S100 Diagram Report

S-100 V2.0.0

Version 2.0 • Proposed

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Author: raphael.malyankar

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1 S-100 V2.0.0 *(package)*

1.1 S100 V2 Part 1 ConceptualSchemaLanguage *(package)*

1.1.1 S100 Part 1 S100 V1 to V2 *(diagram)*

S100 Part 1 S100 V1 to V2
Diagram Version 2.0

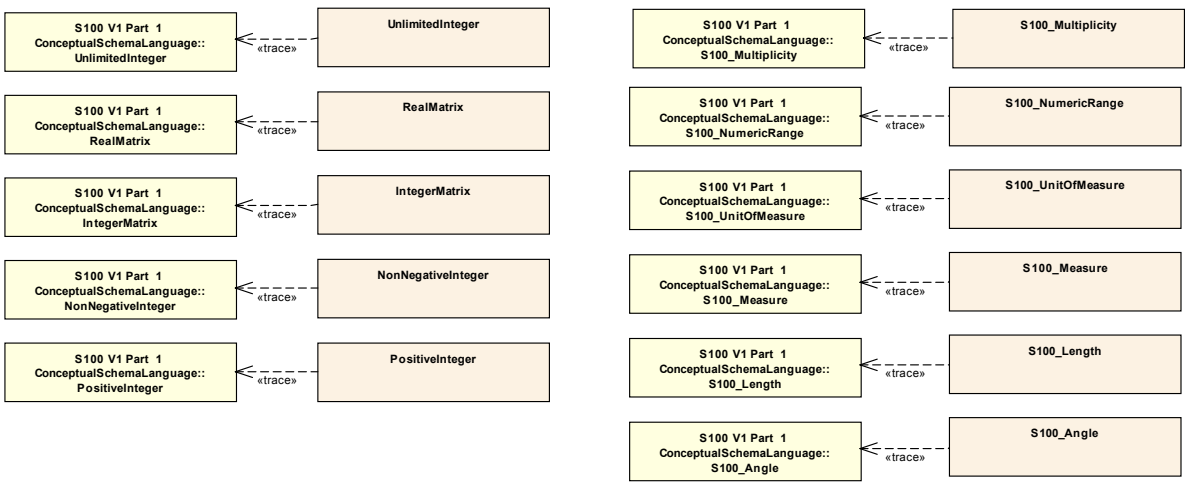
Tracebility between classes in S-100 Part 1 Version 2 back to Version 1.

All classes use the versioning tags Version and Phase.

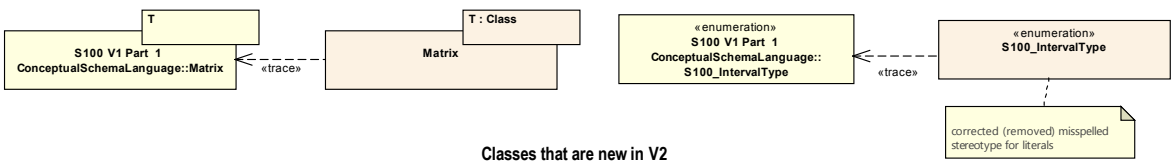
All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

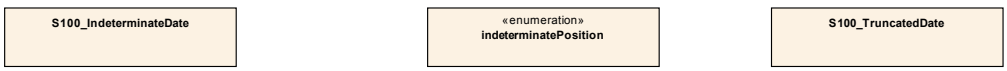
A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2. Classes in Part 1 that are equivalent in V1 and V2



Classes in Part 1 that are changed from V1 to V2



Classes that are new in V2



S100 Part 1 S100 V1 to V2

1.1.2 V2.0.0 Fig 1-1 to 1-6 ConceptualSchemaLanguage Types *(diagram)*

Basic data types. The basic data types are grouped into two categories:
1. Primitive types: Fundamental types for representing values, e.g. CharacterString, Integer, Boolean, Date, Time, etc.
2. Complex types: A combination of types, e.g. a combination of measure types and units of measurement.

There is also a sub-diagram for Predefined derived types URI, URL, and URN from Table 1-4 of Edition 2.0.0, for which inclusion of a diagram in the published text was not considered necessary.

V2.0.0 Fig 1-1 to 1-6 ConceptualSchemaLanguage Types
Diagram Version 2.0

Basic Data Types from S100 Part 1 - 4.5

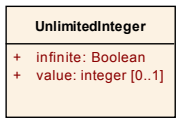
The basic data types are grouped into two categories,:
1) Primitive types: Fundamental types for representing values, e.g. CharacterString, Integer, Boolean, Date, Time, etc.
2) Complex types: A combination of types, e.g. a combination of measure types and units of measurement.

Primitive Data Types

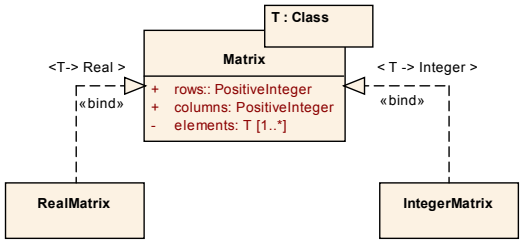
Name	Description
Integer	A signed integer number, the representation of an integer is encapsulation and usage dependent. EXAMPLE 29, -65547
PositiveInteger	An unsigned integer number greater than 0.
NonNegativeInteger	An unsigned integer number greater than or equal to 0
Real	A signed real (floating point) number consisting of a mantissa and an exponent, the representation of a real is encapsulation and usage dependent. EXAMPLE 23.501, -1.234E-4, -23.0
Boolean	A value representing binary logic. The value can be either true or false.
CharacterString	A CharacterString is an arbitrary-length sequence of characters including accents and special characters from repertoire of one of the adopted character sets
Date	A date gives values for year, month and day according to the Gregorian Calendar. Character encoding of a date is a string which shall follow the calendar date format (complete representation, basic format) for date specified by ISO 8601. EXAMPLE 19980918 (YYYYMMDD)
Time	A time is given by an hour, minute and second. Character encoding of a time is a string that follows the local time (complete representation, basic format) format defined in ISO 8601. Time zone according to UTC is optional.
DateTime	A DateTime is a combination of a date and a time type. Character encoding of a DateTime shall follow ISO 8601
TruncatedDate	A TruncatedDate allows a partial date to be given. At least one of the following components must be present with omitted elements replaced by the appropriate number of hyphens. The encoding of this type is as follows: YYYYMMDD Components: YYYY Year integer between 0000 and 9999 MM Month integer between 01 – 12 (inclusive) DD Day integer between 01 and 28, 29, 30, or 31 (inclusive), consistent with year and month values if these are specified. At least one component must be specified. Unspecified components must be represented with the appropriate number of hyphens.

S100 Table 1-2 Data Types

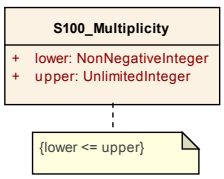
Complex Data Types



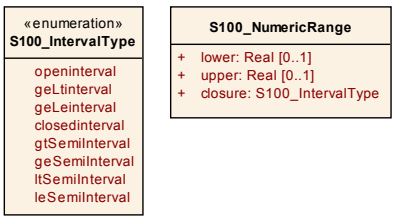
S100 Figure 1-1 - UnlimitedInteger



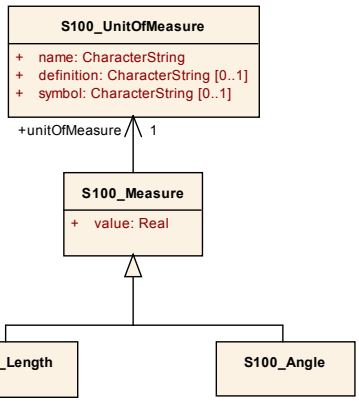
S100 Figure 1-2 - Matrix



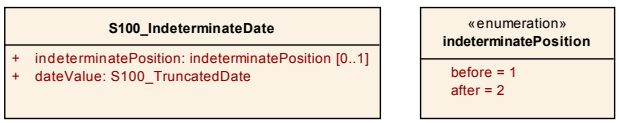
S100 Figure 1-3 - S100_Multiplicity



S100 Figure 1-4 - S100_NumericRange

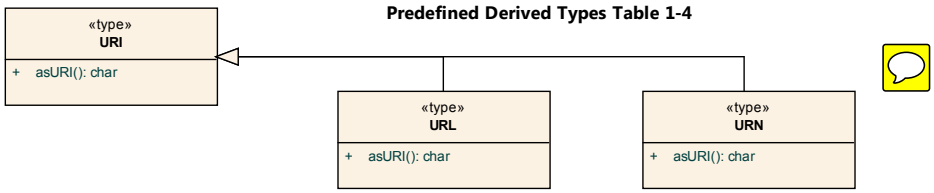


S100 Figure 1-5 - S100_UnitOfMeasure



S100 Figure 1-6 - S100_IndeterminateDate

Predefined Derived Types Table 1-4



V2.0.0 Fig 1-1 to 1-6 ConceptualSchemaLanguage Types

1.2 S100 V2 Part 2 Registers *(package)*

1.2.1 S100 Part 2 S100 V1 to V2.0.0 *(diagram)*

S100 Part 2 S100 V1 to V2.0.0
Diagram Version 2.0

Tracebility between classes in S-100 Part 2 Version 2 back to Version 1.

