

# ISO/IEC 15944-5:2008-06 (E)

## Information technology - Business Operational View - Part 5: Identification and referencing of requirements of jurisdictional domains as sources of external constraints

Contents	Page
Index of Figures .....	vii
Foreword .....	viii
0 Introduction.....	ix
0.1 Purpose and overview .....	ix
0.1.1 ISO/IEC 14662 "Open-edi Reference Model" .....	ix
0.1.2 ISO/IEC 15944-1 "Business Agreement Semantic Descriptive Techniques" .....	x
0.2 Use of "Person", "organization" and "party" in the context of business transactions and commitment exchange.....	xii
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).....	xiv
0.5 Standard based on rules and guidelines .....	xiv
0.6 Use of "jurisdictional domain" and "jurisdiction" (and "country") in the context of business transactions and commitment exchange .....	xv
0.7 Use of "identifier" as "identifier (in business transactions)" .....	xvi
0.8 Organization and description of this part of ISO/IEC 15944 .....	xvi
1 Scope .....	1
1.1 Statement of scope .....	1
1.2 Exclusions .....	2
1.2.1 Mutual recognition of jurisdictional domain by other jurisdictional domains .....	2
1.2.2 Formation of jurisdictional domains .....	2
1.2.3 "Overlap" of and/or conflict among jurisdictional domains as sources of external constraints .....	2
1.2.4 Artificial languages, programming languages, mark-up languages, etc.....	2
1.3 Aspects not currently addressed .....	3
1.4 IT systems environment neutrality .....	3
2 Normative references .....	4
2.1 ISO/IEC, ISO and ITU .....	4
2.2 Referenced specifications .....	6
3 Terms and definitions .....	8
4 Symbols and abbreviations .....	35
5 Fundamental principles and assumptions .....	36
5.1 Introduction.....	36
5.2 Key constructs.....	37
5.2.1 Principles and rules .....	37
5.2.2 Collaboration space – internal constraints only .....	38
5.2.3 Collaboration space - the role of "regulator" representing "external constraints" .....	39
5.3 Jurisdictional domain as a source of external constraints.....	41
5.4 Jurisdictional domains as "Persons" and "public administrations" .....	42
5.5 UN member states as "pivot" jurisdictional domains .....	43
5.6 Jurisdictional domains as "peers" .....	44
5.7 Identification and mapping of external constraints to business transactions, scenarios and their components as business objects.....	45
6 Principal requirements of jurisdictional domains.....	46
6.1 Introduction.....	46
6.2 Jurisdictional domains and official languages .....	46
6.2.1 Introduction - choice of use of language (in a business transaction) .....	46
6.2.2 Jurisdictional domain as an external constraint on choice of language(s) .....	48
6.2.3 What is an "official language?" .....	50

6.2.4	What is a “de facto language”?	51
6.2.5	What is a “legally recognized language (LRL)”?	52
6.2.6	Gender and official languages	53
6.2.7	Official languages and human interchange equivalents (HIEs) of semantic components	54
6.2.8	UN member states and their official (or de facto) languages	56
6.2.9	International organizations and official languages	57
6.3	Jurisdictional domains and public policy requirements	58
6.3.1	Introduction	58
6.3.2	Person and external constraints: consumer protection	59
6.3.3	Privacy protection	60
6.3.4	Individual accessibility	61
6.3.5	Human rights	62
6.4	Jurisdictional domains and identification systems	62
6.5	Jurisdictional domains and classification systems	64
6.6	Jurisdictional domains and the components of a business transaction	65
6.6.1	6.6.1 Introduction	65
6.6.2	Person component	65
6.6.2.1	Introduction	65
6.6.2.2	Role qualification of a Person	65
6.6.2.3	Personae as legally recognized names (LRNs)	66
6.6.2.4	Truncation of a persona	69
6.6.3	Process component	70
6.6.4	Data component	71
6.6.4.1	General	71
6.6.4.2	Record retention	71
6.6.4.3	State Changes	74
6.6.4.4	Business transaction identifier (BTI)	77
6.6.4.5	Date/time referencing	78
7	Rules governing the formation and identification of jurisdictional domains	81
7.1	Introduction	81
7.2	As single entities - UN member states	82
7.3	Jurisdictional domains resulting from international treaties	83
7.3.1	Treaties as jurisdictional domains and their registration	83
7.3.2	Bilateral treaties	84
7.3.3	Plurilateral treaties	85
7.3.4	Multilateral treaties (or conventions)	86
7.4	As a supranational organization	86
7.5	As an international organization	86
7.6	As a regional entity	87
7.7	As sub-types of a UN member state	87
7.8	Unambiguous identification and referencing of jurisdictional domains	87
7.8.1	Introduction	87
7.8.2	Unambiguous identification and referencing UN member states including their administrative sub-divisions	87
7.8.3	Unambiguous identification and referencing of jurisdictional domains resulting from legally binding treaties	88
8	Template for the identification of external constraints of jurisdictional domains	91
8.1	Introduction and basic principles	91
8.2	Template structure and contents	91
8.3	Template for specifying the scope of an open-edi scenario	92
8.4	Consolidated template of attributes of Open-edi scenarios, roles and information bundles	96

