INTERNATIONAL STANDARD

ISO/IEC 15944-8

First edition
2012-04-01

Information technology — Business Operational View —

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-cc2512a96be2/iso-iec-15944-8-2012

Reference number
ISO/IEC 15944-8:2012(E)

© ISO/IEC 2012

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-cc2512a96be2/iso-iec-15944-8-2012

COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

© ISO/IEC 2012 – All rights reserved

Contents

Page

Foreword vii

0 Introduction viii
0.1 Purpose and overview viii
0.1.1 ISO/IEC 14662 "Open-edi Reference Model" viii
0.1.2 ISO/IEC 15944-1 “Business Agreement Semantic Descriptive Techniques” (“Business Operational View (BOV”)) x
0.2 Introducing the use of "Person", "organization" and "party" in the context of business transaction and commitment exchange xi
0.3 Importance and role of terms and definitions xiii
0.4 Importance of the two classes of constraints of the Business Transaction Model (BTM) xiii
0.5 Need for a standard based on rules and guidelines xiv
0.6 Use of "jurisdictional domain", and "jurisdiction" (and "country") in the context of business transaction and commitment exchange xv
0.7 Use of "identifier" as "identifier (in business transaction)" to prevent ambiguity xvi
0.8 Use of “privacy protection” in the context of business transaction and commitment exchange xvi
0.9 Organization and description of this document xvii

1 Scope 1
1.1 Statement of scope 1
1.2 Exclusions 2
1.2.1 Functional Services View (FSV) 2
1.2.2 Internal behaviour of organizations (and public administration) 2
1.2.3 “organization Person” 2
1.2.4 Overlap of and/or conflict among jurisdictional domains as sources of privacy protection requirements 2
1.2.5 Publicly available personal information 3
1.3 Aspects currently not addressed 4
1.4 IT-systems environment neutrality 7
2 Normative references 9
2.1 ISO/IEC, ISO and ITU 9
2.2 Referenced specifications 10

3 Terms and definitions 11

4 Symbols and abbreviations 41

5 Fundamental principles and assumptions governing privacy protection requirements in business transactions involving individuals (external constraints perspective) 43
5.1 Introduction 43
5.2 Exceptions to the application of the privacy protection principles 46
5.3 Fundamental Privacy Protection Principles 46
5.3.1 Privacy Protection Principle 1: Preventing Harm 46
5.3.2 Privacy Protection Principle 2: Accountability 47
5.3.3 Privacy Protection Principle 3: Identifying Purposes 50
5.3.4 Privacy Protection Principle 4: Informed Consent 50
5.3.5 Privacy Protection Principle 5: Limiting Collection 52
5.3.6 Privacy Protection Principle 6: Limiting Use, Disclosure and Retention 54
5.3.7 Privacy Protection Principle 7: Accuracy 57
5.3.8 Privacy Protection Principle 8: Safeguards 58
5.3.9 Privacy Protection Principle 9: Openness 59
5.3.10 Principle Protection Principle 10: Individual Access 60
5.3.11 Privacy Protection Principle 11: Challenging Compliance 62

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-cc2512a90be2/iso-iec-15944-8-2012

© ISO/IEC 2012 – All rights reserved

5.4 Requirement for tagging (or labelling) data elements in support of privacy protection requirements 63

6 Collaboration space and privacy protection 65
6.1 Introduction 65
6.2 Basic Open-edi collaboration space: Buyer and seller 65
6.3 Collaboration space: The role of buyer (as individual), seller and regulator 66

7 Public policy requirements of jurisdictional domains 69
7.1 Introduction 69
7.2 Jurisdictional domains and public policy requirements 69
7.2.1 Privacy protection 70
7.2.2 Person and external constraints: Consumer protection 72
7.2.3 Individual accessibility 73
7.2.4 Human rights 74
7.2.5 Privacy as a right of an "individual" and not the right of an organization or public administration 74

8 Principles and rules governing the establishment, management and use of identities of an individual 77
8.1 Introduction 77
8.2 Rules governing the establishment of personae, identifiers and signatures of an individual 78
8.3 Rules governing the assignment of unique identifiers to an individual by Registration Authorities (RAs) 84
8.4 Rules governing individual identity, authentication, recognition, and use 85
8.5 Legally recognized individual identifies (LRIIs) 90

9 Person component – individual sub-type 93
9.1 Introduction 93
9.2 Role qualification of a Person as an individual 93
9.3 Persona and legally recognized names (LRNs) of an individual 94
9.4 Truncation of legally recognized names of individuals 94
9.5 Rules governing anonymization of individuals in a business transaction 95
9.6 Rules governing pseudonymization of personal information in a business transaction 97

