INTERNATIONAL STANDARD

ISO/IEC 19988

Second edition 2017-10

Information technology — Core Business Vocabulary Standard

Technologies de l'information — Vocabulaire normatif relatif aux activités de base



Reference number ISO/IEC 19988:2017(E)

COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: <u>www.iso.org/iso/foreword.html</u>.

This document was prepared by the GS1 and was adopted, under the PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by national bodies of ISO and IEC.

This second edition cancels and replaces the first edition (ISO/IEC 19988:2015), which has been technically revised.

The main changes compared to the previous edition are as follows:

- A new standard vocabulary for EPCIS error declaration reason identifiers is added.
- The URI structure for EPCIS event identifiers is specified.
- New business step values dispensing and voidShipping added.
- New disposition values dispensed and partially_dispensed added.
- A new section for trade item master data attributes is added, and the section on location and party master data attributes is expanded.



Document Summary

Document Item	Current Value
Document Name	Core Business Vocabulary Standard
Document Date	Sep 2016
Document Version	1.2
Document Issue	
Document Status	Ratified
Document Description	specifies the structure of vocabularies and specific values for the vocabulary elements to be utilised in conjunction with the GS1 EPCIS standard

Log of Changes

Release	Date of Change	Changed By	Summary of Change
1.0	Oct 2010		Initial release
1.1	March 2014		A new standard vocabulary for EPCIS source/destination type is added.
			Templates for new user vocabularies for EPCIS source/destination identifier, EPCIS transformation identifier, and object classes are added.
			New business step, disposition, and business transaction type values are added. The definitions of existing values are also clarified.
			Disposition values non_sellable_expired, non_sellable_damaged, non_sellable_disposed, non_sellable_no_pedigree_match, and non_sellable_recalled defined in CBV 1.0 are deprecated in favour of new disposition values expired, damaged, disposed, no_pedigree_match, and recalled introduced in CBV 1.1.
			RFC5870-compliant geocoordinate URIs are now permitted as location identifiers.
			The introductory material is revised to align with the GS1 System Architecture.
1.2	Sep 2016		CBV 1.2 is fully backward compatible with CBV 1.1 and 1.0.
			CBV 1.2 includes these new or enhanced features:
			A new standard vocabulary for EPCIS error declaration reason identifiers is added.
			The URI structure for EPCIS event identifiers is specified.
			New business step values dispensing and voidShipping added.
			New disposition values dispensed and partially_dispensed added.
			A new section for trade item master data attributes is added, and the section on location and party master data attributes is expanded.

Disclaimer

GS1[®], under its IP Policy, seeks to avoid uncertainty regarding intellectual property claims by requiring the participants in the Work Group that developed this **Core Business Vocabulary Standard** to agree to grant to GS1 members a royalty-free licence or a RAND licence to Necessary Claims, as that term is defined in the GS1 IP Policy. Furthermore, attention is drawn to the possibility that an implementation of one or more features of this Specification may be the subject of a patent or other intellectual property right that does not involve a Necessary Claim. Any such patent or other intellectual property right is not subject to the licencing obligations of GS1. Moreover, the agreement to grant licences provided under the GS1 IP Policy does not include IP rights and any claims of third parties who were not participants in the Work Group.

Accordingly, GS1 recommends that any organisation developing an implementation designed to be in conformance with this Specification should determine whether there are any patents that may encompass a specific implementation that the organisation is developing in compliance with the Specification and whether a licence under a patent or other intellectual

ISO/IEC 19988:2017(E)



Core Business Vocabulary Standard

property right is needed. Such a determination of a need for licencing should be made in view of the details of the specific system designed by the organisation in consultation with their own patent counsel.

THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, NONINFRINGMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHER WISE ARISING OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this Standard, whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any intellectual property rights, relating to use of information in or reliance upon this document.

GS1 retains the right to make changes to this document at any time, without notice. GS1 makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

GS1 and the GS1 logo are registered trademarks of GS1 AISBL.



Table of Contents

1	Introduction – Core Business Vocabulary7			
2	Relationship to the GS1 System Architecture	7		
3	Relationship to EPCIS 3.1 EPCIS event structure. 3.2 Vocabulary kinds. 3.2.1 Standard Vocabulary. 3.2.2 User Vocabulary .	8 9 9		
4	Terminology and typographical conventions	. 10		
5	Compliance and compatibility 5.1 CBV Compliant 5.2 CBV compatible	11 13		
6	 Use of Uniform Resource Identifiers (URIs) 6.1 URI prefix for Standard Vocabularies in the CBV. 6.2 Limitation on Use of the URI prefix 6.2.1 Example of limitation of use of URI prefix (non-normative) 	14 14		
7	Standard Vocabularies 7.1 Business steps 7.1.1 URI structure 7.1.2 Compliant usage 7.1.3 Element values and definitions – Business step	15 15 15		
	 7.2 Dispositions	22 22 23		
	 7.3 Business Transaction Types 7.3.1 URI structure 7.3.2 Compliant usage 7.3.3 Element Values and Definitions – Business Transaction Types 	27 27		
	 7.4 Source/Destination types 7.4.1 URI structure	28 28		
	 7.5 Error reason identifiers	29 29		
8	User vocabularies 8.1 General considerations. 8.1.1 General Considerations for EPC URIs as User Vocabulary Elements 8.1.2 General Considerations for Private or Industry-wide URN as User Vocabulary elements	29 30		

