~~Date: 2023-12-19~~

~~Reference number of document:~~ **ISO/IEC FDIS 15944-~~-~~17**

~~Committee identification:~~ ISO/IEC JTC ~~001~~ 1/SC 32~~/WG 01~~

Secretariat: ~~JTC1/SC32~~ ANSI

Date: 2024-01-10

Information technology — Business ~~Operational View —~~ operational view —

Part 17: Fundamental principles and rules governing Privacy ~~-~~ by ~~-~~ Design (~~PhD~~PbD) requirements in an EDI and collaboration space context

~~*Technologies de l'information — Vue opérationnelle d'affaires — Partie 17: JTC1/SC32*~~

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Contents Page

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List of Figures

List of Tables

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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.

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~~www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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

This document is intended to be used in conjunction with ISO/IEC 14662, ISO/IEC 15944-1, ISO/IEC 15944-4, ISO/IEC 15944-5, ISO/IEC 15944-8 and ISO/IEC 15944-12.

A list of all parts in the ISO/IEC 15944 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at ~~www.iso.org/members.html~~www.iso.org/members.html and www.iec.ch/national-committees.

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Introduction

0.1 Purpose and overview

The ISO/IEC 14662 and the ~~multipart~~ ISO/IEC 15944 Business Operational View (BOV) series of standards focus on electronic data interchange (EDI) and "collaboration space" among Persons. Modelling business transactions using scenarios and scenario components includes specifying the applicable constraints on the data using explicitly stated rules. The ISO/IEC 14662 Open-edi Reference Model identifies two basic classes of constraints, "internal constraints" and "external constraints".

Jurisdictional domains are the primary source of external constraints on business transactions. Privacy protection is addressed as a common set of external constraint requirements coming from jurisdictional domains. Jurisdictional domains, such as UN member states and/or their administrative sub-divisions (see further ~~5.2~~5.2 on sources of requirements), 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 medium used for the recording of personal information and/or its communication to other Persons.

The overall purpose of the PbD ~~[2]~~[2] approach is two folds: (1) to ensure that privacy protection requirements (as stated in applicable legal and/or regulatory requirements) are identified as early as possible in the business operational process; (2) are specified in a systematic and rule-based manner for those developing any IT systems within their organization.

The PbD approach has always been supported and embedded in ISO/IEC 15944 development work. The need for the multipart ISO/IEC series of standards to comply with and support privacy protection requirements was already incorporated in the1st edition of ~~Part 1 titled "*Operational aspects of Open-edi for implementation.*"~~ISO/IEC 15944-1. The development of the multipart series of ISO/IEC 15944 eBusiness standards and relevant parts of the multipart ISO/IEC standard that focus on privacy protection requirements fully supports the seven (7) foundational principles of the PbD approach ~~[2].~~ [2] In particular, it provides the detailed rules, definitions and related guidelines necessary to ensure that privacy protection requirements are identified and implemented not only throughout the entire life cycle of the recorded information involved, i.e. ~~,~~ "cradle-to-grave" information life cycle management (ILCM) but especially for any personal information interchanged via EDI among parities to a particular business transaction.

This document highlights the requirements of ISO/IEC 14662 and ISO/IEC 15944 that focus on addressing commonly definable aspects of external constraints that relate to Privacy by Design in a privacy protection requirements (PPR) context when the source is a jurisdictional domain.[1] Use of this document (and related standards) addresses the transformation of these external constraints (business rules) into specified, registered, and re-useable scenarios and scenario components.

This document also extends the requirements of ISO/IEC 14662 and ISO/IEC 15944 where relevant and describes the added business semantic descriptive techniques needed to support PbD aspects beyond privacy protection requirements (PPR) when modelling business transactions. PbD aspects are central to ensuring that PPR are embedded early on in the design, passed on and supported throughout the lifecycle of the personal information, among all the parties to a business transaction using EDI.

0.2 Use of ISO/IEC 14662 and ISO/IEC 15944

0.2.1 ISO/IEC 14662 "Open-edi Reference Model"[2]

[1] See further ~~Clause~~ sublause 0.2 below which identifies and summarizes the relevance of ISO/IEC 14662 and specific parts of the multipart ISO/IEC 15944 standard to this document.