10 Process component 99
10.1 Introduction 99
10.2 Planning 99
10.3 Identification 99
10.4 Negotiation 100
10.5 Actualization 100
10.6 Post-Actualization 100

11 Data component 101
11.1 Introduction 101
11.2 Rules governing the role of Business Transaction Identifier (BTI) in support of privacy protection requirements 101
11.3 Rules governing state of change management of business transactions in support of privacy protection requirements 102
11.4 Rules governing records retention of personal information in a business transaction 102
11.5 Rules governing time/date referencing of personal information in a business transaction 103

12 Template for identifying privacy protection requirements on business transactions 105
12.1 Introduction and basic principles 105
12.2 Template structure and contents 105
12.3 Template for specifying the scope of an Open-edi scenario 106
12.4 Consolidated template of attributes of Open-edi scenarios, roles and information bundles 113

13 Conformance statement 119
13.1 Introduction 119
13.2 Conformance to the ISO/IEC 14662 Open-edi Reference Model and the multipart ISO/IEC 15944 eBusiness standard 119
13.3 Conformance to ISO/IEC 15944-8 119

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4b10-a2c0-ec2513a96be2/iso-iec-15944-8-2012

 © ISO/IEC 2012 – All rights reserved

Annex A (normative) Consolidated list of terms and definitions with cultural adaptability: ISO English and ISO French language equivalency 120
A.1 Introduction 120
A.2 ISO English and ISO French 120
A.3 Cultural adaptability and quality control 120
A.4 Organization of Annex A – Consolidated list in matrix form 121
A.5 Consolidated list of ISO/IEC 15944-8 terms and definitions 122

Annex B (normative) Consolidated set of rules in existing Parts of ISO/IEC 15944 of particular relevance to privacy protection requirements as external constraints on business transactions 185
B.1 Introduction 185
B.2 Organization of Annex B: Consolidated list in matrix form 185
B.3 Consolidated list of rules in ISO/IEC 15944-1 pertaining to external constraints relevant to supporting privacy protection requirements 186
B.4 Consolidated list of rules in ISO/IEC 15944-2 pertaining to external constraints of relevance to supporting privacy protection requirements 189
B.5 Consolidated list of rules in ISO/IEC 15944-5 pertaining to external constraints of relevance to supporting privacy protection requirements 190
B.6 Consolidated list of rules in ISO/IEC 15944-7 pertaining to external constraints of relevance to supporting privacy protection requirements 194

Annex C (normative) Business Transaction Model (BTM): Classes of constraints 200

Annex D (normative) Integrated set of information life cycle management (ILCM) principles in support of information law compliance 205
D.1 Introduction 205
D.2 Purpose 205
D.3 Approach 206
D.4 Integrated set of information life cycle management (ILCM) principles 206

Annex E (normative) Key existing concepts and definitions applicable to the establishment, management, and use of identities of a single individual 209

Annex F (normative) Coded domains for specifying state change and record retention management in support of privacy protection requirements 211
F.1 Introduction 211
F.2 State changes 212
F.2.1 Introduction 212
F.2.2 Specification of state changes allowed to personal information 213
F.2.3 Store change type 214
F.3 Records retention 216
F.4 Records destruction 218

Bibliography 220

iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-dc2512a960be/iso-iec-15944-8-2012

© ISO/IEC 2012 – All rights reserved

Figures

Page

Figure 1 — Open-edi environment – Open-edi Reference Model ix
Figure 2 — Integrated view - Business operational requirements: External constraints focus..... xi
Figure 3 — Primary sources for privacy protection principles..... 45
Figure 4 — Concept of a business collaboration 66
Figure 5 — Privacy collaboration space (of a business transaction) including the role of a regulator . 68
Figure 6 — Common public policy requirements, i.e., external constraints, applying to a business transaction where the “buyer” is an “individual” 70
Figure 7 — Illustration of relationships of links of a (real world) individual to (its) persona (e) to identification schemas and resulting identifiers to associated Person signatures — in the context of different business transactions and governing rules 80
Figure 8 — Illustration of range of links between personae and identifiers of an individual identity(ies) of an individual..... 86
Figure 9 — Illustration of two basic options for establishment of a recognized individual identity (rii) 89

Figure C.1 — Business Transaction Model - Fundamental components (Graphic illustration)..... 200
Figure C.2 — UML-based Representation of Figure C.1 — Business Transaction Model..... 201
Figure C.3 — Business Transaction Model: Classes of constraints..... 204