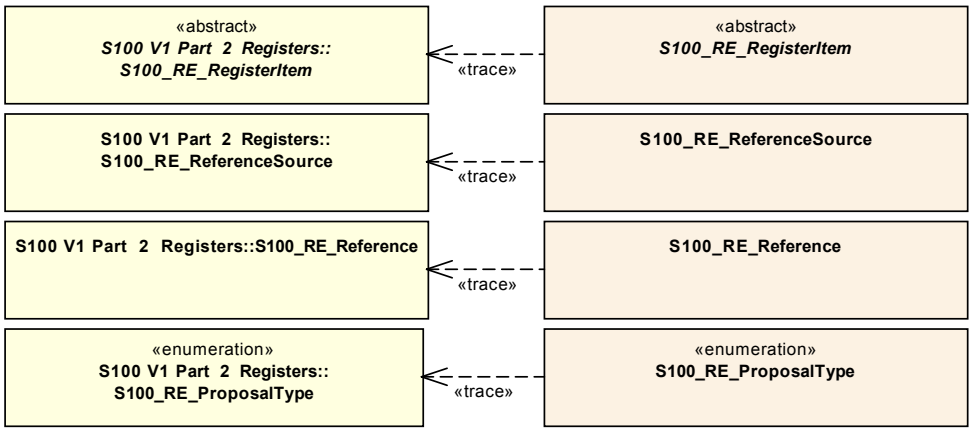
All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

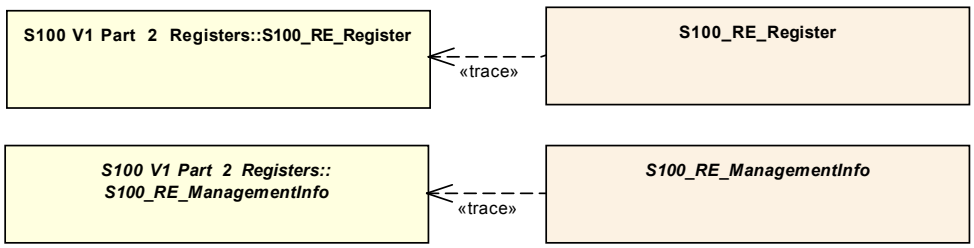
All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.

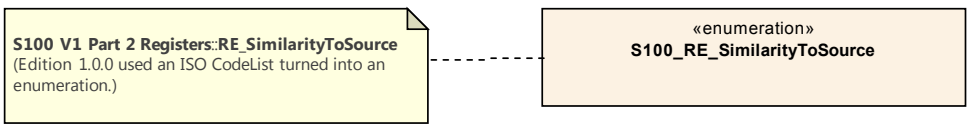
Classes in Part 2 that are equivalent in V1 and V2



Classes in Part 2 that are revised from V1 toV2



Elements in Part 2 that are new in V2

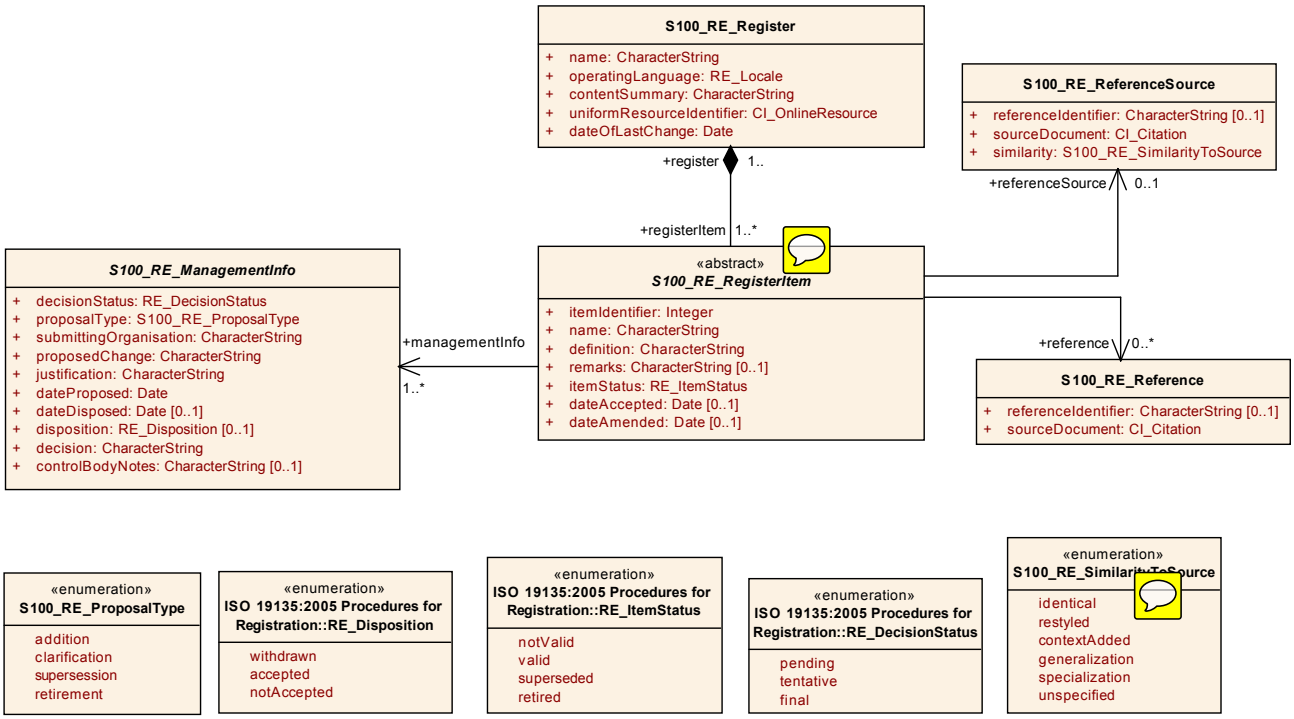


S100 Part 2 S100 V1 to V2.0.0

1.2.2 V2.0.0 Fig 2-4 The Register Schema *(diagram)*

Describes the structure of an IHO Geospatial Information Register.

V2.0.0 Fig 2-4 The Register Schema
Diagram Version 2.0



V2.0.0 Fig 2-4 The Register Schema

1.2.3 S100 V2 Part 2a FCD Registers *(package)*

1.2.3.1 S100 Part 2a S100 V1 to V2.0.0 (diagram)

S100 Part 2a S100 V1 to V2.0.0
Diagram Version 2.0

Traceability between types in S-100 Part 2a Version 2.0.0 back to Version 1.

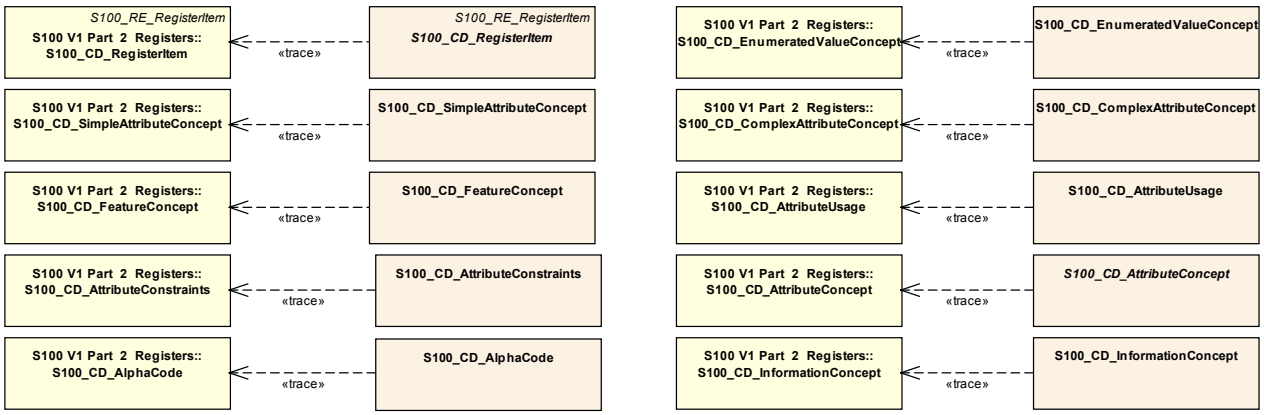
All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

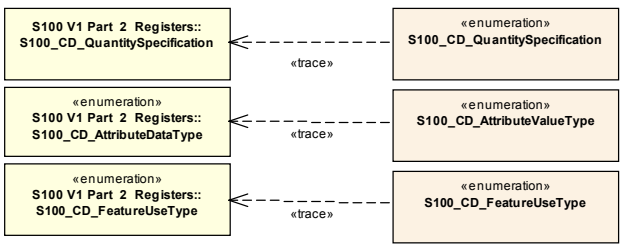
All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.

