data, and (b) pursuant to computer programs, (i) performs logic and control, and (ii) may perform any other function.	ordinateur	dispositif ou ensemble de dispositifs connectés ou reliés les uns aux autres, dont l'un ou plusieurs d'entre eux: (a) contiennent des programmes d'ordinateur ou d'autres données; (b) conformément à des programmes d'ordinateur; (i) soit exécutent des fonctions logiques et de commande, (ii) soit peuvent exécuter toute autre fonction.
	ISO 1087-1:2000 (3.2.1)	concept	unit of knowledge created by a unique combination of characteristics. NOTE - Concepts are not necessarily bound to particular languages. They are, however, influenced by the social or cultural background which often	notion	unité de connaissance créée par une combinaison unique de caractères. NOTE - Les concepts ne sont pas nécessairement liés aux langues particulières. Ils sont cependant soumis à l'influence du contexte socioculturel qui

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			leads to different categorizations.		conduit souvent à des catégorisations différentes.
	ISO/IEC 15944-1 (3.1.11)	constraint	<p>a rule, explicitly stated, that prescribes, limits, governs or specifies any aspect of a business transaction.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1. Constraints are specified as rules forming part of components of Open-edi scenarios, i.e., as scenario attributes, roles, and/or information bundles. 2. For constraints to be registered for implementation in Open-edi, they must have unique and unambiguous identifiers. 3. A constraint may be agreed to among parties (condition of contract) and is therefore considered an "internal constraint". Or a constraint may be 	contrainte	<p>règle, énoncée explicitement, qui prescrit, limite, régit ou spécifie tout aspect d'une transaction d'affaires.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1. Les contraintes sont spécifiées comme des règles faisant partie de composantes de scénarios d'EDI-ouvert, c.-à-d. d'attributs de scénarios, de rôles, et/ou de faisceaux d'information. 2. Les contraintes doivent avoir des identificateurs uniques et non-ambigus afin d'être enregistrées pour application dans l'EDI-ouvert. 3. Une contrainte peut faire l'objet d'un accord entre des parties (clause du contrat), et est par conséquent

Identification		ISO English Language		ISO French Language	
Term ID (1)	Source (2)	Term (3)	Definition (4)	Term (5)	Definition (6)
			imposed on parties, (e.g., laws, regulations, etc.),		considérée comme « contrainte interne ». Ou une
	ISO/IEC 15944-1 (3.1.12)	consumer	a buyer who is an individual to whom consumer protection requirements are applied as a set of external constraints on a business transaction. NOTES: 1. Consumer protection is a set of explicitly defined rights and obligations applicable as external constraints on a business transaction.	consommateur	acheteur, en tant qu'individu, auquel s'appliquent des exigences de protection des consommateurs comme ensemble de contraintes externes sur une transaction d'affaires. NOTES: 1. La protection des consommateurs est un ensemble de droits et d'obligations définis explicitement et qui s'appliquent à titre de contraintes externes à une transaction d'affaires.
action)			representations of recorded information that are being prepared or have been prepared in a form suitable for use in a computer system.	donnée (dans une transaction d'affaires)	représentations d'informations enregistrées qui sont préparées ou l'ont été de façon à pouvoir être traitée par un ordinateur.
	ISO/IEC	data element	a unit of data for which the	élément de	unité d'information dont la

Identification		ISO English Language		ISO French Language	
Term ID (1)	Source (2)	Term (3)	Definition (4)	Term (5)	Definition (6)
	11179-3:200x (3.3.35)		definition, identification, representation and permissible values are specified by means of a set of attributes.	données	définition, l'identification, la représentation et les valeurs autorisées sont spécifiées au moyen d'un ensemble d'attributs.
	ISO/IEC 2382-04:1998 (04.07.01)	data element (in organization of data)	a unit of data that is considered in context to be indivisible. Example: The data element "age of a person" with values consisting of all combinations of 3 decimal digits. NOTE - Differs from the entry 17.06.02 in ISO/IEC 2382-17.	élément de données (en organisation de données)	donnée considérée comme indivisible dans un certain contexte. Exemple: L'élément de données «âge d'une personne» avec des valeurs comprenant toutes les combinaisons de trois chiffres décimaux. NOTE - Cette notion est différente de celle de l'article 17.06.02 dans la norme ISO/CEI 2382-17.
	ISO/IEC 11179-3:200x (3.1.6)	data element attribute	an attribute of a data element		
	ISO/IEC 11179-3:1994 (3.6)	data element value	a value out of a set of permissible values pertaining to a data element.	valeur d'élément de donnée	valeur tirée d'un ensemble de valeurs autorisées relatives à une donnée
	ISO DIS 19115:2001	dataset	identifiable collection of data.		

