INTERNATIONAL STANDARD

ISO
15000-5

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Electronic Business Extensible Markup Language (ebXML) —

Part 5:
Core Components Specification (CCS)

Commerce électronique en langage de balisage extensible (ebXML) —

Partie 5: Spécification des composants principaux (CCS)

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Foreword

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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 ISO documents 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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration*.

This first edition of ISO 15000-5 cancels and replaces ISO/TS 15000-5:2005. It also incorporates the Amendment ISO/TS 15000-5:2005/Amd 1:2011.

The following revisions have been made:

— removal of rules that were unclear or that were specific to the English language;

— clarification of rules that were ambiguous;

— updating of metamodels to reflect reality;

— removal of non-normative clauses.

ISO 15000 consists of the following parts, under the general title *Electronic Business Extensible Markup Language (ebXML)*:

— *Part 5: Core Components Specification (CCS)*

The following parts are under preparation:

— *Part 1: Collaboration-protocol profile and agreement specification (ebCPP)*[1]

— *Part 2: Message service specification (ebMS)*[2]

— *Part 3: Registry information model specification (ebRIM)*[3]

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1) Revision of ISO/TS 15000-1:2004.

2) Revision of ISO/TS 15000-2:2004.

3) Revision of ISO/TS 15000-3:2004.

— *Part 4: Registry services specification (ebRS)*[4]

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4)   Revision of ISO/TS 15000-4:2004.

Introduction

0.1 General

This International Standard describes and specifies a new approach to the well-understood problem of the lack of information interoperability between applications in the e-business arena. Traditionally, standards for the exchange of business data have been focused on static message definitions that have not enabled a sufficient degree of interoperability or flexibility. A more flexible and interoperable way of standardizing Business Semantics is required. The Core Component solution described in this International Standard presents a methodology for developing a common set of semantic building blocks that represent the general types of business data in use today and provides for the creation of new business vocabularies and restructuring of existing business vocabularies.

0.2 Overview

The Core Components Specification (CCS) described in this International Standard provides a way to identify, document and maximize the re-use of business information to support and enhance interoperability across Business Processes. CCS focuses both on human-readable and machine-processable representations of this information.

The Core Components approach described in this International Standard is more flexible than current standards in this area because the semantic standardization is done in a syntax-neutral fashion. Using Core Components as part of the ebXML framework will help to ensure that two trading partners using different syntaxes [e.g. Extensible Markup Language (XML) and United Nations/EDI for Administration, Commerce, and Transport (UN/EDIFACT)] are using Business Semantics in the same way on condition that both syntaxes have been based on the same Core Components. This enables clean mapping between disparate message definitions across syntaxes, industry and regional boundaries.

Business Process and Core Component solutions capture a wealth of information about the business reasons for variation in message semantics and structure. In the past, these variations have led to incompatible data models and a subsequent lack of interoperability. The core components mechanism will allow identification of similarities and differences between these models. Incompatibility becomes incremental rather than wholesale, i.e. the detailed points of difference are noted, rather than a whole model being dismissed as incompatible.

0.3 Key Concepts

The CCS key concepts are based two levels of abstraction: Core Components and Business Information Entities. These focus areas are discussed in Clauses 4 and 5: in each case, the concepts are introduced and a normative definition is given, as well as an example, where appropriate.

NOTE   The term Core Component is used as a generic term that encompasses Basic Core Components, Association Core Components, Aggregate Core Components, and their associated Core Component Types. Equally, the term Business Information Entity is used as a generic term encompassing Basic Business Information Entities, Association Business Information Entities, and Aggregate Business Information Entities.

0.4 Key Core Component Concepts

The central concept of this International Standard is the Core Component. The Core Component is a semantic building block, which is used as a basis to construct all electronic business messages.

There are four different categories of Core Components:

a)   Basic Core Component;

b)   Association Core Component;

c)   Core Component Type;

d)   Aggregate Core Component.

These concepts are described below and their definitions are given in Clause 3.

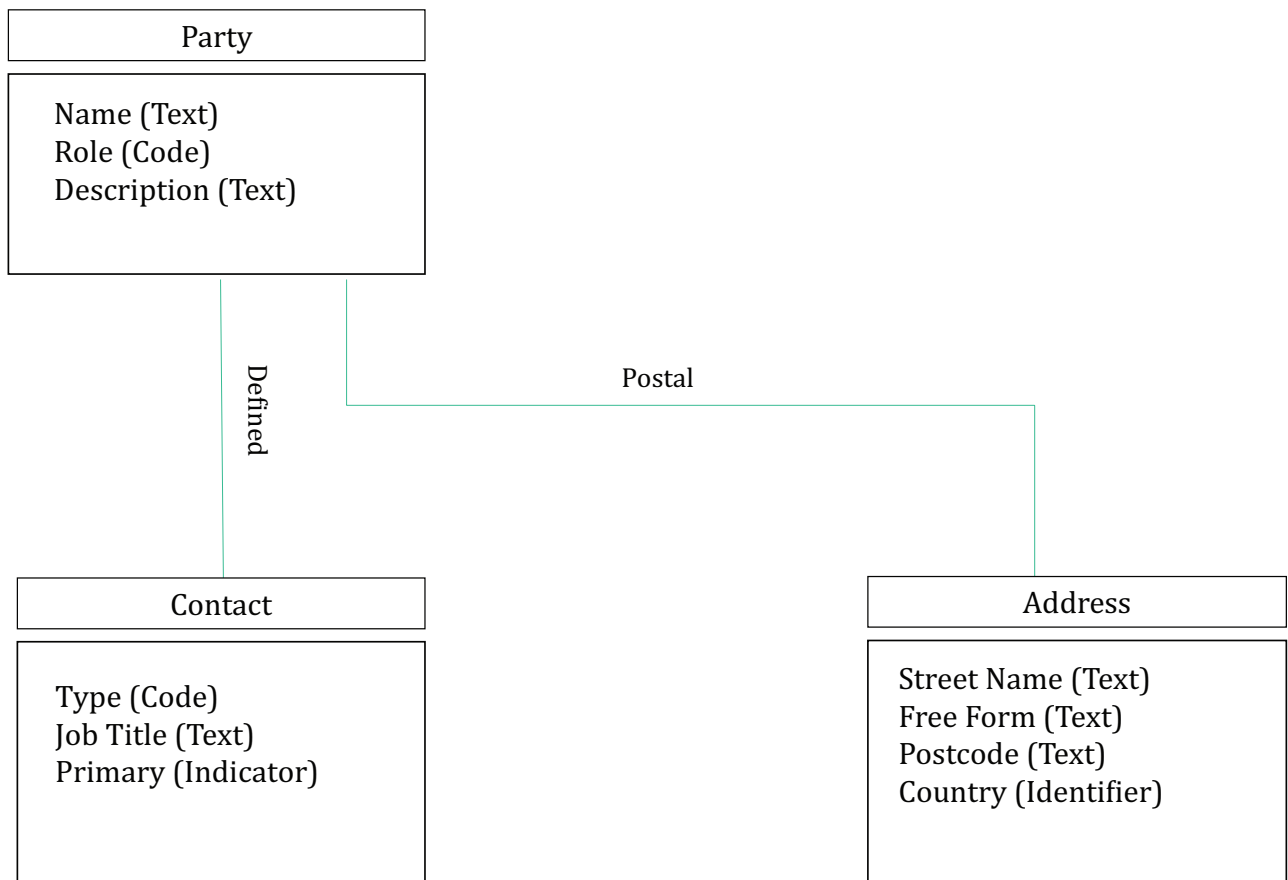**Figure 1 — Association Core Component**

Figure 1 is an example of an Association Core Component and shows the following:

— three Aggregate Core Components: "Party. Details"; "Contact. Details" and "Address. Details";

— each Aggregate Core Component has a number of Properties (i.e. business characteristics);

— the Aggregate Core Component "Party. Details" has five Properties ("Name", "Role", "Description", "Defined. Contact" and "Postal. Address");

— the Aggregate Core Component "Contact. Details" has three Properties ("Type", "Job Title" and "Primary");

— the Aggregate Core Component "Address. Details" has four Properties ("Street Name", "Free Form", "Postcode" and "Country").

Ten of these Properties are Basic Core Components. They each represent a singular business characteristic and its set of allowed values is defined by a Data Type.

In the above example:

— "Name", "Description", "Job Title", "Street Name", "Free Form" and "Postcode" are of the Data Type Text;

— "Role" and "Type" are of the Data Type Code;

— "Primary" is of the Data Type Indicator;

— "Country" is of the Data Type Identifier.

The other two Properties are Association Core Components. They each represent a set of complex business characteristics and in each case their structure is defined by another associated Aggregate Core Component. In the above example, "Party. Defined. Contact" and "Party. Postal. Address" are both Association Core Components. The structures of these associated Aggregate Core Components are defined by the Aggregate Core Components "Contact. Details" and "Address. Details", respectively.

Core Components (and Business Information Entities) have Properties that are defined by Data Types.

A Data Type represents the full range of values to be used for the representation of a particular Core Component Property. A Data Type is based on one of the Core Component Types, but can include restrictions of the set of values of the Content Component and/or Supplementary Component(s) of that Core Component Type.

