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Information technology — Business Operational View

Part 20: Linking business operational view to functional service view

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National foreword

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Part 20: Linking business operational view to functional Linking business operational view to functional service viewservice view

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC32, *Data management and interchange*.

ISO/IEC 15944-20 *Linking business operational view (BOV) to functional service view (FSV)* 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 9: Business transaction traceability framework for commitment exchange*

— *Part 10: IT-enabled coded domains as semantic components in business transactions*

The following part is under preparation:

— *Part 12: Privacy protection requirements on information life cycle management (ICLM) in EDI*

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Introduction

ISO/IEC 14662 Open-edi Reference Model describes the conceptual architecture necessary for carrying out Open-edi. This architecture describes the need to have two separate and related views of the business activities. The first is the Business Operational View (BOV). The second is the Functional Service View (FSV). Figure 1 (Figure 1 from ISO/IEC 14662:2010) depicts the Open-edi environment (for definitions of the terms in Figure 1 see clause 3).

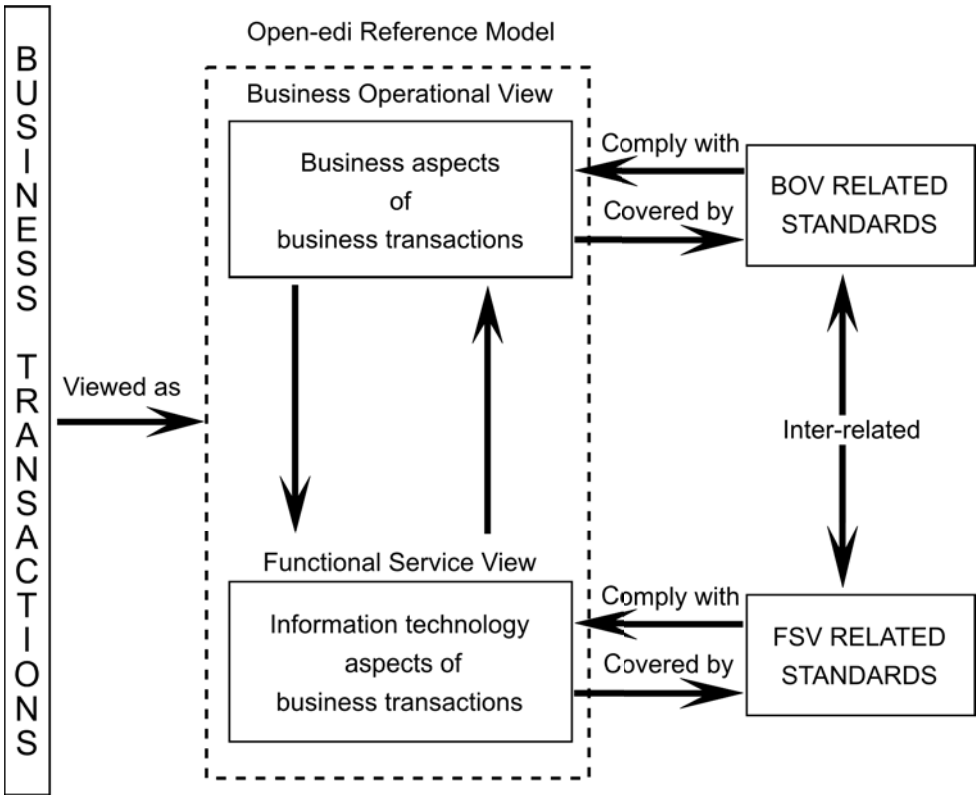

Figure 1 — Open-edi environment - relationships

An Open-edi Party (OeP) is involved in one or more Open-edi configurations, with each configuration executing Open-edi transactions corresponding to a given Open-edi scenario (OeS). The focus of executing these transactions is interoperability among Open-edi Support Entities (OeSEs) of OePs in an Open-edi community.

BOV-related standards address the business aspects of the transactions among OePs in a single Open-edi environment. Agreeing upon a given Open-edi scenario with one set of business partners does not necessarily address a different Open-edi scenario with another set of business partners.

FSV-related standards address the information technology aspects of the interactions among OePs. To accommodate a single OeP's participation in more than one community, grounding the information technology aspects on a suite of base FSV standards promotes interoperability. Doing so also promotes ease of adaptation among communities to specific needs mandated in a given community.