Types in Part 2a that are equivalent in V1 and V2



Types in Part 2a that are revised from V1 toV2



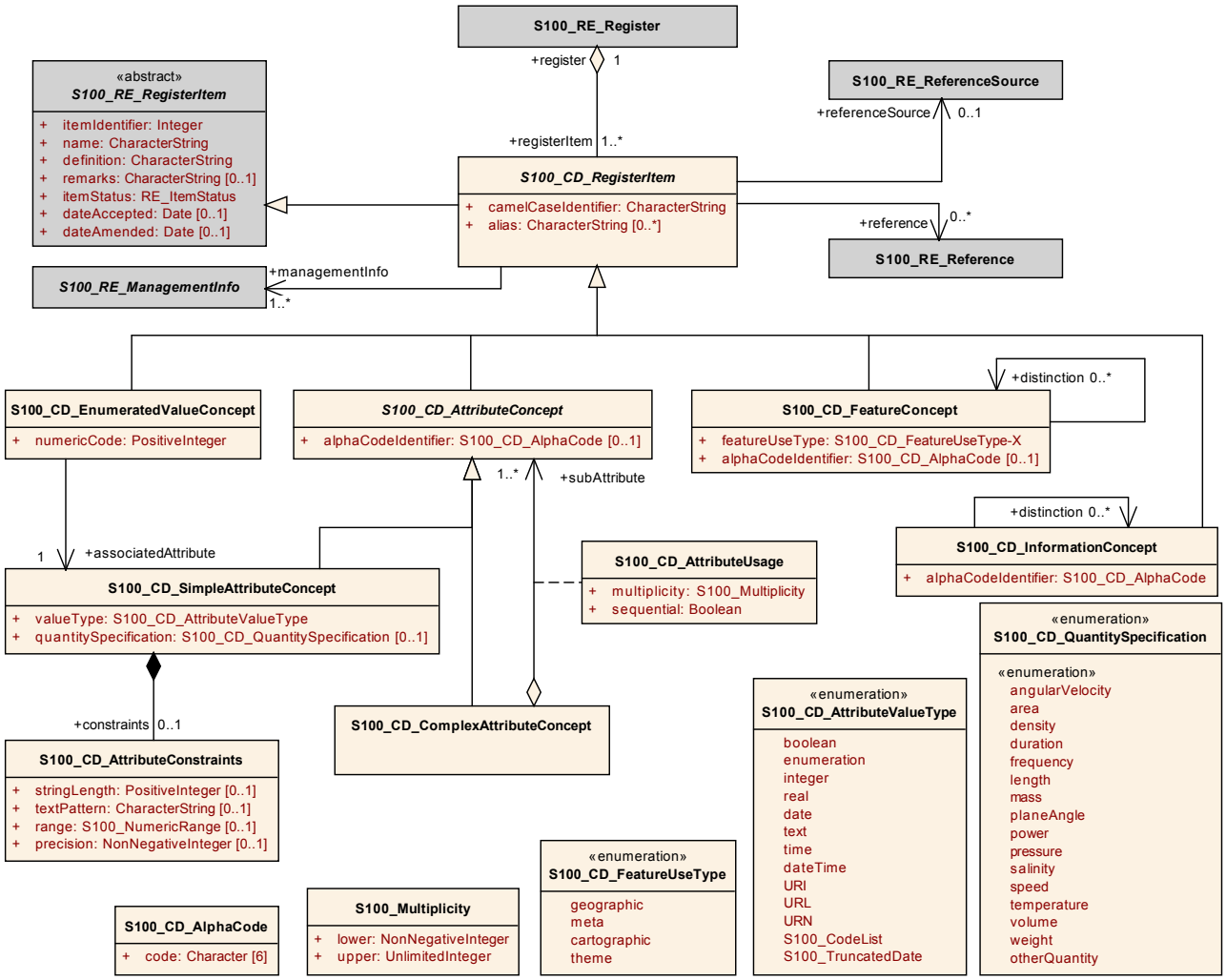
Types in Part 2a that are new in V2

S100 Part 2a S100 V1 to V2.0.0

1.2.3.2 V2.0.0 Fig 2a-1 Feature Concept Dictionary (diagram)

A feature concept dictionary specifies independent sets of definitions of features, attributes, enumerated values, and information types that may be used to describe geographic, hydrographic, and metadata information.

V2.0.0 Fig 2a-1 Feature Concept Dictionary
Diagram Version 2.0



V2.0.0 Fig 2a-1 Feature Concept Dictionary

1.3 S100 V2 Part 3 General Feature Model *(package)*

1.3.1 S100 Part 3 S100 V1 to V2 *(diagram)*

S100 Part 3 S100 V1 to V2
Diagram Version 1.0

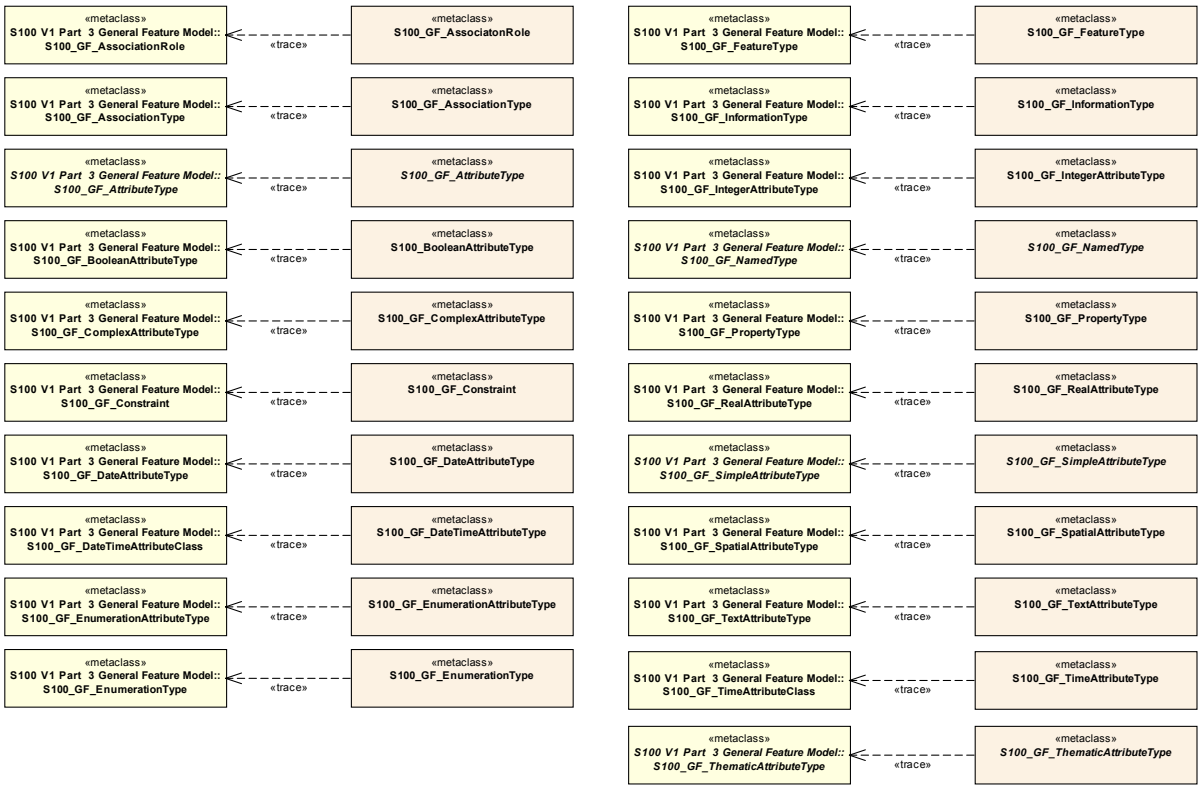
Traceability between elements in S-100 Part 3: Version 2.0.0 to Version 1.

All classes use the versioning tags Version and Phase.

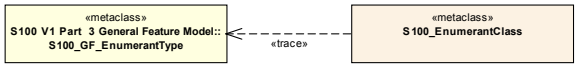
All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

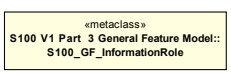
Elements in Part 3 that are equivalent in V1 and V2



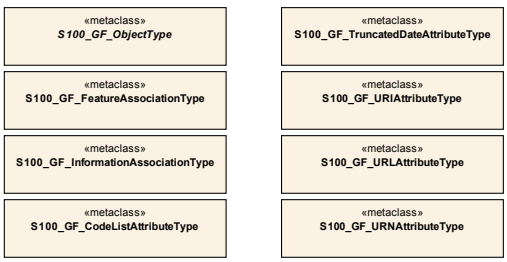
Elements in Part 3 that are revised from V1 to V2



Elements used only in V1



New Elements in V2

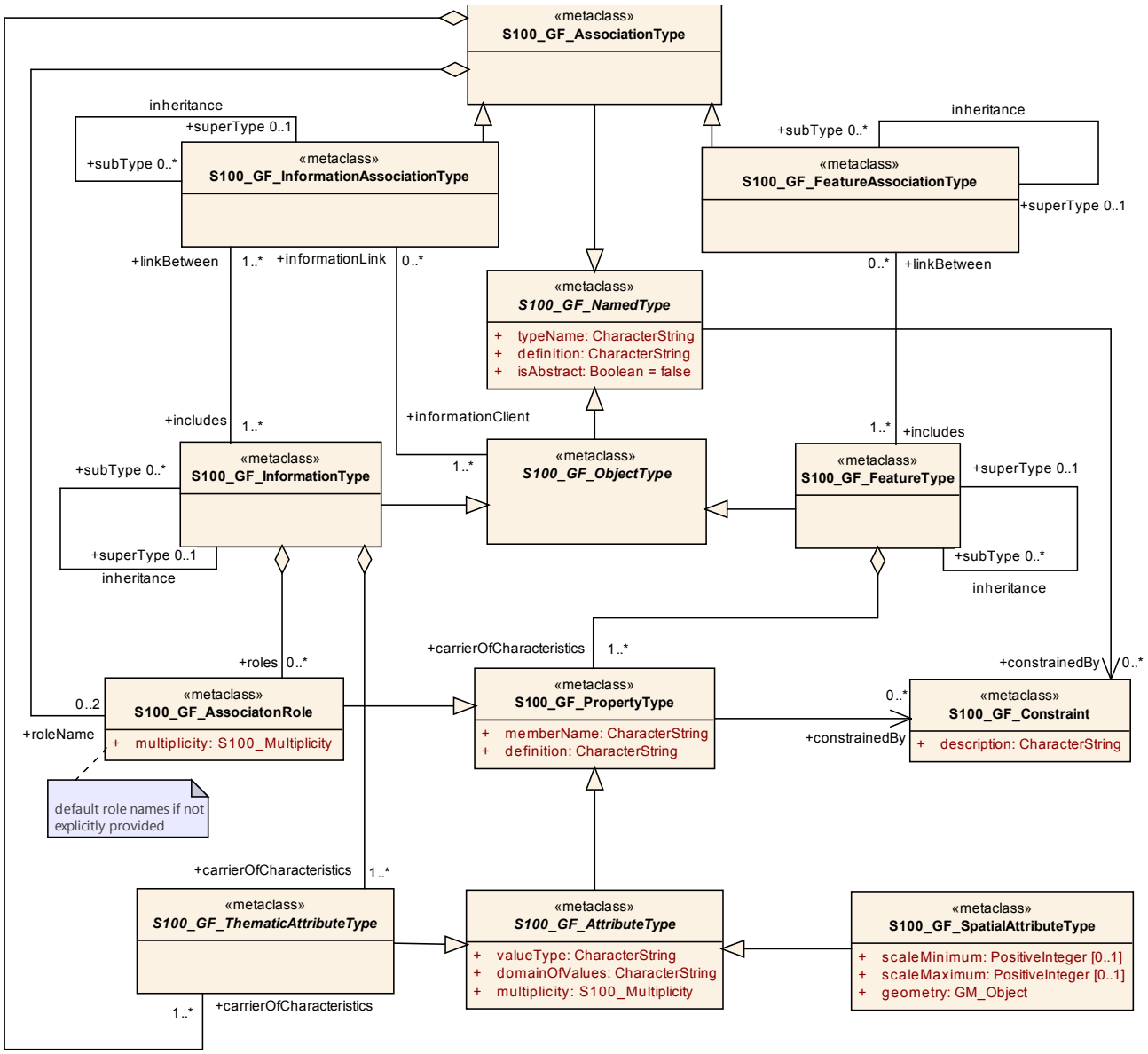


S100 Part 3 S100 V1 to V2

1.3.2 V2.0.0 Fig 3-1 The General Feature Model *(diagram)*

A conceptual model of types that shall be used in S-100 products is presented in this document. It is known as the GFM and is derived from the ISO 19109 General Feature Model by realization of its classes.
The GFM is a basis for the classification of features and information types and their properties. The GFM also acts as the basis for the structure of feature catalogues.