ISO/IEC 19988:2017(E)



		8.1.3	General Considerations for HTTP URLs as User Vocabulary elements	31
	8.2	Phys	sical or digital objects (Instance-Level Identification)	32
		8.2.1	EPC URI for Instance-level identification of objects	33
		8.2.2	Private or Industry-wide URN for Instance-level identification of objects	33
		8.2.3	HTTP URLs for Instance-level identification of objects	33
	8.3	Phys	ical or digital objects (Class-level identification)	34
		8.3.1	EPC URI for Class-level identification of objects	34
		8.3.2	Private or Industry-wide URN for Class-level identification of objects	35
		8.3.3	HTTP URLs for Class-level identification of objects	36
	8.4	Loca	tions	
		8.4.1	EPC URI for Location identifiers	37
		8.4.2	Private or Industry-wide URN for Location identifiers	37
		8.4.3	HTTP URLs for Location identifiers	37
		8.4.4	Geographic Location URIs for Location identifiers	38
	8.5	Busi	ness transactions	38
		8.5.1	EPC URI for Business transaction identifiers	39
		8.5.2	GLN-based identifier for legacy system business transaction identifiers	39
		8.5.3	Private or Industry-wide URN for business transaction identifiers	40
		8.5.4	HTTP URLs for business transaction identifiers	40
	8.6	Sour	ce/Destination identifiers	40
		8.6.1	EPC URI for Source/Destination identifiers	41
		8.6.2	Private or Industry-wide URN for Source/Destination identifiers	41
		8.6.3	HTTP URLs for Source/Destination identifiers	41
	8.7	Tran	sformation identifiers	42
		8.7.1	EPC URI for Transformation identifiers	42
		8.7.2	GLN-based Identifier for Legacy System Transformation identifiers	
		8.7.3	Private or Industry-wide URN for Transformation identifiers	
		8.7.4	HTTP URLs for Transformation identifiers	
	8.8	Even	nt identifiers	43
		8.8.1	Universally Unique Identifier (UUID) URIs for Event identifiers	
9	Tra	de ite	em master data	
	9.1	Trad	e item master data attribute names	45
	9.2	Trad	e item master data attributes	45
		9.2.1	Trade item master data attributes – trade item level	46
		9.2.2	Trade item master data attributes – lot level	47
		9.2.3	Trade item master data attributes – instance-level	49
		9.2.4	Values of type measurement	49
10		Locat	tion and party master data	
	10.1		tion and party master data attribute names	
	10.2		tion and party master data attributes	
	10.3		tion master data code list values	
		10.3.1	Sub-Site Type	53
			Sub-Site Attributes	
		A _		
11		U EX	cample EPCIS Documents (non-normative)	

11.1	CBV-Compliant object event using standard vocabulary	55
11.2	CBV-Compliant object event using HTTP URLs and Private or Industry-wide URNs	56

ISO/IEC 19988:2017(E)



Core Business Vocabulary Standard

2	F	References	58
1	11.4	Location master data	. 58
1	11.3	CBV-Compatible event	. 57



1 Introduction – Core Business Vocabulary

This GS1 standard defines the Core Business Vocabulary (CBV). The goal of this standard is to specify various vocabulary elements and their values for use in conjunction with the EPCIS standard [EPCIS1.2], which defines mechanisms to exchange information both within and across organisation boundaries. The vocabulary identifiers and definitions in this standard will ensure that all parties who exchange EPCIS data using the Core Business Vocabulary will have a common understanding of the semantic meaning of that data.

This standard is intended to provide a basic capability that meets the above goal. In particular, this standard is designed to define vocabularies that are *core* to the EPCIS abstract data model and are applicable to a broad set of business scenarios common to many industries that have a desire or requirement to share data. This standard intends to provide a useful set of values and definitions that can be consistently understood by each party in the supply chain.

Additional end user requirements may be addressed by augmenting the vocabulary elements herein with additional vocabulary elements defined for a particular industry or a set of users or a single user. Additional values for the standard vocabulary types defined in this standard may be included in follow-on versions of this standard.

This standard includes identifier syntax and specific vocabulary element values with their definitions for these *Standard Vocabularies*:

- Business step identifiers
- Disposition identifiers
- Business transaction types
- Source/Destination types
- Error reason identifiers

This standard provides identifier syntax options for these User Vocabularies:

- Objects
- Locations
- Business transactions
- Source/Destination identifiers
- Transformation identifiers
- Event identifiers

This standard provides *Master Data Attributes and Values* for describing Physical Locations including:

- Site Location
- Sub-Site Type
- Sub-Site Attributes
- Sub-Site Detail

Additional detailed master data regarding locations (addresses, etc.) are not defined in this standard.