NoBoMet

*European Coordination Group for Notified Bodies in Legal Metrology*

# Document 1

2023

# Documentation: Digital Certificate of Conformity (D-CoC)

Date: 10 05 2023

NoBoMet is the European Coordination Group of Bodies notified by the European Commission for the Directives 2014/31/EU and 2014/32/EU.

The group is established by the European Commission based on the decision at the Working Group Measuring Instruments meeting in 2019.

This document is a document published by the NoBoMet Project group "Digital certificates of conformity in Metrology" to provide information to notified bodies.

The Documents are purely informative and do not themselves impose any restrictions or additional technical requirements beyond those contained in relevant EU-Directives.

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# 1. Introduction

**Digital Certificate of Conformity** (**D-CoC**) is a data structure that describes a digital conformity assessment certificate for a certification (cf. EN ISO/IEC 17065:2012). For simplifying reasons, the term “certificate” is used throughout this document for the result document of a certification which otherwise might be called “conformity assessment certificate for certification” or “certification document(ation)”.

The D-CoC comprises a set of elements, attributes, data types and constraints for the representation and exchange of conformity-relevant information generated in different systems and by different actors. This document provides an overview of the data structure part which comprises the administrative content of the certificate.

## 1.1 Motivation

Legal metrology deals with all measurements in the economic, health and police monitoring which are regulated by laws and has, therefore, a high significance for the European industry and customer rights. However, in a more and more digital world it is lagging far behind. The development of digital, machine-readable formats for documents such as type examination certificates is a corner stone for the digitalisation of legal metrology.

Digital certificates of conformity can be used for a harmonised data exchange between conformity assessment bodies, market surveillance and manufacturers. They also enhance findability and comparability of information. A specific use case is the harmonisation of certificate databases among notified bodies.

## 1.2 Scope

This data structure applies to all certification schemes related to measuring instruments according to the European directives 2014/32/EU (Measuring instruments directive, MID) and 2014/31/EU (Non-automatic weighing instruments directive, NAWID) but could be used outside of legal metrology as well.

**D-CoC document family:** This document is part of the D-CoC family of documents, which comprises the structure of certificates from different certification systems and schemes. The following documents contain separate data structures for certificate contents specific to the respective certification system/scheme:

- D-CoC M B is specific for the certification of legally regulated measuring instruments based on a **type examination**;
- D-CoC M D is specific for the certification of legally regulated measuring instruments based on the assessment of the **quality assurance** system related to the production process;
- D-CoC M F is specific for the certification of legally regulated measuring instruments with the type based on **product verification**.

### 1.3 Status

In May 2021, a project group “Digital certificates of conformity in Metrology” has been established at Notified Bodies in Legal Metrology NoBoMet to develop data structures for certificates in legal metrology (NAWID and MID) for the conformity assessment module B (type examination), D (quality assurance) and F (product verification). The present documentation is the first result of this work representing the common information from all three conformity assessment modules.

### 1.4 Funding Note

Part of the work on the digital certificate of conformity has been performed within the project framework QI-Digital in the pilot project “Reliable hydrogen filling stations”.

# 2. The Principle of Defining the Data Structure

## 2.1 Prefixes

The prefix for the D-CoC is **dcoc**.

## 2.2 Modularisation and Data Structure

The root element, **dcoc:digitalCertificateOfConformity** consists of three separate subelements:

- the administrative content of the certificate;
- the details of the certification result;
- the comment section.

The element dcoc:certificationResult serves as a placeholder for the more specific description of results depending on the conformity assessment module (type examination, quality assurance, …). This modularisation can be represented graphically as follows:

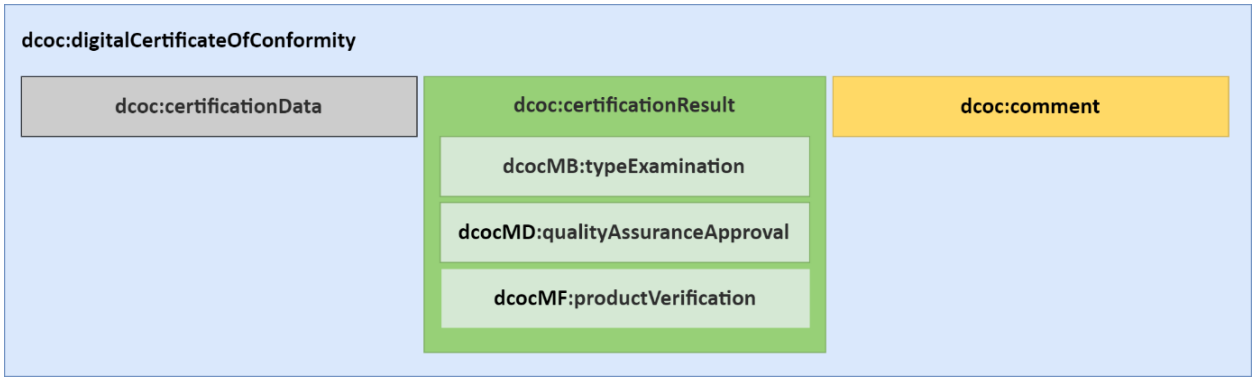


*Figure 1 - Root element and its subelements*

Within the administrative data, several elements representing the main content building blocks of the D-CoC are declared as subelements:

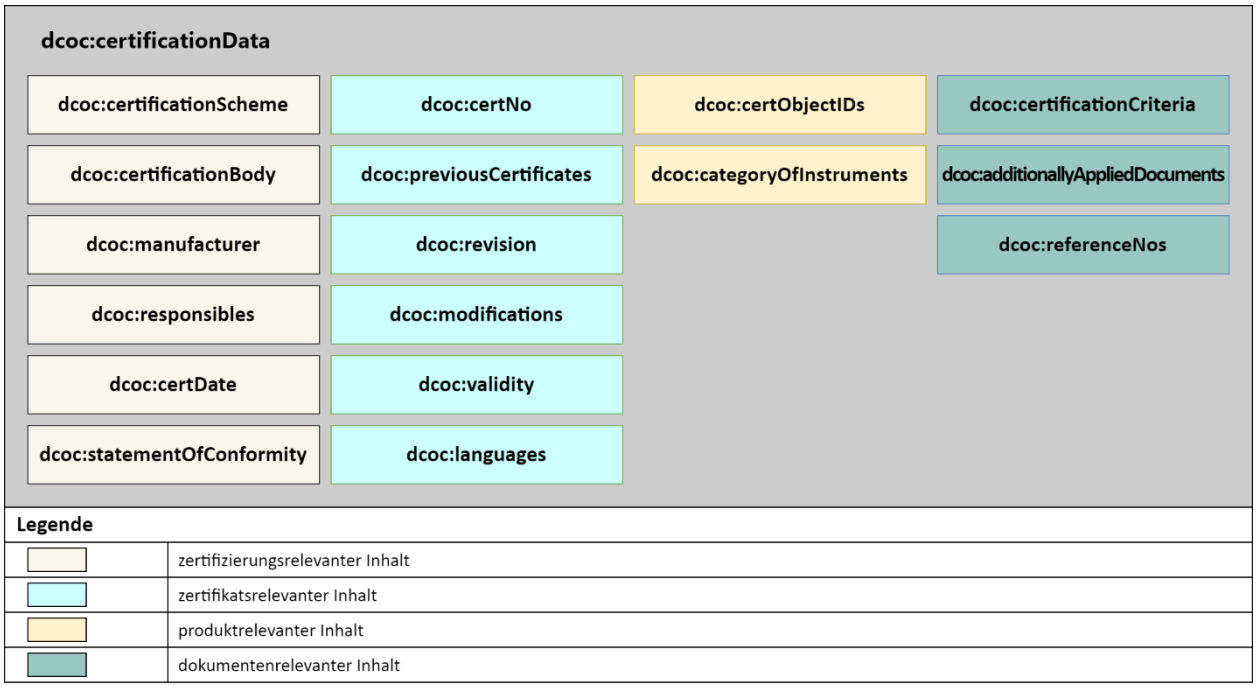


*Figure 2 - Overview of the basic elements within the element **dcoc:certificationData***