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	(4.2)		<p>NOTE:</p> <p>A dataset may be a smaller grouping of data which, though limited by some constraint such as spatial extent or feature type, is located physically within a larger dataset. Theoretically, a dataset may be as small as a single feature or feature attribute contained within a larger dataset. A hardcopy map or chart may be considered a dataset.</p>		
	ISO DIS 19115:2001 (4.3)	dataset series	collection of datasets sharing the same product specification.		
	ISO/IEC 11179-3:200x (3.1.7)	definition	a statement which describes a concept and permits its differentiation from other concepts within a system of concepts. (Note: See ISO 1087)		
	ISO 1087-1:2000 (3.4.1)	designation	<p>representation of a concept by a sign which denotes it.</p> <p>NOTE - In terminology work three types of designations are</p>	designation	<p>représentation d'un concept par un signe qui le dénomme.</p> <p>NOTE - Dans le travail terminologique on distingue</p>

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			distinguished: symbols, appellations and terms.		trois types de désignation: les symboles, les appellations et les termes.
	ISO/IEC 10181-2:1996	distinguishing identifier	data that unambiguously distinguishes an entity in the authentication process.	identificateur distinctif	information qui différencie sans ambiguïté une entité dans le processus d'authentification.
	ISO/IEC 14662:1997 (3.1.5)	Electronic Data Interchange (EDI)	the automated exchange of any predefined and structured data for business purposes among information systems of two or more organisations.	Echange de Données Informatisé (EDI, Electronic Data Interchange)	échange automatisé de données structurées et prédéfinies pour traiter des affaires entre les systèmes d'information de deux ou plusieurs organisations.
	ISO/IEC 2382-17:1999 (17.02.05)	entity	any concrete or abstract thing that exists, did exist, or might exist, including associations among these things. Example: A person, object, event, idea, process, etc. NOTE - Please observe that an entity exists whether data about it are available or not.	entité	tout objet ou association d'objets, concret ou abstrait, existant, ayant existé ou pouvant exister. Exemple: Personne, événement, idée, processus, etc... NOTE - A noter qu'une entité existe que l'on dispose de données à son sujet ou non.
	ISO/IEC 9798-1:1997 (3.3.11) monolingual (English) only	entity authentication	the corroboration that the entity is the one claimed.	authentification de l'entité	corroboration que l'entité est bien celle qui est revendiquée.

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	ISO/IEC 2382-17:1996 (17.02.14)	(entity) identification	a method of using one or more attributes whose attribute values uniquely identify each occurrence of a specified entity.	identification (d'entités)	méthode qui consiste à utiliser un ou plusieurs attributs dont les valeurs d'attribut identifient de façon unique chaque occurrence d'une entité donnée.
	ISO/IEC 11179-3:200x (3.3.72)	enumerated domain	a value domain that is specified by a list of all Permissible Values.		
	ISO/IEC 15944-1 (3.1.23)	external constraint	a constraint which takes precedence over internal constraints in a business transaction, i.e., is external to those agreed upon by the parties to a business transaction. NOTES: 1. Normally external constraints are created by law, regulation, orders, treaties, conventions or similar instruments. 2. Other sources of external constraints are those of a sectorial	vendeur	Personne qui vise à fournir, volontairement ou suite à une demande, un bien, un service et/ou un droit à une autre personne, et qui reçoit en retour une valeur équivalente acceptable, habituellement en argent.