The diagram in Figure 2 shows the relationships between the various Core Component elements.
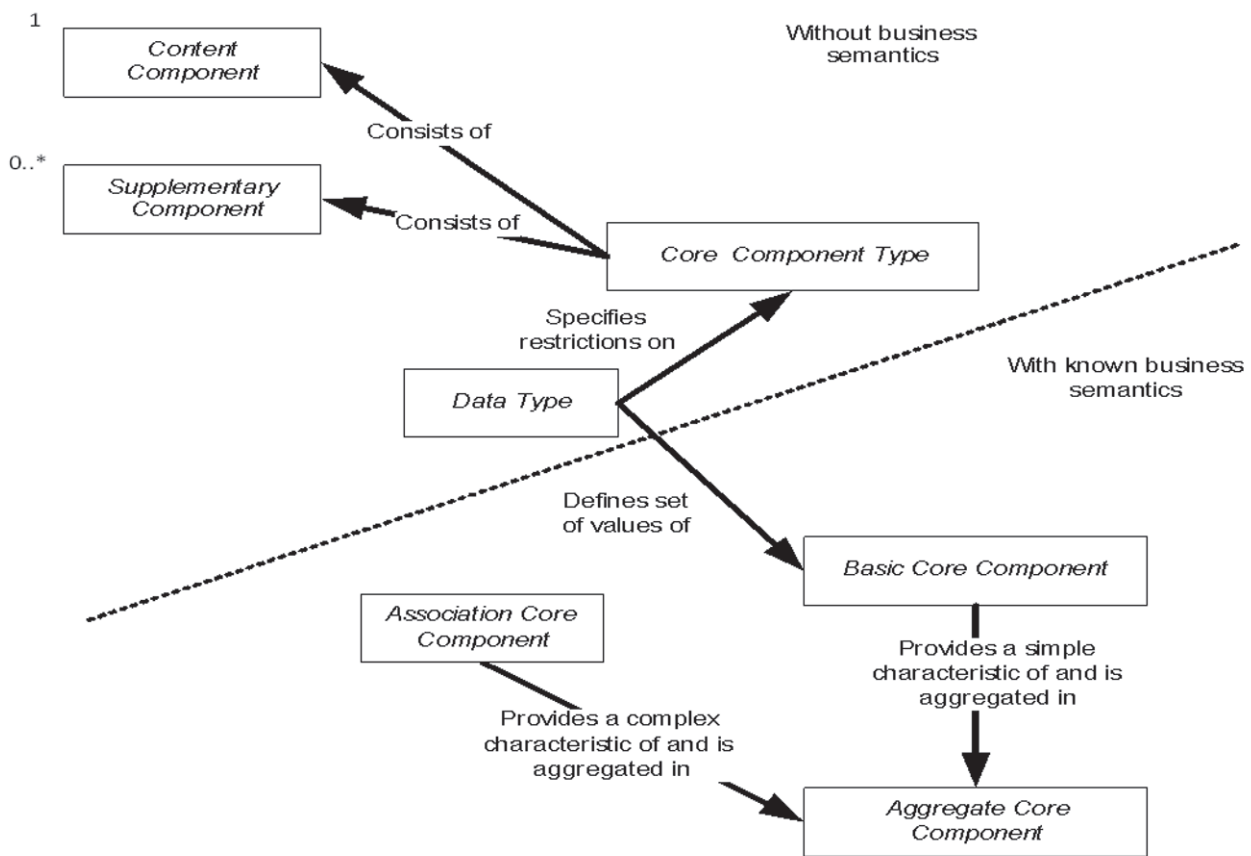
Figure 2 — Core Component Overview

0.5 Key Business Information Entity Concepts

The key differentiator between Core Components and Business Information Entities is the concept of Business Context. Business context is a mechanism for refining the semantic meaning of components according to the specific requirements of their context of use. Once Business Contexts are identified, Core Components can be designed to take into account any necessary qualification and refinement needed to support the use of their Core Component in the given Business Context. The Business Process definition provides a high level description of the use of a message and its contents.

When a Core Component is used in a real business circumstance it serves as the basis of a Business Information Entity. The Business Information Entity is the result of using a Core Component within a specific Business Context.

A specific relationship exists between Core Components and Business Information Entities. Core Components and Business Information Entities are complementary in many respects. Core Components are intended to be the linchpin for creating interoperable Business Process models and business documents using a Controlled Vocabulary.

An Aggregate Business Information Entity is a piece of business data or a group of pieces of business data with a unique Business Semantic definition in a specific Business Context.

There are three different categories of Business Information Entities:

a)   Basic Business Information Entity;

b)   Association Business Information Entity;

c)   Aggregate Business Information Entity.

The most primitive of these is the Basic Business Information Entity. A Basic Business Information Entity is a Basic Core Component used in a specific Business Context.

Whenever a Property of an Aggregate Business Information Entity is of a complex nature, and has the structure of another Aggregate Business Information Entity, an Association Business Information Entity is used to represent that Property. An Association Business Information Entity is based on an Association Core Component, but exists in a Business Context.
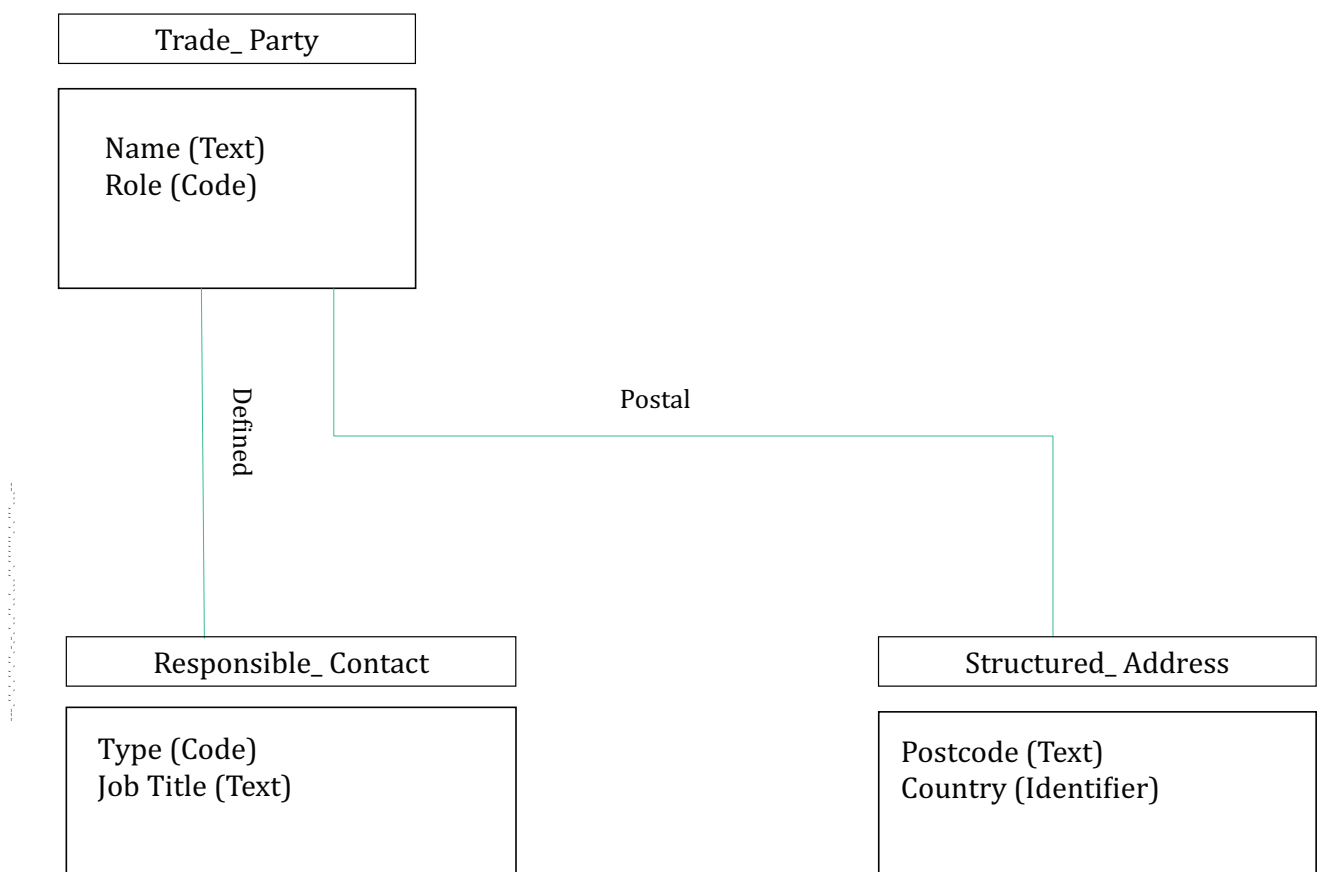

Figure 3 — Association Business Information Entity

Figure 3 is an example of Association Business Information Entity and shows the following:

—   three Aggregate Business Information Entities: "Trade_Party.Details", "Responsible_Contact.Details" and "Structured Address. Details";

—   each Aggregate Core Component has a number of Properties (i.e. business characteristics);

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— the Aggregate Business Information Entity "Trade_ Party. Details" has four Properties ("Name", "Role", "Defined. Responsible_ Contact" and "Postal. Structured_ Address");

— the Aggregate Business Information Entity "Responsible_ Contact. Details" has two Properties ("Type" and "Job Title");

— the Aggregate Business Information Entity "Structured_ Address. Details" has two Properties ("Postcode" and "Country").

Six of these Properties are Basic Business Information Entities: they each represent a singular business characteristic and in each case their set of allowed values is defined by their Data Type:

— "Name", "Job Title" and "Postcode" are of the Data Type Text;

— "Role" and "Type" are of the Data Type Code;

— "Country" is of the Data Type Identifier.

Two of the Properties are Association Business Information Entities: they each represent a set of complex business characteristics and in each case their structure is defined by another associated Aggregate Business Information Entity:

— "Trade_ Party. Defined. Responsible_ Contact" and "Trade_ Party. Postal. Structured_ Address" are both Association Business Information Entities;

— the structures of these Associated Aggregate Business Information Entities are defined by the Aggregate Business Information Entities "Responsible_ Contact. Details" and "Structured_ Address. Details", respectively.