<b>Annex A (normative) Consolidated list of terms and definitions with cultural adaptability: ISO</b>	
<b>English and ISO French language equivalency .....</b>	<b>100</b>
<b>A.1 Introduction.....</b>	<b>100</b>
<b>A.2 ISO English and ISO French.....</b>	<b>100</b>
<b>A.3 Cultural adaptability and quality control.....</b>	<b>101</b>
<b>A.4 List of terms in French alphabetical order.....</b>	<b>101</b>
<b>A.5 Organization of Annex A, "Consolidated matrix of terms and definitions" .....</b>	<b>106</b>
<b>A.6 Consolidated Matrix of ISO/IEC 15944-4 Terms and Definitions in English and French .....</b>	<b>108</b>
<b>Annex B (normative) Consolidated set of rules of ISO/IEC 15944-1:2002 governing business transactions, their scoping and specification as Open-edi scenarios and their components of particular relevance to "external constraints" .....</b>	<b>157</b>
<b>B.1 Introduction.....</b>	<b>157</b>
<b>B.2 Organization of Annex B: consolidated list in matrix form.....</b>	<b>157</b>
<b>B.3 Consolidated list of rules in ISO/IEC 15944-1:2002 pertaining to external constraints .....</b>	<b>158</b>
<b>Annex C (normative) BusinessTransaction Model (BTM): classes of constraints .....</b>	<b>161</b>
<b>Annex D (normative) Unambiguous semantic components and jurisdictional domains: Standard default convention for the identification, interworking and referencing of combinations of codes representing countries, languages, and currencies .....</b>	<b>166</b>
<b>D.1 Introduction.....</b>	<b>166</b>
<b>D.2 Purpose .....</b>	<b>168</b>
<b>D.3 Exclusions to Annex D.....</b>	<b>168</b>
<b>D.4 Current issues and approach taken .....</b>	<b>169</b>
<b>D.4.1 Summary of nature of issues pertaining to interworking of codes representing countries, languages, and currencies .....</b>	<b>169</b>
<b>D.4.1.1 ISO 3166-1 "Country Codes" .....</b>	<b>170</b>
<b>D.4.1.2 ISO 639-2 "Language Codes" .....</b>	<b>171</b>
<b>D.4.1.3 ISO 4217 "Currency Codes" .....</b>	<b>171</b>
<b>D.4.2 Principles governing approach taken .....</b>	<b>172</b>
<b>D.5 Common default conventions .....</b>	<b>172</b>
<b>D.5.1 Default convention #1 for the unambiguous identification and referencing of combinations of codes representing countries, languages and currencies .....</b>	<b>172</b>
<b>D.5.2 Default convention #2 for the ordering of codes representing countries, languages and currencies .....</b>	<b>173</b>
<b>D.6 Application of default convention #1 for identifying codes representing countries, languages and currencies with default convention #2 for ordering them .....</b>	<b>173</b>
<b>Annex E (informative) Codes representing UN member states and their official (or de facto) languages .....</b>	<b>174</b>
<b>E.1 Introduction to Annex E.....</b>	<b>174</b>
<b>E.2 Purpose of Annex E .....</b>	<b>176</b>
<b>E.3 Exclusions to Annex E.....</b>	<b>177</b>
<b>E.4 Organization of Annex E.....</b>	<b>177</b>
<b>E.5 Informative notes.....</b>	<b>179</b>
<b>E.6 15944-5:08 coded domain of "codes representing UN member states and their official (or de facto) languages" .....</b>	<b>181</b>
<b>Annex F (informative) Examples of multiple human interface equivalents (HIE) for a single IT-interface identifier .....</b>	<b>200</b>
<b>F.1 Purpose and use of Annex F.....</b>	<b>200</b>
<b>F.2 Example 1: taken from ISO 19135:2005(E).....</b>	<b>200</b>
<b>F.3 Example 2: Taken from ISO/IEC 5218:2004.....</b>	<b>202</b>
<b>Annex G (informative) Examples of various ontologies resulting from modelling business scenarios with (1) internal constraints only; and, (2) with external constraints: use case - "buyer", "seller", "third party" and "regulator".....</b>	<b>205</b>
<b>G.1 Introduction.....</b>	<b>205</b>
<b>G.2 Modelling buyer, seller and third party - internal constraints only .....</b>	<b>205</b>
<b>G.3 Modelling buyer, seller and regulator .....</b>	<b>208</b>
<b>G.4 Modelling buyer, seller and regulator using a third party.....</b>	<b>209</b>