The overview of individual elements and their attributes can be represented graphically as follows:

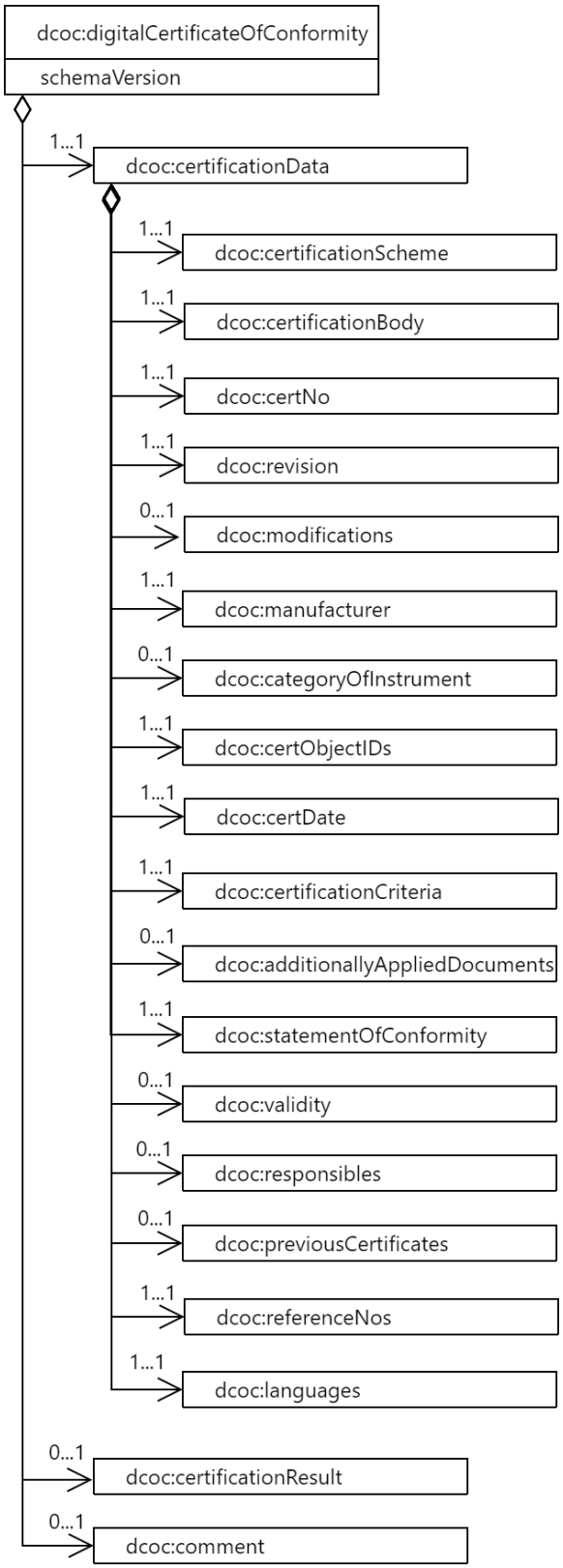


*Figure 3 - Overview of the two top layers of elements of the D-CoC*

## 2.3 Characterisation of the Elements and Attributes

### 2.3.1 Structure of the Specification

The D-CoC elements, data types and attributes presented here are documented in the specification using the following approach:

MACHINE INTERPRETABLE DESIGNATION: **Prefix:nameElement** or **Prefix:nameDataType** or **Prefix:nameAttribute**;

DEFINITION: The representation of the scope of meaning of the D-CoC element, data type, and attribute in natural language;

| | |
|---|---|
| LABEL | This is a human-readable label that can be displayed to the user, e.g. when visualising the digital certificate. |
| EXAMPLE | This is an example of content in the element. |
| NOTE | A note contains additional information regarding the use of the D-CoC element, data type and attribute. |
| CARDINALITY | Cardinality characterises elements/attributes/data types in terms of two properties: (1) the degree of mandatory use and (2) the number of occurrences in the digital certificate. (See here in 2.2.2 Cardinality). |
| DATA TYPE | In the data structure, two main categories of DATA TYPES are distinguished: simple and complex. Simple data types are expressed by their common names such as string, boolean, integer and date. In use these can be adopted in most languages e.g. in XML xs:string, xs:boolean, xs:integer and xs:date. Complex data types are internally developed data types that cover the requirements of digital certification, e.g. in the representation of contact data of relevant persons and organisations, the representation of text-based certification-relevant content, encoded files and language-related information. |
| ATTRIBUTE | See here in 2.2.3 Attributes. |

### 2.3.2 Cardinality

The combination of these properties is expressed in the data structure as follows:

- The cardinality value **1 … ∞** represents a mandatory element/attribute/data type that can be entered more than once;
- The cardinality value **1 … 1** stands for a mandatory element/attribute/data type that can be entered exactly once in the certificate;
- The cardinality value **0 … 1** represents an optional element/attribute/data type that can be entered at most once;
- The cardinality value **0 … ∞** represents an optional element/attribute/data type that can be entered more than once.

### 2.3.3 Attribution

In the data structure, attributes are divided into three types:

- administrative attributes, which relate to the administration of the data structure;

- identifying attributes, which carry this information to identify the element(s);
- language-related attributes, which provide the information on the language(s) used.

## 2.4 Overview of Elements, Attributes and Data Types

### 2.4.1 Elements

dcoc:additionallyAppliedDocument
dcoc:additionallyAppliedDocuments
dcoc:authorisedRepresentative
dcoc:category
dcoc:categoryOfInstrument
dcoc:certDate
dcoc:certDate
dcoc:certificationBody
dcoc:certificationBodyContact
dcoc:certificationBodyIdentification
dcoc:certificationCriteria
dcoc:certificationData
dcoc:certificationResult
dcoc:certificationScheme
dcoc:certificationSchemeId
dcoc:certificationSchemeName
dcoc:certificationSystemName
dcoc:certificationSystemShortName
dcoc:certNo
dcoc:certObjectID
dcoc:certObjectIDs
dcoc:certObjectIDValue
dcoc:comment
dcoc:cryptElectronicSeal
dcoc:cryptElectronicSeal
dcoc:cryptElectronicSignature
dcoc:cryptElectronicTimeStamp
dcoc:cryptElectronicTimeStamp
dcoc:date
dcoc:description
dcoc:description
dcoc:digitalCertificateOfConformity
dcoc:informalTranslation
dcoc:languages
dcoc:mainSigner
dcoc:manufacturer
dcoc:manufacturerContact
dcoc:modification
dcoc:modifications
dcoc:modifications
dcoc:name
dcoc:number
dcoc:officialLanguage
dcoc:previousCertificate
dcoc:previousCertificates
dcoc:person
dcoc:referenceNo
dcoc:referenceNos
dcoc:responsible
dcoc:responsibles
dcoc:revision
dcoc:revision
dcoc:revisionName
dcoc:revisionNo
dcoc:role
dcoc:schemeOwner
dcoc:statementOfConformity
dcoc:subCategory
dcoc:typeOfID
dcoc:URI
dcoc:validFrom
dcoc:validity
dcoc:validUntil
dcoc:version