The features of the relationship between Core Components and Business Information Entities are described in the Figure 4.
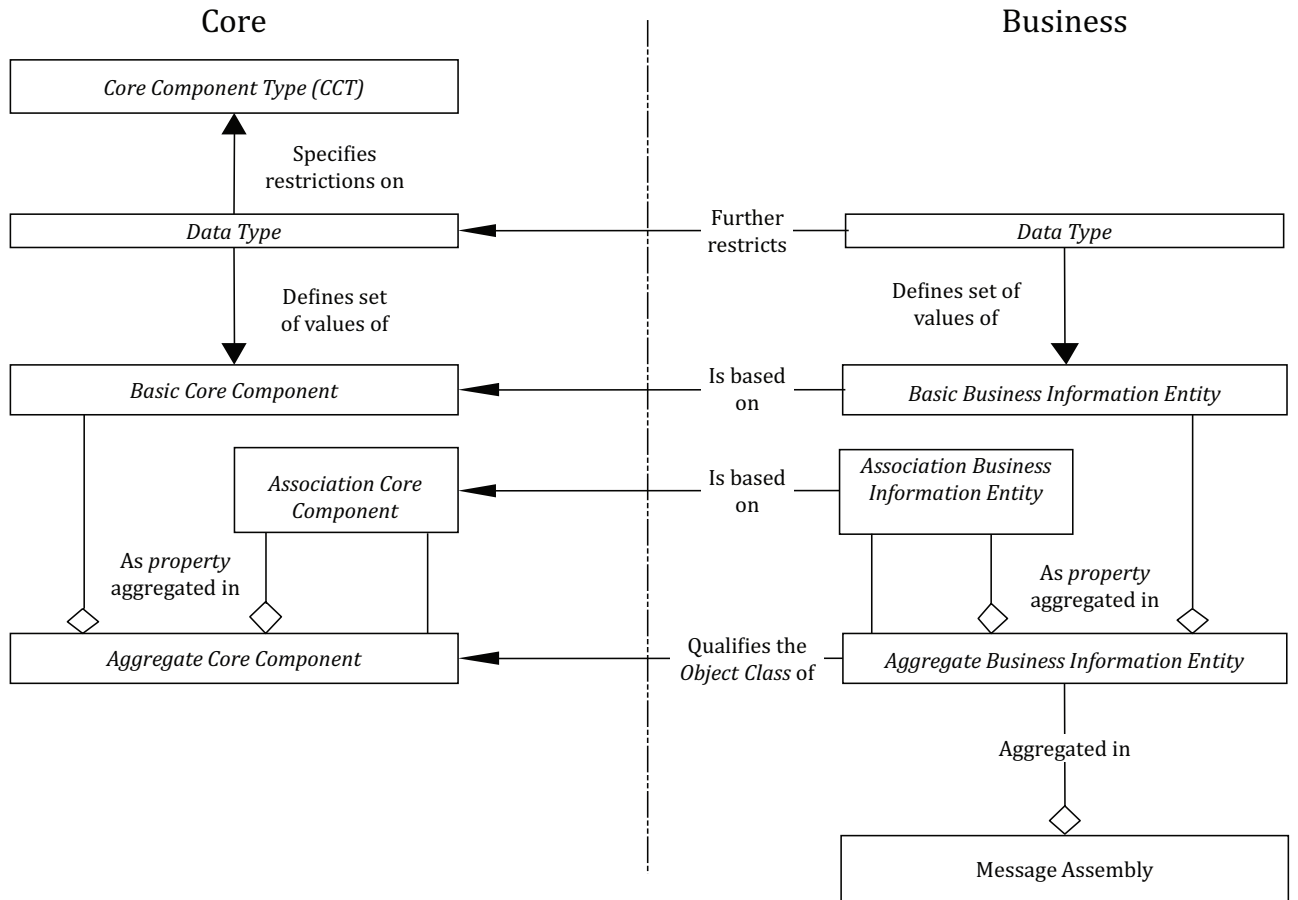
Core Component Library

Figure 4 — Relationships between Core Components and Business Information Entities

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Electronic Business Extensible Markup Language (ebXML) —

Part 5: Core Components Specification (CCS)

1 Scope

This International Standard describes and specifies the Core Component solution as a methodology for developing a common set of semantic building blocks that represent general types of business data, and provides for the creation of new business vocabularies and restructuring of existing business vocabularies.

This International Standard can be employed wherever business information is being shared or exchanged amongst and between enterprises, governmental agencies, and/or other organizations in an open and worldwide environment. The Core Components user community consists of business and governmental users, business document modellers and business data modellers, Business Process modellers, and application developers of different organizations that require interoperability of business information. This interoperability covers both interactive and batch exchanges of business data between applications through the use of internet and web-based information exchanges, as well as traditional Electronic Data Interchange (EDI) systems.

This International Standard forms the basis for standards development work of business analysts, business users and information technology specialists supplying the content for applications that will use a Core Component Library.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 11179-4:2004, *Information technology — Metadata registries (MDR) — Part 4: Formulation of data definitions*

3 Terms and definitions

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

3.1
Aggregate Business Information Entity
ABIE
collection of related pieces of business information that together convey a distinct business meaning in a specific Business Context

Note 1 to entry: Expressed in modelling terms, it is the representation of an object class, in a specific Business Context.

3.2
Aggregate Core Component
ACC
collection of related pieces of business information that together convey a distinct business meaning, independent of any specific Business Context

3.3
Association Business Information Entity
ASBIE
Business Information Entity that represents a complex business characteristic of a specific Object Class in a specific Business Context

Note 1 to entry: It has a unique Business Semantic definition. An Association Business Information Entity represents an Association Business Information Entity Property and is therefore associated to an Aggregate Business Information Entity, which describes its structure. An Association Business Information Entity is derived from an Association Core Component.

3.4
Association Business Information Entity Property
ASBIE Property
Business Information Entity Property for which the permissible values are expressed as a complex structure, represented by an Aggregate Business Information Entity

3.5
Association Core Component
ASCC
Core Component which constitutes a complex business characteristic of a specific Aggregate Core Component that represents an Object Class

Note 1 to entry: It has a unique Business Semantic definition. An Association Core Component represents an Association Core Component Property and is associated to an Aggregate Core Component, which describes its structure.

3.6
Association Core Component Property
ASCC Property
Core Component Property for which the permissible values are expressed as a complex structure, represented by an Aggregate Core Component

3.7
Attribute
named value or relationship that exists for some or all instances of some entity and is directly associated with that instance

3.8
Basic Business Information Entity
BBIE
Business Information Entity that represents a singular business characteristic of a specific Object Class in a specific Business Context

Note 1 to entry: It has a unique Business Semantic definition. A Basic Business Information Entity represents a Basic Business Information Entity Property and is therefore linked to a Data Type, which describes it values.

3.9
Basic Business Information Entity Property
BBIE Property
Business Information Entity Property for which the permissible values are expressed by simple values, represented by a Data Type

3.10
Basic Core Component
BCC
core component has a unique Business Semantic definition and it constitutes a singular business characteristic of a specific Aggregate Core Component that represents an Object Class.

3.11
Basic Core Component Property
BCC Property
Core Component Property for which the permissible values are expressed by simple values, represented by a Data Type

3.12
Business Information Entity
BIE
piece of business data or a group of pieces of business data with a unique Business Semantic definition

Note 1 to entry: A business information entity can be a Basic Business Information Entity (BBIE), an Association Business Information Entity (ASBIE), or an Aggregate Business Information Entity (ABIE).

Note 2 to entry: Message assembly is the process whereby Business Information Entities are assembled into a usable document for exchanging business information.

3.13
Business Information Entity Property
BIE Property
business characteristic belonging to the Object Class in its specific Business Context that is represented by an Aggregate Business Information Entity

3.14
Business Semantics
precise meaning of words from a business perspective

3.15
Business Term
synonym under which the Core Component or Business Information Entity is commonly known and used in the business

Note 1 to entry: A Core Component or Business Information Entity may have several Business Terms or synonyms.

3.16
cardinality
indication of whether a characteristic is optional, mandatory and/or repetitive

3.17
Classification Scheme
officially supported scheme to describe a given Context Category

3.18
Content Component
Primitive Type used to express the content of a Core Component Type

3.19
Content Component restrictions
format restriction that applies to the possible values of a Content Component

Note 1 to entry: Supplementary Component restrictions are the format restriction that applies to the possible values of a Supplementary Component.

3

3.20
Context
circumstances in which a Business Process can be used

Note 1 to entry: This is specified by a set of Context Categories known as Business Context.

3.21
Context Category
group of one or more related values used to express a characteristic of a business circumstance

3.22
Controlled Vocabulary
supplemental vocabulary used to uniquely define potentially ambiguous words or Business Terms

3.23
Core Component
CC
building block for the creation of a semantically correct and meaningful information exchange package which contains only the information pieces necessary to describe a specific concept

3.24
Core Component Library
CCL
collection of Core Components created by a particular organization

Note 1 to entry: A Core Component Library contains all the Core Component Types, Basic Core Components, Aggregate Core Components, Basic Business Information Entities and Aggregate Business Information Entities specified by that organization.

3.25
Core Component Property
CC Property
business characteristic belonging to the Object Class represented by an Aggregate Core Component

3.26
Core Component Type
CCT
Core Component which consists of one and only one Content Component that carries the actual content plus zero or more optional Supplementary Components giving essential extra definition to the Content Component

3.27
Data Type
DT
set of valid values that can be used for a particular Basic Core Component Property or Basic Business Information Entity Property

3.28
definition
unique semantic meaning of a Core Component, Business Information Entity, Business Context or Data Type

3.29
Dictionary Entry Name
DEN
unique official name of a Core Component, Business Information Entity, Business Context or Data Type in the dictionary

3.30
Library Class
formal definition of all information common to Core Components, Business Information Entities, Data Types and Business Contexts

Note 1 to entry: A unique identifier is an identifier that references a Library Class instance in a unique and unambiguous way.

