



BSI Standards Publication

Information technology — Business Operational View

Part 8: Identification of privacy
protection requirements as external
constraints on business transactions

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National foreword

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**Information technology — Business
Operational View —**

Part 8:
**Identification of privacy protection
requirements as external constraints on
business transactions**

Technologies de l'information — Vue opérationnelle d'affaires —

*Partie 8: Identification des exigences de protection de la vie privée en
tant que contraintes externes sur les transactions d'affaires*



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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15944-8 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

ISO/IEC 15944 consists of the following parts, under the general title *Information technology — Business Operational View*:

- *Part 1: Operational aspects of Open-edi for implementation*
- *Part 2: Registration of scenarios and their components as business objects*
- *Part 4: Business transaction scenarios — Accounting and economic ontology*
- *Part 5: Identification and referencing of requirements of jurisdictional domains as sources of external constraints*
- *Part 6: Technical introduction to e-Business modelling* [Technical Report]
- *Part 7: eBusiness vocabulary*
- *Part 8: Identification of privacy protection requirements as external constraints on business transactions*
- *Part 10: Coded domains*

The following parts are under preparation:

- *Part 3: Open-edi description techniques (OeDTs)*
- *Part 9: Traceability framework*

0 Introduction

0.1 Purpose and overview

Modelling business transactions using scenarios and scenario components is done by specifying the applicable constraints on the data content using explicitly stated rules. The Open-edī Reference Model identified two basic classes of constraints, "internal constraints" and "external constraints". External constraints apply to most business transactions. {See Clause 0.4 and Annex E}

Jurisdictional domains are the primary source of external constraints on business transactions. Privacy protection requirements in turn are a common requirement of most jurisdictional domains, although they may also result from explicit scenario demands from or on the parties involved in a business transaction. (Requirements for secrecy or confidentiality are not addressed in this part of ISO/IEC 15944, unless they are implicitly needed to apply privacy protection requirements to data).

This part of ISO/IEC 15944 describes the business semantic descriptive techniques needed to support privacy protection requirements when modelling business transactions using the external constraints of jurisdictional domains

In addition to the existing strategic directions of "portability" and "interoperability", the added strategic direction of ISO/IEC JTC1 of "cultural adaptability" is also supported in this part of ISO/IEC 15944. The external constraints of jurisdictional domains as a primary factor in choice and use of language and application of public policy are also addressed.

0.1.1 ISO/IEC 14662 "Open-edī Reference Model"¹

The ISO/IEC 14662 Open-edī Reference Model² states the conceptual architecture necessary for carrying out electronic business transactions among autonomous parties. That architecture identifies and describes the need to have two separate and related views of the business transaction.

The first is the Business Operational View (BOV). The second is the Functional Service View (FSV). Figure 1 from ISO/IEC 14662:2010 illustrates the Open-edī environment. {For definitions of the terms used in Figure 1, please see Clause 3 below}

¹ The ISO/IEC 14462 Open-edī Reference Model serves as the basis of the 2000 Memorandum of Understanding (MOU) among ISO, IEC, ITU and the UN/ECE concerning standardization in the field of electronic business. {See <http://www.itu.int/ITU-T/e-business/files/mou.pdf>}

² ISO/IEC 14662:2010 (3rd ed. E/F) *"Information technology — Open-edī Reference Model/Technologies de l'information — Modèle de référence EDI-ouvert"*.

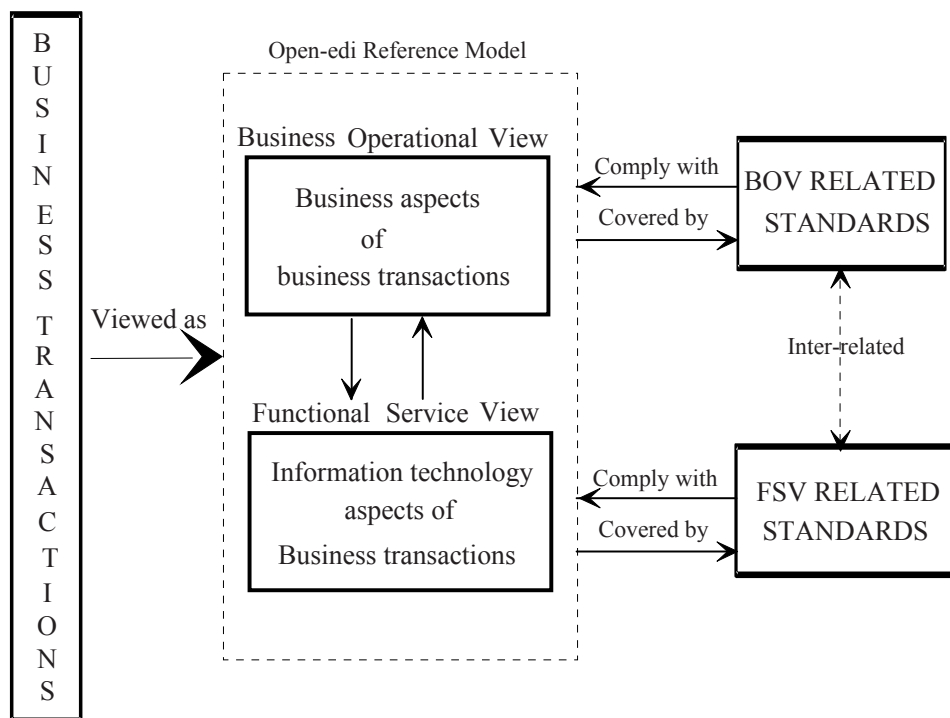


Figure 1 — Open-edi environment – Open-edi Reference Model

ISO/IEC 14662:2010, Clause 5 states:

"The intention is that the sending, by an Open-edi Party, of information from a scenario, conforming to Open-edi standards, shall allow the acceptance and processing of that information in the context of that scenario by one or more Open-edi Parties by reference to the scenario and without the need for agreement.

However, the legal requirements and/or liabilities resulting from the engagement of an organization in any Open-edi transaction may be conditioned by the competent legal environment(s) of the formation of a legal interchange agreement between the participating organizations. Open-edi Parties need to observe rule-based behaviour and possess the ability to make commitments in Open-edi, (e.g., business, operational, technical, legal, and/or audit perspectives)".

In addition, Annex A of the ISO/IEC 14662:2010 "Open-edi Reference Model" contains Figure A.1 "Relationships of Open-edi standardization areas with other standards and import of the legal environment". This part of ISO/IEC 15944 is a BOV standard which focuses on the legal environment for the application of privacy and/or data protection from an Open-edi perspective, and, as required follow-up standards development in support of the "Open-edi Reference Model".

ISO/IEC 15944-5 is used to identify the means by which laws and regulations impacting scenarios and scenario components, as external constraints, may be modelled and represented. The primary source of these external constraints is jurisdictional domains.

ISO/IEC 15944-1 creates rules for creating the specification of external constraints when modelling business transactions through scenarios, scenario attributes and scenario components. Several parts of ISO/IEC 15944 are used as input to this part. They are consolidated in this part of ISO/IEC 15944 in Annex B.

ISO/IEC 15944-1:2011 in Clause 7 "Guidelines for scoping Open-edi Scenarios" states in Clause 7.1:

"The approach taken is that of identifying the most primitive common components of a business transaction and then moving from the general to the more detailed, the simplest aspects to the more

complex, from no external constraints on a business transaction to those which incorporate external constraints, from no special requirements on functional services to specific requirements, and so on".

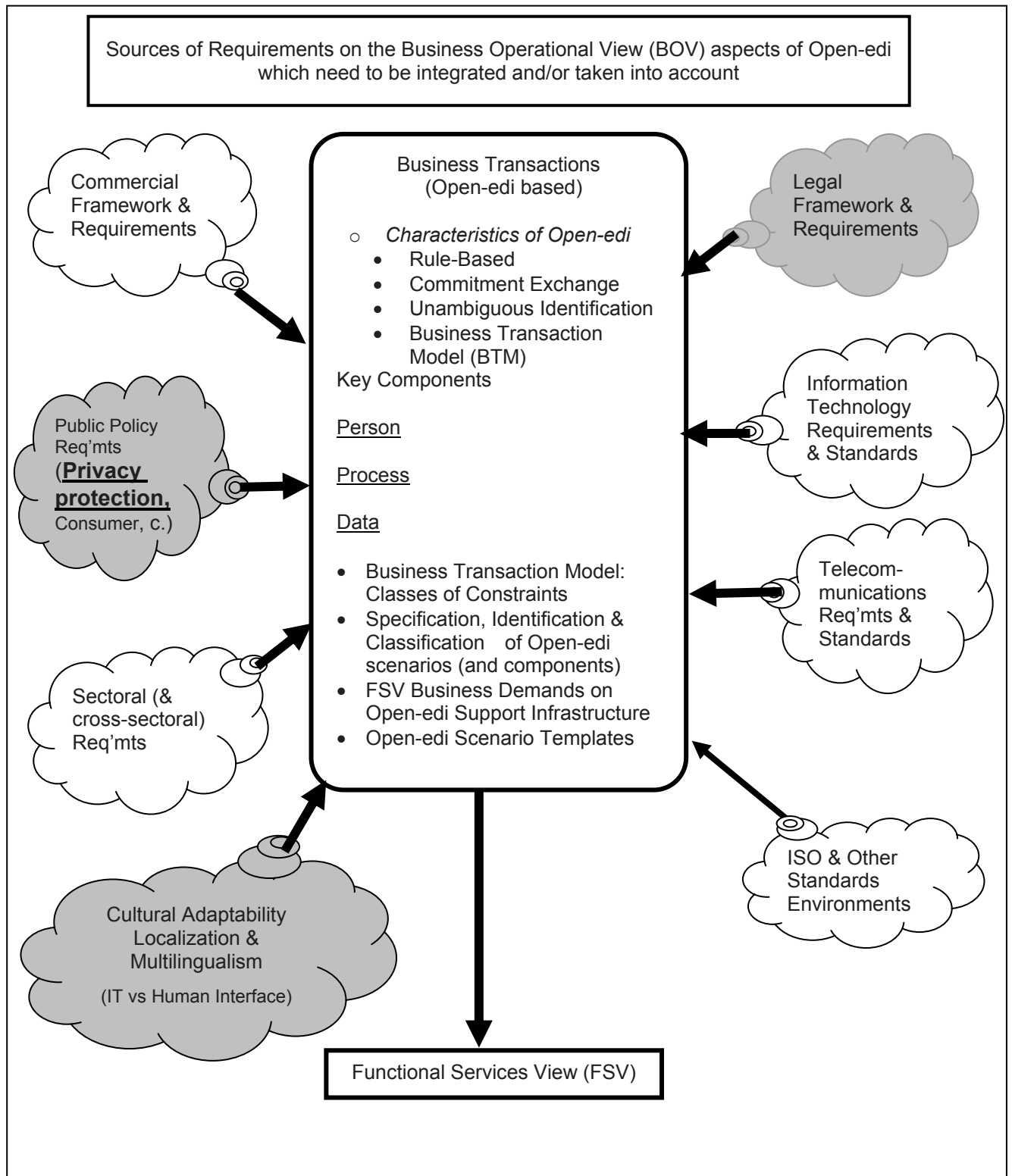
This part of ISO/IEC 15944 focuses on addressing commonly definable aspects of external constraints that relate to privacy and data protection when the source is a jurisdictional domain. A useful characteristic of external constraints is that, at the sectoral level, national and international levels, etc., focal points and recognized authorities often already exist. The rules and common business practices in many sectoral areas are already known. Use of this part of ISO/IEC 15944 (and related standards) addresses the transformation of these external constraints (business rules) into specified, registered, and re-useable scenarios and scenario components.