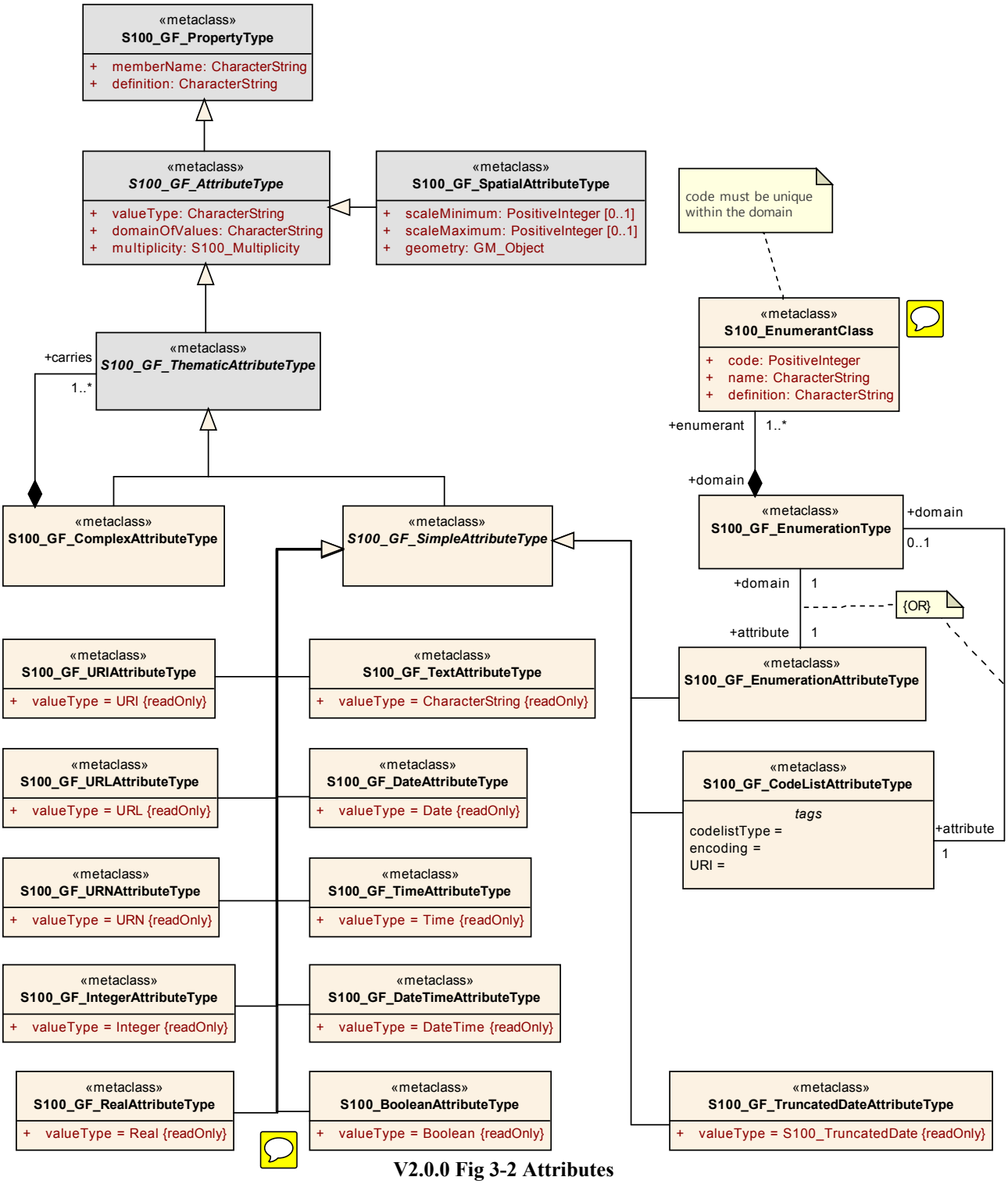
V2.0.0 Fig 3-1 The General Feature Model
Diagram Version 1.0



V2.0.0 Fig 3-1 The General Feature Model

1.3.3 V2.0.0 Fig 3-2 Attributes *(diagram)*

V2.0.0 Fig 3-2 Attributes
Diagram Version 1.0



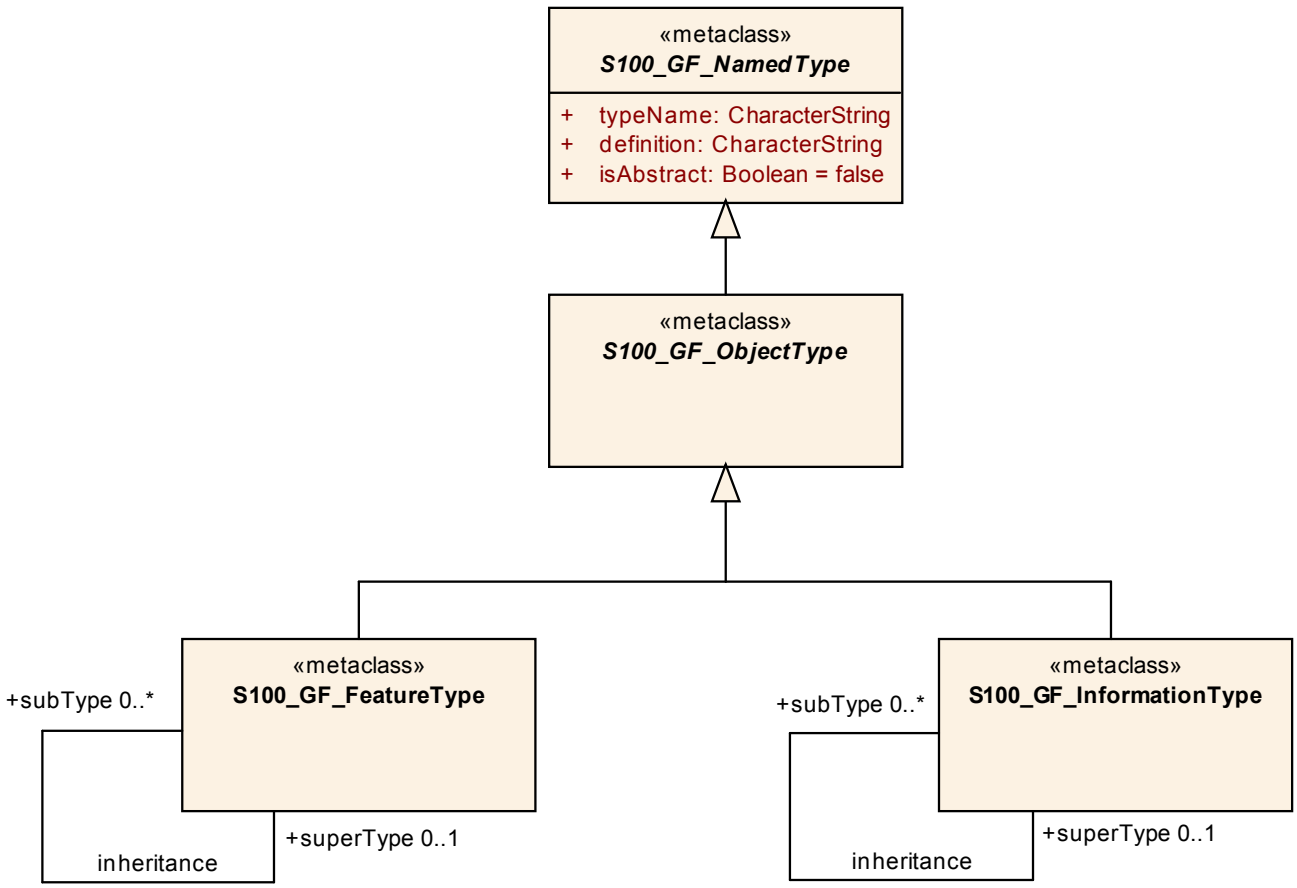
V2.0.0 Fig 3-2 Attributes

1.3.4 V2.0.0 Fig 3-3 Specialisation and Generalisation Associations *(diagram)*

The class GF_InheritanceRelation is not realised in the S-100 GFM but object inheritance is allowed through the use of an identical association on the class S100_GF_FeatureType and the class S100_GF_InformationType (see Figure 3-3). The multiplicity of the superType end of the association is such that a subtype may have only one supertype. This is to prevent the modelling of multiple inheritance. The inheritance relation association is modelled at the level of the concrete class rather than on the abstract class S100_GF_NamedType. This prevents a feature type inheriting from an information type and vice versa.
Inheritance associations exist only between named types (classes) and not between named type instances (i.e. entities occurring in a dataset).

Special note: This version of Figure 3-3 is an accurate representation of the 2.0.0 GFM but the published text of edition 2.0.0 has the old diagram from 1.0.0.

