



The Global Language of Business

GS1 Semantic Model Methodology Writing Rules Standard

describes the writing rules used for the creation of the GS1
EDI Semantic Data Dictionary (SDD)

Release 1.1, Ratified, Oct 2022

Document Summary

Document Item	Current Value
Document Name	GS1 Semantic Model Methodology Writing Rules Standard
Document Date	Oct 2022
Document Version	1.1
Document Issue	
Document Status	Ratified
Document Description	describes the writing rules used for the creation of the GS1 EDI Semantic Data Dictionary (SDD)

Contributors

Name	Organisation
Henri Barthel	GS1 Global Office
Xavier Barras	GS1 France
Salima Bekraoui	GS1 Italy
Miklos Bolyky	GS1 Global Office
David Buckley	GS1 Global Office
Anthony Chan	GS1 Hong Kong, China
Benjamin Couty	GS1 France
Jean-Luc Champion	GS1 Global Office
Tomasz Dębicki	GS1 Poland
Seán Dennison	GS1 Ireland
Tom Depoorter	GS1 Belgium & Luxembourg
Karina Duvinger	GS1 Sweden/GS1 Global Office
Klaus Foerderer	GS1 Germany
Jan Fuchs	GS1 Global Office
Anders Grangard	GS1 Global Office
Andrew Hearn	GS1 Global Office
Jenny Hertzfeldt	GEFEG mbH
Ewa Iwicka	GS1 Global Office
Peter Jonsson	GS1 Sweden
Steven Keddie	GS1 Global Office
Anne-Claire Krid	GS1 France
Piergiorgio Licciardello	GS1 Global Office (Lead Editor)
Adrien Molines	GS1 France (Lead Editor)
John Papadopoulos	GS1 UK
Christian Przybilla	GS1 Germany
Kalpana Raghupatruni	GEFEG mbH
Tom Eric Schmidt	August Storck KG
Marco Schwarzenbach	GS1 Switzerland



Name	Organisation
Cesar Silvestre	GS1 Mexico
Roman Strand	GS1 Germany
Jeroen Van Weperen	GS1 Australia
Sten Walde	GS1 Sweden
Jan Westerkamp	GS1 Netherlands
Stephan Wijnker	GS1 Australia
Dirk Willekens	GS1 Belgium & Luxembourg

Log of Changes

Release	Date of Change	Changed By	Summary of Change
1.0	Dec 2020	Adrien Molines	WR 20-061 initial publication
1.1	Oct 2022	Piergiorgio Licciardello	WR 21-149 updates based on usage feedback

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 **GS1 Semantic Model Methodology Writing Rules 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 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, NONINFRINGEMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this document, 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	5
2	Notes inside Semantic Data Dictionary	5
2.1	Notes expressing a Business Data Term or Business Data Term Group.....	5
2.2	Notes expressing the Context field for a specific document model	6
2.3	Code list management in Semantic Data Dictionary	7
3	Writing Rules	7
3.1	General rules	7
3.2	Rules for identifying a business data term or group	7
3.3	General Rules for naming a business data term or group.....	7
3.4	Specific Rules for naming a business data term or group.....	8
3.4.1	Business data terms or groups, which are constituted by a GS1 acronym such as GLN, GTIN, SSCC, GDTI and other GS1 identification keys.....	8
3.4.2	Business data terms or groups which are constituted by an abbreviation	8
3.4.3	Business data terms or groups which contains dates	9
3.4.4	Business data terms or group which contain a date and time.....	10
3.4.5	Rules only for business data terms which contain a time period or date period	10
3.4.6	Business data terms or groups which contain a coded value.....	10
3.4.7	Business data terms or groups which contain a reference to a document	11
3.4.8	Business data terms or groups which contain a reference to a line in a document	11
3.4.9	Business data terms or groups which contain a monetary amount.....	11
3.4.10	Business data terms derived from a Boolean data type	11
3.5	General rules for definitions of business data terms or groups	11
3.6	Specific Rules for definitions of business data terms or groups	12
3.6.1	Business data terms or group definitions which contain identifiers such as GLN, GTIN, SSCC, GDTI or other GS1 identification keys.....	12
3.6.2	Business data term or group definitions which contain a reference to a document.....	12
3.6.3	Rules for a definition in business data terms or groups using the word "information".....	12
3.6.4	Rules for a definition in business data terms or groups using the word "date time"	12
3.7	Rules for "Used Code list" within business data terms	12
3.8	Rules for the field Usage	13
3.9	Rules for the field Usage rule	13
3.10	Rules for the field Example.....	13
3.11	Rules for Document Model.....	13
3.11.1	Rules for the field Description.....	13
3.11.2	Rules for the field Example	13