The Open-edi Reference Model (ISO/IEC 14662:2010, Clause 5.2) states the following regarding the Functional Service View (FSV):

> *Within the FSV, the interoperability addresses the interactions between the IT Systems supporting the Open-edi Parties. Interoperability implies that two or more IT systems, conforming to the standards*

1) *ISO/IEC 14662 Information technology - Open-edi Reference Model/Technologies de l'information - Modèle de référence EDI-ouvert.* The English and French versions of this ISO/IEC standard are publicly available. {See <http://www.jtc1.org>}

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related to the FSV, are able to co-operate and support the execution of business transactions that are in compliance with Open-edi scenarios. FSV-related standards address information technology interoperability aspects which are generic to business transactions.

The FSV identifies and models the generic functional capabilities of IT Systems which are needed to support the execution of Open-edi transactions. In addition, it provides the basic concepts which will allow the FSV-related standards to accommodate different configurations of organizations and IT systems to provide these functional capabilities.

A base FSV standard is a complete specification from which typically a subset of the specification, possibly also including an extension, is used in an Information Technology System (IT system). A base FSV standard is considered as the whole cloth from which the material for a given garment is cut.

The actual implemented subsets and extensions of base FSV standards for the Open-edi systems in an Open-edi community may not, themselves, be standardized. However, the base FSV standards on which they are derived are developed to promote ease-of-adaptation by implementers.

ISO/IEC 15944 Part 20 *Linking business operational view (BOV) to functional service view (FSV)* is a standard establishing the principles and qualities of these specifications to be standardized as base FSV standards. Also included is a formulation of the processes by which users implement the FSV standards in an Open-edi system for interoperability. These relationships are depicted in Figure 2.

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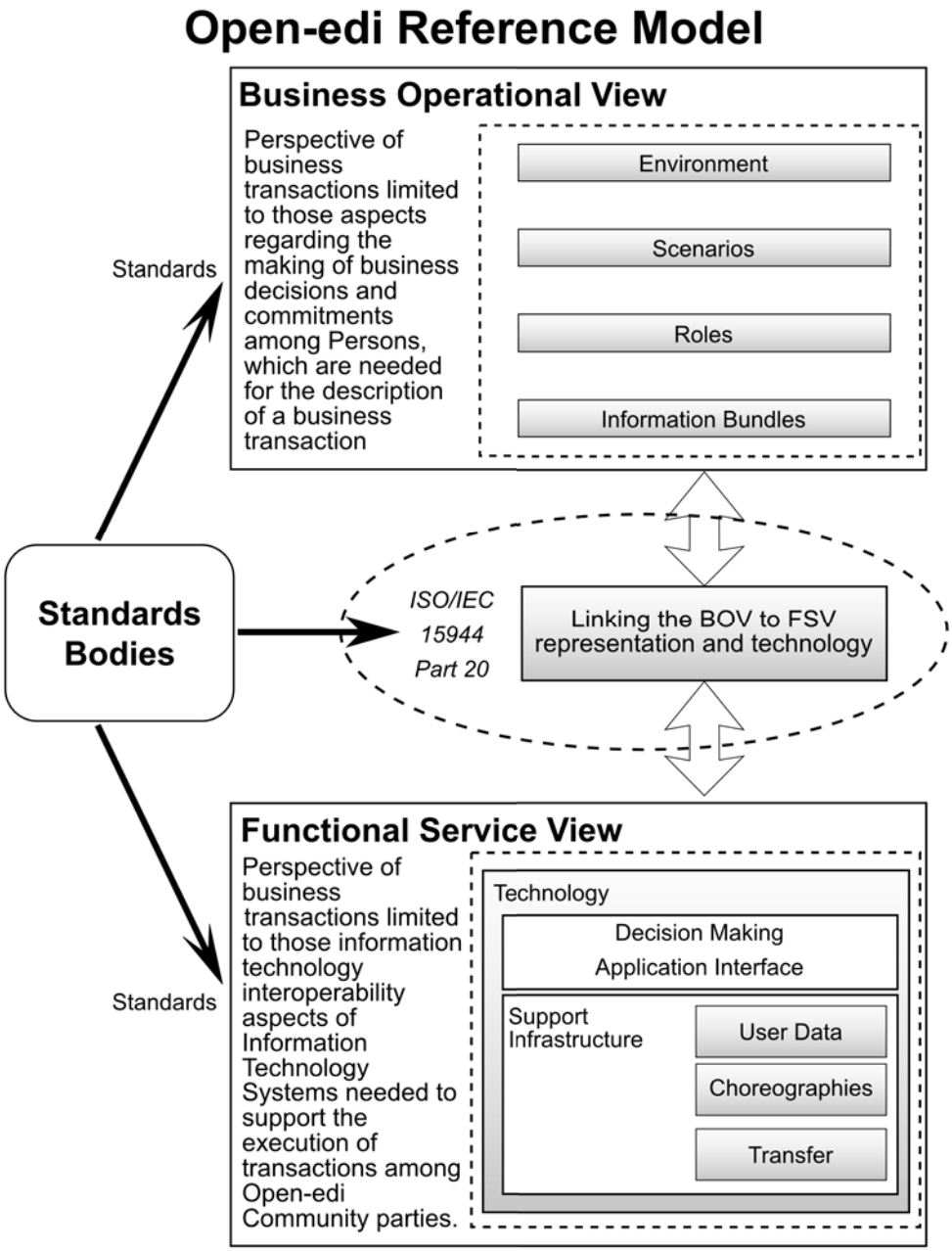