Note 2 to entry: Usage rules are rules which describe how and/or when to use a Library Class.

3.31
Naming Convention
set of rules that together comprise how the Dictionary Entry Name for Core Components and Business Information Entities are constructed

3.32
Object Class
logical data grouping (in a logical data model) to which a data element belongs

3.33
Object Class Term
component of the name of a Core Component or Business Information Entity which represents the Object Class to which it belongs

3.34
Primitive Type
used for the representation of a value

3.35
Property
characteristic common to all members of an Object Class

3.36
Property Term
semantically meaningful name for the characteristic of an Object Class

3.37
Qualifier Term
word or group of words that help define and differentiate a Business Information Entity or a Data Type

3.38
Representation Term
type of valid values for a Basic Core Component or Business Information Entity

3.39
Supplementary Component
gives additional meaning to the Content Component in the Core Component Type

3.40
Syntax Binding
process of expressing a Business Information Entity in a specific syntax

3.42
Version
indication of the evolution over time of an instance of a Core Component, Data Type, Business Information Entity or Core Component Library

4 Core Component Framework

4.1 General

This clause provides a detailed technical explanation of the Core Component, Business Process integration, storage and metamodel elements of the UN/CEFACT Core Components concept.

The Core Component framework prescribes the mechanism for discovery, normalization, Context specialization, and library structure.

This clause defines the following:

a) Core Component rules;

b) Data Type rules;

c) Business Information Entity rules;

d) Naming Conventions;

e) Core Component Types;

f) Content and Supplementary Components;

g) Representation Terms.

Rules that require conformance to ensure Core Components are properly discovered, named and stored in a Core Component Library are identified as follows:

— **[B1]** to **[B24]** indicate Business Information Entity rules;

— **[C1]** to **[C20]** indicate Core Component rules;

— **[D1]** to **[D16]** indicate Data Type rules;

— **[G1]** to **[G8]** indicate General rules;

— **[X1]** to **[X13]** indicate Context rules applicable to all core component types.

Rules are normative.

This clause also specifies relationships between Core Components, Data Types and Business Information Entities and includes details required for constructing a Core Component Library.

4.2 Core Components

Core Components are building blocks for the development and publication of a library of standard Core Components and Business Information Entities containing the information pieces needed to describe a specific concept. There are four categories of Core Components:

— Basic Core Component;

— Association Core Component;

— Core Component Type;

— Aggregate Core Component.

Figure 5 is the complete metamodel and this illustrates these four categories and their relationships. Models are normative to the level of detail at which they exist.
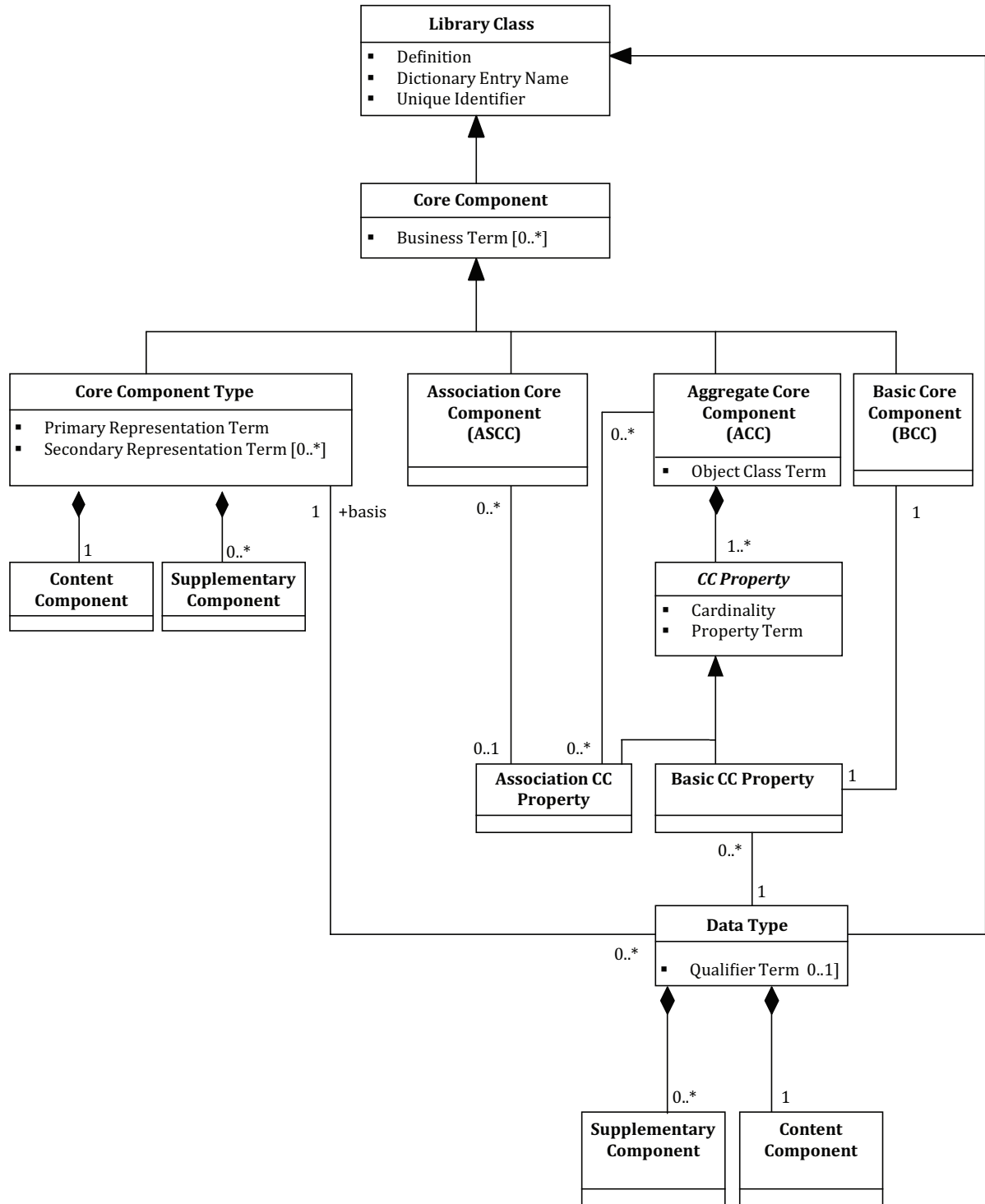
Figure 5 — Core Components and Data Types Metamodel

The following general rules shall be followed in discovering and documenting the four types of Core Components:

[C1]   Each Core Component Type, Basic Core Component, Association Core Component or Aggregate Core Component shall have its own unique semantic definition within the library of which it is a part.

NOTE 1   Comments can be used to further clarify the definition, to provide examples and/or to reference a recognized standard.

[C2] Within an Aggregate Core Component, all embedded Core Component Properties shall be related to the concept of the aggregate.

[C3] There shall be no semantic overlap between the Core Component Properties embedded within the same Aggregate Core Component.

[C4] The representation of the information in a Core Component whose Core Component Type is Code. Type should use a standard issued by a recognized standards body, whenever a standard exists. If international standards are not used a business driven justification shall be provided.

[C5] An Aggregate Core Component shall contain at least one Core Component Property. A Core Component Property shall be either a Basic Core Component Property or an Association Core Component Property.

[C6] An Aggregate Core Component shall never contain a mandatory Association Core Component Property that would cause an endless loop.

NOTE 2   The objective of the above rule is to avoid endless loops in the definition of an Aggregate Core Component. The rule allows an Aggregate Core Component to contain an Association Core Component Property that references itself. The fact that the Association Core Component Property is not mandatory makes it possible to stop the loop after a finite number of iterations.

[C7] The Core Component Type shall be one of the approved Core Component Types (see Annex B).

[C8] The Content Component shall be the approved Content Component for the related Core Component Type (see Annex C).

[C9] The Supplementary Component shall be one of the approved Supplementary Components for the related Core Component Type (see Annex C).

NOTE 3   The complete lists of Core Component Types, Content Components, and Supplementary Components are provided in Annexes B and C.

4.3   Data Types

A Data Type defines the set of valid values that can be used for a particular Basic Core Component Property or Basic Business Information Entity Property. It is defined by specifying restrictions on the Core Component Type from which the Data Type is derived. Figure 5 describes the Data Type and shows relationships to the Core Component Type.

[D1] A Data Type shall be based on one of the approved Core Component Types.

[D2] Where necessary, a Data Type shall restrict the set of valid values allowed by the Core Component Type on which it is based, by imposing restrictions on the Content Component and/or the Supplementary Component.

4.4   Business Information Entities

A Business Information Entity is a piece of business data or a group of pieces of business data with a unique Business Semantic definition in a specific Business Context. A Business Information Entity can be a Basic Business Information Entity (BBIE), an Association Business Information Entity (ASBIE) or an Aggregate Business Information Entity (ABIE).

A Basic Business Information Entity is based on a Basic Core Component (BCC).

An Association Business Information Entity is based on an Association Core Component (ASCC).