0.1.2 ISO/IEC 15944-1 "Business Agreement Semantic Descriptive Techniques" ("Business Operational View (BOV)")

ISO/IEC 15944-1 states the requirements of the BOV aspects of Open-edi in support of electronic business transactions. They shall be taken into account in the development of business semantic descriptive techniques for modelling e-business transactions and components thereof as re-useable business objects. They include:

- commercial frameworks and associated requirements;
- legal frameworks and associated requirements;
- public policy requirements particularly those of a generic nature such as consumer protection, privacy, accommodation of handicapped/disabled;
- requirements arising from the need to support cultural adaptability. This includes meeting localization and multilingual requirements, (e.g., as may be required by a particular jurisdictional domain or desired to provide a good, service and/or right in a particular market. Here one needs the ability to distinguish, the specification of scenarios, scenario components, and their semantics, in the context of making commitments, between:
 - a) the use of unique, unambiguous and linguistically neutral identifiers (often as composite identifiers) at the information technology (IT) interface level among the IT systems of participation parties on the one hand; and, on the other,
 - b) their multiple human interface equivalent (HIE) expressions in a presentation form appropriate to the Persons involved in the making of the resulting commitments.

Figure 2 shows an integrated view of these business operational requirements. It is based on Figure 3 from ISO/IEC 15944-1. Since the focus of this part of ISO/IEC 15944 is that of external constraints for which jurisdictional domains are the primary source these primary sources have been shaded in Figure 2 below).



In electronic business transactions, whether undertaken on a for profit or not-for-profit basis, the key element is commitment exchange among Persons made among their Decision Making Applications (DMAs) of the

Information Technology Systems (IT Systems)³ acting on behalf of "Persons". "Persons" are the only entities able to make commitments⁴. Clause 0.4 in ISO/IEC 15944-1 states:

"When the ISO/IEC 14662 Open-edi Reference Model standard was being developed, the "Internet" and "WWW" were an embryonic stage and their impact on private and public sector organizations was not fully understood."

The **Business Operational View (BOV)** was therefore defined as:

*"perspective of **business transactions** limited to those aspects regarding the making of **business decisions** and **commitments** among **organizations** which are needed for the description of a **business transaction**".*

The ISO/IEC 6523 definition of "organization" was used in the first edition (1997) of ISO/IEC 14662. The fact that today Open-edi, through the Internet and WWW, also involves "individuals" has been taken into account in the development of the 2nd and subsequent editions. ISO/IEC 15944-1 defines the term "commitment". However, the definition of the term "Open-edi Party" previously used proved not to be specific enough to satisfy scenario specifications when the legal aspects of commitment were considered. In many instances commitments were noted as being actually among IT systems acting under the direction of those legally capable of making commitment, rather than actually the individuals acting in their own capacities. It was also recognized that in some jurisdictions a commitment could be made by "artificial" persons such as corporate bodies. Finally, it was noted that there are occasions where agents act, either under the instruction of a principal, or as a result of requirement(s) laid down by a jurisdiction, or where an individual is prevented by a relevant jurisdiction from being able to make a commitment in their own right, (e.g., a minor), and this must be incorporated into the standard.

To address these extended requirements the additional concept and term of "Person", has been defined. A Person is defined such that they are capable of having the appropriate legal and regulatory constraints applied to them.

There are three categories of Person as a role player in Open-edi, namely: (1) the Person as "individual", (2) the Person as "organization", and (3) the Person as "public administration". There are also three basic (or primitive) roles of Persons in business transactions, namely: "buyer", "seller", and "regulator".

When modelling business transactions, jurisdictional domains prescribe their external constraints in the role of "regulator" and execute them as "public administration". {See further below Clause 6.3}

While "public administration" is one of the three distinct sub-types of Person, most of the rules applicable to "organization" also apply to "public administration". In addition, an unincorporated seller is also deemed to function as an "organization". Consequently, the use of "organization" throughout this part of ISO/IEC 15944 also covers "public administration". Where it is necessary to bring forward specific rules, constraints, properties, etc., which apply specifically to "public administration", this is stated explicitly.

The requirements of jurisdictional domains are specified through the use of sets of "Codes representing X..." Such sets of codes are created and maintained by Source Authorities via a rulebase with resulting coded domains in the form of data elements whose permitted values represent predefined semantics in a structured form, i.e., as a type of semantic component. Jurisdictional domains serve as Source Authorities for such coded domains.

These three categories of Person also identify the possible Source Authorities for coded domains. Source Authorities for coded domains are therefore either "organizations" or "public administrations".

Throughout this part of ISO/IEC 15944:

³ See further Clause 5.2 "Functional Services View" in ISO/IEC 14662:2010 "Open-edi Reference Model" (3rd edition).

⁴ The text in this section is based on existing text in Section "0.3" in ISO/IEC 15944-1:2011 and ISO/IEC 14662:2010 (3rd edition).

- 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 carries the legal responsibility for making commitment(s);
- "individual", "organization", and "public administration" are defined terms representing the three common sub-types of "Person"; and,
- the words "person(s)" and/or "party(ies)" are used in their generic contexts independent of roles of "Person" as defined in the ISO/IEC 14662 and ISO/IEC 15944-1 standards. A "party" to a business transaction has the properties and behaviours of a "Person".

0.3 Importance and role of terms and definitions⁵

ISO/IEC Directives Part 2 provide for "Terms and definitions" as a "Technical normative element," necessary for the understanding of certain terms used in the document, where the words have special, extended or technical meaning.

The ISO/IEC 15944 multipart standard sets out the processes for achieving a common understanding of the Business Operational View (BOV) from commercial, legal, ICT, public policy and cross-sectoral perspectives. It is therefore important to check and confirm that a "common understanding" in any one of these domains is also unambiguously understood as identical in the others.

This sub-clause is included in each part of ISO/IEC 15944 to emphasize that harmonized terms and definitions are essential to the continuity of the overall standard. Definitions and their assigned terms should be established as early as possible in the development process. Comments on any definition/term pair should address the question of changes needed to avoid possible misinterpretation. Definitions may need to be amended/improved as part of the harmonization of definitions and their assigned terms among the various parts of ISO/IEC 15944.

In order to minimize ambiguity in the definitions and their associated terms, each definition and its associated term has been made available in at least one language other than English in the part in which it is introduced. In this context, it is noted that ISO/IEC 15944-7 *eBusiness vocabulary* already also contains human interface equivalents (HIEs) in ISO Chinese, ISO French, and ISO Russian.

Normative Annex A "*Consolidated list of terms and definitions with cultural adaptability: ISO English and ISO French language equivalency*" is derived from Clause 3 of each part of ISO/IEC 15944.⁶ Annex A is repeated in each part of ISO/IEC 15944 as a convenient reference. The designation ISO before a natural language refers to the use of that natural language in ISO standards, and has no other meaning.

0.4 Importance of the two classes of constraints of the Business Transaction Model (BTM)

The BTM has two classes of constraints; namely:

- 1) those which are "self-imposed" and agreed to as commitments among the parties themselves, i.e., "internal constraints"; and,
- 2) those which are imposed on the parties to a business transaction based on the nature of the good, service and/or rights exchanged, the nature of the commitment made among the parties (including ability to make

⁵ All the terms and definitions of the current editions of the ISO/IEC 14669 *Open-edi Reference Model* and the multipart ISO/IEC 15944 *eBusiness* standard have been consolidated in ISO/IEC 15944-7:2009. A primary reason for having "Terms and definitions" in a standard is because one cannot assume that there exists a common understanding, worldwide, for a specific concept. And even if one assumes that such an understanding exists, then having such a common definition in Clause 3 serves to formally and explicitly affirm (re-affirm) such a common understanding, i.e., ensure that all parties concerned share this common understanding as stated through the text of the definitions in Clause 3.

⁶ Canada has committed to maintain this comprehensive list in a database as the reference file for Annex A. This Annex A reference file will insure the consistency of definitions and their assigned terms among the various parts in the on-going harmonization effort. {See also ISO/IEC 15944-7 *e-Business Vocabulary*}

commitments, the location, information identifying the parties as living individuals, and so on), i.e., "external constraints".

This part of ISO/IEC 15944 addresses external constraints. Jurisdictional domains are the primary source of external constraints.⁷ Privacy protection is addressed as a common set of external constraint requirements coming from of jurisdictional domains.

ISO/IEC 15944-1:2011, Clause 6.1.6 provides normative text for these two classes of constraints. It is included for convenience in this part of ISO/IEC 15944 as Annex C.

0.5 Need for a standard based on rules and guidelines⁸

This part of ISO/IEC 15944 is intended to be used within and outside of the ISO and IEC by diverse sets of users having different perspectives and needs {See above Figure 2 in Clause 0.2}.

In an ISO, IEC, ISO/IEC JTC1 context, a standard is considered to be a:

*"documented agreement 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."*⁹

This Business Operational View (BOV) standard focuses on "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".

Open-edi is based on rules which are predefined and mutually agreed to. They are precise criteria and agreed upon requirements of business transactions representing common business operational practices and functional requirements.

Clause 5 "*Characteristics of Open-edi*" in ISO/IEC 15944-1:2011 defines the "Business Operational View (BOV)" type of Open-edi standards as "rule-based" standards¹⁰. Of particular relevance here is the first key characteristic of Open-edi as stated in Clause 5.1 "*Actions based upon following clear, predefined rules*". It is useful to quote some key normative text of ISO/IEC 15944-1:2011 so that users of ISO/IEC 15944-5 have a clear understanding of the nature and purpose of this BOV standard.

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

⁷ For business requirements of the Functional Service View and business demands on the Open-edi support infrastructure with respect to internal constraints, see further ISO/IEC 15944-1:2011, Clause 6.5.2 "*Self-Imposed Constraints*". ISO/IEC 15944-4:2007, which focuses on accounting and economic aspects of business transactions, does so from an "internal constraints" perspective.

⁸ This introductory clause is primarily based on that found in ISO/IEC 15944-1:2011, Clause 6.1.2 titled "*Standard based on rules and guidelines*".

⁹ See entry D252, Annex D, ISO/IEC 15944-7. One can interpret "agreement" in a variety of ways. The ISO/IEC Guide 2:2004 (1.7) uses the term "consensus" which need not imply unanimity but rather "absence of sustained opposition to substantial issues..."

¹⁰ The key characteristics of Open-edi are (as stated in Clause 5, ISO/IEC 15944-1:2011, pp.12-14) are:

- actions based on following predefined rules;
- commitment of the parties involved;
- communications among parties are automated;
- parties control and maintain their states;
- parties act autonomously; and,
- multiple transactions can be supported.

The six sub-clauses of Clause 5 of ISO/IEC 15944-1:2011 describe each of these in more detail.