V2.0.0 Fig 3-3 Specialisation and Generalisation Associations
Diagram Version 1.0

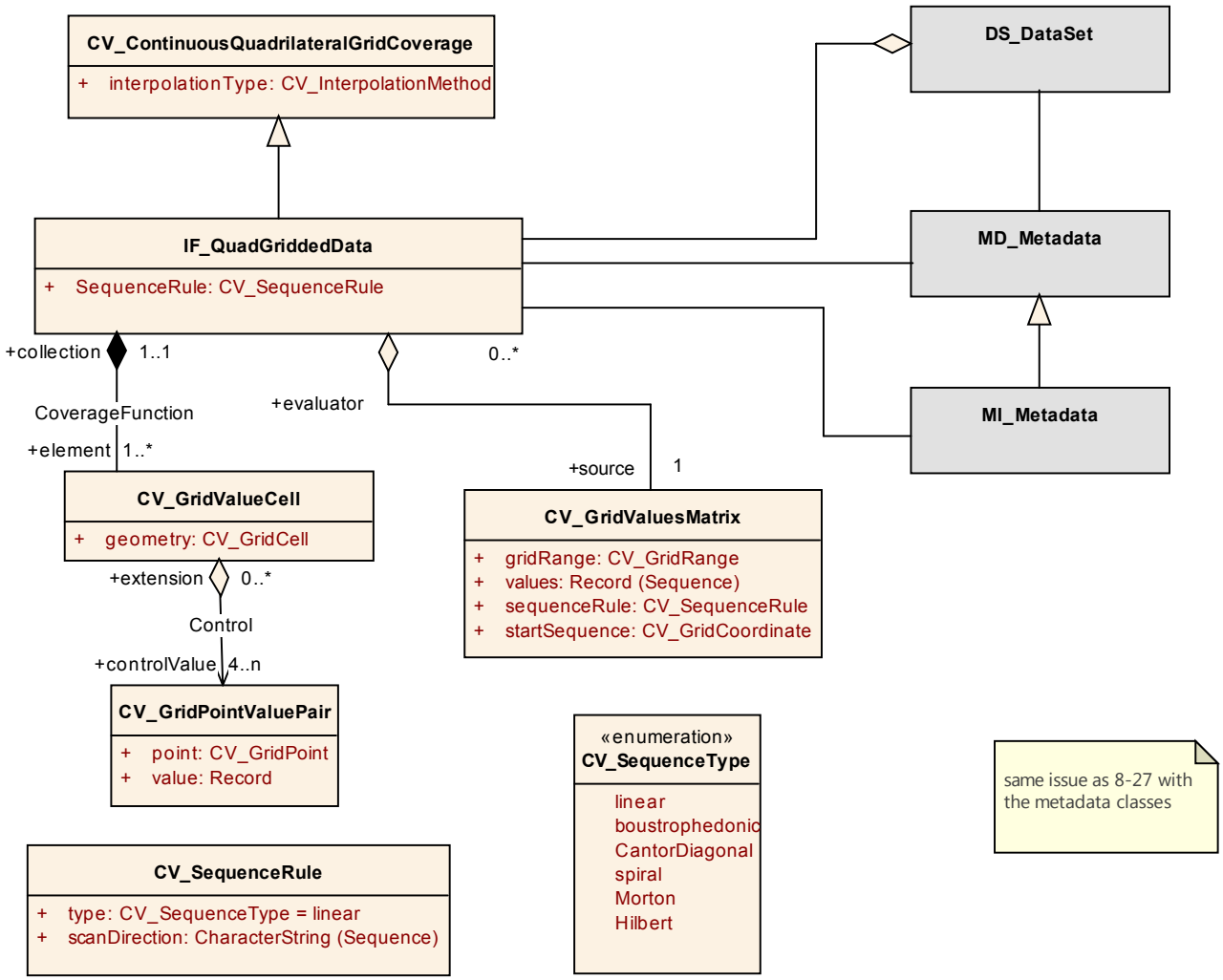


V2.0.0 Fig 3-3 Specialisation and Generalisation Associations

1.3.5 V2.0.0 Fig 3-4 (Fig 8-28) Template Application Schema for a Quadrilateral Grid Coverage *(diagram)*

This is the same as Figure 8-28.

V2.0.0 Fig 3-4 (Fig 8-28) Template Application Schema for a Quadrilateral Grid Coverage
Diagram Version 1.0

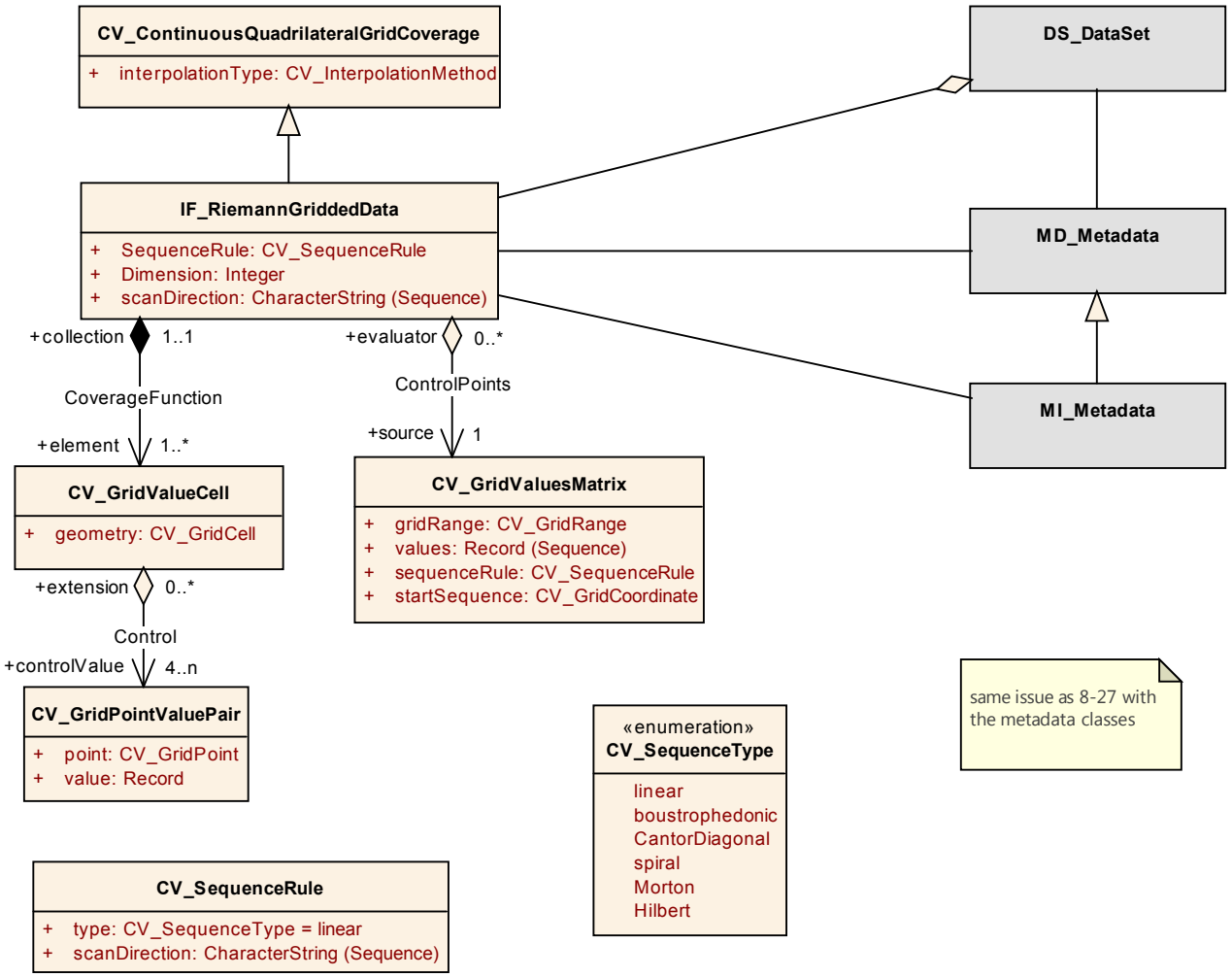


V2.0.0 Fig 3-4 (Fig 8-28) Template Application Schema for a Quadrilateral Grid Coverage

1.3.6 V2.0.0 Fig 3-5 (Fig 8-29) Template Application Schema for a Riemann Grid Coverage *(diagram)*

This is the same as Figure 8-29.

V2.0.0 Fig 3-5 (Fig 8-29) Template Application Schema for a Riemann Grid Coverage
Diagram Version 1.0

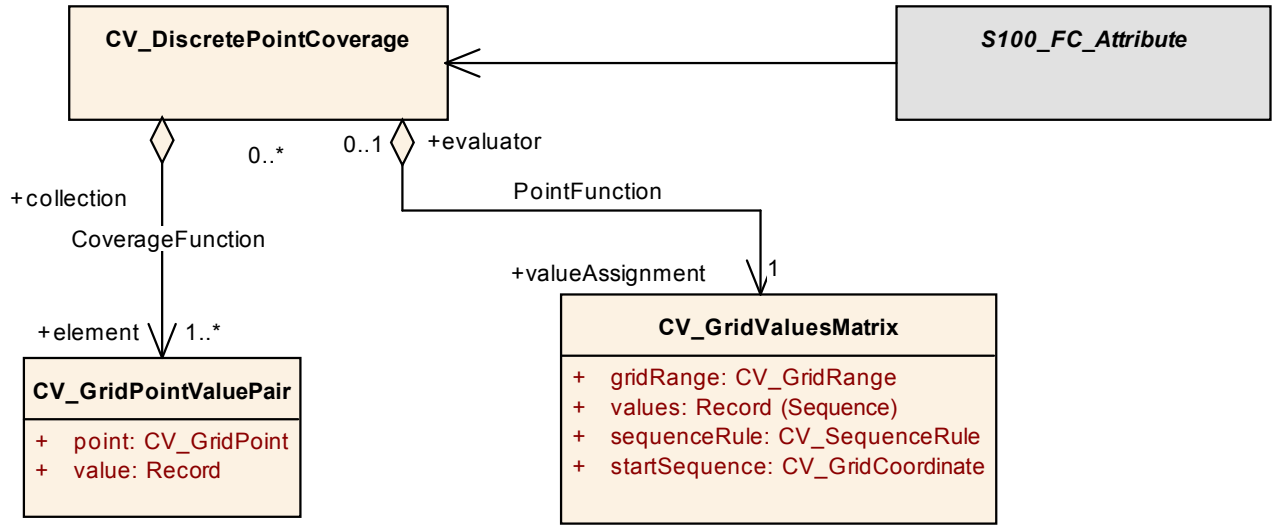


V2.0.0 Fig 3-5 (Fig 8-29) Template Application Schema for a Riemann Grid Coverage

1.3.7 V2.0.0 Fig 3-6 (Fig 8-30) Feature Oriented Discrete Coverage *(diagram)*

This is the same as Figure 8-30.