[2] 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 [harmonization of standardization in the field of electronic

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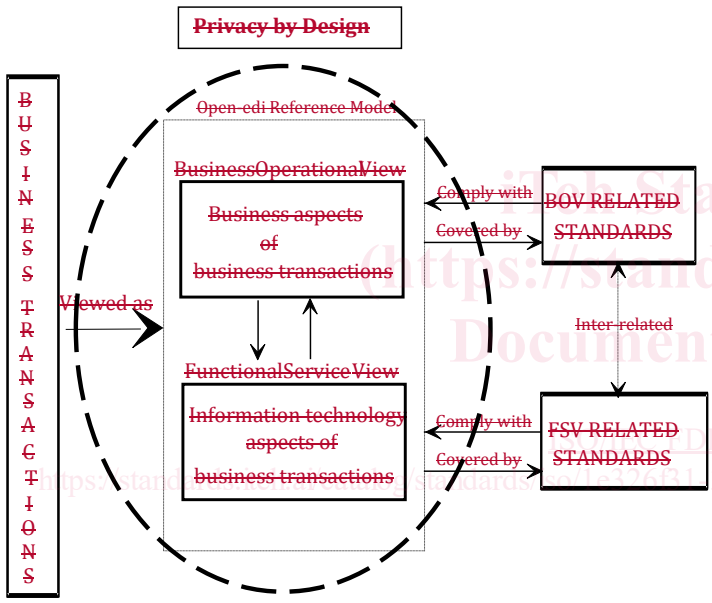
ISO/IEC 14662 states the conceptual architecture necessary for carrying out electronic business transactions among autonomous parties. That architecture identifies and describes the need to have two separate and related views of the business transaction. ISO/IEC 15944 is a multipart eBusiness standard which is based on and focuses on the BOV perspective of the ISO/IEC 14662 Open-edi reference model.

The delivery of Privacy by Design and privacy protection requires action both at the business operational level (BOV) and functional services view (FSV) (or technology levels). Where human beings interact with recorded information once it has passed through an Open-edi transaction, they have the potential to compromise technical controls (FSV) that -have been applied. It is essential that business models take into account the need to establish overarching business processes that address issues that have not been, and/or cannot be resolved by the technical FSV controls. This is to provide the overall privacy protection demands of regulation that are required to be applied to personal data, their use, prescribed dissemination and so on. In this regard, the interplay of the BOV and FSV views of all organizations is important.

The first is the Business Operational View (BOV). The second is the Functional Service View (FSV). Figure 1 from ISO/IEC 14662-:2010, Figure 1 illustrates the realm to which PbD aligns with the Open-edi environment.



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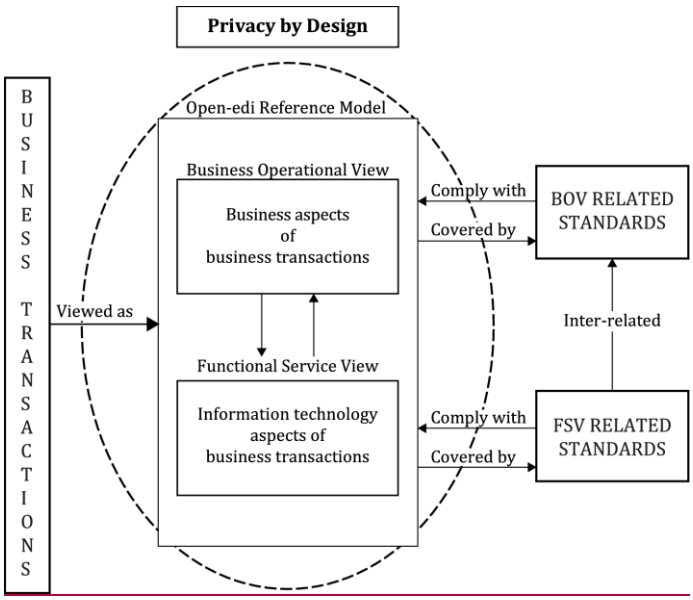

Figure ~~1~~ 1 — Privacy by Design and Open-edi reference model environment

0.2.2 ISO/IEC 15944-1 Business operational view (BOV) ~~operational~~ Operational aspects of Open-edi for implementation

ISO/IEC 15944-1 states the requirements of the BOV aspects of Open-edi in support of electronic business transactions. They include:

— commercial frameworks and associated requirements;

— legal frameworks and associated requirements;

— public policy requirements particularly which apply to individuals, i.e. are rights of individuals, which are of a generic nature such as consumer protection, privacy protection, accessibility and human rights (see ISO/IEC 15944-5:~~2017~~2008, 6.3);

— requirements arising from the need to support cultural adaptability. This includes meeting localization and multilingual requirements, (e.g. as can be required by a particular jurisdictional domain or desired to provide a good, service and/or right in a particular market). One needs the ability to distinguish, the specification of scenarios, scenario components, and their semantics, in the context of making commitments, between:

a) ~~a)~~ the use of unique, unambiguous and linguistically neutral identifiers (often as composite identifiers) at the information technology interface level among the IT systems of participation parties on the one hand; and, on the other,

b) ~~b)~~ their multiple human interface equivalent (HIE) expressions in a presentation form appropriate to the Persons involved in the making of the resulting commitments.