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

The combination of both of these provides a complete definition of the relationships among the parties since it requires them to achieve a common semantic understanding of the information exchanged. They must also have consistent generic procedural views on their interaction. Therefore, rule sets have to be agreed to in advance and captured in Open-edi scenarios. This is a major component of the agreement required among parties."

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.¹¹

For ease of reference, common rules have been sequentially enumerated, and are presented in **bold** font. Where guidelines associated with a rule are provided, they are numbered sequentially after that rule and are shown in **bold** and italic font¹². Choice of words in the rules, the guidelines and the terms and definitions are governed by maximizing the ability to map, on the one hand, to all the sources of requirements of the Business Operational View (BOV) of any e-business transaction, (e.g., commercial, legal, public policy, cultural adaptability, sectoral, etc.), frameworks of the day-to-day world of business, and, on the other hand, those pertaining to the Functional Services View (FSV) in support of BOV requirements, (e.g., that of those providing information technology and communication services in support of commitment exchange of any kind and among all parties involved in a business transaction).

0.6 Use of "jurisdictional domain", and "jurisdiction" (and "country") in the context of business transaction and commitment exchange

The term "jurisdiction" has many possible definitions. Some "jurisdictions" have accepted international legal status while others do not. It is also common practice to equate "jurisdiction" with "country", although the two are by no means synonymous. It is also common practice to refer to states, provinces, länder, cantons, territories, municipalities, etc., as "jurisdictions", and in contract law it is customary to specify a particular court of law as having jurisdiction or a defined national body, or an international body as having jurisdiction (even if that is not legally enforceable), and so on. Finally, there are differing "legal" definitions of "jurisdiction". Readers of this part of ISO/IEC 15944 should understand that in this part of ISO/IEC 15944:

- the use of the term "jurisdictional domain" represents its use as a defined term; and,
- the use of the terms "jurisdiction(s)" and/or "country(ies)" represents their use in their generic contexts and do not imply that this part of ISO/IEC 15944 has any legal effect per se.

At the same time, a set of external constraints of a jurisdictional domain lends itself to being modelled through scenarios and semantic components. For example, Annex "I" in ISO/IEC 15944-1:2011, titled, "*Scenario Description Using the Open-Edi Scenario Template, Telecommunications Operations Map Example*" is a scenario of an external constraint of a jurisdictional domain, i.e., the USA, that provides a business process framework for the enterprise process required for a telecommunications service provider. Here, the fact that external constraints of jurisdictional domains are a primary factor in choice of language and application of public policy are also addressed in this part of ISO/IEC 15944.

¹¹ The working principle here is that of "coordinated autonomy", i.e., all parties are autonomous. Therefore, the extent to which they cooperate, agree on common needs, business rules constraints, practices, etc., and reach agreement on the same in form of precise rules, terms and definitions, etc., is a key influence on the creation of necessary standards as well as common scenarios, scenario attributes and scenario components.

¹² For example, "Guideline 5G2" equals the second Guideline under Rule 5.

0.7 Use of "identifier" as "identifier (in business transaction)" to prevent ambiguity¹³

Clause 6.1.4 of ISO/IEC 15944-1:2011 focuses on the requirement for the unambiguous identification of entities in business transactions. "Unambiguous" is a key issue in business transactions because states of ambiguity and uncertainty are an anathema from commercial, legal, consumer and information technology perspectives. Issues of unambiguousness apply to all aspects of a business transaction and even more so to those which are EDI-based. Open-edi transactions anticipate that all entities are fully and clearly identified prior to the transaction.

The ISO/IEC 15944 multipart standard serves as a methodology and tool for the specification and unambiguous identification of Open-edi scenarios, scenario attributes and scenario components as re-useable elements, i.e., as re-useable business objects, in support of common business transactions. These and related objectives of interoperability and re-usability of Open-edi scenarios and scenario components for business transactions require their unambiguous identification.

ISO/IEC 15944-1 defines "unambiguous" as follows:

unambiguous

*level of certainty and explicitness required in the completeness of the semantics of the **recorded information** interchanged that is appropriate to the goal of a **business transaction***

[ISO/IEC 15944-1:2011 (3.66)]

and "identifier (in business transaction)" as follows:

identifier (in business transaction)

unambiguous, unique and a linguistically neutral value, resulting from the application of a **rule-based identification process**

NOTE Identifiers must be unique within the identification scheme of the issuing authority.

[ISO/IEC 15944-1:2011 (3.27)]

Thus, readers of this part of ISO/IEC 15944 should understand that the "identifier" in this part of ISO/IEC 15944 is used as a defined term as "identifier (in a business transaction)".¹⁴

0.8 Use of "privacy protection" in the context of business transaction and commitment exchange

Jurisdictional domains such as UN member states (and/or their administrative sub-divisions), have enacted various "privacy" laws, "data protection" laws, "protection of personal information" laws, etc., (as well as pursuant regulations). Some of these sources of legal requirements focus on the protection of personal information in IT systems only, (e.g., "data protection"), while others focus on the protection of personal information irrespective of the medium¹⁵ used for the recording of personal information and/or its communication to other Persons.

¹³ This is a summary of ISO/IEC 15944-1:2011, Clause 6.1.4 "Business transactions: Unambiguous identification of entities". See also Annex C in ISO/IEC 15944-1 titled *Unambiguous Identification of Entities in a Business Transaction* which provides the informative and explanatory text for the rules and definitions in Clause 6.1.4.

¹⁴ Identifiers in business transactions can be simple or composite identifiers. This is dependent on (1) the rules governing "identifiers" as a rule-based process; (2) the "registration schema" used (as well as any permitted combinations of the same).

¹⁵ "Medium" is a defined concept. {See ISO/IEC 15944-1:2011, Clause 6.4. "Rules governing the data component", and its Clause 6.4.1 "Recorded information".}

In the case of personal information, this is currently defined by most jurisdictional domains to be a specific sub-set of recorded information relating to the Person as an “individual” – where the qualities of such type of Person are that they must be an identifiable, living individual. So this may only apply to some proportion of the specific role players in a business transaction (including their personae) and not others.

This part of ISO/IEC 15944 incorporates the common aspects of such laws and regulations as pertaining to privacy protection, applicable at the time of publication only. The concept of “privacy protection” also integrates these various sets of legal and regulatory requirements and does so from a public policy requirements perspective. {See below at Clause 6.3 and Clause 7}

It has to be borne in mind that the delivery of “privacy protection” requires action both at the business level (BOV) and technology levels (FSV). Where human beings interact with recorded information once it has passed through an Open-edi transaction, they may have the potential to compromise technical controls (FSV) that may have been applied. It is essential that business models take account of the need to establish overarching business processes that address issues that have not been, and/or cannot be resolved by the technical FSV controls applied so as to provide the overall privacy demands of regulation that must be applied to personal data, their use, proscribed dissemination and so on. In this regard, the interplay of the BOV and FSV views of all organizations must be taken into account.

0.9 Organization and description of this document

This part of ISO/IEC 15944 identifies basic common requirements of privacy protection requirements, as external constraints of jurisdictional domains, on the modelling of a business transaction through scenarios and scenario components.

Following Clauses 0, 1, 2, 3 and 4, which have common content in the multipart standard, Clause 5 introduces a fundamental set of principles and assumptions governing privacy protection requirements in business transactions involving individuals as Persons. The essential aspects of eleven common privacy protection principles have been identified and their requirements are captured in the form of rules. Also, included in Clause 5 are exclusions and rules for tagging (or labelling) data elements in support of privacy protection requirements.

The importance of the concept of “collaboration space” introduced in ISO/IEC 15944-4 is carried forward and adapted in the privacy protection context in Clause 6, as the “privacy collaboration space (PCS)”. Refer to ISO/IEC 15944-4 in order to understand and use the concept of collaboration space and apply it in an ISO/IEC 15944-8 context. Generic public policy requirements which apply whenever individuals engage in a business transaction, i.e., as a buyer, are summarized in Clause 7, which is based on ISO/IEC 15944-5. Refer to ISO/IEC 15944-5 in order to understand and use of the concept of public policy requirements. (Privacy protection is one of several common public policy requirements; others include consumer protection and individual accessibility.) Clause 7 concludes by noting that privacy protection is a right of an “individual” only and not of an organization or public administration.

The establishment, management and use of the different identities that an individual has, is the focus of Clause 8. Here the generic principles and rules already stated in ISO/IEC 15944-1 pertaining to Person are used, being placed in a privacy protection requirements context. These include “persona”, “identifiers” (and their assignment by Registration Authorities), signature, individual identity (ii), authentication, recognition, i.e., as a recognized individual identity (rii), recognized individual name (RIN), etc.

Many aspects of the individual as a sub-type of Person and the resulting link to privacy protection were anticipated in the development of ISO/IEC 15944-1 and ISO/IEC 15944-5. The purpose of Clause 9 is to consolidate those which apply to an individual, and do so in a privacy protection requirements context. Clause 9 addresses role qualifications of an individual, a legally recognized name (LRN), truncation of LRNs, anonymization and use of pseudonyms.

Clause 10 focuses on the process component of the Business Transaction Model (BTM) which is constructed of five fundamental activities: planning, identification, negotiation, actualization and post-actualization. Here the generic rules in Clause 6.5 of ISO/IEC 15944-1:2011 are brought forward, and those which pertain to an individual as a buyer are adapted and applied from a privacy protection perspective.

Similarly, Clause 11 focuses on the data component of the BTM and brings forward in summary form applicable concepts and rules in ISO/IEC 15944-1 and ISO/IEC 15944-5 in the context of privacy protection requirements. Specific aspects addressed in Clause 11 include the role of the business transaction identifier (BTI), change management and records retention of personal information, and associated data synchronization requirements, for personal information among all parties to a business transaction as well as date/time referencing.

As in ISO/IEC 15944-1, ISO/IEC 15944-2, and ISO/IEC 15944-5, Clause 12 provides a checklist through the use of templates, to guide the user through the mechanics of determining the source of the external constraints where these are jurisdictional domains; and of determining the adequacy of a scenario specification as well as of available scenario components.

Finally, annexes are provided for elaboration of points raised in the main body.

Annex A is a consolidated list of the definitions and their associated terms used in this part of ISO/IEC 15944 in ISO English and ISO French. As stated in the main body of this part of ISO/IEC 15944, the issue of semantics and their importance of identifying the correct interpretation across official aspects is critical.

Annex B identifies rules stated in the other parts of ISO/IEC 15944 that are applicable to this part of ISO/IEC 15944. Annex C is common to ISO/IEC 15944-2, ISO/IEC 15944-4, and ISO/IEC 15944-5. It summarizes the Business Transaction Model (BTM). Annex D presents, in summary form, an integrated set of information life cycle principles (ILCM) in support of information law compliance from a jurisdictional domain perspective.

The purpose of Annex E is to bring forward and highlight the key concepts and their definitions applicable to the establishment and management, etc., of the multiple identities of a single individual.

Annex F provides the primitive and essential set of coded domains whose interworking is required in order to be able to support state changes and record retention requirements in support of privacy protection requirements.¹⁶

¹⁶ The coded domains presented in this Annex F are an application in a privacy protection context of those stated in Clause 6.6.4 of ISO/IEC 15944-5:2008, which presents a high level generic approach. The reason that this normative text is in an annex is to facilitate its possible future use of a new part of ISO/IEC 15944 which takes these coded domains as new part of ISO/IEC 15944.