V2.0.0 Fig 3-6 (Fig 8-30) Feature Oriented Discrete Coverage
Diagram Version 1.0



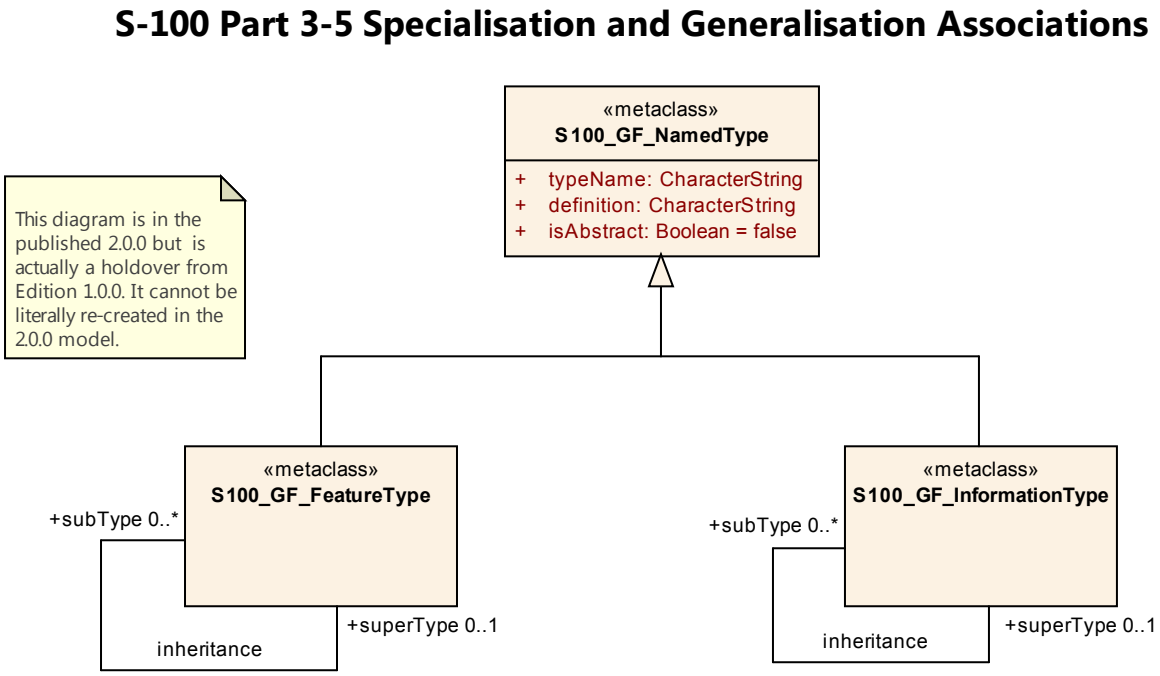
V2.0.0 Fig 3-6 (Fig 8-30) Feature Oriented Discrete Coverage

1.3.8 Figure 3-3 as published in 2.0.0 *(package)*

1.3.8.1 V2.0.0 Fig 3-3 Specialisation and Generalisation Associations (Figure 3-3 in published text of Edition 2.0.0) (diagram)

S-100 Figure 3-3, as depicted in the published S-100 Edition 2.0.0. This figure is a legacy and **cannot be drawn with the 2.0.0 UML model**.
The figure in the published Word/PDF S-100 should be replaced at the next opportunity with the correct figure, which is Figure 3-3 in the General Feature Model package.

V2.0.0 Fig 3-3 Specialisation and Generalisation Associations (Figure 3-3 in published text of Edition 2.0.0)
Diagram Version 2.0



S100 Figure 3-3 - Specialisation and Generalisation Associations

V2.0.0 Fig 3-3 Specialisation and Generalisation Associations (Figure 3-3 in published text of Edition 2.0.0)

1.4 S100 V2 Part 4 Metadata *(package)*

1.4.1 S100 Part 4 S100 V1 to V2 *(diagram)*

S100 Part 4 S100 V1 to V2
Diagram Version 2.0

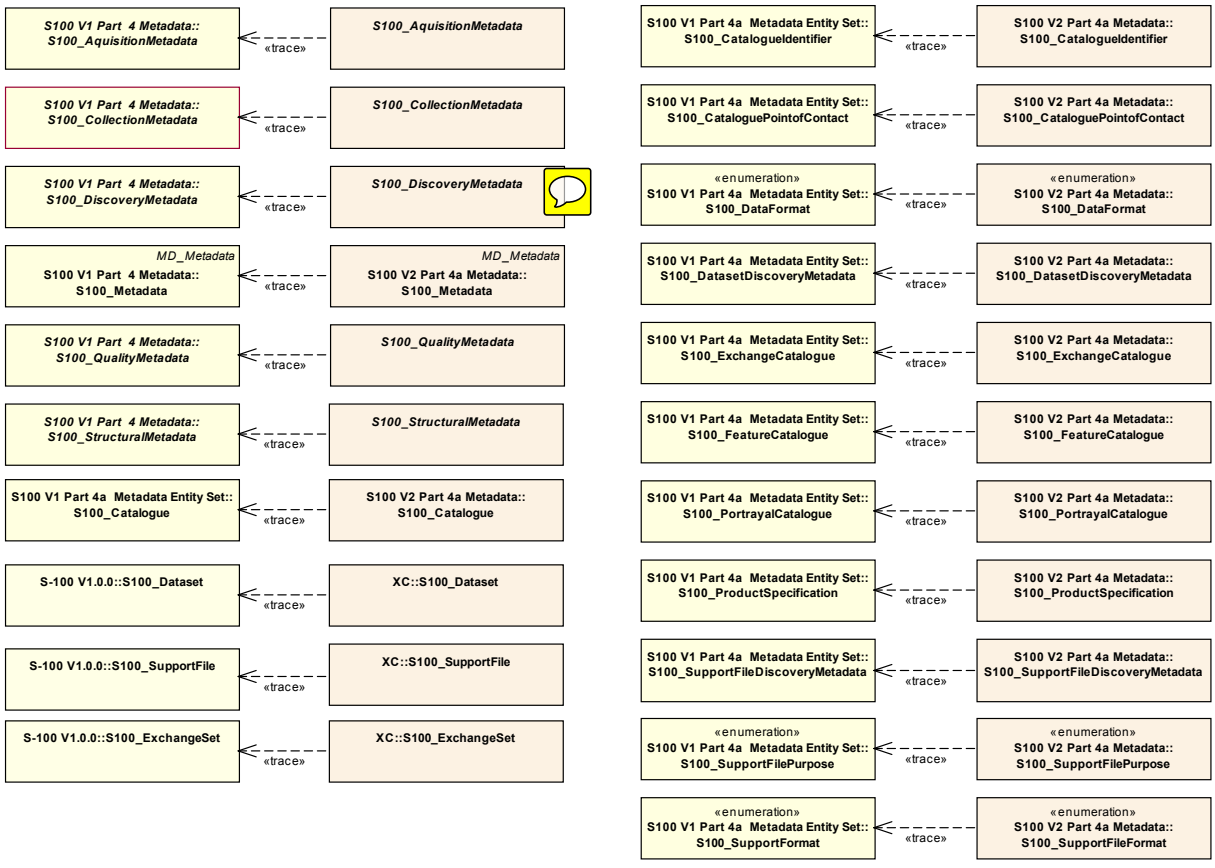
Tracebility between classes in S-100 Part 4 Version 2 back to Version 1.

All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.