1 Introduction

This document describes the writing rules used for the creation and maintenances of GS1 EDI Semantic Data Dictionary (SDD). It contains also rules for Document Model.

All these rules are applied on Business Data Terms (BDT) and Business Data Terms Groups (BDTG).

A **Business Data Term** is a full set of information which expresses the Business name, definition and how to use it. The goal is to create a Business reference that will be the bridge to all technical information.

A **Business Data Term group** regroup several Business data terms and use it in order to constitute a particular business usage.

Another document, the [GS1 EDI Semantic Model Methodology](#), includes:

- Principles and preconditions
- Business process
- Collaboration processes
- Business documents
- Mapping to syntaxes
- Publication
- Communication
- Maintenance

This document is a complement to this Semantic Model Methodology – Writing rules and should be read together.

2 Notes inside Semantic Data Dictionary

2.1 Notes expressing a Business Data Term or Business Data Term Group

- **Name:** Name of the business data term or business data term group.
- **Definition:** Description of the business data term or business data term group.
- **Business rule:** Description of the reason why the business data term or group must be used in response to business or legal requirement.
 - *Examples:* "Mandatory if code "2" or "3" are entered in the business data term "EU unique identifier type code"."
- **Usage rule:** Description of how to use the business data term or group.
 - *Examples:* "To be used in addition to GS1 Global Product Classification standard."
- **Reference Definition:** Used when there is a definition from a specific source which are relevant to include for a specific BDT.
- **Example:** Concrete example of the use of the business data term or group.
- **Use code list:** Name the code list.
- **Link to used code list:** URL of the code list.
- **Remark:** Complementary information.
- **Status:** The status assigned to the business data term or group. (work in progress)
- **Synonyms:** Business data terms that have the same meaning and definition
 - *Examples:* Post office box number and "P.O. box, postal box"
- **Version:** Current version of the business data term or group. (work in progress)
- **GDD Name:** Name of the GDD data term used for the creation of the business data term.

- **GDD Definition:** Information about the GDD Name.
- **GDD Example:** Information about the example inside GDD.
- **SDD-ID:** ID used to identify this Business data term or business data term group.

Business data term (EN)	
Name	Global location number, GLN
Definition	The identity according to the GS1 identification system for unique identification of legal entities, roles and functions, physical and digital locations.
Business rule	
Usage	
Usage rule	
Reference definition	GS1 General Specifications: The GS1 identification key used to identify physical locations or parties. The key comprises a GS1 Company Prefix, location reference, and check digit.
Example	
Used code list	
Link to used code list	
Remark	GLN is the GS1 Identification Key used to identify physical locations or parties. The identification key is comprised of a GS1 Company Prefix, a location reference and a check digit.
Status	
Synonyms	
Version	
SDD-ID	BDT00000063
GDD Name (EN)	gln
GDD Definition (EN)	The Global Location Number (GLN) is the GS1 Identification Key used to identify physical locations or parties. The key is comprised of a GS1 Company Prefix, Location Reference, and Check Digit.

Example of BDT notes.

2.2 Notes expressing the Context field for a specific document model

The field "Context" is a block that expresses all information specific to a document model (e.g. Order). All this information will be linked to a specific business data term or group. It will help for understanding the business data term or group inside specific circumstances.

- **Description:** Specified information about the business data term (BDT) and business data term groups (BDTG) in a Document model.
- **Examples:** Specified example for the Document Model.

Context (EN)	
Description	The order document is used when a buyer sends an order to a seller.
Example	

Example of context note.