Information technology — Business Operational View —

Part 8:

Identification of privacy protection requirements as external constraints on business transactions

1 Scope

1.1 Statement of scope

This part of ISO/IEC 15944:

- provides method(s) for identifying, in Open-edi modelling technologies and development of scenarios, the additional requirements in Business Operational View (BOV) specifications for identifying the additional external constraints to be applied to recorded information in business transactions relating to personal information of an individual, as required by legal and regulatory requirements of applicable jurisdictional domains having governance over the personal information exchanged among parties to a business transaction;
- integrates existing normative elements in support of privacy and data protection requirements as are already identified in the current editions of ISO/IEC 14662 and ISO/IEC 15944-1, ISO/IEC 15944-2, ISO/IEC 15944-4, and ISO/IEC 15944-5 which apply to information concerning identifiable living individuals as buyers¹⁷ in a business transaction or whose personal information is used in the transaction;
- provides overarching operational 'best practice' statements for associated (and not necessarily automated) processes, procedures, practices and governance requirements that must act in support of implementing and enforcing technical mechanisms needed to support privacy/data protection requirements necessary for the implementation in Open-edi transaction environments;
- identifies and provides a sample scenario and implementation (use case) for one or more use cases of privacy/data protection in business transactions; and,
- provides guidelines on the need for procedural mechanisms in the event that mandatory disclosure rules of transactional information must be implemented.

This part of ISO/IEC 15944 is a BOV-related standard which addresses basic (or primitive) requirements of a privacy protection environment, as legal requirements represented through jurisdictional domains, on business transactions, and also integrates the requirements of the information technology and telecommunications environments.

This part of ISO/IEC 15944 contains a methodology and tool for specifying common classes of external constraints through the construct of "jurisdictional domains". It meets the requirements set in ISO/IEC 15944-1 and ISO/IEC 15944-2 through the use of explicitly stated rules, templates, and Formal Description Techniques (FDTs).

¹⁷ As stated in Clauses 6.2.4 – 6.2.8, and Figure 18 of ISO/IEC 15944-1:2011, a natural person who provides a good, service and/or right is deemed to be an organization. Most jurisdictional domains also view an unincorporated activity providing a good, service and/or right to be an organization. {See further ISO/IEC 6523}

1.2 Exclusions

1.2.1 Functional Services View (FSV)

This part of ISO/IEC 15944 focuses on the BOV aspects of a business transaction, and does not concern itself with the technical mechanisms needed to achieve the business requirements (the FSV aspects, including the specification of requirements of a Functional Services View (FSV) nature which include security techniques and services, communication protocols, etc.). The FSV includes any existing standard (or standards development of an FSV nature), which have been ratified by existing ISO, IEC, UN/ECE and/or ITU standards.

1.2.2 Internal behaviour of organizations (and public administration)

Excluded from the scope of this part of ISO/IEC 15944 is the application of privacy protection requirements within an organization itself. The Open-edi Reference Model, considers these to be internal behaviours of an organization and thus not germane to business transactions (which focus on external behaviours pertaining to electronic data interchange among the autonomous parties to a business transaction). As such, excluded from the scope of this part of ISO/IEC 15944 are any:

- 1) internal use and management of recorded information pertaining to an identifiable organization Person an organization (or public administration) within an organization; and,
- 2) implementation of internal information management controls, internal procedural controls or operational controls within an organization or public administration necessary for it to comply with applicable privacy requirements that may be required in observance of their lawful or contractual rights, duties and obligations as a legal entity in the jurisdictional domain(s) of which they are part.

This should not be taken to mean that an organization could not adapt this part of ISO/IEC 15944 in order to model internal behaviour if they so wished, say when moving personal data within the organization.

1.2.3 “organization Person”

From a public policy privacy protection requirements perspective, an “organization Person” is a “natural person” who acts on behalf of and makes commitments on behalf of the organization (or public administration) of which that natural person is an “organization part”. But, as an “organization Person, they do not attract inherent rights to privacy. Privacy protection requirements which do apply to an organization Person are placed in an employee-employer context with associated contractual elements. In addition, some jurisdictional domains have privacy protection laws and regulations which apply specifically to employees of their public administrations.

As such, from a business transaction perspective, it is an internal behaviour of an organization, as to who makes commitments on behalf of an organization or public administration. How and why organization Persons make decisions and commitments is not germane to the scope and purpose of this part of ISO/IEC 15944. {See further ISO/IEC 15944-1:2011, Clause 6.2 “*Person and external constraints: Individual, organization, and public administration*” as well as its Figure 17 “*Illustration of commitment exchange versus information exchange for organization, organization part(s) and organization Person(s)*”}

1.2.4 Overlap of and/or conflict among jurisdictional domains as sources of privacy protection requirements

A business transaction requires an exchange of commitments among autonomous parties. Commitment is the making or accepting of a right, an obligation, liability or responsibility by a Person. In the context of a business transaction, the making of commitments pertains to the transfer of a good, service and/or right among the Persons involved.

Consequently, it is not an uncommon occurrence, depending on the goal and nature of the business transaction, that the Persons (and parties associated) are in different jurisdictional domains, and that multiple sets of external constraints apply, and overlap will occur. It is also not an uncommon occurrence that there is overlap among such sets of external constraints and/or conflict among them. This is also the case with respect

to laws and regulations of a privacy protection nature. Resolving issues of this nature is outside the scope of this part of ISO/IEC 15944.

However, modelling business transaction as scenarios and scenario components as re-useable business objects may well serve as a useful methodology for identifying specific overlaps and conflicts (thereby serving as a tool for their harmonization, if only within the context of a specific transaction).

The application of business semantic descriptive techniques to laws, regulations, etc., of jurisdictional domains and their modelling of such sets of external constraints as scenarios and scenario components is an essential step to their application in a systematic manner to (electronic) business transactions (and especially e-government, e-commerce, e-education, etc.).

Open-edl business agreement descriptive techniques methodologies can serve as a tool in the harmonization and simplification of external constraints arising from jurisdictional domains.

NOTE This part of ISO/IEC 15944 is based on the following assumptions:

- 1) the privacy protection requirements of the individual, as a buyer in a business transaction, are those of the jurisdictional domain in which the individual made the commitments associated with the instantiated business transaction; and,
- 2) where the seller is in a jurisdictional domain other than that of the individual, as the buyer, this edition of ISO/IEC 15944 incorporates and supports the *“OECD Guidelines on the Protection of Privacy and Transborder Data Flows of Personal Data”*. [See further below Clause 2.2]

1.2.5 Publicly available personal information

Excluded from the scope of this part of ISO/IEC 15944 is “publicly available personal information” (PAPI). In a business transaction context, the seller does not collect personal information of this nature from the individual (particularly in the “planning phase” of the business transaction process).

For example, the seller in advertising product to the market may:

- 1) publish personal information that is publicly available personal information, such as that found in telephone directories;
- 2) make use of any personal information declared to be of a public information by a regulation based on an law or regulation of the applicable jurisdictional domain; and, or,
- 3) include that which the individual itself chose to make public, (e.g., via one or more Internet based applications such as “Facebook”).

In a privacy protection context, publicly available personal information is defined as follows:

publicly available personal information (PAPI)

personal information about an **individual** that the **individual** knowingly makes or permits to be made available to the public, or is legally obtained and accessed from: (a) government records that are available to the public; or, (b) information required by law to be made available to the public

EXAMPLE 1 Examples of personal information which an individual knowingly makes or permits to be made available include public telephone directories, advertisements in newspapers, published materials, postings of a similar nature on the internet, etc.

EXAMPLE 2 Examples of government records that are publicly available include registers of individuals who are entitled to vote, buy or sell a property, or any other personal information that a jurisdictional domain requires to be publicly available, etc.

Further, determining whether or not personal information is of a “PAPI” nature is also excluded from the scope of this part of ISO/IEC 15944.

1.3 Aspects currently not addressed

This part of ISO/IEC 15944 focuses on the essential and basic aspects of privacy protection requirements. The purpose of this Clause is to identify aspects not currently addressed. These will be addressed in either:

- a) an Amendment to this part of ISO/IEC 15944,
- b) new editions of this part of ISO/IEC 15944,
- c) through a new part of ISO/IEC 15944,
- d) in a new edition of an existing part of ISO/IEC 15944 (as may be applicable),
- e) through a new edition of an existing standard of ISO/IEC JTC1, or another existing ISO/IEC JTC1/SC, or ISO, IEC or ITU; and/or,
- f) new standard(s) by any of the above noted committees.

ISO/IEC 15944-8 also does yet address the following requirements:

- 1) differences in equality in the use of official languages by an individual, in being informed and exercising privacy protection rights within a jurisdictional domain¹⁸;
- 2) interworking between privacy protection and consumer protection requirements as two sets of external constraints applicable to an individual as a buyer in a business transaction;
- 3) identification and registration of schemas involving the control and management of legally recognized names (LRNs) as personas and associated unique identifiers for the unambiguous identification of an individual and/or the role qualification of an individual in a specific context;
- 4) more detailed information management and audit requirements pertaining to ensuring privacy protection of personal information that should be enacted by and among organizations and public administrations as parties to a business transaction;
- 5) more detailed rules and associated text pertaining to the BOV perspective with respect to transborder data flows of personal information;
- 6) inter-operation between jurisdictional domains where they do not possess defined equivalents to their protection requirements (interoperability) or where protection requirements simply are different;
- 7) instances in which privacy protection requirements continue to apply to the personal information of an individual after his/her death;

In addition, from a business transaction perspective, there may be some continuity in privacy protection requirements, (e.g., those pertaining to temporal aspects of post-actualization aspects of an instantiated business transaction, (e.g., health care matters, warranties on products, service contracts, rights (including IP), etc.). Instantiated business transactions may require personal information to be retained and continue to be protected following the death of the individual.

¹⁸ This part of ISO/IEC 15944 focuses on the essential basic, i.e. primitive, aspect of jurisdictional domains as sources of external constraints. As such this edition of ISO/IEC 15944-8 does not address differences in status that may exist among official languages within a jurisdictional domain. It is not uncommon that where a jurisdictional domain has three or more official languages that not all of these have equal status. For example, for use of some official language(s) in a jurisdictional domain, there could be criteria such as “where and when numbers warrant”, “there is a significant demand for communication with and services from a public administration in that language”, etc. This impacts both the language in which personal information is recorded by an organization or public administration as well as the language of communications of the individual with the organization in a business transaction.

NOTE 1 This may also include a settlement of wills, probate, investments, etc., pertaining to that individual once proved deceased.

NOTE 2 Tax information filed has 4-6 years record retention requirements in most jurisdictional domains. In some jurisdictional domains, tax matters are confidential and in others they are public. The status of personal information may change as a result of litigation and public hearings.

NOTE 3 Instantiated business transactions may require personal information to be retained and continue to be protected following the death of an individual, (e.g., many credit card agreements exist after the death of the credit card holder).

NOTE 4 One may need to have an added Clause on privacy protection of personal information on individuals consequent upon the death of the individual.