### 2.4.2 Specified Data Types

dcoc:byteData
dcoc:contact
dcoc:norm
dcoc:text

### 2.4.3 Subelements of Specific Data Types

- dcoc:city
- dcoc:clause
- dcoc:content
- dcoc:countryCode
- dcoc:data
- dcoc:date
- dcoc:description
- dcoc:descriptionData
- dcoc:eMail
- dcoc:fileName
- dcoc:further
- dcoc:mimeType
- dcoc:name
- dcoc:name
- dcoc:name
- dcoc:normId
- dcoc:location
- dcoc:organisation
- dcoc:phone
- dcoc:state
- dcoc:street
- dcoc:streetNo
- dcoc:postCode
- dcoc:postOfficeBox
- dcoc:version

### 2.4.4 Attributes

- dcoc:id
- dcoc:lang
- dcoc:schemaVersion

# 3. Specification of the Data Structure

## 3.1 dcoc:digitalCertificateOfConformity

digital conformity assessment certificate for a certification

| | |
|---|---|
| LABEL | D-CoC |
| NOTE | Element contains entire document. |
| CARDINALITY | 1 … 1 |
| ATTRIBUTE | schemaVersion |

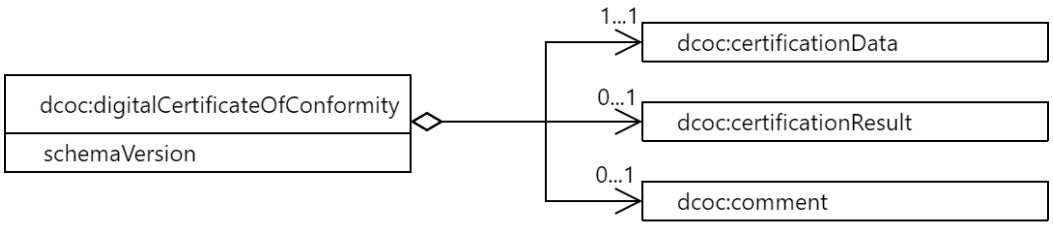


*Figure 4 - The subdivision of the element **dcoc:digitalCertificateOfConformityMetrology** into subelements*

### 3.1.1 dcoc:certificationData

administrative data of the certification

| | |
|---|---|
| LABEL | certification data |
| NOTE | Administrative data is identical for all certification schemes. |
| CARDINALITY | 1 … 1 |

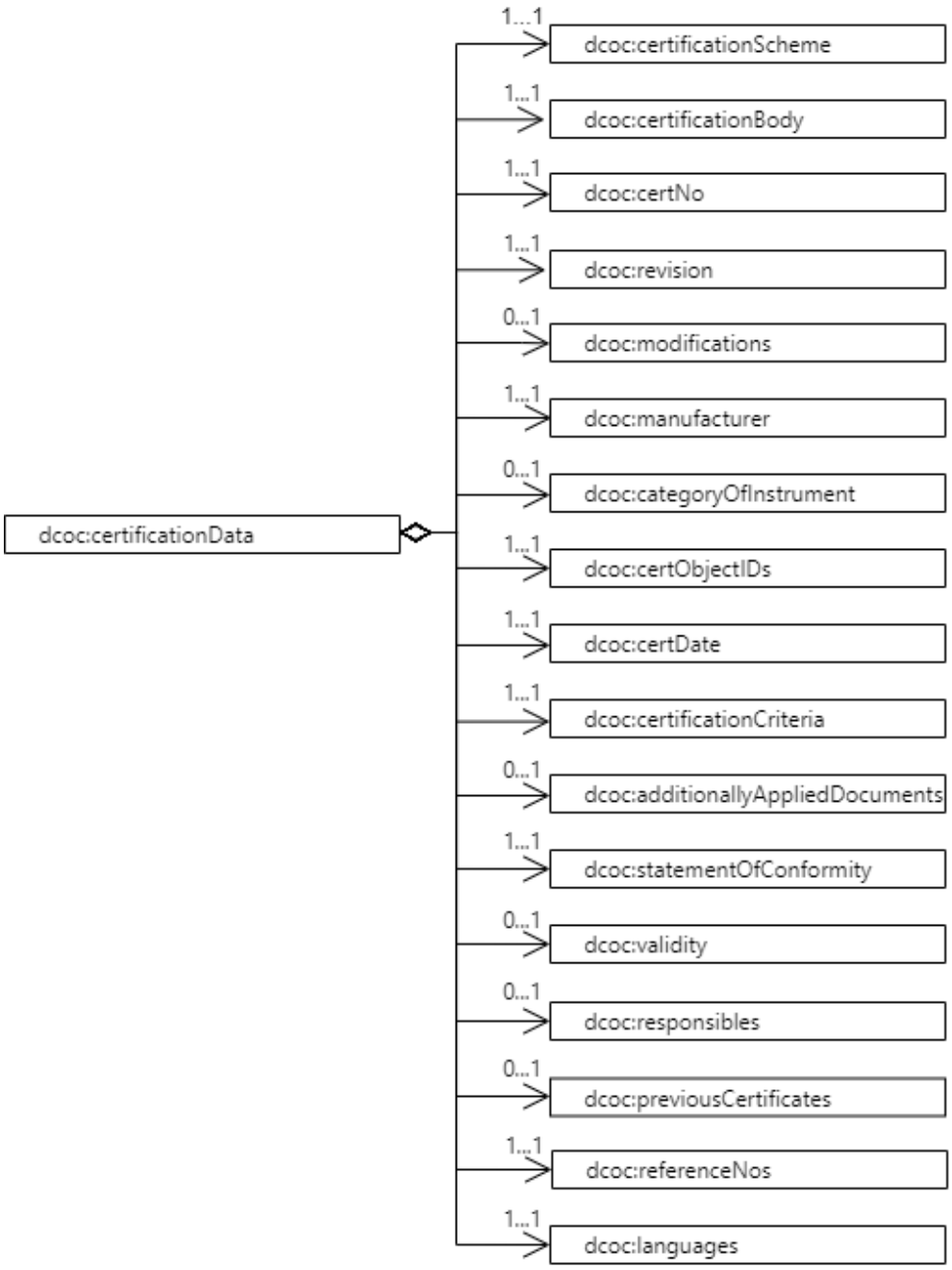


*Figure 5 - The subdivision of the element **dcoc:certificationData** into subelements*

### 3.1.1.1 dcoc:certificationScheme

data on the certification scheme and system

| | |
|---|---|
| LABEL | certification scheme/system |
| NOTE | The elements are named according to DIN EN ISO/IEC 17065. |
| CARDINALITY | 1 … 1 |

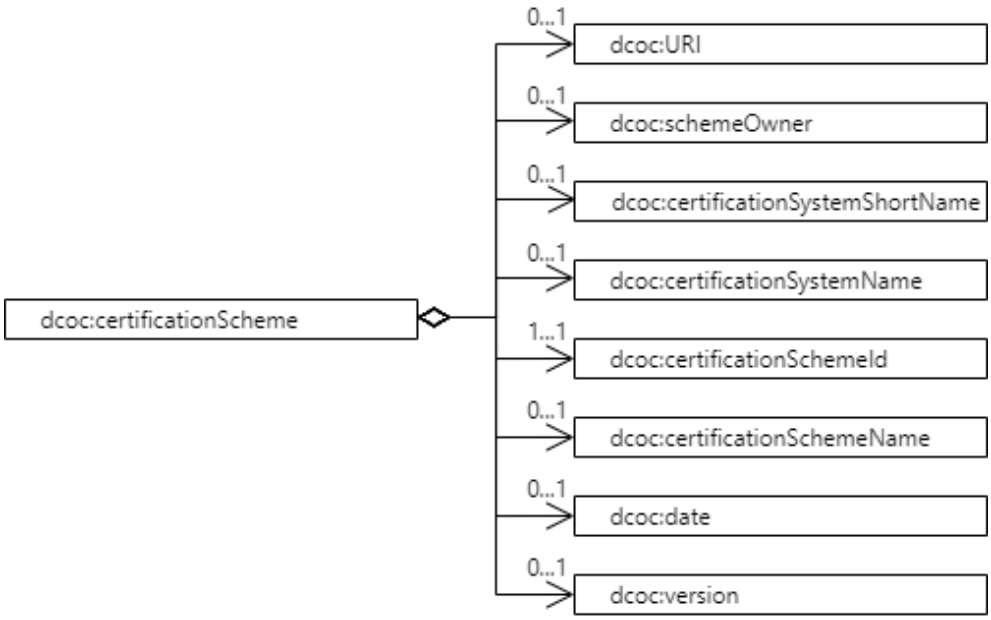


*Figure 6 - The subdivision of the element **dcoc:certificationScheme** into subelements*

