INTERNATIONAL STANDARD

ISO 8000-2

Fourth edition
2020-06
AMENDMENT 1

Data quality —

Part 2:
Vocabulary

AMENDMENT 1

Qualité des données —
Partie 2: Vocabulaire
AMENDEMENT 1

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This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

A list of all parts in the ISO 8000 series can be found on the ISO website.

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Data quality —

Part 2:
Vocabulary

AMENDMENT 1

Clause 3

Replace entry 3.1.1 with the following new entry:

3.1.1
process (noun)
set of interrelated or interacting activities that use inputs to deliver an intended result

[SOURCE: ISO 9000:2015, 3.4.1, modified — Notes to entry have been removed.]

Add the following new entries immediately after 3.2.6:

3.2.7
data element
unit of data that is considered in context to be indivisible

Note 1 to entry: The definition states that a data element is "indivisible" in some context. This means it is possible that a data element considered indivisible in one context (e.g. telephone number) can be divisible in another context (e.g. country code, area code, local number).

[SOURCE: ISO/IEC 11179-1:2015, 3.3.8, modified — The abbreviated term "DE" has been removed and the word "may" has been replaced by "can" in Note 1 to entry.]

3.2.8
value domain
set of permissible values

Note 1 to entry: The permissible values in a value domain can either be enumerated or expressed via a description.

[SOURCE: ISO/IEC 11179-1:2015, 3.3.31, modified — The abbreviated term "VD" has been removed and the word "may" has been replaced by "can" in Note 1 to entry.]

3.2.9
data element concept
concept that is an association of a property with an object class

Note 1 to entry: A data element concept is implicitly associated with both the property and the object class whose combination it expresses.

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Note 2 to entry: A data element concept can also be associated with zero or more conceptual domains, each of which expresses its value meanings.

Note 3 to entry: A data element concept can also be associated with zero or more data elements, each of which provides representation for the data element concept via its associated value domain.

[SOURCE: ISO/IEC 11179-1:2015, 3.3.9, modified — The abbreviated term "DEC" has been removed and the word "may" has been replaced by "can" in Notes 2 and 3 to entry.]

Replace entry 3.4.1 with the following new entry:

3.4.1
measure (verb)
ascertain or determine the magnitude or quantity of something

Add the following new entry immediately after 3.4.4:

3.4.5
unit of measurement
measurement unit
unit
real scalar quantity, defined and adopted by convention, with which any other quantity of the same kind can be compared to express the ratio of the second quantity to the first one as a number

[SOURCE: ISO 80000-1:2009, 3.9, modified — Notes to entry have been removed.]

Add the following new entry immediately after 3.5.5:

3.5.6
application software
application program
software or program that is specific to the solution of an application problem

[SOURCE: ISO/IEC 2382:2015, 2121364, modified — Notes to entry have been removed.]

Replace entry 3.6.1 with the following new entry:

3.6.1
data dictionary entry
description of an entity type containing, at a minimum, an unambiguous identifier, a term, and a definition

Note 1 to entry: In the ISO 8000 data architecture, a property need not be associated with a specific data type in a data dictionary. The association between a property and a data type can be made in a data specification.

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Note 2 to entry: In order to exchange a value corresponding to a data dictionary entry, more information than an identifier, a name and a definition can be needed. For a property, a data type is needed. Depending on the kind of property, other data items (e.g. unit of measurement, language) can also be needed. These elements can be given in the data dictionary, in a data specification that references the data dictionary entry, or directly associated with the data.

Note 3 to entry: In the ISO 13584 data architecture, the dictionary entry for a property is required to reference a specific data type. Thus, an ISO 13584 dictionary entry is a special case of the more general concept, as it includes elements of a data specification.

[SOURCE: ISO 22745-2:2010, B.2.17, modified — The spelling of "datatype" has been changed to "data type" to be consistent with other terms in this document and Note 2 to entry has been modified.]

Replace entry 3.8.12 with the following new entry:

3.8.12
data completeness
quality of a data set in respect of the content being all that is necessary for an intended purpose

EXAMPLE 1   When creating a data specification that addresses data completeness considerations, an organization includes in the specification a requirement for a data set to identify explicitly the applicable unit of measurement for each physical quantity in the set.

EXAMPLE 2   When calculating the average speed of a journey, a user decides to use the start and end times of the journey and the total distance travelled. This decision determines the basis for data completeness of the required data set.

EXAMPLE 3   When calculating the maximum speed during a journey, a user decides to use a list of points in time and, for each point, the distance travelled to that point. The user decides an appropriate duration between each point in time. This duration being longer makes the calculation less accurate but prevents the data set becoming inappropriately large. These decisions determine the basis for data completeness of the required data set.

EXAMPLE 4   A buyer wants a supplier to send a list of all products that are available for purchase. The supplier uses ISO 8000-140, which specifies how to provide a statement to confirm the supplier has created a data set representing a list that meets the buyer's requirement.

Note 1 to entry: For data completeness, the relevant inherent characteristics of the data set are those that determine which data exist as part of the data set.

Note 2 to entry: No universal specification for data completeness exists. Data completeness depends on the content of the data set, the subject matter of the data and the purpose to which the user intends to put the data set.

Note 3 to entry: Not all aspects of data completeness can be verified by just assessing, as a closed system, the consistency of the data set and the applicable data specification. If the data set claims, for example, to be a complete list of the employees of an organization, then the actual human beings are in the real world, requiring an appropriate test to look beyond the content of the data set and the data specification. Such testing is addressed by ISO 8000-8.

Note 4 to entry: ISO 8000-140 specifies the mechanisms by which an organization can state the completeness of a data set (including identification of the method that has assessed the data) or assert the completeness of a data set (including identification of the remediation that the organization will perform if the data in fact fails to meet the asserted level of completeness).

Add the following new entry immediately after 3.9.3:

3.9.4
portable data
data where the formal syntax, semantics and any use restrictions are explicit

Note 1 to entry: When the use restrictions so allow, a set of portable data is useable in more than one application software without incurring subsequent claims of ownership to any of the data by third parties.

Note 2 to entry: The semantics are provided by metadata, reference data and relationship data.

Note 3 to entry: Use of a data dictionary is the basis for semantic encoding, which, in combination with identifying the applicable syntax for a data set, provides a foundation for being portable. Portable data can pass from one system to another reliably because the receiver can guarantee being able to process the format and the meaning of the data.

Note 4 to entry: By choosing a data dictionary that is not subject to use restrictions (i.e. offers free decoding), organizations can ensure a data set is portable without incurring subsequent claims of ownership to any of the data by third parties.

Note 5 to entry: Portable data is structured data but not all structured data is portable data.

Add the following new entries immediately after 3.15.17

3.15.18
maturity level category
collection of one or more numeric maturity levels that are described by the label of the category

3.15.19
quality management area
aspect of a process for data quality management where the aspect is to be subject to evaluation during a process maturity assessment

3.15.20
maturity level target
metric value that indicates a corresponding quality management area has reached the identified maturity level

3.15.21
quality management area value
value that indicates the degree to which implementation of a process is meeting the needs of an organization with respect to the scope of the quality management area

3.15.22
target level matrix
matrix that indicates the target value for each combination of quality management area and maturity level

Add the following new entries immediately after 3.16.1:

3.16.2
computer-processable data policy statement
computer-processable statement that directs how an organization is to manage data and to generate evidence to demonstrate compliance with the policy

3.16.3
data governance authority
authority responsible for data governance within an organization

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