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			<p>nature, those which pertain to a particular jurisdiction or a mutually agreed to common business conventions, (e.g., INCOTERMS, exchanges, etc.).</p> <p>3. External constraints can apply to the nature of the good, service and/or</p>		
	ISO/IEC 14662:1997 (4.1.2.2)	semantic component (SC)	<p>a unit of information unambiguously defined in the context of the business goal of the business transaction.</p> <p>A SC may be atomic or composed of other SCs.</p>	Composant sémantique (SC, Semantic Component)	<p>unité d'information définie de manière non ambiguë dans le contexte de l'objectif d'affaires de la transaction d'affaires.</p> <p>Un SC peut être atomique ou composé d'autres SC.</p>
	ISO/IEC 11179-3:200x (3.2.26)	shareable data	data that has precise identifiers, meaning, structures, and values.		
	ISO/IEC 7826-2:1994 (3.2)	sponsoring authority (SA)	body recognized in accordance with the requirements of this part of ISO/IEC 7826, to receive proposals from issuing organizations for the registration of coding schemes and to submit applications to		

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			the registration authority.		
	This is the generic definition of "standards" of the ISO and IEC (and now found in the ISO/IEC JTC1 Directives, Part 1, Section 2.5:1998) {See also ISO/IEC Guide 2: 1996 (1.7)} << http://www.iso.ch/infoe/intro.html >>	standards	documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics, to ensure that materials, products, processes and services are fit for their purpose.	norme	accords documentés contenant des spécifications techniques ou autres critères précis destinés à être utilisés systématiquement en tant que règles, lignes directrices ou définitions de caractéristiques pour assurer que des matériaux, produits, processus et services sont aptes à leur emploi.
	ISO/IEC 2382-12:1988 (12.02.04)	storage	the retention of data in a storage device.	stockage	conservation de données dans une mémoire.
	ISO/IEC 2382-1:1993 (01.01.10)	storage device	a functional unit into which data can be placed, in which they can be retained, and from which they can be retrieved.	mémoire	unité fonctionnelle capable de recevoir, de conserver et de restituer des données.
	ISO 1087:1990 (5.3.1.2)	term	designation of a defined concept in a special language by a linguistic expression.	terme	désignation au moyen d'une unité linguistique d'une notion définie dans une langue de

Identification		ISO English Language		ISO French Language	
Term ID (1)	Source (2)	Term (3)	Definition (4)	Term (5)	Definition (6)
			NOTE - A term may consist of one or more words i.e. simple term, or complex term or even contain symbols.		spécialité. NOTE - Un terme peut être constitué d'un ou de plusieurs mots (terme simple ou terme complexe) et même de symboles.
	ISO/IEC 15944-1 (3.1.63)	third party	a Person besides the two primarily concerned in a business transaction who is agent of neither and who fulfils a specified role or function as mutually agreed to by the two primary Persons or as a result of external constraints. NOTE - It is understood that more than two Persons can at times be primary parties in a business transaction.	tierce partie	Personne, autre que les deux personnes concernées en premier lieu par une transaction d'affaires et qui n'est le mandataire d'aucune d'elles, et qui joue un rôle ou remplit une fonction spécifiés, selon l'accord mutuel des deux personnes concernées en premier lieu, ou le résultat de contraintes externes. NOTE – Il est entendu que plus de deux Personnes peuvent parfois être les parties de première part dans une transaction d'affaires.
	ISO/IEC 2382-23:1994 (23.01.01)	text	data in the form of characters, symbols, words, phrases, paragraphs, sentences, tables, or other character arrangements, intended to	texte	données sous forme de caractères, de symboles, de mots, d'expressions, de paragraphes, de phrases, de tableaux ou d'autre

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
			<p>convey a meaning and whose interpretation is essentially based upon the reader's knowledge of some natural language or artificial language.</p> <p>Example: A business letter printed on paper or displayed on a screen.</p>		<p>arrangements de caractères, ayant une signification particulière, dont l'interprétation dépend essentiellement de la connaissance de la part du lecteur d'un langage naturel ou d'un langage artificiel.</p> <p>Exemple: Une lettre commerciale imprimée sur papier ou affichée à l'écran.</p>
	ISO/IEC 15944-1 (3.1.64)	unambiguous	the level of certainty and explicitness required in the completeness of the semantics of the recorded information interchanged appropriate to the goal of a business transaction.	non-ambigu	niveau de certitude et d'explicité exigé dans la complétude de la sémantique d'une information enregistrée et échangée dans le but d'une transaction d'affaires.
	ISO/IEC 11179-3:200x (3.3.135)	value domain	a set of permissible values. It provides representation, but has no implication as to what data element concept the values may be associated with nor what the values mean.		
	ISO/IEC 11179-3:200x (3.3.143)	value item	a representation of a value meaning in a specific value domain. The actual value.		
	ISO/IEC 11179-3:200x	value meaning	the meaning or semantic content of a value.		