An Aggregate Business Information Entity is a re-use of an Aggregate Core Component (ACC) in a specified Business Context.
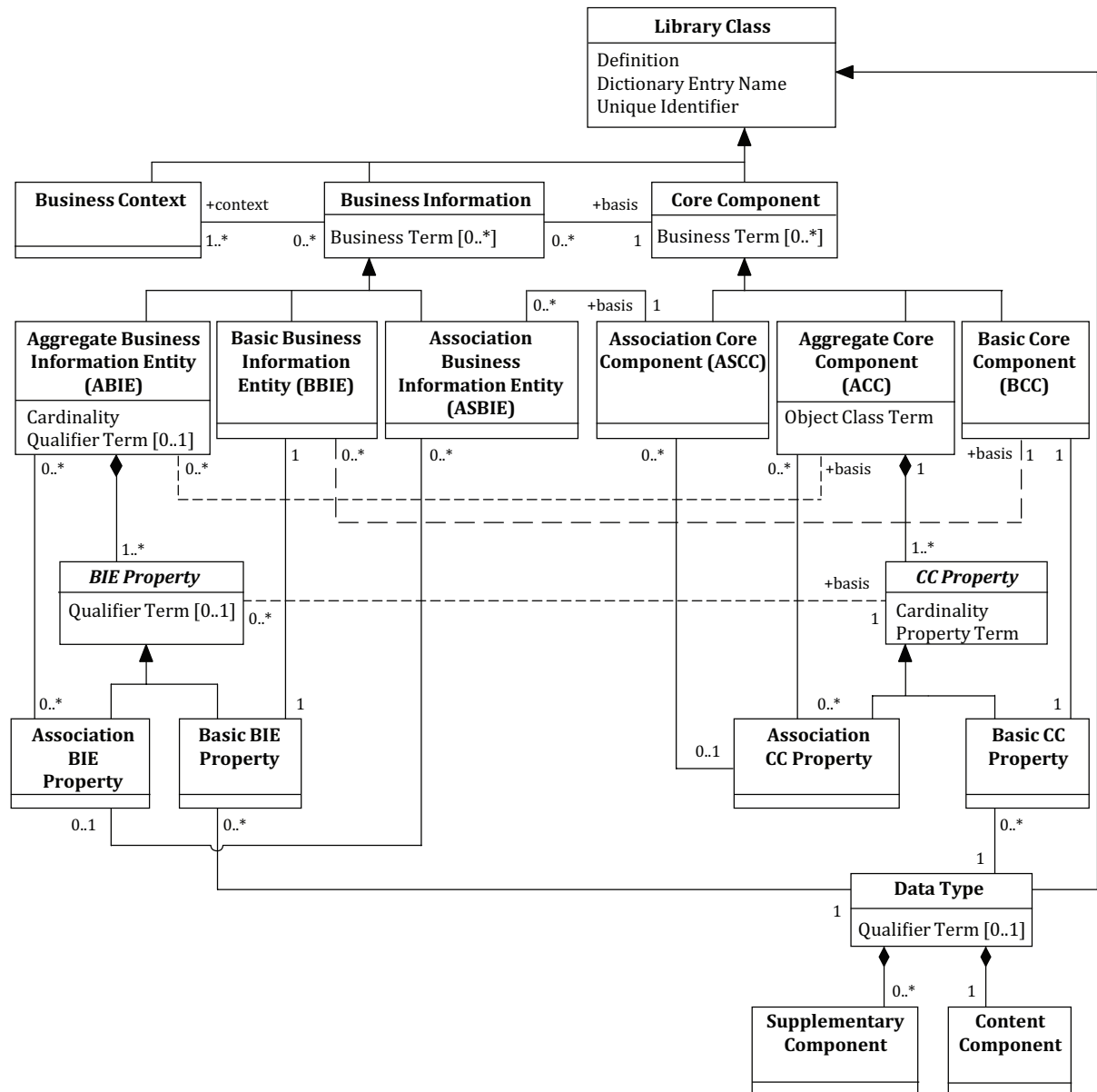
Figure 6 — Business Information Entities Basic Definition Model

[Figure 6](#) describes the Business Information Entity types and shows relationships to the Core Component counterparts.

[B1]   A Business Information Entity shall be a Basic Business Information Entity, an Association Business Information Entity or an Aggregate Business Information Entity

[B2]   A Business Information Entity shall be defined by one or more Business Contexts

[B3]   A Basic Business Information Entity shall be based on a Basic Core Component

[B4]   An Association Business Information Entity shall be based on an Association Core Component

[B5]   An Aggregate Business Information Entity shall be based on an Aggregate Core Component

[B6]   An Aggregate Business Information Entity shall contain at least one Business Information Entity Property. A Business Information Entity Property shall either be a Basic Business Information Entity Property or an Association Business Information Entity Property.

[B7] A Business Information Entity Property of an Aggregate Business Information Entity shall be based on a Core Component Property of the corresponding Aggregate Core Component.

[B8] The Data Type, on which a Basic Business Information Entity Property is based, shall itself be similar to the Data Type on which the corresponding Basic Core Component Property is based (i.e. it shall either be the same Data Type or a more restricted one).

[B9] The Aggregate Business Information Entity, on which an Association Business Information Entity Property is based, shall itself be based on the Aggregate Core Component on which the corresponding Association Core Component Property is based.

[B10] An Aggregate Business Information Entity shall never contain a mandatory Association Business Information Entity Property that would cause an endless loop.

NOTE   The objective of the above rule is to avoid endless loops in the definition of an Aggregate Business Information Entity. The rule allows an Aggregate Business Information Entity to contain an Association Business Information Entity Property that references itself. The fact that the Association Business Information Entity Property is not mandatory makes it possible to stop the loop after a finite number of iterations.

4.5   Naming Convention

4.5.1   General

A Naming Convention is necessary to gain consistency in the naming and defining of all Core Components, Data Types and Business Information Entities. The resulting consistency facilitates comparison during the discovery and analysis process, and precludes ambiguity, such as the development of multiple Core Components with different names that have the same semantic meaning.

The Naming Convention is derived from the guidelines and principles described in ISO/IEC 11179-5. In certain instances, these guidelines have been adapted to the Core Component environment. In particular, the guidelines have been extended to cover the naming and defining of Core Component Types, Data Types and Business Information Entities.

4.5.2   Core Component Naming Rules

4.5.2.1   General

The naming rules for Core Components are specified in 4.5.2.2 to 4.5.2.7.

4.5.2.2   Core Component Dictionary Information

Each Core Component contains the following dictionary information that is impacted by the naming rules in subsequent subclauses.

a)   Dictionary Entry Name (mandatory): this is the unique official name of the Core Component in the dictionary.

b)   Definition (mandatory): this is the unique Business Semantic of that Core Component.

c)   Business Term (optional): this is a synonym term under which the Core Component is commonly known and used in the business. A Core Component may have several Business Terms or synonyms.

EXAMPLE   Dictionary Entry Name – Person. Tax. Identifier; Definition – A unique tax identifier for a person; Business Term – Income tax number, national register number, personal tax register number, social security number, national insurance number.

The naming rules are also based on the following concepts as defined in ISO/IEC 11179-5.

— Object Class Term: the object class term is the part of a CCS DEN that represents an object class.

— Property Term: this represents the distinguishing characteristic or Property of the Object Class and shall occur naturally in the definition.

— Representation Term: an element of the Core Component name which describes the form in which the Core Component is represented.

4.5.2.3   Core Component General Rules

[G1]   The Dictionary Entry Name shall be unique within the library of which it is a part.

[G2]   The Dictionary Entry Name shall reflect the Core Component definition.

[G3]   The Dictionary Entry Name shall be concise and shall not contain consecutive duplicative words, unless the removal of the words would cause loss of meaning or function.

[G4]   The Dictionary Entry Name and all its components shall be in singular form unless the concept itself is plural.

[G5]   The Dictionary Entry Name shall not use non-alphanumeric characters unless required by language rules.

[G6]   The Dictionary Entry Name shall contain primarily verbs, nouns, adjectives and adverbs (other parts of speech may be used where they add semantic clarity or are a part of an official title, part of a term listed in the Oxford English Dictionary, or part of a Controlled Vocabulary) and shall not use a numeric for sequencing. This rule shall be applied to the English Language, and may be applied to other languages as appropriate.

[G7]   Abbreviations and acronyms that are part of the Dictionary Entry Name shall be expanded or explained in the definition.

4.5.2.4   Core Component Rules for Definitions

[G8]   The definition shall be consistent with the requirements of ISO/IEC 11179-4:2004, Clause 4, and provide an understandable meaning, which should also be translatable to other languages.

4.5.2.5   Core Component Rules for Dictionary Entry Names

[C10]   The Dictionary Entry Name of a Basic Core Component shall consist of the following parts in the order specified:

— the Object Class Term of the Aggregate Core Component owning the corresponding Basic Core Component Property;

— the Property Term of the corresponding Basic Core Component Property;

— the Representation Term of the Data Type on which the corresponding Basic Core Component Property is based.

[C11]   The Dictionary Entry Name of an Association Core Component shall consist of the following parts in the order specified:

— the Object Class Term of the Aggregate Core Component owning the corresponding Association Core Component Property;

— the Property Term of the corresponding Association Core Component Property;

— the Object Class Term of the Aggregate Core Component on which the corresponding Association Core Component Property is based.

[C12]   The components of a Dictionary Entry Name shall be separated by dots. The space character shall separate words in multi-word Object Class Terms and/or multi-word Property Terms. Every word

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shall start with a capital letter. To allow spell checking of the words of the Directory Entry Names, the dots after Object Class Terms and Property Terms shall be followed by a space character.

[C13]   The name of an Object Class shall always have the same semantic meaning throughout the dictionary and may consist of more than one word.

[C14]   A Basic Core Component Property Term plus a Representation Term, or an Association Core Component Property Term plus associated Object Class Term, shall be unique within the Context of an Object Class but may be reused across different Object Classes.

NOTE   The name of a Property Term is supposed to occur naturally in the definition and can consist of more than one word.