8) personal information found in journalistic reports:

The use of personal information in a business transaction which is found in journalistic reports including news items, public broadcasts, items published by news media about an individual, personal information published and made available by third parties on the internet, (e.g., via Google, Facebook, Twitter, etc.), which in some jurisdictional domains is held to be “in the public interest”, is not included in this part of ISO/IEC 15944.

The reasons for exclusion are that a journalistic report containing personal information about an individual:

- may contain inaccurate information, allegations, and thus should not (can not) be used as “personal information”;
- may be subject to libel and other legal actions by the individual;
- etc.

Further issues pertaining to privacy protection versus journalistic reports on identified individuals resulting in the publishing of personal information is a “grey area” which courts in various jurisdictional domains are addressing and thus not yet resolved;

- 9) this part of ISO/IEC 15944 does not address the question of negotiated consent, but rather considers the simplest case, that a scenario may be registered which includes a specific form of consent within it;
- 10) the use of biological characteristics and attributes of an individual which require the physical presence of an individual and are physically “taken” from an individual in a particular context and for a specified role action of an individual;

These include the use of biometrics, biological (such as hair, blood, DNA samples), dentistry records, etc.

- 11) the application of the rights of individuals who are disabled as stated in the “UN Convention on the Rights of Persons with Disabilities” (2006)¹⁹;

Of particular importance here is that this UN Convention takes as its basis the need to support individuals with disabilities to be a fully functioning member of society means that information necessary for these individuals to be able to make commitments including the undertaking of business transactions shall be made available in a form and format so that the semantics are fully communicated, the individual is able to have informed consent, etc.

¹⁹ Most, if not all, of the jurisdictional domains of the P-members of ISO/IEC JTC1 are signatories to this UN Convention and are enacting the requirements of this UN Convention into their domestic legislation.

- 12) this part of ISO/IEC 15944 does not address the role of an “ombudsperson”, “Privacy Commissioner”, a “Data Protection Commissioner”, etc., who serves as an independent adjudicator of complaints and ensures compliance with privacy protection requirements (including of internally of the organization or public administration themselves);

Many jurisdictional domains provide for the role of an ombudsperson which may be a role similar in application to public administration.

- 13) detailed rules pertaining to the use of agents and/or third parties by a seller in a business transaction

This includes their qualification and assurance of compliance with applicable privacy protection requirements for the personal information pertaining to a business transaction.

- 14) an agent acting on behalf of an individual

An individual may request an agent to act on its behalf and this may or may not include the individual to require the agent not to reveal the individual identity or any personal information about the individual, i.e., as an anonymous “client” of the agent.

- 15) detailed rules governing the requirement to tag (or label) at the data elements (or field) level which form part of personal information of an individual generally as is required for as the business transactions(s) and its associated BTI(s);

- 16) mergers and acquisitions

It is presumed that when an organization “A” merges with, or is acquired by another organization “B”, that the privacy protection requirements applicable to personal information under the control of organization “A” continue to apply and be enforced. It is also assumed the personal information under the control of organization “A” remains under its control and that a merger with or acquisition by organization “B” does not allow organization “B” to access and/or use personal information held by organization “A” without the express and informed consent of the individuals whose personal information is/was organization “A”.

- 17) ICT and other service providers

It is presumed that any ICT (or other) services provider which is under contract to provide ICT services to an organization or public administration (which has personal information under its control) shall not access or use such personal information processed as part of its services offering to that organization, unless it has a formal contractual arrangement to do so, in compliance with applicable privacy protection requirements.

- 18) data mining

It is also presumed that an organization shall ensure that any data mining activities undertaken by itself (or via an agent or third party on its behalf) shall be in compliance with applicable privacy protection requirements, and not involve any secondary use or any other use of personal information for which the individual(s) concerned have not provided explicitly informed consent.

- 19) formal Conformance Statements

Clause 13 below deals with conformance requirements at the most primitive level only. More detailed conformance statements with associated rules and procedures are required in implementation. It is also necessary to ensure that any such conformance statement, i.e., declaration by an organization or public administration is “verifiable”.

- 20) linkages and similarities between privacy protection and consumer protection requirements

Many of the external constraints pertaining to personal information of a privacy protection nature in a business transaction are similar to consumer protection requirements. {See further below Clause 7.2.2}

It is anticipated that some or all of these requirements will be addressed in future editions of ISO/IEC 15944-8 or in companion standards or technical reports (including possible new parts of ISO/IEC 15944).

1.4 IT-systems environment neutrality

This part of ISO/IEC 15944 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, syntax, computing platform, or any technology required for implementation, i.e., it is information technology neutral. At the same time, this part of ISO/IEC 15944 maximizes an IT-enabled approach to its implementation and maximizes semantic interoperability.

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2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 ISO/IEC, ISO and ITU²⁰

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

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

ISO/IEC 2382 (all parts) (E/F), *Information technology — Vocabulary/Technologies de l'information — Vocabulaire*

ISO 3166-1:2006(E/F), *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes/Codes pour la représentation des noms de pays et de leur subdivisions — Partie 1: Codes pays*

ISO 3166-2:2007(E/F), *Codes for the representation of names of countries and their subdivisions — Part 2: Country subdivision code/Codes pour la représentation des noms de pays et de leurs subdivisions — Partie 2: Code pour les subdivisions de pays*

ISO 5127:2001(E), *Information and documentation — Vocabulary*

ISO/IEC 5218:2004(E/F), *Information technology — Codes for the representation of human sexes/Technologies de l'information — Codes de représentation des sexes humains*

ISO/IEC 6523-1:1998(E/F), *Information technology — Structure for the identification of organizations and organization parts — Part 1: Identification of organization identification schemes/Technologies de l'information — Structures pour l'identification des organisations et des parties d'organisations — Partie 1: Identification des systèmes d'identification d'organisations*

ISO/IEC 6523-2:1998(E/F), *Information technology — Structure for the identification of organizations and organization parts — Part 2: Registration of organization identification schemes/Technologies de l'information — Structures pour l'identification des organisations et des parties d'organisations — Partie 2: Enregistrement des systèmes d'identification d'organisations*

ISO/IEC 7501-1:2008(E), *Identification cards — Machine readable travel documents — Part 1: Machine readable passport*

ISO/IEC 7501-2:1997(E), *Identification cards — Machine readable travel documents — Part 2: Machine readable visa*

ISO/IEC 7501-3:2005(E), *Identification cards — Machine readable travel documents — Part 3: Machine readable official travel documents*

ISO/IEC 7812-1:2006(E), *Identification cards — Identification of issuers — Part 1: Numbering system*

ISO/IEC 7812-2:2007(E), *Identification cards — Identification of issuers — Part 2: Application and registration procedures*

²⁰ For standards referenced for which both English and French versions are available both the English and French language titles are provided. This is independent of whether the English and French language versions of the standard are published as a single document or as separate documents. For those standards which are available in English only, only the English language title is provided.

ISO 8601:2004(E), *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 14662:2010(E/F), *Information technology — Open-edition reference model/Technologies de l'information — Modèle de référence EDI-ouvert*

ISO/IEC 15944-1:2011(E), *Information technology — Business Operational View — Part 1: Operational aspects of Open-edition for implementation*

ISO/IEC 15944-2:2006(E), *Information technology — Business Operational View — Part 2: Registration of scenarios and their components as business objects*

ISO/IEC 15944-4:2007(E), *Information technology — Business Operational View — Part 4: Business transactions and scenarios — Accounting and economic ontology*

ISO/IEC 15944-5:2008(E), *Information technology — Business Operational View — Part 5: Identification and referencing of requirements of jurisdictional domains as sources external constraints*

ISO/IEC 15944-7:2009(E), *Information technology — Business Operational View — Part 7: eBusiness vocabulary*

ISO 19108:2002(E), *Geographic information — Temporal schema*

ISO/IEC 19501:2005(E), *Information technology — Open Distributed Processing — Unified Modeling Language (UML) Version 1.4.2*²¹

ISO 22857:2004(E), *Health informatics — Guidelines on data protection to facilitate trans-border flows of personal health information*

2.2 Referenced specifications²²

APEC Privacy Framework. (2005)

Charter of the United Nations (as signed 1945 and Amended 1965, 1968, and 1973+), United Nations (UN).

Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (1995) Directive

OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data (1980)

UN Convention on the Rights of Disabled Persons (2006+)

Vienna Convention of the Law of Treaties (1969), United Nations (UN)

²¹ Throughout this part of ISO/IEC 15944, ISO/IEC 19501:2005 is simply referenced as “UML”.

²² All references in this sub-clause were correct at the time of approval of this part of ISO/IEC 15944. The provisions of the referenced specifications, as identified in this sub-clause, are valid within the context of this part of ISO/IEC 15944. The reference to a specification within this part of ISO/IEC 15944 does not give it any further status within ISO/IEC; in particular, it does not give the referenced specification the status of an International Standard.

3 Terms and definitions

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

3.1

address

set of **data elements** that specifies a **location** to which a **recorded information** item(s), a **business object**(s), a material **object**(s) and/or a person(s) can be sent or from which it can be received

NOTE 1 An address can be specified as either a physical address and/or electronic address.

NOTE 2 In the identification, referencing and retrieving of registered business objects, it is necessary to state whether the pertinent recorded information is available in both physical and virtual forms.

NOTE 3 In the context of Open-edi, a "recorded information item" is modelled and registered as an Open-edi scenario (OeS), Information Bundle (IB) or Semantic Component (SC).

[ISO/IEC 15944-2:2006 (3.1)]

3.2

agent

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 14662:2009, "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 15944-1:2011 (3.1)]

3.3

anonymization

process whereby the association between a **set of recorded information (SRI)** and an identifiable **individual** is removed where such an association may have existed

NOTE Adapted from ISO 25237.

3.4

attribute

characteristic of an **object** or **entity**

[ISO/IEC 11179-3:2003 (3.1.3)]

3.5

authentication

provision of assurance of the claimed identity of an **entity**

[ISO/IEC 10181-2:1996 (3.3)]

3.6

authenticity

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

NOTE Authenticity applies to entities such as users, processes, systems and information.

[ISO/IEC TR 13335-1:1996 (3.3)]

3.7

business

series of **processes**, each having a clearly understood purpose, involving more than one **Person**, realised through the exchange of **recorded information** and directed towards some mutually agreed upon goal, extending over a period of time

[ISO/IEC 14662:2010 (3.1.2)]

3.8

business event

occurrence in time that **partners** to a **business transaction** wish to monitor or control

NOTE 1 Business events are the workflow tasks that business partners need to accomplish to complete a business transaction among themselves. As business events occur, they cause a business transaction to move through its various phases of planning, identification, negotiation, actualization, and post-actualization.

NOTE 2 Occurrences in time can either be:

- (1) internal as mutually agreed to among the parties to a business transaction; and/or,
- (2) reference some common publicly available and recognized date/time referencing schema, (e.g., one based on using the ISO 8601 and/or ISO 19135 standards).

[ISO/IEC 15944-4:2007 (3.5)]

3.9

business object

unambiguously identified, specified, referenceable, registered and re-useable **Open-edl scenario** or **scenario component** of a **business transaction**

NOTE As an “object”, a “business object” exists only in the context of a business transaction.