#### 3.1.1.1.1 dcoc:URI

Uniform Resource Identifier of the certification scheme

| | |
|---|---|
| LABEL | URI |
| NOTE | The ELI is used for European Directives. |
| EXAMPLE | http://data.europa.eu/eli/dir/2014/32/oj |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |

#### 3.1.1.1.2 dcoc:schemeOwner

owner (or issuer) of the certification scheme

| | |
|---|---|
| LABEL | scheme owner |
| EXAMPLE 1 | *European Union* |
| EXAMPLE 2 | *Welmec* |
| EXAMPLE 3 | *OIML* |
| CARDINALITY | 0 … 1 |
| DATA TYPE | text |

#### 3.1.1.1.3 dcoc:certificationSystemShortName

short designation of the certification system

| | |
|---|---|
| LABEL | certification system (short) |

EXAMPLE 1 *2014/32/EU*

EXAMPLE 2 *Welmec guide 8.8*

CARDINALITY 0 … 1

DATA TYPE text

#### 3.1.1.1.4 dcoc:certificationSystemName

designation of the certification system

LABEL certification system

EXAMPLE *Directive 2014/32/EU of the European Parliament … on the market*.

CARDINALITY 0 … 1

DATA TYPE text

#### 3.1.1.1.5 dcoc:certificationSchemeId

identification number of the certification scheme

LABEL certification scheme (short)

EXAMPLE 1 *module B*

EXAMPLE 2 *module F*

EXAMPLE 3 *EC*

EXAMPLE 4 *PC*

CARDINALITY 1 … 1

DATA TYPE string

#### 3.1.1.1.6 dcoc:certificationSchemeName

designation of the certification scheme

LABEL certification scheme

EXAMPLE 1 *EU Type Examination Certificate*

EXAMPLE 2 *Certificate of Conformity*

CARDINALITY 0 … 1

DATA TYPE text

#### 3.1.1.1.7 dcoc:date

issue date of the certification system

LABEL issue date of certification system

EXAMPLE *2014-02-26*

CARDINALITY 0 … 1

DATA TYPE date

#### 3.1.1.1.8 dcoc:version

version of the certification system

| | |
|---|---|
| LABEL | certification system version |
| EXAMPLE | *Edition 2012* |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |

### 3.1.1.2 dcoc:certificationBody

data on the certification body

| | |
|---|---|
| LABEL | certification body |
| NOTE | The certification body corresponds to the notified body for certification schemes of the European Union. |
| CARDINALITY | 1 … 1 |

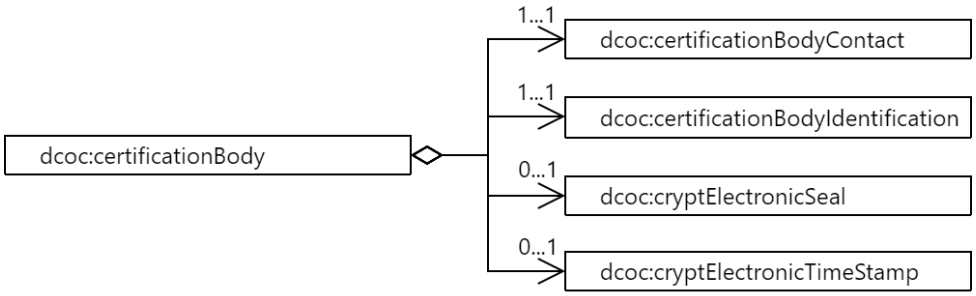


*Figure 7 - The subdivision of the element **dcoc:certificationBody** into subelements*

#### 3.1.1.2.1 dcoc:certificationBodyContact

contact data on the certification body

| | |
|---|---|
| LABEL | certification body contact data |
| CARDINALITY | 1 … 1 |
| DATA TYPE | contact |

#### 3.1.1.2.2 dcoc:certificationBodyIdentification

identification number of the certification body

| | |
|---|---|
| LABEL | certification body ID |
| EXAMPLE 1 | *0102* |
| EXAMPLE 2 | *PTB* |
| NOTE 1 | The element **dcoc:bodyIdentification** corresponds to the number from Nando in European Union certification schemes. |
| NOTE 2 | If the certification body does not have an official number, the abbreviated designation of |

that certification body shall be used as the identification number.

CARDINALITY 1 … 1

DATA TYPE string

#### 3.1.1.2.3 dcoc:cryptElectronicSeal

indication whether an electronic seal has been used

LABEL electronic seal

CARDINALITY 0 … 1

DATA TYPE boolean

#### 3.1.1.2.4 dcoc:cryptElectronicTimeStamp

indication of whether an electronic time stamp has been used

LABEL time stamp

CARDINALITY 0 … 1

DATA TYPE boolean

### 3.1.1.3 dcoc:certNo

number of the certificate

LABEL certificate No.

BEISPIEL *DE-22-MI002-PTB002*

CARDINALITY 1 … 1

DATA TYPE string

### 3.1.1.4 dcoc:revision

revision status of the certificate

LABEL revision

CARDINALITY 1 … 1

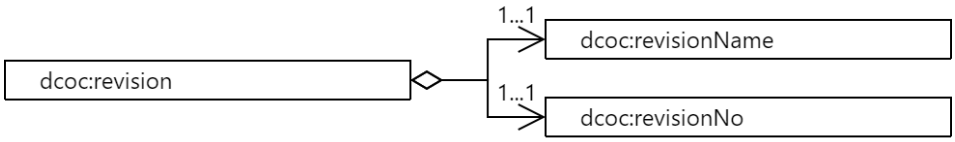


*Figure 8 - The subdivision of the element **dcoc:revision** into subelements*

#### 3.1.1.4.1 dcoc:revisionName

revision name of the current certificate

LABEL revision name

| | |
|---|---|
| EXAMPLE 1 | *5* |
| EXAMPLE 2 | *M-001* |
| EXAMPLE 3 | *issue 2* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | text |

#### 3.1.1.4.2 dcoc:revisionNo

revision number of the certificate

| | |
|---|---|
| LABEL | revision No. |
| CARDINALITY | 1 … 1 |
| DATA TYPE | integer |
| RESTRICTION ON VALUE | starting with 0 for the initial certificate |

### 3.1.1.5 dcoc:modifications

supplements to the previous revision of the certificate

| | |
|---|---|
| LABEL | modifications |
| NOTE | The element **dcoc:modifications** contains elements of the same type for each one supplement. |
| CARDINALITY | 0 … 1 |

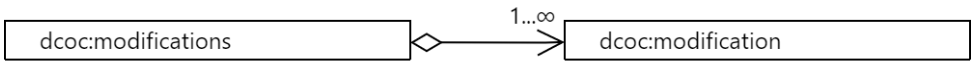


*Figure 9 - The subdivision of the element **dcoc:modifications** into subelements*