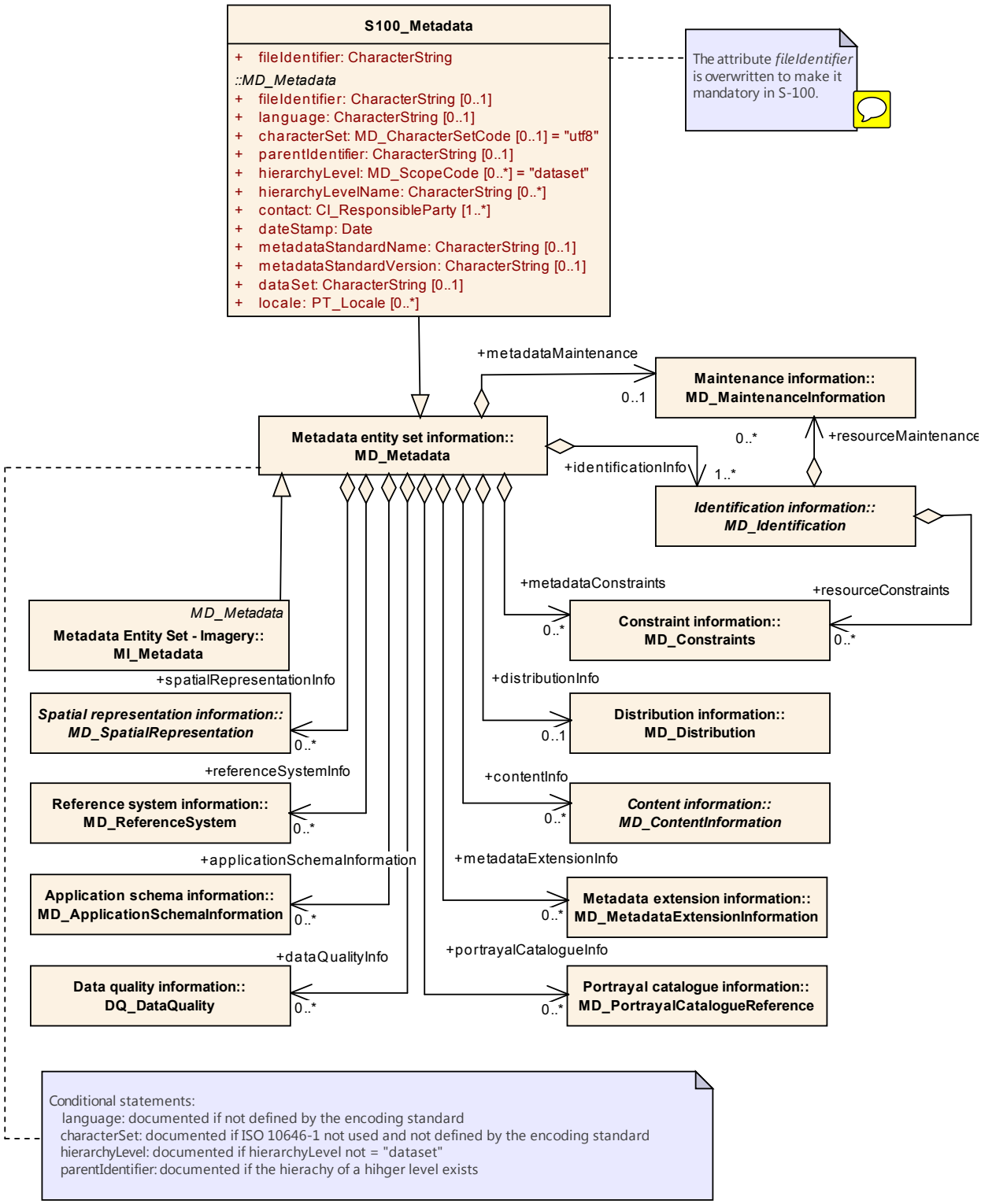


S100 Part 4 S100 V1 to V2

1.4.2 S100 V2 Part 4a Metadata *(package)*

1.4.2.1 V2.0.0 Fig 4a-2 Metadata entity set information (diagram)

V2.0.0 Fig 4a-2 Metadata entity set information
Diagram Version 2.0

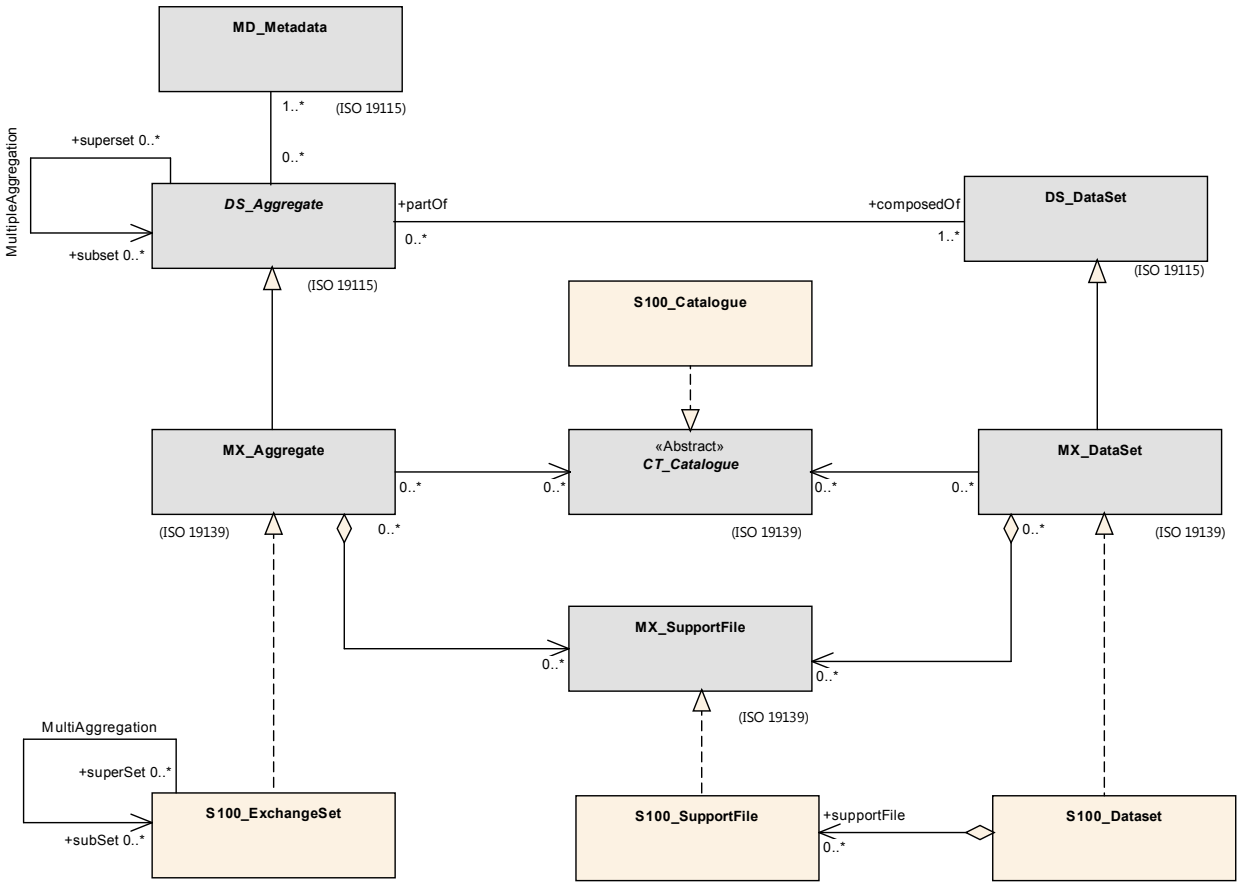


V2.0.0 Fig 4a-2 Metadata entity set information

1.4.2.2 V2.0.0 Fig 4a-D1 Realization of the Exchange Set Classes (diagram)

Figures 4a-D1 to 4a-D3 outline the overall concept of an S-100 exchange set for the interchange of geospatial data and its relevant metadata. Figure 4a-D1 depicts the realization of the ISO 19139 classes which form the foundation of the exchange set.

V2.0.0 Fig 4a-D1 Realization of the Exchange Set Classes
Diagram Version 2.0

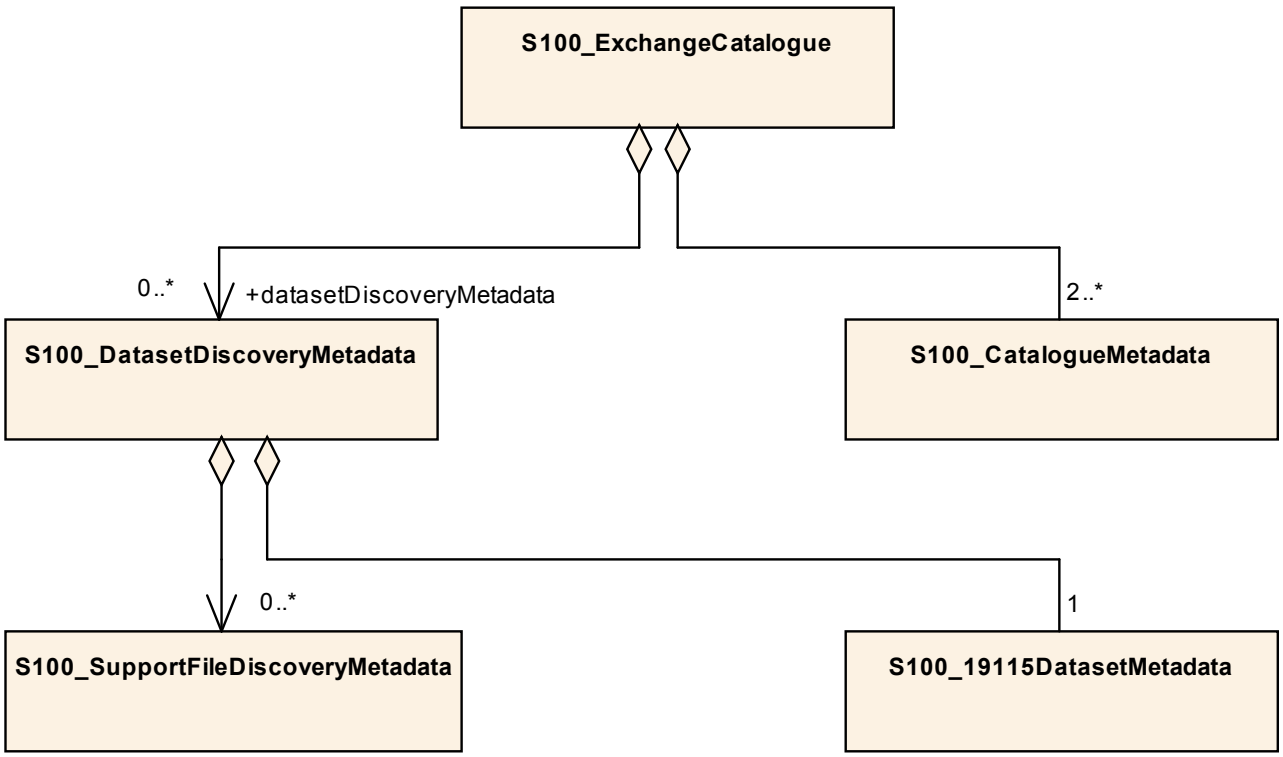


V2.0.0 Fig 4a-D1 Realization of the Exchange Set Classes

1.4.2.3 V2.0.0 Fig 4a-D2 S100 ExchangeSetCatalogue (diagram)

The S100_ExchangeCatalogue is an XML instance, which provides the information needed to exploit all the components of an exchange set. It consists of sections for the catalogues and datasets with subsections for support file metadata and a reference to classic ISO 19115 dataset metadata.

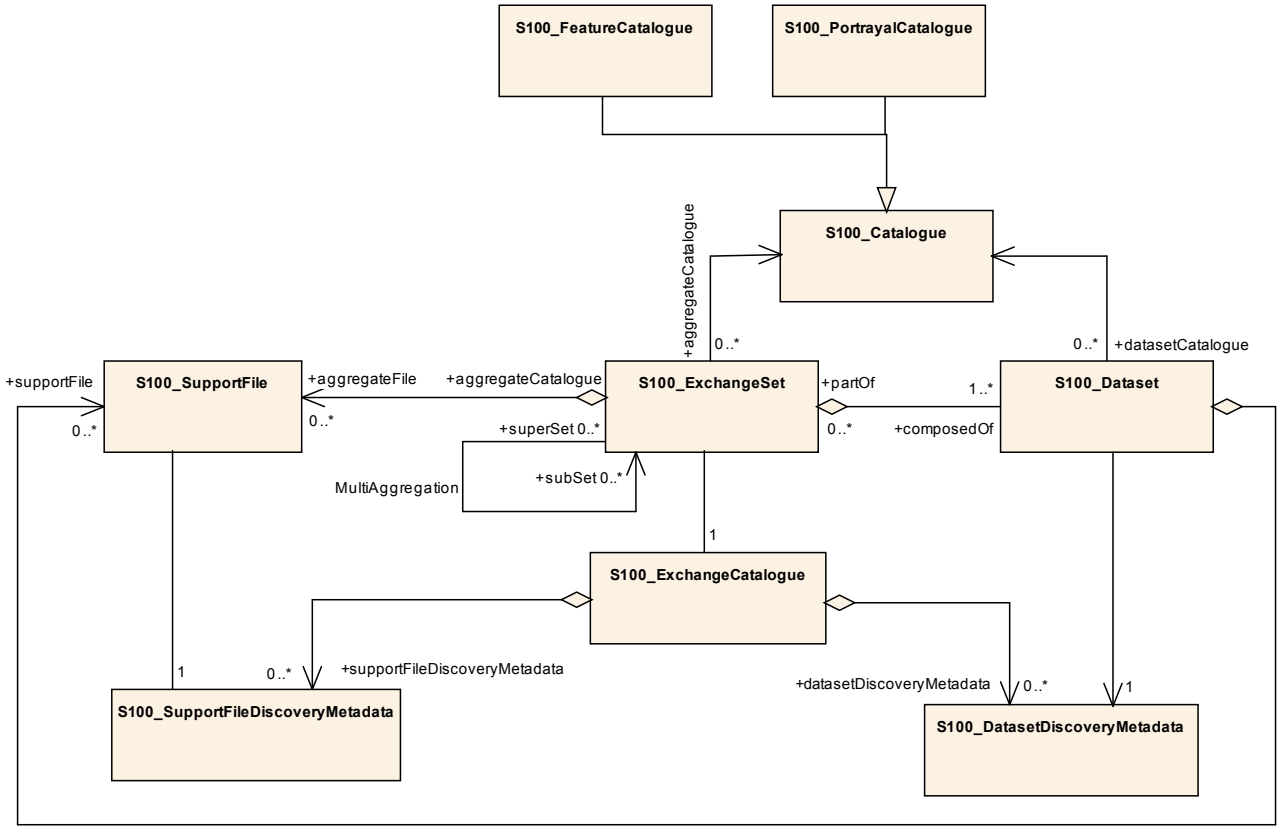
V2.0.0 Fig 4a-D2 S100 ExchangeSetCatalogue
Diagram Version 2.0