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Tables

Page

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-

Table 1 — Template for specifying the scope of an Open-edi scenario..... 106
Table 2 — Consolidated template of attributes of Open-edi scenarios, roles and information bundles 113

Table F.1 — ISO/IEC 15944-5:05 Codes for specifying state changes allowed for the values of Information Bundles and Semantic Components..... 213
Table F.2 — ISO/IEC 15944-5:06 Codes representing store change type for Information Bundles and Semantic Components 215
Table F.3 — ISO/IEC 15944-5:02 Codes Representing Specification of Records Retention Responsibility..... 216
Table F.4 — ISO/IEC 15944-5:04 Codes representing retention triggers..... 218
Table F.5 — ISO/IEC 15944-5:03 Codes representing disposition of recorded information..... 219

© ISO/IEC 2012 – All rights reserved

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*.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-cc2512a96be2/iso-iec-15944-8-2012

— *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*

© ISO/IEC 2012 – All rights reserved

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-edi 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-edi Reference Model"[1]

iTeh STANDARD PREVIEW
(standards.iteh.ai)

The ISO/IEC 14662 Open-edi Reference Model[2] 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.

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/6108f274-c4f3-4619-a2c0-ce2512a96be2/iso-iec-15944-8-2012

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-edi environment. {For definitions of the terms used in Figure 1, please see Clause 3 below}

---

1 The ISO/IEC 14462 Open-edi 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-edi Reference Model/Technologies de l'information — Modèle de référence EDI-ouvert*".

© ISO/IEC 2012 – All rights reserved

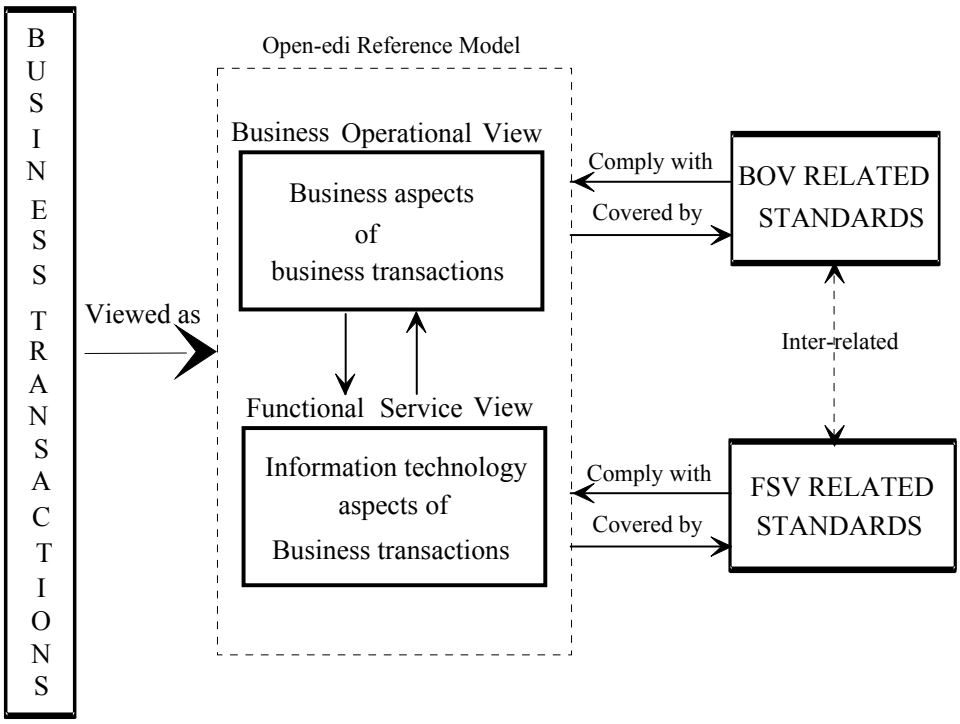


Figure 1 — Open-edi environment – Open-edi Reference Model

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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)*".