**Annex H (informative) Levels of international regulatory regimes .....211**

**Annex I (informative) Example of classification system: Harmonized System (HS) nomenclature of the World Customs Organization (WCO) .....213**

**Annex J (informative) Coded domain for non-UN member states listed in ISO 3166-1:1997.....215**

**J.1 Introduction .....215**

**J.2 Organization of Annex J – Coded domain “15944-5:09” .....216**

**J.3 ISO/IEC 15944-5:08 Codes representing non-UN member states listed in ISO 3166-1 .....218**

**Annex K (informative) Examples of the need for specifying gender of terms and nouns to ensure unambiguity in use of an official language.....220**

**K.1 Introduction .....220**

**K.2 Organization of the Annex K matrix.....220**

**K.3 Examples of the same word having two gender forms and two different meanings .....221**

**Bibliography .....223**

## Index of Tables

Table 1 — ISO/IEC 15944-5:01 Codes representing gender in natural languages.....	54
Table 2 — ISO/IEC 15944-5:02 Codes Representing Specification of Records Retention Responsibility .....	73
Table 3 — ISO/IEC 15944-5:03 Codes representing disposition of recorded information.....	73
Table 4 — ISO/IEC 15944-5:04 Codes representing retention triggers .....	74
Table 5 — ISO/IEC 15944-5:05 Codes for specifying state changes allowed for the values of Information Bundles and Semantic Components.....	75
Table 6 — ISO/IEC 15944-5:06 Codes representing store change type for Information Bundles and Semantic Components.....	76
Table 7 — Coded Domain 15944-5:07 Codes Representing UN member states and their Official (or de facto) Languages.....	181
Table 8 — ISO/IEC 15944-5:08 Codes representing Non-UN member states listed in ISO 3166-1.....	218

## Index of Figures

Figure 1 — Open-edi environment.....	ix
Figure 2 — Integrated View – Business Operational Requirements: External Constraints Focus.....	xi
Figure 3 — Accounting and economic ontology (internal constraints only): Buyer, seller and common collaboration space (Graphic illustration) .....	39
Figure 4 — Accounting and economic ontology (internal constraints only): Buyer, seller and common collaboration space with a third party (Graphic illustration) .....	39
Figure 5 — Illustration of accounting and economic ontology with external constraints: Common collaboration space — Buyer, seller and regulator (Graphic illustration).....	40
Figure 6 — Accounting and economic ontology with external constraints: Common Collaboration Space — Buyer, Seller and Regulator utilizing a Third Party (Graphic Illustration).....	41
Figure 7 — Integrated View of (1) two classes of constraints, (2) the three (primitive) roles of a Person and (3) three sub-types of Person .....	42
Figure 8 — Business Transaction Model — Fundamental elements (Graphic illustration) .....	161
Figure 9 — UML-based Representation of Figure 8 — Business Transaction Model — .....	162
Figure 10 — Business Transaction Model: Classes of constraints .....	165
Figure 11 — Example of the distinction between identifiers used in an information technology interface and representations used in a human interface.....	201
Figure 12 — Accounting and Economic Ontology (internal constraints only): Buyer, Seller and Common Collaboration Space (Graphic illustration).....	205
Figure 13 — Accounting and Economic Ontology (internal constraints only): Buyer, Seller and Common Collaboration Space with a Third Party (Graphic Illustration) .....	206
Figure 14 — Accounting and economic ontology with external constraints: Common Collaboration Space - Buyer, Seller and Regulator (Graphic Illustration).....	209
Figure 15 — Accounting and economic ontology with external constraints: Common Collaboration Space – Buyer, Seller and Regulator utilizing a Third Party (Graphic illustration) .....	209
Figure 16 — Examples of the same word having two gender forms and two different meanings .....	221