#### 3.1.1.5.1 dcoc:modification

supplement to the previous revision of the certificate

| | |
|---|---|
| LABEL | modification |
| NOTE | Supplements for an initial certificate are typically references to previous certificates under a separate certificate number. |
| EXAMPLE 1 | *New software version usm-1.9* |
| EXAMPLE 2 | *Indication variant MSPR-4.0-DEx* |
| CARDINALITY | 1 … ∞ |
| DATA TYPE | text |

### 3.1.1.6 dcoc:manufacturer

shall mean any natural or legal person who manufactures a product or has a product designed or manufactured, and markets that product under his name or trademark

SOURCE Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC

LABEL manufacturer

CARDINALITY 1 … 1

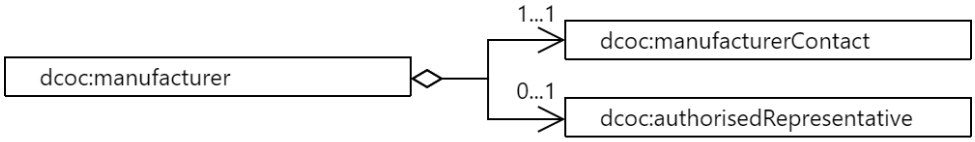


*Figure 10 - The subdivision of the element **dcoc:manufacturer** into subelements*

#### 3.1.1.6.1 dcoc:manufacturerContact

contact data of the manufacturer

LABEL manufacturer's contact data

CARDINALITY 1 … 1

DATA TYPE contact

#### 3.1.1.6.2 dcoc:authorisedRepresentative

shall mean any natural or legal person established within the Community who has received a written mandate from a manufacturer to act on his behalf in relation to specified tasks

SOURCE Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC

LABEL representative

CARDINALITY 0 … 1

DATA TYPE contact

### 3.1.1.7 dcoc:categoryOfInstrument

category of the certified product

LABEL product category

NOTE Applicable for conformity assessment modules B, F, G (not D).

CARDINALITY 0 … 1

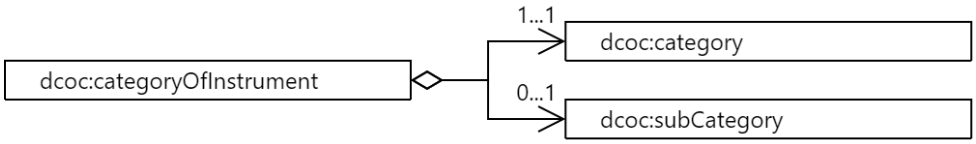


*Figure 11 - The subdivision of the element **dcoc:categoryOfInstrument** into subelements*

#### 3.1.1.7.1 dcoc:category

main category of the certified product

| | |
|---|---|
| LABEL | main product category |
| EXAMPLE 1 | *non-automatic weighing instrument* |
| EXAMPLE 2 | *Water meter* |
| EXAMPLE 3 | *Gas meter* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | text |

#### 3.1.1.7.2 dcoc:subCategory

subcategory of the certified product

| | |
|---|---|
| LABEL | product subcategory |
| EXAMPLE | *non-automatic electromagnetic weighing instrument* |
| CARDINALITY | 0 … 1 |
| DATA TYPE | text |

### 3.1.1.8 dcoc:certObjectIDs

identifiers of the certification object

| | |
|---|---|
| LABEL | certification object IDs |
| NOTE | The element **dcoc:certObjectIDs** contains elements of the same type for each identifier. |
| CARDINALITY | 1 … 1 |

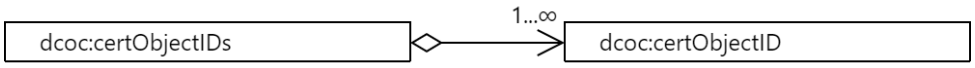


*Figure 12 - The subdivision of the element **dcoc:certObjectIDs** into subelements*

#### 3.1.1.8.1 dcoc:certObjectID

identifier of the certification object

| | |
|---|---|
| LABEL | certification object ID |
| CARDINALITY | 1 … ∞ |

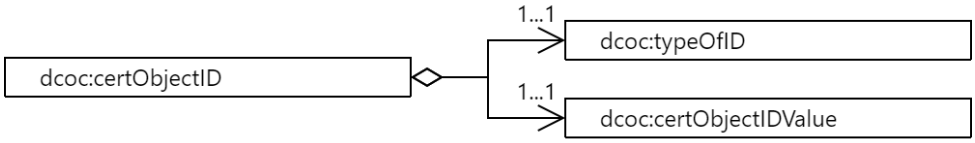


*Figure 13 - The subdivision of the element **dcoc:certObjectID** into subelements*

#### 3.1.1.8.1.1 dcoc:typeOfID

type of identifier

| | |
|---|---|
| LABEL | ID type |
| EXAMPLE 1 | *Type* |
| EXAMPLE 2 | *Serial number* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | string |

#### 3.1.1.8.1.2 dcoc:certObjectIDValue

value of the identifier

| | |
|---|---|
| LABEL | ID value |
| EXAMPLE 1 | *ABC167x* |
| EXAMPLE 2 | *984214576134* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | string |

### 3.1.1.9 dcoc:certDate

issue date of the certificate

| | |
|---|---|
| LABEL | issue date |
| CARDINALITY | 1 … 1 |
| DATA TYPE | date |

### 3.1.1.10 dcoc:certificationCriteria

reference to the main certification criterion

| | |
|---|---|
| LABEL | certification criterion |
| CARDINALITY | 1 … 1 |
| DATA TYPE | norm |

### 3.1.1.11 dcoc:additionallyAppliedDocuments

references to further applied standards, guidelines, normative documents or laws

| | |
|---|---|
| LABEL | further documents |
| NOTE | The element **dcoc:additionallyAppliedDocuments** contains elements of the same type for one reference each. |
| CARDINALITY | 0 … 1 |

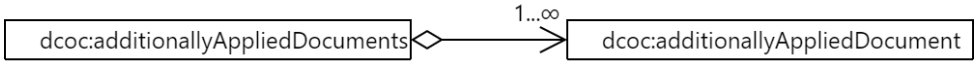


*Figure 14 - The subdivision of the element **dcoc:additionallyAppliedDocuments** into subelements*

#### 3.1.1.11.1 dcoc:additionallyAppliedDocument

reference to further applied standard, guideline, normative document or law

| | |
|---|---|
| LABEL | further document |
| EXAMPLE 1 | *EN 45501* |
| EXAMPLE 2 | *OIML R…* |
| EXAMPLE 3 | *Welmec guide 7.2* |
| CARDINALITY | 1 … ∞ |
| DATA TYPE | norm |

### 3.1.1.12 dcoc:statementOfConformity

conformity statement formulated on the basis of the certification results

| | |
|---|---|
| LABEL | conformity statement |
| EXAMPLE | *The technical design of the measuring instrument described below meets the above essential requirements. This certificate is accompanied by the authorisation to mark instruments manufactured in conformity with this certificate with the number of this certificate.* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | text |

### 3.1.1.13 dcoc:validity

validity of the certificate

| | |
|---|---|
| LABEL | validity |
| CARDINALITY | 0 … 1 |

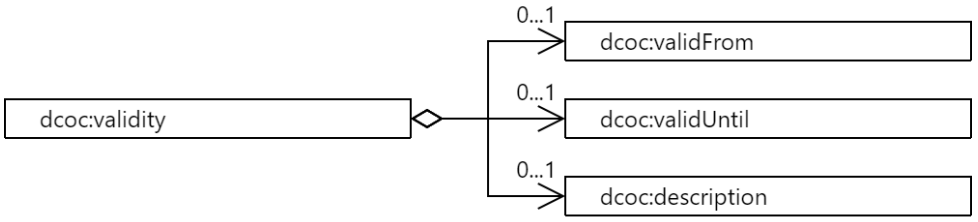


*Figure 15 - The subdivision of the element **dcoc:validity** into subelements*

#### 3.1.1.13.1 dcoc:validFrom

validity start date of the certificate

LABEL valid from

CARDINALITY 0 … 1

DATA TYPE date

#### 3.1.1.13.2 dcoc:validUntil

validity end date of the certificate

LABEL valid until

CARDINALITY 0 … 1

DATA TYPE date

#### 3.1.1.13.3 dcoc:description

detailed description of the validity of the certificate

LABEL validity description

EXAMPL *valid until withdrawn*

CARDINALITY 0 … 1

DATA TYPE text

### 3.1.1.14 dcoc:responsibles

data on the persons responsible for issuing the certificate

LABEL responsibles

NOTE The element dcoc:responsibles contains elements of the same type for one person each.