Context (EN)	
Description	The order line is used to specify information which is specific for an ordered trade item. The order line is repeated for each ordered trade item. The same trade item can be ordered using multiple order lines.
Example	

Example of context note with multiple lines.

Business data term (EN)	
Name	Received order document status code
Definition	The code specifying the status of the received order document.
Business rule	
Usage	
Usage rule	
Example	
Used code list	ResponseStatusCode
Link to used code list	http://apps.gs1.org/GDD/Pages/clDetails.aspx?semanticURN=urn:gs1:gdd:cl:ResponseStatusCode
Remark	
Status	
Synonyms	
Version	
SDD-ID	BDTG00000381
Context (EN)	
Description	The business data term is used to indicate weather the received order is accepted, modified or rejected.
Example	ACCEPTED

Example of context note with BDT notes.

2.3 Code list management in Semantic Data Dictionary

While the Semantic Data Dictionary is intended to be syntax neutral, different syntaxes may adopt different code lists to represent a business term.

In consideration of this aspect, the notes “Used code list” and “Link to used code list” must be considered as a reference helping in the correct interpretation of the business data term.

The effective set of admitted values, when developing a real message, will depend on the target syntax and may differ from the code list included in the SDD.

Similar considerations apply to enumerations. The eventually proposed set of possible values will represent only a reference for the correct interpretation of the type of expected content. The effective values may vary according to the target syntax specifications.

The set of applicable values may vary also due to the application of restricted code lists, allowing, in a specific context, only a subset of codes.

For instance, in an invoice, only the document types relevant for this kind of message are allowed while other document types are relevant in an order.

3 Writing Rules

3.1 General rules

- R1. For business terms that are applicable at different levels in a message, for instance at header level as well as at item level, the reuse of existing BDTs or BDTGs should be privileged. If necessary, in order to clarify the usage of a term in different positions, the usage and context notes can be leveraged.

3.2 Rules for identifying a business data term or group

The following general rules apply for identifying a semantic business data term and group

- R2. Each business data term must be identified by a unique identifier in the GS1 semantic dictionary
- R3. The format of the identifier is written in the form: BDT + 8 digits and BDTG + 8 digits. (work in progress)



Example of identifier.

3.3 General Rules for naming a business data term or group

The following **general writing rules** apply for naming a business data term and a business data term group.

- R4. The name must be in British English.
- R5. Only the first word in the name must start with a capital letter except for proper nouns.
- R6. The name must be business oriented and non-technical.
- R7. The business data term and group name must be kept as shorter as possible.
- R8. The name may not contain abbreviations or acronyms except for those business data terms and business data term groups described in sections [3.4.1](#) and [3.4.2](#).
- R9. The name must be designed in a way that it is clear for what piece of information (data) it is to be used.
- R10. The name may not be designed in a way that allows it to be used for multiple purposes.
- R11. The name must be as generic as possible (makes it useful in different context), but without losing meaning and without violating R9.
- R12. The name must not contain references to other business data terms, code lists, standards (e.g. ISO). Such references should be listed in another field such as a comment included in the semantic description of a business document.

- R13. The name must be syntax independent (e.g. no references to EANCOM® or GS1 XML may be included).
- R14. When referencing another business data term, the SDD-ID + name must be written as a quotation.

Sample of good naming
Entity identification
Document status code
Global trade item number, GTIN
Allowance monetary amount
European Union unique identifier type code

3.4 Specific Rules for naming a business data term or group

The following specific rules for naming a business data term or group apply to business data terms or group used for GS1 identification keys, coded values, monetary amounts, references and dates or date periods.

3.4.1 Business data terms or groups, which are constituted by a GS1 acronym such as GLN, GTIN, SSCC, GDTI and other GS1 identification keys.

- R15. The business data terms or groups must be written in full name.
- R16. The acronym of the GS1 identification key must be included in the business data term name separated by a “,”.