Figure 2 — Part 20 view of the Open-edi Reference Model

Thus, implementations of the FSV standards from base FSV standards promote interoperability among OePs within an Open-edi community, enhancing the adaptability needed for multiple configurations in which any given OeP participates. Moreover, some possible level of additional beneficial interoperability may end up existing between differing configurations, further enhancing the interoperability of an OeP within the larger business world.

NOTE Because this part deals with the bridging of BOV standards to FSV standards it contains no "rules" as found in other parts of ISO/IEC 15944.

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Information Technology — Business Operational View —

Part 20: Linking business operational view to functional service view

1 Scope

1.1 Statement of scope

ISO/IEC 15944-20 specifies the properties of Base Functional Specification View (FSV) Standards in order to best meet the requirements of the Business Operational View (BOV) with interoperable implementations. Base FSV standards exhibiting these properties support business transactions beyond those that are in compliance with Open-edi scenarios (OeS). Additional beneficial business transactions may also be supported between a given IT system and IT system(s) outside of the Open-edi scenarios for which they were designed.

These base FSV standards address those aspects of interoperability between IT systems used among Parties of the Open-edi Community participating in the scenario. Examples of such standards include the choreography of interchanges among systems, and the foundational structure and syntax used to express Information Bundles (IB) in the interchanges.

1.2 Exclusions

ISO/IEC 15944-20 does not specify the properties of FSV implementations related to the interfaces of the Open-edi support infrastructure (OeSI) to the technology of the Information Processing Domain (IPD) in which they are being used. Those are the interfaces of the services offered to Decision Making Applications (DMA), and to the inter-working of the Open-edi support entities (OeSE) of the OeSI. How these OeSEs interact are self-contained within a Party's IPD and have no interworking relationship with those OeSEs of other IT system(s) in the scenario.

The Open-edi Reference Model (ISO/IEC 14662:2010, Clause 0.3) observes the following regarding interoperability:

Only the external behaviour of Open-edi Parties affects the interoperability of Open-edi Systems.

2 Terms and definitions

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

2.1
base FSV standard
Functional Service View standard from which a systematic derivation of some kind is implemented in an *Open-edi scenario*

2.2
business
series of processes, each having a clearly understood purpose, involving more than one *Person*, realised through the exchange of information and directed towards some mutually agreed upon goal, extending over a period of time

[ISO/IEC 14662:2010, 3.2]

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2.3
Business Operational View
BOV
perspective of *business transaction*s limited to those aspects regarding the making of business decisions and commitments among *Person*s, which are needed for the description of a *business transaction*

[ISO/IEC 14662:2010, 3.3]

2.4
business transaction
predefined set of activities and/or processes of *Person*s 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 *Person*s although some of the recognition might be implicit

[ISO/IEC 14662:2010, 3.4]

2.5
choreography

instantiation of an *Open-edi scenario* in accordance with the rules governing the roles and *Information Bundle*s of that scenario, whose elements interact in a non-directed fashion with each autonomous member knowing and following an observable predefined pattern of behavior for the entire (global) instantiation

NOTE There can be more than one choreography serving as an instantiation of an Open-edi scenario.

[adapted from ISO/IEC TR 30102:2012, 2.1.3]

2.6
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, 3.24]

2.7
Decision Making Application
DMA
model of that part of an *Open-edi system* that makes decisions corresponding to the role(s) that the *Open-edi Party* plays, as well as originating, receiving and managing data values contained in instantiated *Information Bundle*s, which is not required to be visible to the other *Open-edi Party*(ies)

[ISO/IEC 14662:2010, 3.7]

2.8
eBusiness
business transaction, involving the making of commitments, in a defined collaboration space, among *Person*s using their *Information Technology System*, according to *Open-edi Standard*s

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.

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