CARDINALITY 0 … 1

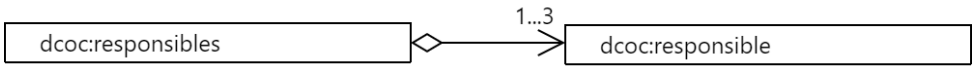


*Figure 16 - The subdivision of the element **dcoc:responsibles** into subelements*

#### 3.1.1.14.1 dcoc:responsible

data on the person responsible for issuing the certificate

LABEL responsible

CARDINALITY 1 … 3

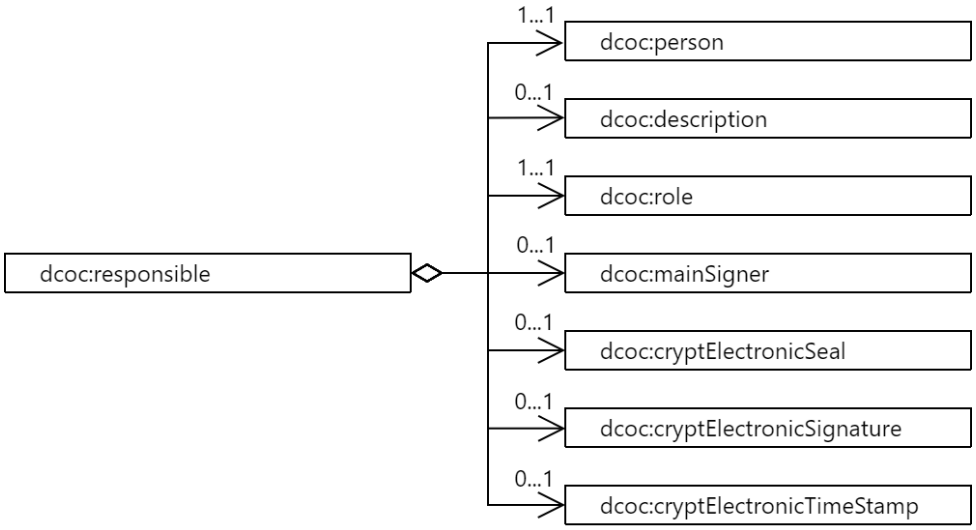


*Figure 17 - The subdivision of the element **dcoc:responsible** into subelements*

#### 3.1.1.14.1.1 dcoc:person

contact data of the person responsible for issuing the certificate

| | |
|---|---|
| LABEL | contact data of responsible person |
| CARDINALITY | 1 … 1 |
| DATA TYPE | contact |

#### 3.1.1.14.1.2 dcoc:description

additional data on the person responsible for issuing the certificate

| | |
|---|---|
| LABEL | description |
| EXAMPLE | *Head of the Conformity Assessment Body* |
| CARDINALITY | 0 … 1 |
| DATA TYPE | text |

#### 3.1.1.14.1.3 dcoc:role

position of the person responsible for issuing the certificate

| | |
|---|---|
| LABEL | position |
| EXAMPLE 1 | *Certifier* |
| EXAMPLE 2 | *Certification manager* |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |

#### 3.1.1.14.1.4 dcoc:mainSigner

indication of whether it is the main signer

LABEL main signer

CARDINALITY 0 … 1

DATA TYPE boolean

#### 3.1.1.14.1.5 dcoc:cryptElectronicSeal

indication whether an electronic seal has been used

LABEL electronic seal

CARDINALITY 0 … 1

DATA TYPE boolean

#### 3.1.1.14.1.6 dcoc:cryptElectronicSignature

indication whether an electronic signature has been used

LABEL electronic signature

CARDINALITY 0 … 1

DATA TYPE boolean

#### 3.1.1.14.1.7 dcoc:cryptElectronicTimeStamp

indication whether an electronic seal has been used

LABEL time stamp

CARDINALITY 0 … 1

DATA TYPE boolean

### 3.1.1.15 dcoc:previousCertificates

history of the certificate as a list of previous certificates

LABEL previous certificates

NOTE The element **dcoc:previousCertificate** contains elements of the same type for each revision of the certificate.

CARDINALITY 0 … 1

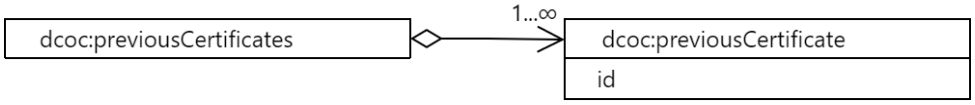


*Figure 18 - The subdivision of the element **dcoc:previousCertificates** into subelements*

#### 3.1.1.15.1 dcoc:previousCertificate

data on a previous certificate of a certain revision

LABEL previous certificate

CARDINALITY 1 … ∞

ATTRIBUT id

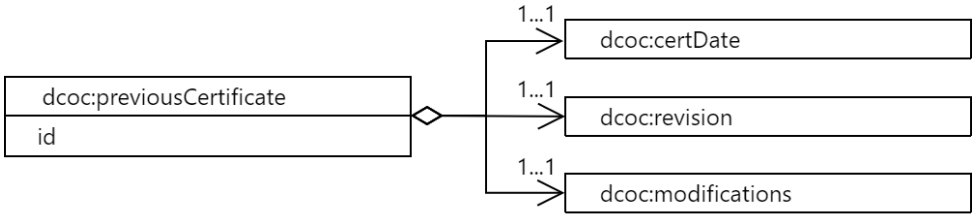


*Figure 19 - The subdivision of the element **dcoc:previousCertificate** into subelements*

### 3.1.1.15.1.1 dcoc:certDate

LABEL date

NOTE See **dcoc:certDate** here in 3.1.1.9.

CARDINALITY 1 … 1

### 3.1.1.15.1.2 dcoc:revision

LABEL revision

NOTE See **dcoc:revision** here in 3.1.1.4.

CARDINALITY 1 … 1

### 3.1.1.15.1.3 dcoc:modifications

LABEL modifications

NOTE See **dcoc:modifications** here in 3.1.1.5.

CARDINALITY 1 … ∞

### 3.1.1.16 dcoc:referenceNos

reference numbers for the certificate

LABEL reference numbers

NOTE The element dcoc:referenceNos contains elements of the same type for each reference number.