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
	(3.3.144)				
	ISO/IEC 11179-3:200x (3.3.148)	value meaning identifier	the unique identifier for a value meaning.		
	ISO/IEC 11179-3:200x (3.3.149)	value meaning set	the relationship between a conceptual domain and a set of value meanings.		
	ISO/IEC 15944-1 (3.1.65)	vendor	<p>a seller on whom consumer protection requirements are applied as a set of external constraints on a business transaction.</p> <p>NOTES:</p> <ol style="list-style-type: none"> Consumer protection is a set of explicitly defined rights and obligations applicable as external constraints on a business transaction. It is recognized that external constraints on a seller of the nature of consumer protection may be peculiar to a specified jurisdiction. 	fournisseur	<p>vendeur auquel s'appliquent des exigences de protection des consommateurs comme ensemble de contraintes externes sur une transaction d'affaires.</p> <p>NOTES:</p> <ol style="list-style-type: none"> La protection des consommateurs est un ensemble de droits et d'obligations explicitement définis, et qui s'appliquent comme contraintes externes à une transaction d'affaires. On reconnaît que les contraintes externes,

Identification		ISO English Language		ISO French Language	
Term ID	Source	Term	Definition	Term	Definition
(1)	(2)	(3)	(4)	(5)	(6)
					telles que la protection des consommateurs, exercées sur un fournisseur, peuvent relever d'une juridiction particulière.

ANNEX B (NORMATIVE) CODES REPRESENTING GENDER OF TERMS IN NATURAL LANGUAGES

Many natural languages have "gender" as part of their grammar while others do not. Knowing the gender of nouns as words, terms, "names", etc., is often needed to ensure unambiguity in interoperability of semantics among different languages from both IT interface and human interface perspectives.

Further, in natural languages where gender is an essential part of the language, the gender of the noun governs the representation of the associated/relevant words in the noun phrase. The gender of the noun also may impact the representation of the associated verb phrases. Therefore, gender of the noun is important in generating representations.

It is a fact that standards both (1) use existing natural language words in different contexts and thus different meanings, i.e., semantics; and, (2) in standards development work new terms are often coined/invented and thus not readily found in standard dictionaries. Consequently, it is important to be able to specify the gender of each term (noun), label, etc., where gender is a crucial element in the use of a natural language.

With respect to gender, in language the three (most) common possible states are: neuter, masculine, or feminine.

Also, gender is language specific, i.e., a noun in one natural language may have one gender code, and the equivalent noun in another language may have a different gender code.

It is deemed important to note the gender of nouns at the human interface because gender determines the use of "linkage words"/«mots liens», as well as the correct representation of such nouns and noun phrases in their daily use.

The coding scheme proposed here incorporates present international conventions and is presented below as "Table 01" of ISO/IEC 18022:01 titled "Codes Representing Gender in Natural Languages". [Note: If more gender codes are required, they will be added].

ISO/IEC 18022:01 Codes Representing Gender in Natural Languages					
IT Interface		Human Interface Equivalent: Linguistic - Written Form			
Coded Domain ID	ID Code	ISO English	ISO French	ISO Spanish	
18022:01	1	Masculine	Masculin	Masculino	
18022:01	2	Feminine	Féminin	Feminino	
18022:01	3	Neutral	Neutre	Neutro	

ISO/IEC 18022:01 Codes Representing Gender in Natural Languages						
IT Interface		Human Interface Equivalent: Linguistic - Written Form				
Coded Domain ID	ID Code	ISO English	ISO French	ISO Spanish		
18022:01	9	Not Applicable	Sans objet	No aplica		

ANNEX C (INFORMATIVE) CASE STUDY - EXAMPLE OF ISO 3166-1:1997 "CODES REPRESENTING THE CURRENT NAMES OF COUNTRIES, DEPENDENCIES AND OTHER AREAS OF PARTICULAR GEOPOLITICAL INTEREST"

Project Editor's Notes:

1. *The work required for this Annex C has already been completed. The information to be used to support the text will be drawn from document 32 N0535 titled "Approach to development of New ISO/IEC 18038 Identification and Mapping of Various Jurisdictional Domains".*
2. *ISO/IEC 18038 work on jurisdictions includes that of countries as jurisdictions which are accepted/recognized members as "peers" in a "club" known as the United Nations. {See further ISO/IEC 18038 Annex B (Normative) Codes representing UN recognized (and candidate) countries and their official languages. (In the meantime, see Annex B in 32 N0535 titled "Identification and Mapping of Countries as Jurisdictions on a Peer-to-Peer Basis")}*.