[C15]   The Dictionary Entry Name of a Core Component Type shall consist of a Representation Term followed by a dot, a space character, and the term Type.

[C16]   In the Dictionary Entry Name of a Core Component Type, the name of the Representation Term shall be one of the primary terms specified in the list of permissible Representation Terms as included in Annex D.

[C17]   The Dictionary Entry Name of an Aggregate Core Component shall consist of a meaningful Object Class Term followed by a dot, a space character, and the term Details. The Object Class Term may consist of more than one word.

4.5.2.6   Core Component Rules for Cardinality

[C18]   Each BCC and ASCC shall have a cardinality expressed.

[C19]   BCC and ASCC cardinalities shall consist of a pair of values consisting of a minimum occurrence and a maximum occurrence.

[C20]   BCC and ASCC minimum cardinality values shall be zero or greater, maximum cardinality values shall be one or greater than the minimum or the word unbounded if no limit applies.

4.5.2.7   Core Component Business Terms

Core Component Business Terms are those terms commonly used in information exchanges within a given domain. As such, no specific naming rules apply to Business Terms. Interoperability of Business Terms will be given by linking them to Core Component dictionary entries.

4.5.3   Rules for Business Information Entities

4.5.3.1   General

The naming rules for Business Information Entities are specified in 4.5.3.2 to 4.5.3.6.

4.5.3.2   Business Information Entity Dictionary Information

Each Business Information Entity contains the following dictionary information that is impacted by the naming rules.

a)   Dictionary Entry Name (mandatory): this is the unique official name of the Business Information Entity in the dictionary.

b)   Definition (mandatory): this is the unique semantic business meaning of that Business Information Entity.

c)   Business Term (optional): this is a synonym term under which the Business Information Entity is commonly known and used in the business for a specific Context. A Business Information Entity may have several Business Terms or synonyms.

The Business Information Entity naming rules are also based on the following concepts as defined in ISO/IEC 11179-5.

— Object Class: this represents the logical data grouping or aggregation (in a logical data model) to which a data element belongs. The Object Class is expressed as an Object Class Term. The Object Class is thus the part of a Business Information Entity's Dictionary Entry Name that represents an activity or object in a specific Context. Object Classes have explicit boundaries and meaning and their Properties and behaviour follow the same rules.

— Property Term: this represents the distinguishing characteristic or Property of the Object Class and shall occur naturally in the definition.

— Representation Term: an element of the Business Information Entity name which describes the form in which the Business Information Entity is represented.

— Qualifier Term: a word or words which help define and differentiate a Business Information Entity from its associated Core Component and other Business Information Entities.

4.5.3.3   Business Information Entity Rules for Definitions

[B11]   The definition shall be consistent with the requirements of ISO/IEC 11179-4:2004, Clause 4, and provide an understandable meaning, which should also be translatable to other languages.

4.5.3.4   Rules for Business Information Entity Dictionary Entry Names

[B12]   The Dictionary Entry Name of a Basic Business Information Entity shall consist of the following components in the specified order:

— the Object Class Term of the corresponding Basic Core Component, and possibly additional Qualifier Term(s);

— the Property Term of the corresponding Basic Core Component, and possibly additional Qualifier Term(s);

— the Representation Term of the Data Type on which the corresponding Basic Business Information Entity Property is based.

[B13]   The Dictionary Entry Name of an Association Business Information Entity shall consist of the following components in the specified order:

— the Object Class Term of the associating Business Information Entity, and possibly additional Qualifier Term(s);

— the Property Term that reflects the nature of the association between object classes, and possibly additional Qualifier Term(s);

— the Object Class Term of the associated Business Information Entity, and possibly additional Qualifier Terms(s).

[B14]   The Object Class Term, Property Term, and Representation Term components of a Dictionary Entry Name shall be separated by dots. The space character shall separate words in multi-word Object Class Terms and/or multiword Property Terms, including their Qualifier Terms. Every word shall start with a capital letter. Qualifier Terms shall be separated from their associated Object Class or Property Term by an underscore (_) followed by a space to separate each qualifier. To allow spell checking of the words in the Dictionary Entry Name, a space character shall follow the dots after Object Class Term(s) and Property Term(s).

[B15]   Qualifier Terms shall precede the associated Object Class Term and or Property Term.

[B16]   The name of a qualified Object Class refers to an activity or object within a Business Context. It shall be unique throughout the dictionary and may consist of more than one word.

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[B17] For Basic and Association Business Information Entities, if the Property Term is equal to the third component of the Dictionary Entry Name, and the Property Term is not qualified, the Property Term shall be removed from the Dictionary Entry Name.

[B18] The Dictionary Entry Name of an Aggregate Business Information Entity shall consist of the name of the Object Class of its associated Aggregate Core Component and possibly additional Qualifier Term(s) to represent its specific Business Context, followed by a dot, a space character, and the term Details.

4.5.3.5   Rules for Business Information Entity Cardinality

[B19] Each BBIE and ASBIE shall have a cardinality expressed.

[B20] BBIE and ASBIE cardinalities shall consist of a pair of values consisting of a minimum occurrence and a maximum occurrence.

[B21] BBIE and ASBIE minimum cardinality values shall be zero or greater, maximum cardinality values shall be one or greater than the minimum or the word "unbounded" if no limit applies.

[B22] BBIE and ASBIE minimum cardinality values shall be either equal to or greater than the minimum cardinality of the underlying base (BCC, BBIE, ASCC, or ASBIE).

[B23] BBIE and ASBIE maximum cardinality values shall be either equal to or less than the maximum cardinality of the underlying base (BCC, BBIE, ASCC, or ASBIE).

4.5.3.6   Business Information Entity Business Terms

Business Information Entity Business Terms are those terms that are commonly used for information exchanges within a given domain. As such, no specific naming rules apply to Business Terms. Interoperability of Business Terms will be given by linking them to the formalized names of the corresponding Business Information Entity dictionary entries.

4.5.4   Rules for Data Types

4.5.4.1   Data Type Dictionary Information

Each Data Type contains the following dictionary information that is impacted by the naming rules.

a) Dictionary Entry Name (mandatory): this is the unique official name of the Data Type in the dictionary.

b) Definition (mandatory): this is the unique Business Semantic of that Data Type.

The Data Type naming rules are also based on the following concepts as defined in ISO/IEC 11179-5.

— Representation Term: this defines the type of valid values for an Information Entity.

— Qualifier Term: a word or words which help define and differentiate a Data Type from its associated Core Component Type and other Data Types.

4.5.4.2   Data Type Rules for Definitions

[D3] The definition shall be consistent with the requirements of ISO/IEC 11179-4:2004, Clause 4, and shall provide an understandable meaning, which should also be translatable to other languages.

4.5.4.3   Rules for Data Type Dictionary Entry Names

[D4] The Dictionary Entry Name of a Data Type shall consist of a Representation Term—preceded by Qualifier Term(s) as necessary —followed by a dot, a space character, and the term Type. The space character shall separate words in multi-word Qualifier Terms and Representation Terms. Each Qualifier

Term shall be followed by an underscore. To allow spell checking of the words in the Dictionary Entry Name, a space character shall follow the underscores after Qualifier Terms.

[D5] In the Dictionary Entry Name of a Data Type, the name of the Representation Term shall be one of the primary or secondary terms specified in the list of permissible Representation Terms as included in Annex D.

NOTE   Whereas the name of the Core Component Type can only be based on a primary Representation Term, the Representation Term that is used in the Dictionary Entry Name of a Data Type can also be a secondary Representation Term. This will be the case when the Data Type restricts the Core Component Type in such a way that it only covers a part of the full semantic meaning of the primary Representation Term.

4.5.4.4   Rules for Data Type Cardinality

[D6] Each CCT shall have one and only one CCT content component.

[D7]   A CCT content component shall be the specified CCT content component as defined in a compatible Data Type Catalogue.

The Supplementary Component cardinality defines the occurrence requirements of the Supplementary Component within its data type.

[D8] Each CCT Supplementary Component shall have a cardinality expressed.

[D9] CCT Supplementary Component cardinalities shall consist of a pair of values consisting of a minimum occurrence and a maximum occurrence.

[D10] CCT Supplementary Component cardinality shall be equal to [0..1].

Any restriction on the presence of the supplementary components shall be accomplished through the use of the qualified DT Supplementary Component cardinality value. The qualified DT Supplementary Component cardinality defines the occurrence requirements of the Supplementary Component within its data type.

[D11] Each qualified DT Supplementary Component shall have a cardinality expressed.

[D12] Qualified DT Supplementary Component cardinalities shall consist of a pair of values consisting of a minimum occurrence and a maximum occurrence.

[D13] Qualified DT Supplementary Component cardinality values shall be non-negative integers of zero or greater.

[D14] Qualified DT Supplementary Component cardinality shall be equal to [0..1] if the qualified DT Supplementary Component is optional, or [1..1] if mandatory.

4.5.4.5   Permissible Values

The content of each CCT Content or Supplementary Component shall be based on a Primitive Type defined in Annex A.

[D15] The permissible values of a content or supplementary component shall be restricted according to a recognized Primitive Type.

[D16] Content Component Restrictions shall only be used to define content restrictions on the Primitive Type.

4.5.4.6   List of permissible Representation Terms

The Representation Term is the part of a Core Component name that describes the form of valid values in which the business information is expressed in a data item. For instance all Basic Core Components representing a monetary amount shall be named "[Name].[Qualifier]_Amount" where [Name] represents

a specialization of the generic amount, [Qualifier] specifies a restriction of the possible values and Amount is the Representation Term. Annex D lists the permissible Representation Terms.

4.6   Library of Core Components

It is important that the full range of Core Components be published in a freely available library. This library should convey the full details of each Core Component consistent with how those components are stored.