CARDINALITY 1 … 1

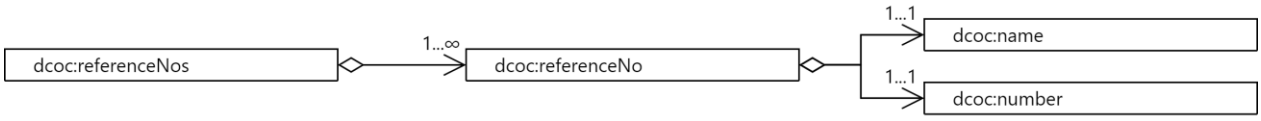


*Figure 20 - The subdivision of the element **dcoc:referenceNos** into subelements*

### 3.1.1.16.1 dcoc:referenceNo

reference number for the certificate

| | |
|---|---|
| LABEL | reference number |
| CARDINALITY | 1 … ∞ |

#### 3.1.1.16.1.1 dcoc:name

designation of the reference

| | |
|---|---|
| LABEL | designation |
| EXAMPLE 1 | *project number* |
| EXAMPLE 2 | *job number* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | text |

#### 3.1.1.16.1.2 dcoc:number

number of the reference

| | |
|---|---|
| LABEL | number |
| EXAMPLE | *1.72-4101 5722* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | string |

### 3.1.1.17 dcoc:languages

data on the used languages

| | |
|---|---|
| LABEL | languages |
| NOTE 1 | The Element **dcoc:languages** contains elements of the same type for each language data. |
| CARDINALITY | 1 … 1 |

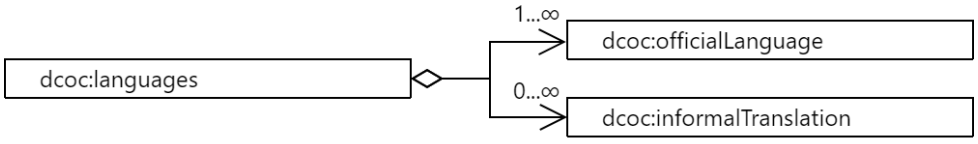


*Figure 21 - The subdivision of the element **dcoc:languages** into subelements*

#### 3.1.1.17.1 dcoc:officialLanguage

official language of the certificate

| | |
|---|---|
| LABEL | official language |
| CARDINALITY | 1 … ∞ |
| DATA TYPE | string |
| RESTRICTION ON VALUES | code according to ISO 639 |

#### 3.1.1.17.2 dcoc:informalTranslation

language of translation of the certificate which does not hold any legal binding

| | |
|---|---|
| LABEL | informal translation |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |
| RESTRICTION ON VALUES | code according to ISO 639 |

### 3.1.2 dcoc:certificationResult

result of a certification

| | |
|---|---|
| LABEL | certification result |
| CARDINALITY | 0 … 1 |
| DATA TYPE | separate documentation e.g. for D-CoC M B |

### 3.1.3 dcoc:comment

comment on the content of the certificate

| | |
|---|---|
| LABEL | comment |
| CARDINALITY | 0 … 1 |
| COMMENT ON DATA TYPE | The data type can be freely selected depending on the application. |

## 3.2 Data Types

### 3.2.1 dcoc:contact

contact data on a person or organisation

NOTE The element name and cardinality are determined at the place of use of the data structure.

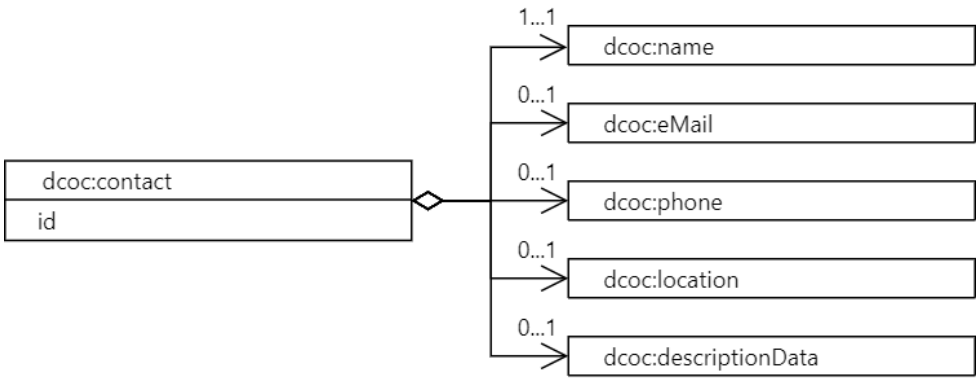


*Figure 22 - The subdivision of the data type **dcoc:contact** into subelements*

#### 3.2.1.1 dcoc:name

name of the contact person or organization

| | |
|---|---|
| LABEL | name |
| EXAMPLE 1 | *P. Sherman Meter GmbH* |
| EXAMPLE 2 | *ਪੀ ਸ਼ਰਮਨ ਮੀਟਰ ਲਿਮਿਟੇਡ* |
| EXAMPLE 3 | *Peter Hase* |
| CARDINALITY | 1 … 1 |
| DATA TYPE | text |

#### 3.2.1.2 dcoc:eMail

email address of the contact person or organization

| | |
|---|---|
| LABEL | email |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |

#### 3.2.1.3 dcoc:phone

phone number of the contact person or organization

| | |
|---|---|
| LABEL | phone number |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |

#### 3.2.1.4 dcoc:location

location data of the contact person or organization

| | |
|---|---|
| LABEL | location |
| CARDINALITY | 0 … 1 |

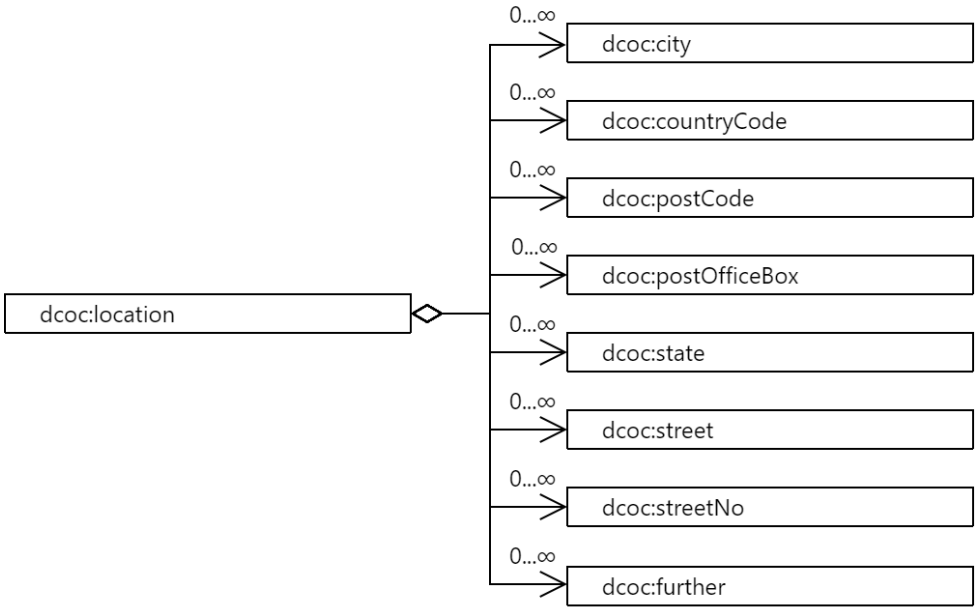


*Figure 23 - The subdivision of the data type **dcoc:location** into subelements*

#### 3.2.1.4.1 dcoc:city

city name

| | |
|---|---|
| LABEL | city |
| EXAMPLE | *Sydney* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.2 dcoc:countryCode

country code

| | |
|---|---|
| LABEL | country |
| EXAMPLE | *AUS* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |
| RESTRICTION ON VALUE | The entry is made using the country codes according to ISO 3166. |

#### 3.2.1.4.3 dcoc:postCode

post code

| | |
|---|---|
| LABEL | postcode |
| EXAMPLE | *2124* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.4 dcoc:postOfficeBox

post office box number of the contact person or organisation

| | |
|---|---|
| LABEL | P.O. box |
| EXAMPLE | *P.O. Box 1234* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.5 dcoc:state

name of the federal state, region, or substate

| | |
|---|---|
| LABEL | state |
| EXAMPLE | *Queensland* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.6 dcoc:street

street name of the contact person or organisation

| | |
|---|---|
| LABEL | street |
| EXAMPLE | *Wallaby Way* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.7 dcoc:streetNo

street number of the contact person or organisation

| | |
|---|---|
| LABEL | street number |
| EXAMPLE | *42a* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

#### 3.2.1.4.8 dcoc:further

additional information on the location

| | |
|---|---|
| LABEL | further |
| EXAMPLE | *o.V.i.A* |
| CARDINALITY | 0 … ∞ |
| DATA TYPE | string |

### 3.2.1.5 dcoc:descriptionData

additional files on the contact person or organisation

LABEL additional file

EXAMPLE *Logo*

CARDINALITY 0 … 1

DATA TYPE byteData

### 3.2.2 dcoc:norm

reference data on standards, directives, normative documents, or laws

NOTE The element name and cardinality are determined at the place of use of the data structure.