ELEMENTS OF DRAFT TEXT FOR ANNEX C

- C.1 ISO 3166-1 is a value domain in the nature of a list. The set of permissible values is that as stated in the list. This enumerated value domain has grown historically and organically over the course of the past three decades. When it was decided to split the original ISO 3166 standard into a Part 1 and Part 2, many of the members who were to "move" to Part 2 because they are "administrative sub-divisions" did not. Consequently, many of the same real world entities are now identified through two different ID codes in both Part 1 and Part 2.
- C.2 Real world entities, i.e., over 25%, enumerated in the code list of ISO 3166-1 do not share the same properties and behaviours nor can they all be treated as "peers" in referencing them for purposes of commitment exchange particularly as semantic components in business transactions.
- C.3 However, this standard is used in different context, out of context and on a cross-sectorial nature by users who are under the mistaken impression that each code and associated name as a permitted value is a "country", i.e., as a recognized member body of the UN. They are not and use of ISO 3166-1 as is, holus bolus, is presenting increasing interoperability problems from both IT interface and human interface perspectives and increasingly so in electronic data interchange in support of commitment exchange among autonomous parties and across sectors.
- C.4 From an object class perspective ISO 3166-1 can be viewed as an object class whose members (or "instances" in UML) are governed by only one rule,

namely, that of being identified in an enumerated domain.

**ANNEX D (INFORMATIVE) CASE STUDY - EXAMPLE OF ISO 4217:2001
"CODES FOR THE REPRESENTATION OF CURRENCIES AND FUNDS"**

Project Editor's Notes:

1. *Text and example are in preparation. Content is being drawn from earlier work and contributions.*
2. *Points to be highlighted:*
 - *the ISO 4217 3-digit codes for currencies and funds are not the same as the ISO 3166-1 3-digit codes for "countries" (at least 25 instances of differences in ID codes have already been identified);*
 - *there is "no" relation between the ISO 4217 and the ISO 3166-1 3-alpha codes although many users mistakenly believe there is;*
 - *some "countries" have no currency of their own but use a currency of another country;*
 - *a country may have more than one valid "official" currency.*

ANNEX E (INFORMATIVE) CASE STUDY - EXAMPLE OF "E-POTATO"

Project Editor's Notes:

1. *Text and examples are in preparation. Content is being drawn from earlier work and contributions, (e.g., 32N486).*
2. *Points to be highlighted:*
 - *multiple official human linguistic equivalents in a jurisdiction when there is more than one official language in a jurisdiction;*
 - *the use of the same natural language resulting in variant representation for the same entity/ID code in different jurisdictions.*

ANNEX F (INFORMATIVE) CASE STUDY - EXAMPLE OF A CODED DOMAIN WITH TWO WRITING SYSTEMS FOR HUMAN INTERFACE EQUIVALENTS OF A SET OF ID CODES - CANADIAN PROVINCES AND TERRITORIES

Project Editor's Note:

Text and example are in preparation. Content is being drawn from earlier work and contributions. {See example "4.3.3" in 32N0486}.

ANNEX G (INFORMATIVE) USE OF UML AND XML

Project Editor's Notes:

1. *It is anticipated that:*
 - *Annexes C, D, E, and F will contain UML based representation, (e.g., of the different coded domains currently embodied in each set of "codes representing x" serving as an example.*
 - *Annexes C, D, E and F will also contain XML based mapping of the coded domains. [There are some copyright issues here].*
2. *The purpose of this Annex G is to serve as the container for all the UML diagrams required to support Clauses 4 - 9 as well as required added informative text.*
3. *The designation of Annex G may change as work progresses, (e.g., it may well become Annex C, i.e., before the case studies/examples).*

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