5   Context

5.1   General

This clause fully describes applicable rules and applications for the use of Context in Core Component discovery, analysis, and use to include Context Categories and their values.

5.2   Overview of Context Specification

5.2.1   General

Whenever business collaboration takes place between specific trading partners, data may be exchanged in the form of business messages. When used as such, that data exists in a particular Business Context. The Context in which the business collaboration takes place can be specified by a set of categories and their associated values.

The Core Components have no Context independent of their use. The Context mechanism provides a full semantic qualification for the Core Component used in a Business Process. Qualification narrows the semantic concept to a more specific one. The structure of qualified Business Information Entities may be a subset (but never a superset) of the structure of the (unqualified) Business Information Entities or Core Components upon which they are based. That means that value ranges may be restricted, components may be removed or their repetition factor may be lowered and Cardinality may change from optional to mandatory. The Business Information Entity resulting from this process can be manifested as a model, which in turn can be used as the basis of a syntax-bound business message description (e.g. an EDI message implementation guide, an XML schema).

NOTE   The term XML schema includes XML Schema as defined in World Wide Web Consortium XML Schema Part 1: Structures XML Schema Definit41000ion Language, XML Document Type Definitions, Schematron, SOX, Relax NG, ASN.1, XDR or any other notation that specifies the form and information content of an XML document.
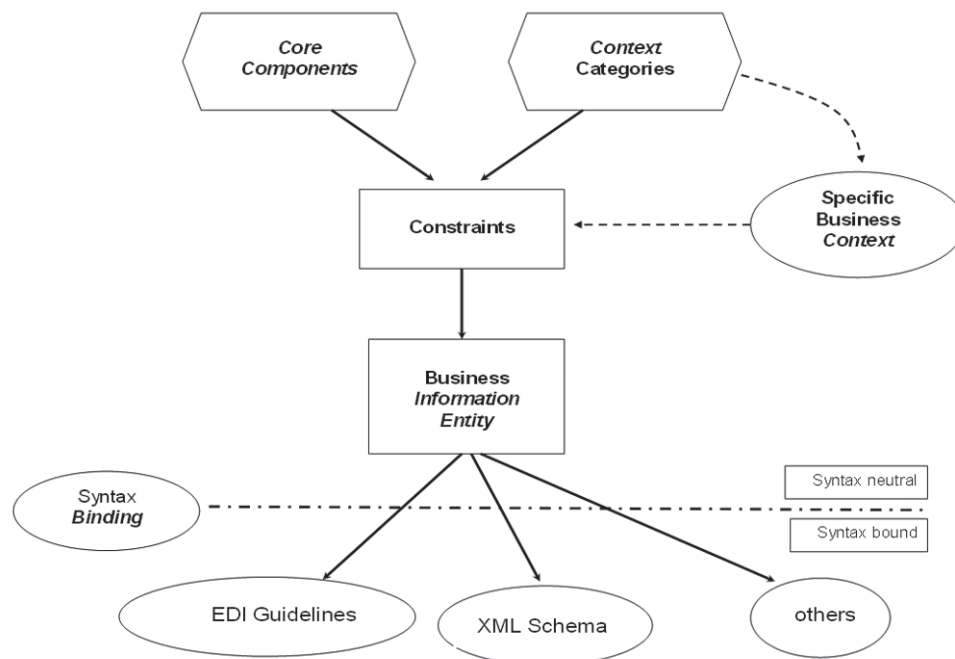
Figure 7 — Operation of the Context Mechanism

5.2.2 Context Categories

Context Categories exist to allow users to uniquely identify and distinguish between different Business Contexts. Eight Context Categories have been identified (Table 1). Each of the identified categories, unless otherwise stated, uses a standard classification to provide values for the category. Business Information Entities are tied to a particular set of standard classifications for identifying and distinguishing Contexts.

5.2.3 Syntax Binding

The Business Information Entity in its standard form is a model that has no specific relationship to any given syntax. A given Business Information Entity can subsequently be expressed in any of a number of syntaxes through a binding process. This process is called Syntax Binding, and is independent of (has no relationship to) a specific syntax. The Syntax Binding process does not alter the semantics of the Business Information Entity, but simply instantiates the Business Information Entity for use in syntax specific documents.

[B24] Syntax Binding shall not change the semantics of a Business Information Entity.

5.3   Approved Context Categories

5.3.1   Context Categories

Table 1 contains the eight approved Context Categories.

[X1]   When describing a specific Business Context, a value or set of values shall be assigned to each of the approved Context Categories in order to describe the business situation in an unambiguous and formal way.

Table 1 — Approved Context Categories

Context Category	Description
Business Process	The Business Process name(s) as described using an appropriate list of relevant Business Processes.
Product Classification	Factors influencing semantics that are the result of the goods or services being exchanged, handled, or paid for, etc. (e.g. the buying of consulting services as opposed to materials)
Industry Classification	Semantic influences related to the industry or industries of the trading partners (e.g. product identification schemes used in different industries).
Geopolitical	A combination of political and geographic factors influencing or delineating a country or region
Official Constraints	Legal and governmental influences on semantics (e.g. hazardous materials information required by law when shipping goods).
Business Process Role	The actor(s) conducting a particular Business Process.
Supporting Role	The actor(s) acting indirectly in the Business Process.
System Capabilities	This Context Category exists to capture the capabilities or constraints of systems (e.g. an existing back office can only support an address in a certain form).

5.3.2 Context Categories descriptions

5.3.2.1 Business Process Context

In describing a business situation, generally the most important aspect of that situation is the business activity being conducted. Business Process Context provides a way to unambiguously identify the business activity. To ensure consistency with Business Process activities, it is important to use a common point of reference.

[X2] Assigned Business Process Contexts shall be from the standard hierarchical classification.

[X3] When Business Process extensions are used, they shall include full information for each value sufficient to unambiguously identify which extension is providing the value used.

5.3.2.2 Product Classification Context

The Product Classification Context describes those aspects of a business situation related to the goods or services being exchanged by, or otherwise manipulated, or concerned, in the Business Process. Recognized code lists exist that provide authoritative sources of Product Classification Contexts.

[X4] A single value or set of values may be used in a Product Classification.

[X5] If more than one classification system is being employed, an additional value specifying which Classification Scheme has supplied the values used shall be conveyed.

[X6] Product Classification Context code values shall be taken from recognized code lists.

NOTE   The following recognized code lists can be used (the fourth code list provides a mapping between the first three):

— Universal Standard Product and Service Specification (UNSPSC) - Custodian: GS1

— Standard International Trade Classification (SITC) - Custodian: United Nations Statistics Division (UNSD)

— Harmonized Commodity Description and Coding System (HS) - Custodian: World Customs Organization (WCO)

— Classification Of the purposes of Non Profit Institutions serving households (COPNI) - Custodian: UNSD.

5.3.2.3 Industry Classification Context

The Industry Classification Context provides a description of the industry or sub-industry in which the Business Process takes place.

[X7] The Industry Classification Context value hierarchy shall be identified.

[X8] Industry Classification Context code values shall be taken from recognized code lists.

NOTE   The following recognized code lists can be used:

— International Standard Industrial Classification (ISIC) - Custodian: UNSD;

— Universal Standard Product and Service Specification (UNSPSC) Top-level Segment [digits 1 and 2] used to define industry - Custodian: UNDP - Manager: GS1 US.

5.3.2.4   Geopolitical Context

Geopolitical Contexts allow description of those aspects of the Business Context that are related to region, nationality, or geographically based cultural factors.

5.3.2.5   Official Constraints Context

The Official Constraints Context Category describes those aspects of the business situation that result from legal or regulatory requirements and similar official categories. This category contains two distinct types:

— regulatory and legislative: these are normally unilateral in nature and include such things as Customs Authority regulations;

— conventions and treaties: these are normally bilateral or multilateral agreements and, as such, are different from regulatory and legislative constraints.

[X9] The Official Constraints Context shall consist of a value or values providing:

— identification of the regulatory or legislative constraint;

— identification of the convention or treaty constraint.

5.3.2.6   Business Process Role Context

The Business Process Role Context describes those aspects of a business situation that are specific to an actor or actors directly involved in the Business Process. Its values are taken from a set of Role values.

[X10] Business Process Role Context values shall be taken from a list compatible with the Business Process model library being employed.

5.3.2.7   Supporting Role Context

The Supporting Role Context identifies those parties that are indirect participants in the Business Process. A Supporting Role Context is specified with a value or set of values from a standard classification.

[X11] Supporting Role Context values shall be taken from a list compatible with the Business Process model library being employed.

5.3.2.8   System Capabilities Context

This Context Category exists to capture any relevant capabilities or constraints of systems (e.g. an existing back office can only support an address in a certain form).

5.3.3   Context Values

In order to avoid ambiguity, a specific Business Context should be formally described using a set of Context values. Every Context Category shall have a valid value, even if this value is "In All Contexts" or "None".

[X12]   The In All Contexts value shall be a valid value for every Context Category.

[X13]   The value None shall be a valid value for Official Constraints Context and System Capabilities when they represent a system limitation.

6   Conformance

Applications will be considered to be in full conformance with this International Standard if they comply with the content of normative clauses, rules and definitions.

Annex A
(normative)

Primitive Type definitions

The minimum set required for interoperability is shown in Table A.1.

Table A.1 — Primitive Type definitions

Primitive Type	Definition
Binary	A set of (in)finite-length sequences of binary digits
Boolean	A binary variable, having two possible values called "true" and "false".
Date	Time point representing a calendar day on a time scale consisting of an origin and a succession of calendar [ISO 8601:2004]
Decimal	A subset of the real numbers, which can be represented by decimal numerals
Integer	An integer is a whole number (not a fraction) that can be positive, negative, or zero.
String	A finite sequence of characters.