ATTRIBUTE id

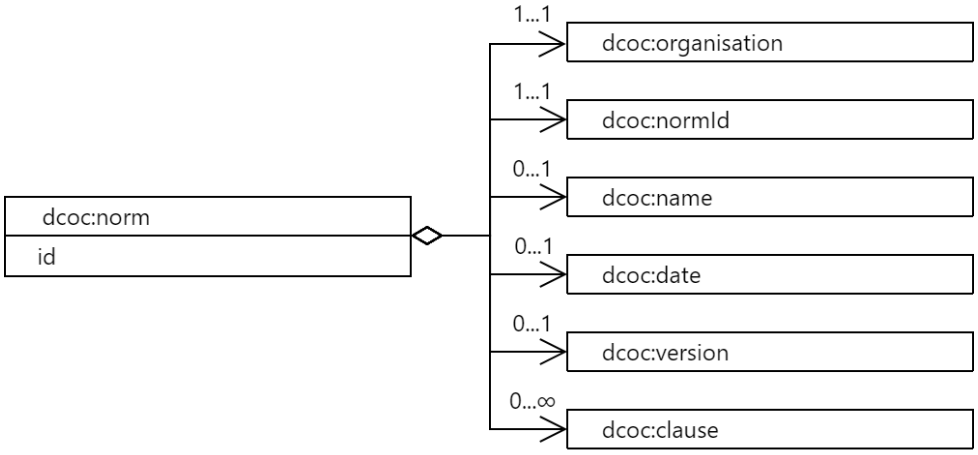


*Figure 24 - The subdivision of the data type **dcoc:norm** into subelements*

#### 3.2.2.1 dcoc:organisation

name of the issuing organisation of the reference

LABEL organisation

EXAMPLE 1 *Europäische Union*

EXAMPLE 2 *ISO*

EXAMPLE 3 *Welmec*

CARDINALITY 1 … 1

DATA TYPE string

#### 3.2.2.2 dcoc:normId

number of the referenced document

LABEL reference number

EXAMPLE 1 *2014/32/EU*

EXAMPLE 2 *17025*

CARDINALITY 1 … 1

DATA TYPE string

#### 3.2.2.3 dcoc:name

name of the referenced document

LABEL reference designation

EXAMPLE *Directive 2014/32/EU of the European parliament … on the market of measuring instruments*

CARDINALITY 0 … 1

DATA TYPE text

#### 3.2.2.4 dcoc:date

issuing date of the referenced document

LABEL issuing date

CARDINALITY 0 … 1

DATA TYPE date

#### 3.2.2.5 dcoc:version

version of the referenced document

LABEL version

EXAMPLE 1 *Revision 5*

EXAMPLE 2 *Version 1.7*

CARDINALITY 0 … 1

DATA TYPE string

#### 3.2.2.6 dcoc:clause

reference to essential content of the referenced document

LABEL clause

EXAMPLE 1 *Annex MI-006*

EXAMPLE 2 *Extension D: Download of Legally Relevant Software*

CARDINALITY 0 … ∞

DATA TYPE text

### 3.2.3 dcoc:byteData

description of an encoded file

NOTE The element name and cardinality are given at the point where it is used.

ATTRIBUTE id

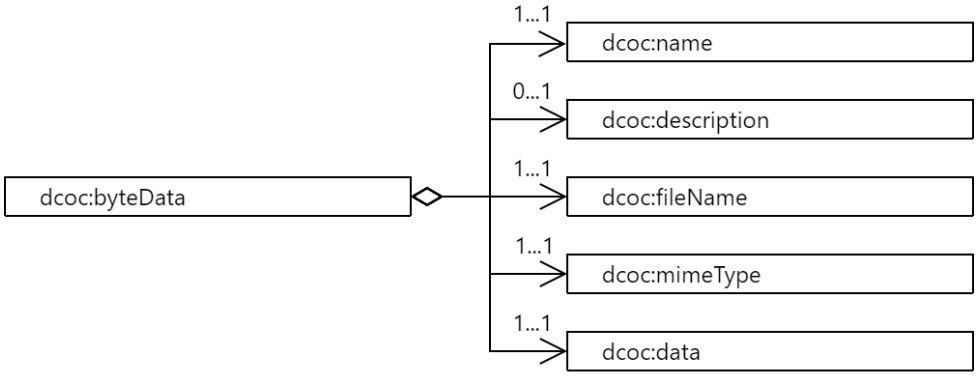


*Figure 25 - The subdivision of the data type **dcoc:byteData** into subelements*

### 3.2.3.1 dcoc:name

designation of the file content, such as an image or a document

LABEL designation
EXAMPLE *seal plan*
CARDINALITY 1 … 1
DATA TYPE text

### 3.2.3.2 dcoc:description

description of the file content

LABEL description
CARDINALITY 0 … 1
DATA TYPE text

### 3.2.3.3 dcoc:fileName

designation of the file

LABEL file designation
EXAMPLE *picture.jpg*
CARDINALITY 1 … 1
DATA TYPE string

### 3.2.3.4 dcoc:mimeType

underlying file type

LABEL MIME type
NOTE according to specificaton Multipurpose Internet Mail Extensions (MIME)

EXAMPLE *base64*
CARDINALITY 1 … 1
DATA TYPE string

#### 3.2.3.5 dcoc:data

encoded file

LABEL file
CARDINALITY 1 … 1
DATA TYPE binary

### 3.2.4 dcoc:text

indication of any content in text form including used language

NOTE The element name and cardinality are given at the point where it is used.
DATA TYPE string
ATTRIBUTE id

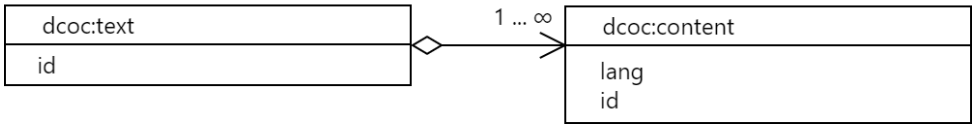


*Figure 26 - The subdivision of the data type **dcoc:text** into subelements*

#### 3.2.4.1. dcoc:content

text content based on language indication

LABEL content
CARDINALITY 1 … ∞
DATA TYPE string
ATTRIBUTE 1 id
ATTRIBUTE 2 lang

## 3.3. Attributes

### 3.3.1 dcoc:schemaVersion

version of the schema

LABEL schema version
EXAMPLE *Version="0.4.0"*
CARDINALITY 1 … 1
DATA TYPE string

### 3.3.2 dcoc:id

identification number

| | |
|---|---|
| LABEL | ID |
| CARDINALITY | 0 … 1 |

### 3.3.3 dcoc:lang

language used

| | |
|---|---|
| LABEL | language |
| CARDINALITY | 0 … 1 |
| DATA TYPE | string |
| RESTRICTION ON VALUES | code according to ISO 639 |

# 4. References/Sources

1. Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC

## 5. Revision of this Document

| Issue Year | Significant changes |
|---|---|
| 2023 | Document first issued |