Not so good naming	Reason	Better naming
GTIN	Not British English (R 3). Not business oriented (R 5). No clear use (R 8). The name must be written in full name and be complete by “,” and the acronym (R 13, R 14).	Global trade item number, GTIN
GLN	Not British English (R 3). Not business oriented (R 5). No clear use (R 8). The name must be written in full name and be complete by “,” and the acronym (R 13, R 14).	Global location number, GLN

3.4.2 Business data terms or groups which are constituted by an abbreviation

- R17. The business data terms or groups must be written in full name.
- R18. The abbreviation must be included in the business data term name separated by a “,”.

Not so good naming	Reason	Better naming
SEPA	The name must be written in full name and be complete by “,” and the acronym (R 16, R 17).	Single euro payments area information, SEPA

3.4.3 Business data terms or groups which contains dates

R19. The word “date” must be included in the name.

R20. The name must be designed in a way that it is clear what is meant by the indication of the date.

Not so good naming	Reason	Better naming
Date	No clear use (R 8). Multiple purposes (R 9). Lacks meaning for the date (R 19).	Document creation date
Estimated date for the delivery	Too long (R 6).	Estimated delivery date

3.4.4 Business data terms or group which contain a date and time

- R21. The words "date" and "time" must be included in the name.
- R22. The words "date" and "time" must be included in the business data term group if the group contains the business data terms "date" and "time", and the business data term group mainly expresses date and time information.
- R23. The business data term name must be designed in a way that it is clear what is meant by the indication of the date time.

Not so good naming	Reason	Better naming
Requested delivery time	No clear meaning (R 22). The word "date" must be included (R 20).	Requested delivery date time
Requested date and time for the delivery	Too long (R 6). Bad naming (R 21).	Requested delivery date time
Referenced customer document date and time information	(R21) the business data term does not mainly express a date. It contains date and time and other information.	Referenced customer document information

3.4.5 Rules only for business data terms which contain a time period or date period

- R24. When the SDD include a time or date period, the business data term must be split in two business data terms.
- R25. The business data term name must be designed in a way that it is clear what is meant by the indication of the begin or end period.

Not so good naming	Reason	Better naming
time period	split in 2 business data terms (R 23).	Begin time period End time period
Date period	split in 2 business data terms (R 23).	Begin date period End date period

3.4.6 Business data terms or groups which contain a coded value

- R26. The word "code" must be included in the name.
- R27. The word "code" must be in the end of the name.
- R28. The name must be designed in a way that it is clear what is meant by the coded information.

Not so good naming	Reason	Better naming
Currency code for invoice	Name is too specific (R 10). The word "code" not at the end (R 26).	Currency code
currency cording to ISO-4217	Name is too specific (R 10). Name includes reference to standard (R 11). The word "code" not at the end (R 26). (R54, R55, R56) For Code list reference	Currency code (Reference to ISO-4217 to be included in a separate field: "used code list", in the semantic model of the business document in which the business data term is used.)

3.4.7 Business data terms or groups which contain a reference to a document

- R29. The name must begin with the word "Referenced" when referring to a document.
- R30. The **Business data term group** name must end with "information" when the reference is to a set of information.
- R31. The name referring to a document must be designed in a way that it is clear which document is referenced.

Not so good naming	Reason	Better naming
Despatch advice	Name begins incorrect (R 28). Not clear as a reference (R 30).	Referenced despatch advice information

3.4.8 Business data terms or groups which contain a reference to a line in a document

- R32. When referring to a document line, the generic business data term must be used.
- R33. Where the business data term is used the exact meaning must be specified in the document model.

Not so good naming	Reason	Better naming
Line in despatch advice	Name begins incorrect (R 31). Not clear as a reference (R 32).	Document line number

3.4.9 Business data terms or groups which contain a monetary amount

- R34. When the name constitutes a monetary amount, it must include the word "monetary amount".

Not so good naming	Reason	Better naming
Total tax amount	The word "monetary" is not included (R 33).	Total tax monetary amount

3.4.10 Business data terms derived from a Boolean data type

- R35. No business data terms ... Boolean data type should appear in the semantic data dictionary.
- R36. A GDD Boolean attribute should be created as a business data term.
- R37. The name of the business data term must include the word "indicator" in the end.