[ISO/IEC 15944-2:2006 (3.6)]

3.10

Business Operational View (BOV)

perspective of **business transactions** limited to those aspects regarding the making of **business** decisions and **commitments** among **Persons**, which are needed for the description of a **business transaction**

[ISO/IEC 14662:2010 (3.1.3)]

3.11

business transaction

predefined set of activities and/or **processes** of **Persons** which is initiated by a **Person** to accomplish an explicitly shared **business** goal and terminated upon recognition of one of the agreed conclusions by all the involved **Persons** although some of the recognition may be implicit

[ISO/IEC 14662:2010 (3.1.4)]

3.12

business transaction identifier (BTI)

identifier assigned by a **seller** or a **regulator** to an instantiated **business transaction** among the **Persons** involved

NOTE 1 The identifier assigned by the seller or regulator shall have the properties and behaviours of an “identifier (in a business transaction)”.

NOTE 2 As an identifier (in a business transaction), a BTI serves as the unique common identifier for all Persons involved for the identification, referencing, retrieval of recorded information, etc., pertaining to the commitments made and the resulting actualization (and post-actualization) of the business transaction agreed to.

NOTE 3 A business transaction identifier can be assigned at any time during the planning, identification or negotiation phases but shall be assigned at least prior to the start or during the actualization phase.

NOTE 4 As and where required by the applicable jurisdictional domain(s), the recorded information associated with the business transaction identifier (BTI) may well require the seller to include other identifiers, (e.g., from a value-added good or service tax, etc., perspective) as assigned by the applicable jurisdictional domain(s).

[ISO/IEC 15944-5: 2008 (3.12)]

3.13

buyer

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 15944-1:2011 (3.8)]

3.14

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)]

3.15

character set

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

EXAMPLE The international reference version of the character set of ISO 646-1.

[ISO/IEC 2382-4:1999 (04.01.02)]

3.16

classification system

systematic **identification** and arrangement of **business** activities and/or **scenario components** into categories according to logically structured conventions, methods and procedural **rules** as specified in a classification schema

NOTE 1 The classification code or number often serves as a semantic identifier (SI) for which one or more human interface equivalents (HIEs) exist.

NOTE 2 The rules of a classification schema governing the operation of a classification system at times lead to the use of ID codes which have an intelligence built into them, (e.g., in the structure of the ID, the manner in which it can be parsed, etc.). Here the use of block-numeric numbering schemas is an often used convention.

[ISO/IEC 15944-5:2008 (3.17)]

3.17

code

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

NOTE In this part of ISO/IEC 5944 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)]

3.18

code (in coded domain)

identifier, i.e., an **ID code**, assigned to an **entity** as member of a **coded domain** according to the pre-established set of **rules** governing that **coded domain**

[ISO/IEC 15944-5:2008 (3.19)]

3.19

coded domain

domain for which (1) the boundaries are defined and explicitly stated as a **rulebase** of a **coded domain Source Authority**; and (2) each **entity** which qualifies as a member of that domain is identified through the assignment of a unique **ID code** in accordance with the applicable **Registration Schema** of that **Source Authority**

NOTE 1 The rules governing the assignment of an ID code to members of a coded domain reside with its Source Authority and form part of the Coded Domain Registration Schema of the Source Authority.

NOTE 2 Source Authorities which are jurisdictional domains are the primary source of coded domains.

NOTE 3 A coded domain is a data set for which the contents of the data element values are predetermined and defined according to the rulebase of its Source Authority and as such have predefined semantics.

NOTE 4 Associated with a code in a coded domain can be:

- one and/or more equivalent codes;
- one and/or more equivalent representations especially those in the form of Human Interface Equivalent (HIE) (linguistic) expressions.

NOTE 5 In a coded domain the rules for assignment and structuring of the ID codes must be specified.

NOTE 6 Where an entity as member of a coded domain is allowed to have, i.e., assigned, more than one ID code, i.e., as equivalent ID codes (possibly including names), one of these must be specified as the pivot ID code.

NOTE 7 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.

NOTE 8 A coded domain may contain ID code which pertains to predefined conditions other than qualification of membership of entities in the coded domain. Further, the rules governing a coded domain may or may not provide for user extensions.

EXAMPLE Common examples include: (1) the use of ID Code "0" (or "00", etc.) for "Others", (2) the use of ID Code "9" (or "99", etc.) for "Not Applicable"; (3) the use of "8" (or "98") for "Not Known"; and/or, if required, (4) the pre-reservation of a series of ID codes for use of "user extensions".

NOTE 9 In object methodology, entities which are members of a coded domain are referred to as instances of a class.

EXAMPLE In UML modelling notation, an ID code is viewed as an instance of an object class.

[ISO/IEC 15944-2:2006 (3.13)]

3.20

coded Domain Registration Schema (cdRS)

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

[ISO/IEC 15944-5:2008 (3.21)]

3.21

coded domain Source Authority (cdSA)

Person, usually an **organization**, as a **Source Authority** which sets the **rules** governing a **coded domain**

NOTE 1 Source Authority is a role of a Person and for widely used coded domains the coded domain Source Authority is often a jurisdictional domain.

NOTE 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.

NOTE 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.

[ISO/IEC 15944-2:2006 (3.14)]

3.22

collaboration space

business activity space where an economic exchange of valued resources is viewed independently and not from the perspective of any **business** partner

NOTE In collaboration space, an individual partner's view of economic phenomena is de-emphasized. Thus, the common use business and accounting terms like purchase, sale, cash receipt, cash disbursement, raw materials, and finished goods is not allowed because they view resource flows from a participant's perspective.

[ISO/IEC 15944-4:2007 (3.12)]

3.23

commitment

making or accepting of a right, obligation, liability or responsibility by a **Person** that is capable of enforcement in the **jurisdictional domain** in which the **commitment** is made

[ISO/IEC 14662:2010 (3.5)]

3.24

composite identifier

identifier (in a business transaction) functioning as a single unique **identifier** consisting of one or more other **identifiers**, and/or one or more other **data elements**, whose interworkings are **rule**-based

NOTE 1 Identifiers (in business transactions) are for the most part composite identifiers.

NOTE 2 The rules governing the structure and working of a composite identifier should be specified.

NOTE 3 Most widely used composite identifiers consist of the combinations of:

- the ID of the overall identification/numbering schema, (e.g., ISO/IEC 6532, ISO/IEC 7812, ISO/IEC 7506, UPC/EAN, ITU-T E.164, etc.), which is often assumed;
- the ID of the issuing organization (often based on a block numeric numbering schema); and,
- the ID of the entities forming part of members of the coded domain of each issuing organization.

[ISO/IEC 15944-2:2006 (3.16)]

3.25

computational integrity

expression of a **standard** 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

NOTE Open-edi standards have been designed to be able to support computational integrity requirements especially from a registration and re-use of business objects perspectives.

[ISO/IEC 15944-2:2006 (3.17)]

3.26

constraint

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

NOTE 1 Constraints are specified as rules forming part of components of Open-edi scenarios, i.e., as scenario attributes, roles, and/or information bundles.

NOTE 2 For constraints to be registered for implementation in Open-edi, they must have unique and unambiguous identifiers.

NOTE 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 15944-1:2011 (3.11)]

3.27

consumer

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

NOTE 1 Consumer protection is a set of explicitly defined rights and obligations applicable as external constraints on a business transaction.

NOTE 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.

NOTE 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 15944-1:2011 (3.12)]

3.28

consumer protection

set of **external constraints** of a **jurisdictional domain** as rights of a **consumer** and thus as obligations (and possible liabilities) of a **vendor** in a **business transaction** which apply to the good, service and/or right forming the **object** of the **business transaction** (including associated information management and interchange requirements including applicable (**sets of**) **recorded information**

NOTE 1 Jurisdictional domains may restrict the application of their consumer protection requirements as applicable only to individuals engaged in a business transaction of a commercial activity undertaken for personal, family or household purposes, i.e., they do not apply to natural persons in their role as "organization" or "organization Person".

NOTE 2 Jurisdictional domains may have particular consumer protection requirements which apply specifically to individuals who are considered to be a "child" or a "minor", (e.g., those individuals who have not reached their thirteenth (13) birthday).

NOTE 3 Some jurisdictional domains may have consumer protection requirements which are particular to the nature of the good, service and/or right being part of the goal of a business transaction.

[ISO/IEC 15944-5:2008 (3.33)]

3.29

controlled vocabulary (CV)

vocabulary for which the entries, i.e., **definition/term** pairs, are controlled by a **Source Authority** based on a **rulebase** and **process** for addition/deletion of entries

NOTE 1 In a controlled vocabulary, there is a one-to-one relationship of definition and term.

EXAMPLE The contents "Clause 3 Definitions" in ISO/IEC standards are examples of controlled vocabularies with the entities being identified and referenced through their ID codes, i.e., via their clause numbers.

NOTE 2 In a multilingual controlled vocabulary, the definition/term pairs in the languages used are deemed to be equivalent, i.e., with respect to their semantics.

NOTE 3 The rule-base governing a controlled vocabulary may include a predefined concept system.

[ISO/IEC 15944-5:2008 (3.34)]

3.30

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 15944-1:2011 (3.14)]

3.31

data element

unit of **data** for which the **definition**, **identification**, representation and permissible values are specified by means of a set of **attributes**

[ISO/IEC 11179-1:2004 (3.3.8)]

3.32

data element (in organization of data)

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)]

3.33

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 hardcopy map or chart may be considered a dataset.

[ISO 19115:2003 (4.2)]

3.34

dataset series

collection of **datasets** sharing the same product specification

[ISO 19115:2003 (4.3)]

3.35

data synchronization (in business transaction)

process of continuous harmonization of a **set(s)** of **recorded information** among all the parties to a **business transaction** to ensure that the current state of such a **set(s)** of **recorded information** is the same in the **IT systems** of all the participating parties

NOTE Adapted from GS1 Global Traceability Standard (GDSN) Glossary.

3.36

Decision Making Application (DMA)

model of that part of an **Open-edition system** that makes decisions corresponding to the **role(s)** that the **Open-edition Party** plays as well as the originating, receiving and managing **data** values contained in the instantiated **Information Bundles** which is not required to be visible to the other **Open-edition Parties**

[ISO/IEC 14662:2010 (3.7)]

3.37

de facto language

natural language used in a **jurisdictional domain** which has the properties and behaviours of an **official language** in that **jurisdictional domain** without having formally been declared as such by that **jurisdictional domain**

NOTE 1 A de facto language of a jurisdictional domain is often established through long term use and custom.

NOTE 2 Unless explicitly stated otherwise and for the purposes of modelling a business transaction through scenario(s), scenario attributes and/or scenario components, a de facto language of a jurisdictional domain is assumed to have the same properties and behaviours of an official language.

[ISO/IEC 15944-5:2008 (3.42)]

3.38

definition

representation of a concept by a descriptive statement which serves to differentiate it from related concepts

[ISO/IEC 1087-1:2000 (3.3.1)]

3.39

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 adapted)]

3.40

distinguishing identifier

data that **unambiguously** distinguishes an **entity** in the **authentication** process

[ISO/IEC 10181-2:1996]

3.41

eBusiness

business transaction, involving the making of **commitments**, in a defined **collaboration space**, among **Persons** using their **IT systems**, according to **Open-edi standards**

NOTE 1 eBusiness can be conducted on both a for-profit and not-for-profit basis.