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/610862f4-c4f3-4619-a2d0-cc2512a96be2/iso-iec-15944-8-2012

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*

© ISO/IEC 2012 – All rights reserved

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:

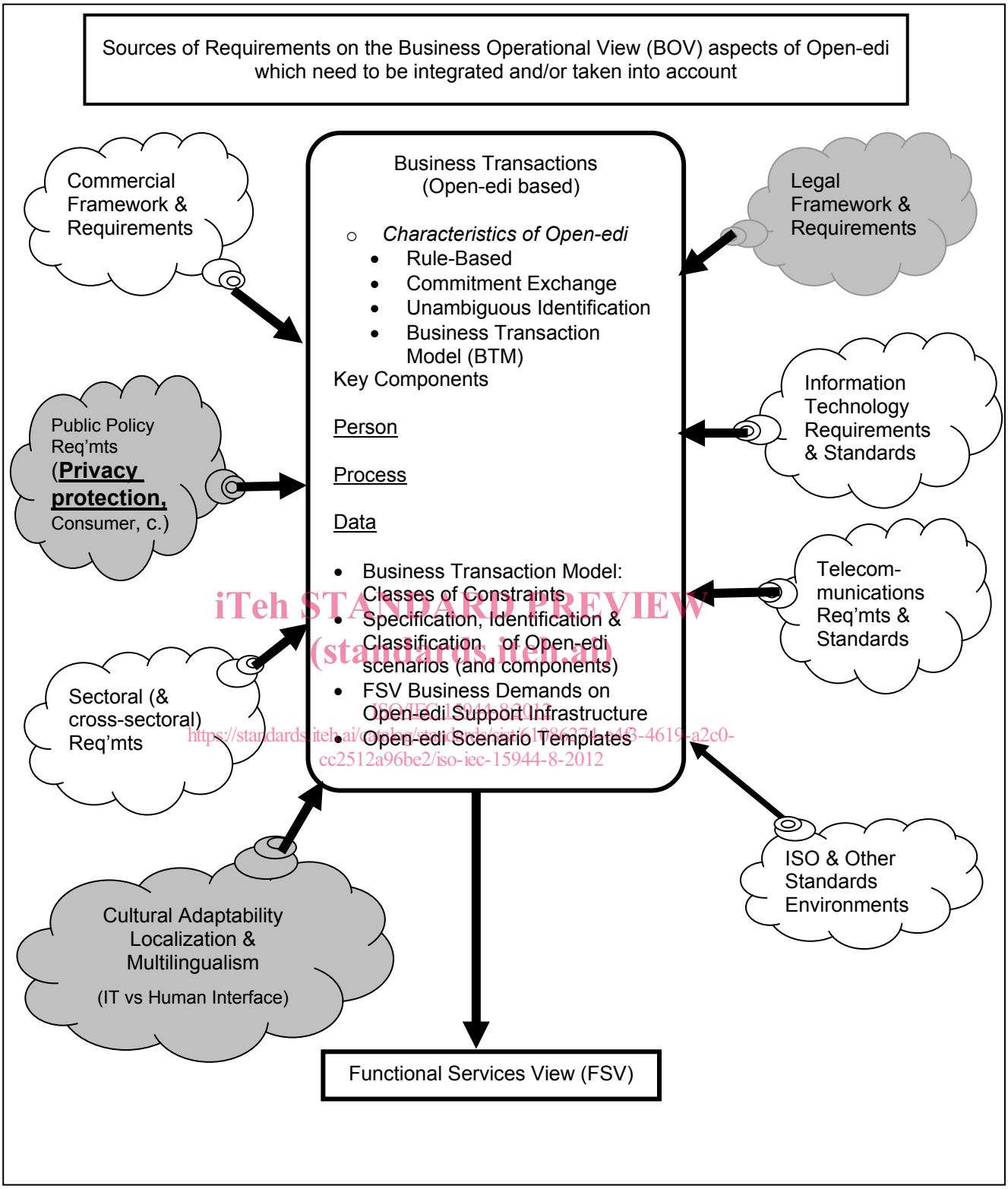
iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61086274-e4f3-4619-a2c0-cc2512a96be2/iso-iec-15944-8-2012

  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).

 © ISO/IEC 2012 – All rights reserved



iTeh STANDARD PREVIEW
(standards.iteh.ai)
ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/61986274-a4f3-4619-a2c0-cc2512a96be2/iso-iec-15944-8-2012

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

© ISO/IEC 2012 – All rights reserved

Information Technology Systems (IT Systems)[3] acting on behalf of "Persons". "Persons" are the only entities able to make commitments[4]. 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/b10862f4-c4f3-4b19-a2c0-cc2512a96be2/iso-iec-15944-8-2012

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).

 © ISO/IEC 2012 – All rights reserved

- 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 definitions[5]

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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}*

© ISO/IEC 2012 – All rights reserved

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 guidelines[8]

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".

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

ISO/IEC 15944-8:2012
https://standards.iteh.ai/catalog/standards/sist/6...

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" standards[10]. 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.

© ISO/IEC 2012 – All rights reserved

- *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 font[12]. 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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

© ISO/IEC 2012 – All rights reserved