Not so good naming	Reason	Better naming
Is signature required	The word "indicator" is not included (R 36).	Signature requirement indicator

3.5 General rules for definitions of business data terms or groups

The following **general writing rules** apply for the definition of a business data term and business data term group.

- R38. The definition must be in British English.
- R39. The definition must be business-oriented and non-technical.
- R40. The definition must be as short as possible.
- R41. The definition must be designed in a way that it is clear for what piece of information (data) it is to be used.
- R42. The definition must be as generic as possible (makes it useful in different context), but without losing meaning.
- R43. The definition must not contain any references to other business data terms or groups.

- R44. The definition must not contain any references to code lists.
- R45. The definition must not contain any references to standards (e.g. ISO).
- R46. The definition ... references should be defined as "used code list" and "Link to used code list" to the business data term/group.
- R47. The definition must be syntax independent (i.e. no references to EDIFACT or XML may be included).
- R48. The definition must be recognised globally. The definition must not be regional (e.g. EU).
- R49. The definition should start with the word: "The".

3.6 Specific Rules for definitions of business data terms or groups

The following **specific rules** for the definition of a business data term and group apply to business data terms or group used for GS1 identification keys, coded values, monetary amounts, references and dates or date periods.

3.6.1 Business data terms or group definitions which contain identifiers such as GLN, GTIN, SSCC, GDTI or other GS1 identification keys

- R50. The definition must begin with the words "Identity" when defining a business data term which constitutes an identifier.
- R51. The business data term definition may not mention any GS1 identification key.

1. Business data term name	Not so good definition	Reason	Better definition
Global trade item number, GTIN	The identification of any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, ordered, or invoiced at any point in any supply chain.	Not business oriented (R 38). Too long (R 39). The word "Identity of" missing (R 49).	Identity according to the GS1 identification system for unique identification of products and services.
Global location number, GLN	The globally unique identification attached to the logistic unit, used for logistical and traceability purposes.	Not business oriented (R 38). No clear use (R 40). The word "Identity of" missing (R 49).	Identity according to the GS1 identification system for unique identification of legal entities, roles and functions, physical and digital locations.

3.6.2 Business data term or group definitions which contain a reference to a document

- R52. It should start "The information specifying the details of a reference to".
- Example:** The information specifying the details of a reference to a despatch advice.

3.6.3 Rules for a definition in business data terms or groups using the word "information"

- R53. The description may start with: "The information specifying ...".

3.6.4 Rules for a definition in business data terms or groups using the word "date time"

- R54. The description may start with: "The date (and time)...".

3.7 Rules for "Used Code list" within business data terms

- R55. The direct link to a specific ISO code list should not be included but may be stated where it is available.
- R56. If the applied code list is an external code list from GS1 and is open and free of charge, the SDD should contain the direct link.

R57. If the applied code list is a GS1 code list, the SDD should contain the direct link.

3.8 Rules for the field Usage

R58. The sentence must start with the word: "Used to", "Used by", "Used in" or "Used for".

2. Business data term name	Example
Butter fat reference	Used for customs declarations when importing or exporting goods.
GS1 global product classification GPC attribute value code	Used in conjunction with the attribute type to further characterise the product specified by the brick.

3.9 Rules for the field Usage rule

R59. The information should express global or regional usage rules.

R60. All Local information should be expressed in a different location.

3.10 Rules for the field Example

R61. An example should be valid for all Business documents models, otherwise no example should be included.

3.11 Rules for Document Model

The following rules apply to all information included in the context fields that are linked to a Business Data Term or Group in the specified document model.

3.11.1 Rules for the field Description

R62. The information should express specified instructions for the document model.

Context (EN)	
Description	A reason for the specified action can be given by using "BDTG00000247 Reason for status of business document code".
Example	

3.11.2 Rules for the field Example

R63. An example should be understandable within the context it is written, otherwise no example should be included (dependent upon R60)

Context (EN)	
Description	The business data term is to be used in accordance with specified code in "BDT00000045 Business document action code". The business data term is used to indicate a reason for why a previously sent order is changed, deleted or partial changed.
Example	INVALID_BUYER_IDENTIFICATION