NOTE 2 A key distinguishing aspect of eBusiness is that it involves the making of commitment(s) of any kind among the Persons in support of a mutually agreed upon goal, involving their IT systems, and doing so through the use of EDI (using a variety of communication networks including the Internet).

NOTE 3 eBusiness includes various application areas such as e-commerce, e-administration, e-logistics, e-government, e-medicine, e-learning, etc.

NOTE 4 The equivalent French language term for “eBusiness” is always presented in its plural form.

[ISO/IEC 15944-7:2009 (3.06)]

3.42

electronic address

address used in a recognized electronic addressing scheme, (e.g., telephone, telex, IP, etc.), to which **recorded information** item(s) and/or **business object**(s) can be sent to or received from a **Contact**

[ISO/IEC 15944-2:2006 (3.32)]

3.43

Electronic Data Interchange (EDI)

automated exchange of any predefined and structured **data** for **business** purposes among information systems of two or more **Persons**

NOTE This definition includes all categories of electronic business transactions.

[ISO/IEC 14662:2010 (3.8)]

3.44

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 An entity exists whether data about it are available or not.

[ISO/IEC 2382-17:1999 (17.02.05)]

3.45

entity authentication

corroboration that the **entity** is the one claimed

[ISO/IEC 9798-1:1997 (3.3.11)]

3.46

exchange code set

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

EXAMPLE The 3-numeric, 2-alpha and 3-alpha code sets in ISO 3166-1.

[ISO/IEC 15944-5:2008 (3.49)]

3.47

external constraint

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**

NOTE 1 Normally external constraints are created by law, regulation, orders, treaties, conventions or similar instruments.

NOTE 2 Other sources of external constraints are those of a sectoral nature, those which pertain to a particular jurisdiction or a mutually agreed to common business conventions, (e.g., INCOTERMS, exchanges, etc.).

NOTE 3 External constraints can apply to the nature of the good, service and/or right provided in a business transaction.

NOTE 4 External constraints can demand that a party to a business transaction meet specific requirements of a particular role.

EXAMPLE 1 Only a qualified medical doctor may issue a prescription for a controlled drug.

EXAMPLE 2 Only an accredited share dealer may place transactions on the New York Stock Exchange.

EXAMPLE 3 Hazardous wastes may only be conveyed by a licensed enterprise.

NOTE 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.

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".

NOTE 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 15944-1:2011 (3.23)]

3.48

Formal Description Technique (FDT)

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 14662:2010 (3.9)]

3.49

Functional Service View (FSV)

perspective of **business transactions** limited to those information technology interoperability aspects of **IT Systems** needed to support the execution of **Open-edition transactions**

[ISO/IEC 14662:2010 (3.10)]

3.50

Human Interface Equivalent (HIE)

representation of the **unambiguous** and **IT-enabled** semantics of an **IT interface equivalent** (in a **business transaction**), often the **ID code** of a **coded domain** (or a **composite identifier**), in a formalized manner suitable for communication to and understanding by humans

NOTE 1 Human interface equivalents can be linguistic or non-linguistic in nature but their semantics remain the same although their representations may vary.

NOTE 2 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 sectoral nature.

NOTE 3 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, image, etc.).

[ISO/IEC 15944-2:2006 (3.35)]

3.51

IB Identifier

unique, linguistically neutral, **unambiguous** referenceable **identifier** for an **Information Bundle**

[ISO/IEC 15944-2:2006 (3.36)]

3.52

ID Code

identifier assigned by the **coded domain Source Authority (cdSA)** to a member of a **coded domain ID**

NOTE 1 ID codes must be unique within the Registration Schema of that coded domain.

NOTE 2 Associated with an ID code in a coded domain can be: - one or more equivalent codes; - one or more equivalent representations, especially those in the form of human equivalent (linguistic) expressions.

NOTE 3 Where an entity as a member of a coded domain is allowed to have more than one ID code, i.e., as equivalent codes (possibly including names), one of these must be specified as the pivot ID code.

NOTE 4 A coded domain may contain ID codes pertaining to entities which are not members as peer entities, i.e., have the same properties and behaviours, such as ID codes which pertain to predefined conditions other than member entities. If this is the case, the rules governing such exceptions must be predefined and explicitly stated.

EXAMPLE Common examples include: (1) the use of an ID code "0" (or "00", etc.), for "Other"; (2) the use of an ID code "9" (or "99") for "Not Applicable"; (3) the use of "8" (or "98") for "Not Known"; if required, (4) the pre-reservation of a series or set of ID codes for use for "user extensions".

NOTE 5 In UML modeling notation, an ID codes is viewed as an instance of an object class.

[ISO/IEC 15944-2:2006 (3.37)]

3.53

identification

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 15944-1:2011 (3.26)]

3.54

identifier (in business transaction)

unambiguous, unique and a linguistically neutral value, resulting from the application of a **rule-based identification process**

NOTE 1 Identifiers must be unique within the identification scheme of the issuing authority.

NOTE 2 An identifier is a linguistically independent sequence of characters capable of uniquely and permanently identifying that with which it is associated. (See ISO 19135:2005 (4.1.5).

[ISO/IEC 15944-1:2011 (3.27)]

3.55

individual

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 15944-1:2011 (3.28)]

3.56

individual accessibility

set of **external constraints** of a **jurisdictional domain** as rights of an **individual** with disabilities to be able to use **IT systems** at the human, i.e., user, interface and the concomitant obligation of a **seller** to provide such adaptive technologies

NOTE Although "accessibility" typically addresses users who have a disability, the concept is not limited to disability issues.

EXAMPLE Examples of disabilities in the form of functional and cognitive limitations include:

- people who are blind;
- people with low vision;
- people with colour blindness;
- people who are hard of hearing or deaf, i.e., are hearing impaired;
- people with physical disabilities;
- people with language or cognitive disabilities.

[ISO/IEC 15944-5:2008 (3.60)]

3.57

individual anonymity

state of not knowing the identity or no having any recording of **personal information** on or about an **individual** as a **buyer** by the **seller** or **regulator**, (or any other party) to a **business transaction**

3.58

individual authentication

provision of the assurance of a **recognized individual identity (rii)** sufficient for the purpose of the **business transaction**

3.59

individual identity (ii)

Person identity of an **individual**, i.e., an individual identity, consisting of the combination of the **persona** information and **identifier** used by an **individual** in a **business transaction**, i.e., the making of any kind of **commitment**

3.60

individual persona Registration Schema (ipRS)

persona Registration Schema (pRS) where the **persona** is, or includes, that of an **individual** being registered

NOTE 1 Where an persona Registration Schema includes persona of sub-types of Persons, i.e., individuals, organizations, and/or, public administrations, those which pertain to individuals shall be identified as such because public policy as external constraints apply including those of a privacy protection requirements nature.

NOTE 2 In an individual persona Registration Schema, one shall state whether or not a truncated name, i.e. registered persona, of the individual, is allowed or mandatory, and if so the ipRS shall explicitly state the rules governing the formation of the same.

3.61

Information Bundle (IB)

formal description of the semantics of the **recorded information** to be exchanged by **Open-edi Parties** playing **roles** in an **Open-edi scenario**

[ISO/IEC 14662:2010 (3.11)]

3.62

information law

any law, regulation, policy, or code (or any part thereof) that requires the creation, receipt, collection, description or listing, production, retrieval, submission, retention, storage, preservation or destruction of **recorded information**, and/or that places conditions on the access and use, confidentiality, privacy, integrity, accountabilities, continuity and availability of the processing, reproduction, distribution, transmission, sale, sharing or other handling of **recorded information**

3.63

Information Processing Domain (IPD)

Information Technology System which includes at least either a **Decision Making Application** and/or one of the components of an **Open-edi Support Infrastructure**, and acts/executes on behalf of an **Open-edi Party** (either directly or under a delegated authority)

[ISO/IEC 14662:2010 (3.12)]

3.64

Information Technology System (IT System)

set of one or more computers, associated software, peripherals, terminals, human operations, physical **processes**, information transfer means, that form an autonomous whole, capable of performing information processing and/or information transfer

[ISO/IEC 14662:2010 (3.12)]

3.65

internal constraint

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 15944-1:2011 (3.33)]

3.66

IT-enablement

transformation of a current **standard** used in **business transactions**, (e.g., **coded domains**), from a manual to computational perspective so as to be able to support **commitment** exchange and **computational integrity**

[ISO/IEC 15944-5:2008 (3.48)]

3.67

IT-interface equivalent

computer processable **identification** of the **unambiguous** semantics of a scenario, **scenario attribute** and/or **scenario component(s)** pertaining to a **commitment** exchange in a **business transaction** which supports **computational integrity**

NOTE 1 IT interface equivalents have the properties of identifiers (in business transaction) and are used to support semantic interoperability in commitment exchange.

NOTE 2 The value of an IT interface equivalent at times is a composite identifier.

NOTE 3 An IT interface equivalent as a composite identifier can consist of the identifier of a coded domain plus an ID code of that coded domain.

NOTE 4 An IT interface equivalent is at times used as a semantic identifier.

NOTE 5 An IT interface equivalent may have associated with it one or more Human Interface Equivalents (HIEs).

NOTE 6 The value of an IT Interface is independent of its encoding in programming languages or APIs.

[ISO/IEC 15944-2:2006 (3.45)]

3.68

jurisdictional domain

jurisdiction, recognized in law as a distinct legal and/or regulatory framework, which is a source of **external constraints** on **Persons**, their behaviour and the making of **commitments** among **Persons** including any aspect of a **business transaction**

NOTE 1 The pivotal jurisdictional domain is a United Nations (UN) recognized member state. From a legal and sovereignty perspective they are considered "peer" entities. Each UN member state, (a.k.a. country) may have sub-administrative divisions as recognized jurisdictional domains, (e.g., provinces, territories, cantons, länder, etc.), as decided by that UN member state.

NOTE 2 Jurisdictional domains can combine to form new jurisdictional domains, (e.g., through bilateral, multilateral and/or international treaties).

EXAMPLE Included here, for example, are the European Union (EU), NAFTA, WTO, WCO, ICAO, WHO, Red Cross, the ISO, the IEC, the ITU, etc.

NOTE 3 Several levels and categories of jurisdictional domains may exist within a jurisdictional domain.

NOTE 4 A jurisdictional domain may impact aspects of the commitment(s) made as part of a business transaction including those pertaining to the making, selling, transfer of goods, services and/or rights (and resulting liabilities) and associated information. This is independent of whether such interchange of commitments is conducted on a for-profit or not-for-profit basis and/or includes monetary values.

NOTE 5 Laws, regulations, directives, etc., issued by a jurisdictional domain are considered as parts of that jurisdictional domain and are the primary sources of external constraints on business transactions.

[ISO/IEC 15944-5:2008: (3.67)]

3.69

jurisdictional domain identifier

ID code of a **jurisdictional domain** as recognized for use by peer **jurisdictional domains** within a system of mutual recognition

[ISO/IEC 15944-2:2006 (3.47)]

3.70

language

system of signs for communication, usually consisting of a **vocabulary** and **rules**

NOTE In this part of ISO/IEC 15944, language refers to natural languages or special languages, but not "programming languages" or "artificial languages".