Annex B
(normative)

List of approved Core Component Types (CCT)

Table B.1 provides a list of approved Core Component Types (CCT).

Table B.1 — List of approved Core Component Types (CCT)

CCT Diction-ary Entry Name	Definition	Remarks	Object Class	Property Term	CCT Components
Amount. Type	A number of monetary units specified in a currency where the unit of currency is explicit or implied.		Amount	Type	- Amount. Content - Amount Currency. Identifier - Amount Currency. Code List Version. Identifier
Binary Object. Type	A set of finite-length sequences of binary octets.	Shall also be used for Data Types representing graphics (i.e. diagram, graph, mathematical curves or similar representa-tions), pictures (i.e. visual representation of a person, object, or scene), sound, video, etc.	Binary Object	Type	- Binary Object. Content - Binary Object. Format. Text - Binary Object. Mime. Code - Binary Object. Encoding. Code - Binary Object. Character Set. Code - Binary Object. Uniform Resource. Identifier - Binary Object. Filename. Text
Code. Type	A character string (letters, figures or symbols) that for brevity and/or language independence may be used to represent or replace a definitive value or text of an Attribute together with relevant supplementary information.	Should not be used if the character string identifies an instance of an Object Class or an object in the real world, in which case the Identifier. Type should be used.	Code	Type	- Code. Content - Code List. Identifier - Code List. Agency. Identifier - Code List. Agency Name. Text - Code List. Name. Text - Code List. Version. Identifier - Code. Name. Text - Language. Identifier - Code List. Uniform Resource. Identi-fier - Code List Scheme. Uniform Resource. Identifier
Date Time. Type	A particular point in the progression of time together with relevant sup-plementary information.	Can be used for a date and/or time.	Date Time	Type	- Date Time. Content - Date Time. Format. Text

Table B.1 *(continued)*

CCT Dictionary Entry Name	Definition	Remarks	Object Class	Property Term	CCT Components
Identifier. Type	A character string to identify and distinguish uniquely, one instance of an object in an identification scheme from all other objects in the same scheme together with relevant supplementary information.		Identifier	Type	- Identifier. Content - Identification Scheme. Identifier - Identification Scheme. Name. Text - Identification Scheme Agency. Identifier - Identification Scheme. Agency Name. Text - Identification Scheme. Version. Identifier - Identification Scheme Data. Uniform Resource. Identifier - Identification Scheme. Uniform Resource. Identifier
Indicator. Type	A list of two mutually exclusive values that express the only possible states of a Property.		Indicator	Type	- Indicator. Content - Indicator. Format. Text
Measure. Type	A numeric value determined by measuring an object along with the specified unit of measure.		Measure	Type	- Measure. Content - Measure Unit. Code - Measure Unit. Code List Version. Identifier
Numeric. Type	Numeric information that is assigned or is determined by calculation, counting, or sequencing. It does not require a unit of quantity or unit of measure.	May or may not be decimal	Numeric	Type	- Numeric. Content - Numeric. Format. Text
Quantity. Type	A counted number of non-monetary units possibly including fractions.		Quantity	Type	- Quantity. Content - Quantity. Unit. Code - Quantity Unit. Code List. Identifier - Quantity Unit. Code List Agency. Identifier - Quantity Unit. Code List Agency Name. Text
Text. Type	A character string (i.e. a finite set of characters) generally in the form of words of a language.	Shall also be used for names (i.e. word or phrase that constitutes the distinctive designation of a person, place, thing or concept).	Text	Type	- Text. Content - Language. Identifier - Language. Locale. Identifier

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Annex C
(normative)

List of approved Core Component Type Content and Supplementary Components

Table C.1 provides a list of approved Core Component Type Content and Supplementary Components.

Table C.1 — List of approved Core Component Type Content and Supplementary Components

Name	Primitive Data Type	Definition	Remarks
Amount. Content	decimal	A number of monetary units specified in a currency where the unit of currency is explicit or implied	
Amount Currency. Code List Version. Identifier	string	The Version of the code list.	
Amount Currency. Identifier	string	The currency of the amount	Reference 3-letter alphabetic codes published in ISO 4217.
Binary Object. Content	binary	A set of finite-length sequences of binary octets.	
Binary Object. Format. Text	string	The format of the binary content.	
Binary Object. Mime. Code	string	The mime type of the binary object.	Reference IETF RFC 2045, 2046, 2047
Binary Object. Character Set. Code	string	The character set of the binary object if the mime type is text.	Reference IETF RFC 2045, 2046, 2047
Binary Object. Encoding. Code	string	Specifies the decoding algorithm of the binary object.	Reference IETF RFC 2045, 2046, 2047
Binary Object. Uniform Resource. Identifier	string	The Uniform Resource Identifier that identifies where the Binary Object is located.	
Binary Object. Filename. Text	string	The filename of the binary object.	Reference IETF RFC 2045, 2046, 2047
Code. Content	string	A character string (letters, figures or symbols) that for brevity and/or language independence may be used to represent or replace a definitive value or text of an Attribute.	
Code List. Agency. Identifier	string	An agency that maintains one or more code lists.	
Code List. Agency Name. Text	string	The name of the agency that maintains the code list.	
Code List. Name. Text	string	The name of a list of codes.	
Code List. Identifier	string	The identification of a list of codes	Can be used to identify the URL of a source that defines the set of currently approved permitted values
Code List Scheme. Uniform Resource. Identifier	string	The Uniform Resource Identifier that identifies where the code list scheme is located.	
Code List. Uniform Resource. Identifier	string	The Uniform Resource Identifier that identifies where the code list is located.	
Code List. Version. Identifier	string	The Version of the code list.	
Code. Name. Text	string	The textual equivalent of the code content	
Date Time. Content	string	The particular point in the progression of time	Reference ISO 8601
Date Time. Format. Text	string	The format of the date/time content	Reference ISO 8601
Identification Scheme Agency. Identifier	string	The identification of the agency that maintains the identification scheme.	
Identification Scheme Agency. Name. Text	string	The name of the agency that maintains the identification scheme	
Identification Scheme Data. Uniform Resource. Identifier	string	The Uniform Resource Identifier that identifies where the identification scheme data is located	

Table C.1 *(continued)*

Name	Primitive Data Type	Definition	Remarks
Identification Scheme. Identifier	string	The identification of the identification scheme.	
Identification Scheme. Name. Text	string	The name of the identification scheme.	
Identification Scheme. Uniform Resource. Identifier	string	The Uniform Resource Identifier that identifies where the identification scheme is located.	
Identification Scheme. Version. Identifier	string	The Version of the identification scheme.	
Identifier. Content	string	A character string to identify and distinguish uniquely, one instance of an object in an identification scheme from all other objects within the same scheme	
Indicator. Content	string	The value of the indicator	For example on, off or yes no
Indicator. Format. Text	string	Whether the indicator is numeric, textual or binary	
Language. Identifier	string	The identifier of the language used in the corresponding text string	Reference ISO 639
Language. Locale. Identifier	string	The identification of the locale of the language.	
Measure. Content	decimal	The numeric value determined by measuring an object.	
Measure Unit. Code	string	The type of unit of measure	
Measure Unit. Code List Version. Identifier	string	The Version of the measure unit code list.	
Numeric. Content	As defined by Numeric. Format. Text	Numeric information that is assigned or is determined by calculation, counting or sequencing.	
Numeric. Format. Text	string	Whether the number is an integer, decimal, real number or percentage	
Quantity. Content	decimal	A counted number of non-monetary units possibly including fractions.	
Quantity. Unit. Code	string	The unit of the quantity	
Quantity Unit. Code List Agency. Identifier	string	The identification of the agency which maintains the quantity unit code list	
Quantity Unit. Code List. Identifier	string	The quantity unit code list.	
Quantity Unit. Code List Agency Name. Text	string	The name of the agency which maintains the quantity unit code list.	
Text. Content	string	A character string (i.e. a finite set of characters) generally in the form of words of a language.	

Annex D
(normative)

List of permissible Representation Terms

Table D.1 provides a list of permissible Representation Terms.

Table D.1 — List of permissible Representation Terms

Primary Repre-sentation Term	Definition	Related Core Compo-nent Type	Secondary Representation Terms
Amount	A number of monetary units specified in a currency where the unit of currency is explicit or implied.	Amount. Type	
Binary Object	A set of finite-length sequences of binary octets.	Binary Object. Type	Graphic, Picture, Sound, Video
Code	A character string (letters, figures or symbols) that for brevity and / or language independence may be used to represent or replace a definitive value or text of a Property.	Code. Type	
Date Time	A particular point in the progression of time (ISO 8601).	Date Time. Type	Date, Time
Identifier	A character string used to establish the identity of, and distinguish uniquely, one instance within an identification scheme from all others within the same scheme.	Identifier. Type	
Indicator	A list of exactly two mutually exclusive values that express the only possible states of a Property.	Indicator. Type	
Measure	A numeric value determined by measuring an object. Measures need to be specified with a unit of measure.	Measure. Type	
Numeric	Numeric information that is assigned or is determined by calculation, counting or sequencing.	Numeric. Type	Value, Rate, Percent
Quantity	A counted number of non-monetary units. Quantities may be specified with a unit of quantity.	Quantity. Type	
Text	A character string (i.e. a finite set of characters) generally in the form of words of a language.	Text. Type	Name

Bibliography

[1]   ISO 639 (all parts), *Code for the representation of names of languages*

[2]   ISO 4217, *Codes for the representation of currencies*

[3]   ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

[4]   ISO/IEC 11179-5, *Information technology — Metadata registries (MDR) — Part 5: Naming principles*

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