[ISO 5127-1:2001 (1.1.2.01)]

3.71

language code

combination of **characters** used to represent a **language** or **languages**

NOTE In this multipart ISO/IEC 15944 standard, the ISO 639-2/T (terminology) three alpha-code, shall be used.

[ISO 639-2:1998 (3.2. adapted)]

3.72

legally recognized language (LRL)

natural language which has status (other than an **official language** or **de facto language**) in a **jurisdictional domain** as stated in an act, regulation, or other legal instrument, which grants a community of people (or its **individuals**) the right to use that **natural language** in the context stipulated by the legal instrument(s)

NOTE The LRL can be specified through either:

- the identification of a language by the name used; or,
- the identification of a people and thus their language(s).

EXAMPLE In addition to acts and regulations, legal instruments include self-government agreements, land claim settlements, court decisions, jurisprudence, etc.

[ISO/IEC 15944-5:2008 (3.71)]

3.73

legally recognized name (LRN)

persona associated with a **role** of a **Person** recognized as having legal status and so recognized in a **jurisdictional domain** as accepted or assigned in compliance with the **rules** applicable of that **jurisdictional domain**, i.e. as governing the **coded domain** of which the **LRN** is a member

NOTE 1 A LRN may be of a general nature and thus be available for general use in commitment exchange or may arise from the application of a particular law, regulation, program or service of a jurisdictional domain and thus will have a specified use in commitment exchange.

NOTE 2 The process of the establishment of a LRN is usually accompanied by the assignment of a unique identifier.

NOTE 3 A LRN is usually a registry entry in a register established by the jurisdictional domain (usually by a specified public administration within that jurisdictional domain) for the purpose of applying the applicable rules and registering and recording LRNs (and possible accompanying unique identifiers accordingly).

NOTE 4 A Person may have more than one LRN (and associated LRN identifier).

[ISO/IEC 15944-5:2008 (3.72)]

3.74

list

ordered set of **data elements**

[ISO/IEC 2382-4:1999 (04.08.01)]

3.75

localization

pertaining to or concerned with anything that is not global and is bound through specified sets of **constraints** 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 sectoral nature, i.e., industry sector, scientific, professional, etc.;
- (d) a human rights nature, i.e., privacy, disabled/handicapped persons, etc.;
- (e) consumer behaviour requirements; and/or,
- (f) safety or health requirements.

Within and among "locales", interoperability and harmonization objectives also apply

[ISO/IEC 15944-5:2008 (3.75)]

3.76

location

place, either physical or electronic, that can be defined as an **address**

[ISO/IEC 15944-2:2006 (3.50)]

3.77

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

NOTE 1 This definition is independent of the material nature on which the information is recorded and/or technology used 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.).

NOTE 2 The inclusion of the "non-volatile in nature" attribute is to cover latency and records retention requirements.

NOTE 3 This definition of "medium" is independent of:

- i) the form or format of recorded information;
- ii) the physical dimension and/or size; and,
- iii) any container or housing that is physically separate from material being housed and without which the medium can remain a functional unit.

NOTE 4 This definition of "medium" also captures and integrates the following key properties:

- i) the property of medium as a material in or on which information or data can be recorded and retrieved;
- ii) the property of storage;
- iii) the property of physical carrier;
- iv) the property of physical manifestation, i.e., material;
- v) the property of a functional unit; and,
- vi) the property of (some degree of) stability of the material in or on which the information or data is recorded.

[ISO/IEC 15944-1:2011 (3.34)]

3.78

model

abstraction of some aspect of reality

[ISO 19115:2003 (4.9)]

3.79

multilingualism

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 domain**, sectoral and/or **consumer** marketplace perspectives

[ISO/IEC 15944-5:2008 (3.82)]

3.80

mutually defined - recognized individual identity (md-rii)

recognized individual identity (rii) which is mutually defined and agreed to for use between the **seller** and the **individual**, as **buyer**, in a **business transaction**

NOTE 1 The establishment of a mutually agreed to and recognized individual between a seller and individual, as buyer, does not extinguish the applicable privacy protection rights of that individual.

NOTE 2 A mutually defined recognized individual identity (md-rii) shall be established between the seller and the individual no later than the end of the negotiation phase.

NOTE 3 Use of a mutually defined recognized individual identity (md-rii) may not be permitted where external constraints apply.

3.81

name

designation of an **individual** concept by a linguistic expression

NOTE Adapted from ISO 1087-1:2000.

[ISO 5217:2000 (1.1.2.02)]

3.82

natural language

language which is or was in active use in a community of people, and the **rules** of which are mainly deduced from the usage

[ISO 5217:2000 (1.1.2.02)]

3.83

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)]

3.84

object class

set of ideas, abstractions, or things in the real world that can be identified with explicit boundaries and meaning and whose properties and behaviour follow the same **rules**

[ISO/IEC 11179-1:2004 (3.3.22)]

3.85

official language

external constraint in the form of a **natural language** specified by a **jurisdictional domain** for official use by **Persons** forming part of and/or subject to that **jurisdictional domain** for use in communication(s) either:

(1) within that **jurisdictional domain**; and/or,

(2) among such **Persons**, where such communications are **recorded information** involving **commitment(s)**

NOTE 1 Unless official language requirements state otherwise, Persons are free to choose their mutually acceptable natural language and/or special language for communications as well as exchange of commitments.

NOTE 2 A jurisdictional domain decides whether or not it has an official language. If not, it will have a de facto language.

NOTE 3 An official language(s) can be mandated for formal communications as well as provision of goods and services to Persons subject to that jurisdictional domain and for use in the legal and other conflict resolution system(s) of that jurisdictional domain, etc.

NOTE 4 Where applicable, use of an official language may be required in the exercise of rights and obligations of individuals in that jurisdictional domain.

NOTE 5 Where an official language of a jurisdictional domain has a controlled vocabulary of the nature of a terminology, it may well have the characteristics of a special language. In such cases, the terminology to be used must be specified.

NOTE 6 For an official language, the writing system(s) to be used shall be specified, where the spoken use of a natural language has more than one writing system.

EXAMPLE 1 The spoken language of use of an official language may at times have more than one writing system. For example, three writing systems exist for the Inuktitut language. Canada uses two of these writing systems, namely, a Latin-1 based (Roman), the other is syllabic-based. The third is used in Russia and is Cyrillic based.

EXAMPLE 2 Another example is that of Norway which has two official writing systems, both Latin-1 based, namely, Bokmål (Dano-Norwegian) and Nynorsk (New Norwegian).

NOTE 7 A jurisdictional domain may have more than one official language but these may or may not have equal status.

EXAMPLE Canada has two official languages, Switzerland has three, while the Union of South Africa has eleven official languages.

NOTE 8 The BOV requirement of the use of a specified language will place that requirement on any FSV supporting service.

EXAMPLE A BOV requirement of Arabic, Chinese, Russian, Japanese, Korean, etc., as an official language requires the FSV support service to be able to handle the associated character sets.

[ISO/IEC 15944-5:2008 (3.87)]

3.86

Open-edi

electronic data interchange among multiple autonomous **Persons** to accomplish an explicit shared **business** goal according to Open-edi standards

[ISO/IEC 14662:2010 (3.14)]

3.87

Open-edi Description Technique (OeDT)

specification method such as a **Formal Description Technique**, another methodology having the characteristics of a **Formal Description Technique**, or a combination of such techniques as needed to formally specify **BOV** concepts, in a computer processable form

[ISO/IEC 14662:2010 (3.16)]

3.88

Open-edi disposition

process governing the implementation of formally approved records retention, destruction (or expungement) or transfer of **recorded information** under the control of a **Person** which are documented in disposition authorities or similar instruments

NOTE Adapted from ISO 15489-1.

[ISO/IEC 15944-5:2008: (3.90)]

3.89

Open-edi Party (OeP)

Person that participates in **Open-edi**

NOTE Often in this ISO/IEC 15944-1 standard referred to generically as "party" or "parties" for any entity modelled as a Person as playing a role in Open-edi scenarios.

[ISO/IEC 14662:2010 (3.17)]

3.90

Open-edi Record Retention (OeRR)

specification of a period of time that a **set of recorded information** must be kept by a **Person** in order to meet operational, legal, regulatory, fiscal or other requirements as specified in the **external constraints** (or **internal constraints**) applicable to a **Person** who is a party to a **business transaction**

[ISO/IEC 15944-5:2008 (3.92)]

3.91

Open-edi system

information technology system which enables an **Open-edi Party** to participate in **Open-edi** transactions

[ISO/IEC 14662:2010 (3.22)]

3.92

organization

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:

EXAMPLE 1 An organization incorporated under law.

EXAMPLE 2 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.

EXAMPLE 3 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)]

3.93

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)]

3.94

organization Person

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

NOTE 1 An organization can have one or more organization Persons.

NOTE 2 An organization Person is deemed to represent and act on behalf of the organization and to do so in a specified capacity.

NOTE 3 An organization Person can be a "natural person" such as an employee or officer of the organization.

NOTE 4 An organization Person can be a legal person, i.e., another organization.

[ISO/IEC 15944-1:2011 (3.46)]

3.95

Person

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)

NOTE 1 Synonyms for "legal person" include "artificial person", "body corporate", etc., depending on the terminology used in competent jurisdictions.

NOTE 2 Person is capitalized to indicate that it is being used as formally defined in the standards and to differentiate it from its day-to-day use.

NOTE 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 14662:2010 (3.24)]

3.96

Person authentication

provision of the assurance of a **recognized Person identity (rPi)** (sufficient for the purpose of the **business transaction**) by corroboration

[ISO/IEC 15944-1:2011 (3.48)]

3.97

persona

set of **data elements** and their values by which a **Person** wishes to be known and thus identified in a **business transaction**

[ISO/IEC 15944-1:2010 (3.51)]

3.98

persona Registration Schema (pRS)

formal **definition** of 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 **persona** profile of a **Person**)

[ISO/IEC 15944-1:2011 (3.52)]

3.99

personal information

any information on or 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.

[ISO/IEC 15944-5:2008 (3.103)]

3.100

Person identity (Pi)

combination of **persona information** and **identifier** used by a **Person** in a **business transaction**

[ISO/IEC 15944-1:2011 (3.49)]

3.101

Person signature

signature, i.e., a **name** representation, distinguishing mark or usual mark, which is created by and pertains to a **Person**

[ISO/IEC 15944-1:2011 (3.50)]

3.102

personal information filing system

any structured set of personal information which is accessible according to specific criteria, whether centralized, decentralized or dispersed on a functional or geographical basis

3.103

physical address

address that is used/recognized by a postal authority and/or courier service to deliver information item(s), material **object(s)**, or **business object(s)** to a **Contact** at either an actual **address** or a pick-up point **address**, (e.g., P.O. Box, rural route, etc.)

[ISO/IEC 15944-2:2006 (3.80)]

3.104

pivot code set

set of **ID 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**

NOTE 1 The use of the pivot code set 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.

NOTE 2 At times a coded domain has more than one valid code set, (e.g., ISO 639, ISO 3166, etc.).

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.

[ISO/IEC 15944-5:2008: (3.104)]