V2.0.0 Fig 4a-D2 S100 ExchangeSetCatalogue

1.4.2.4 V2.0.0 Fig 4a-D3 S100 ExchangeSet (diagram)

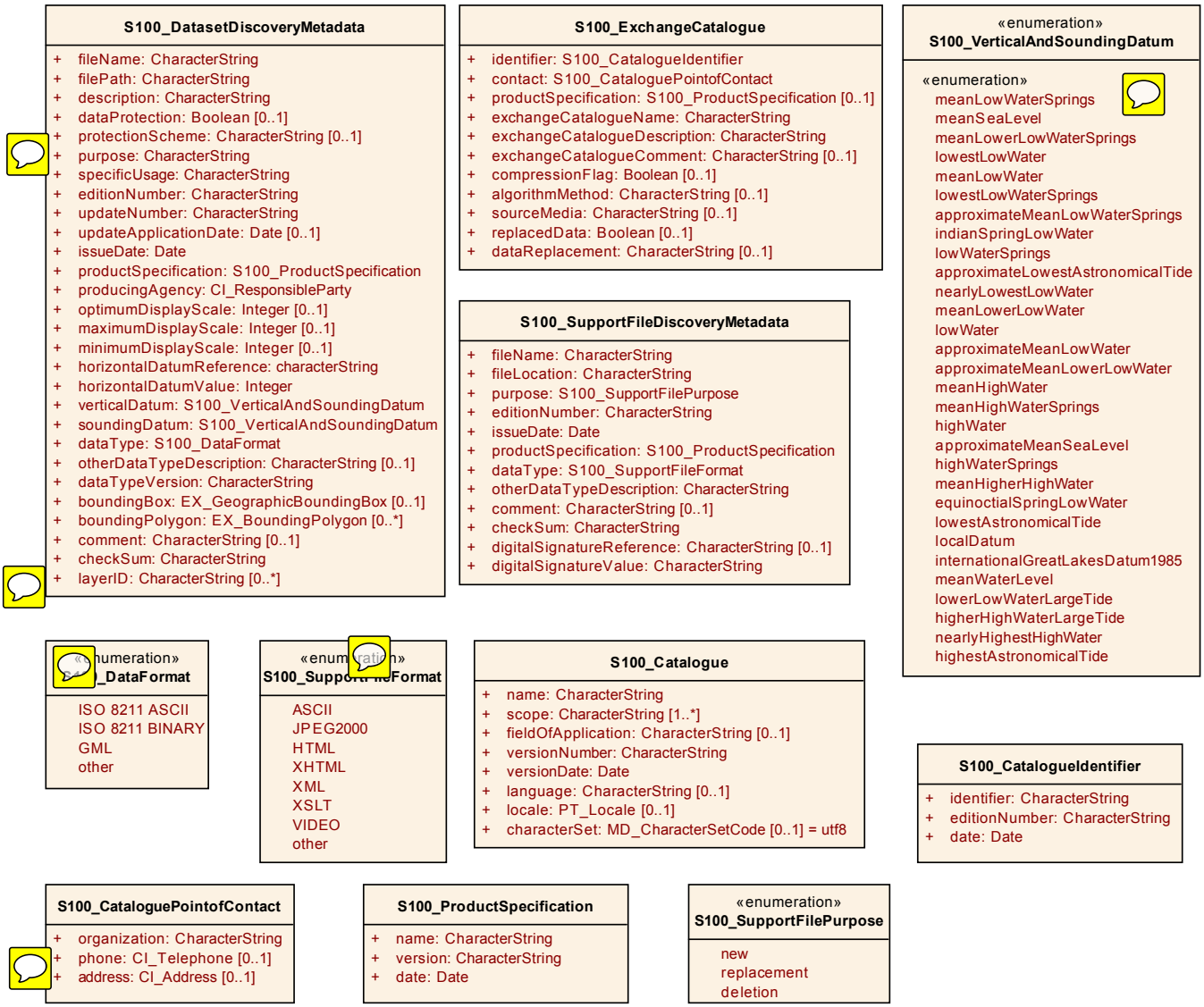
V2.0.0 Fig 4a-D3 S100 ExchangeSet
Diagram Version 2.0



V2.0.0 Fig 4a-D3 S100 ExchangeSet

1.4.2.5 V2.0.0 Fig 4a-D4 S100 Exchange Set - class details (diagram)

V2.0.0 Fig 4a-D4 S100 Exchange Set - class details
Diagram Version 2.0

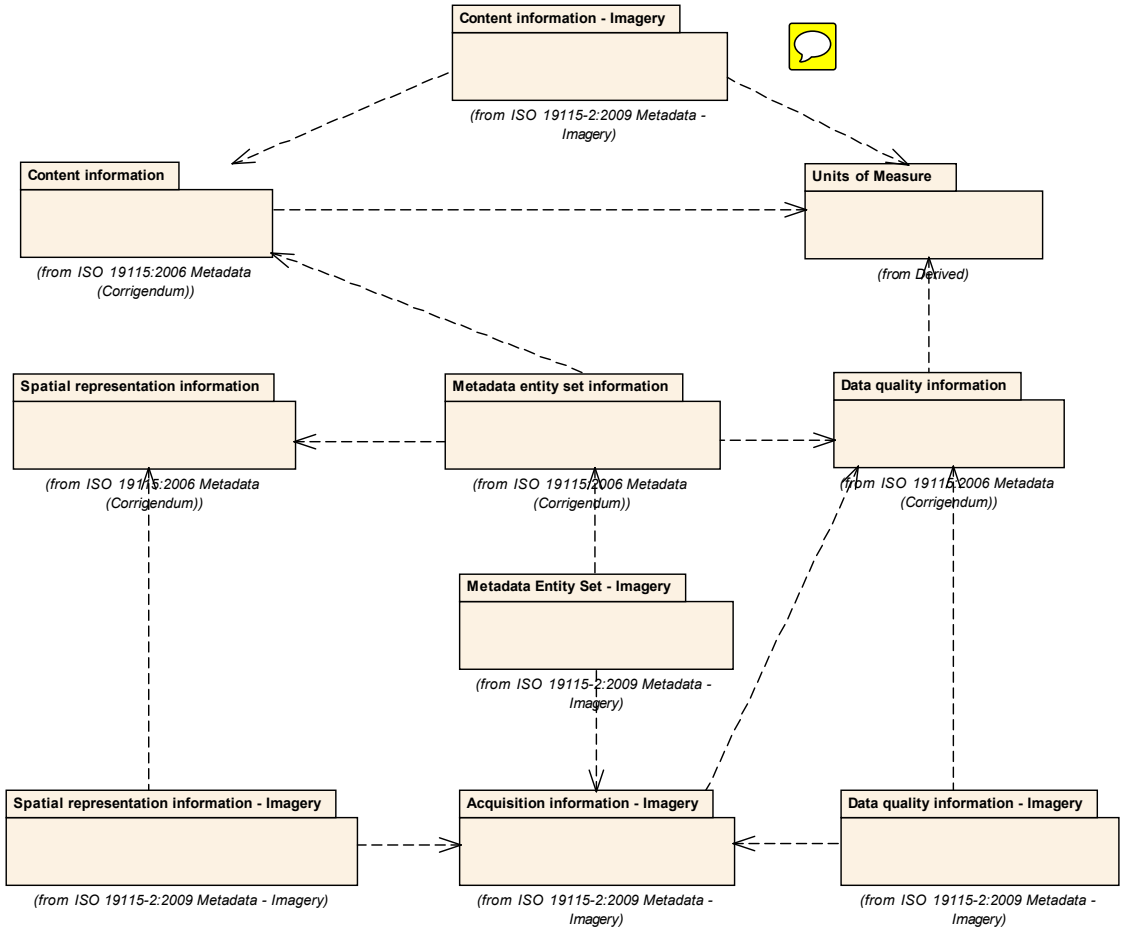


V2.0.0 Fig 4a-D4 S100 Exchange Set - class details

1.4.3 S100 V2 Part 4b Metadata for Imagery and Gridded Data *(package)*

1.4.3.1 V2.0.0 Fig 4b-1 Metadata Packages (Figure 3 ISO 19115-2 (2009)) (diagram)

V2.0.0 Fig 4b-1 Metadata Packages (Figure 3 ISO 19115-2 (2009))
Diagram Version 1.0



V2.0.0 Fig 4b-1 Metadata Packages (Figure 3 ISO 19115-2 (2009))

1.4.4 S100 V2 Part 4c Quality *(package)*

1.4.4.1 S100 Part 4c V1 to V2 (diagram)

S100 Part 4c V1 to V2
Diagram Version 1.0

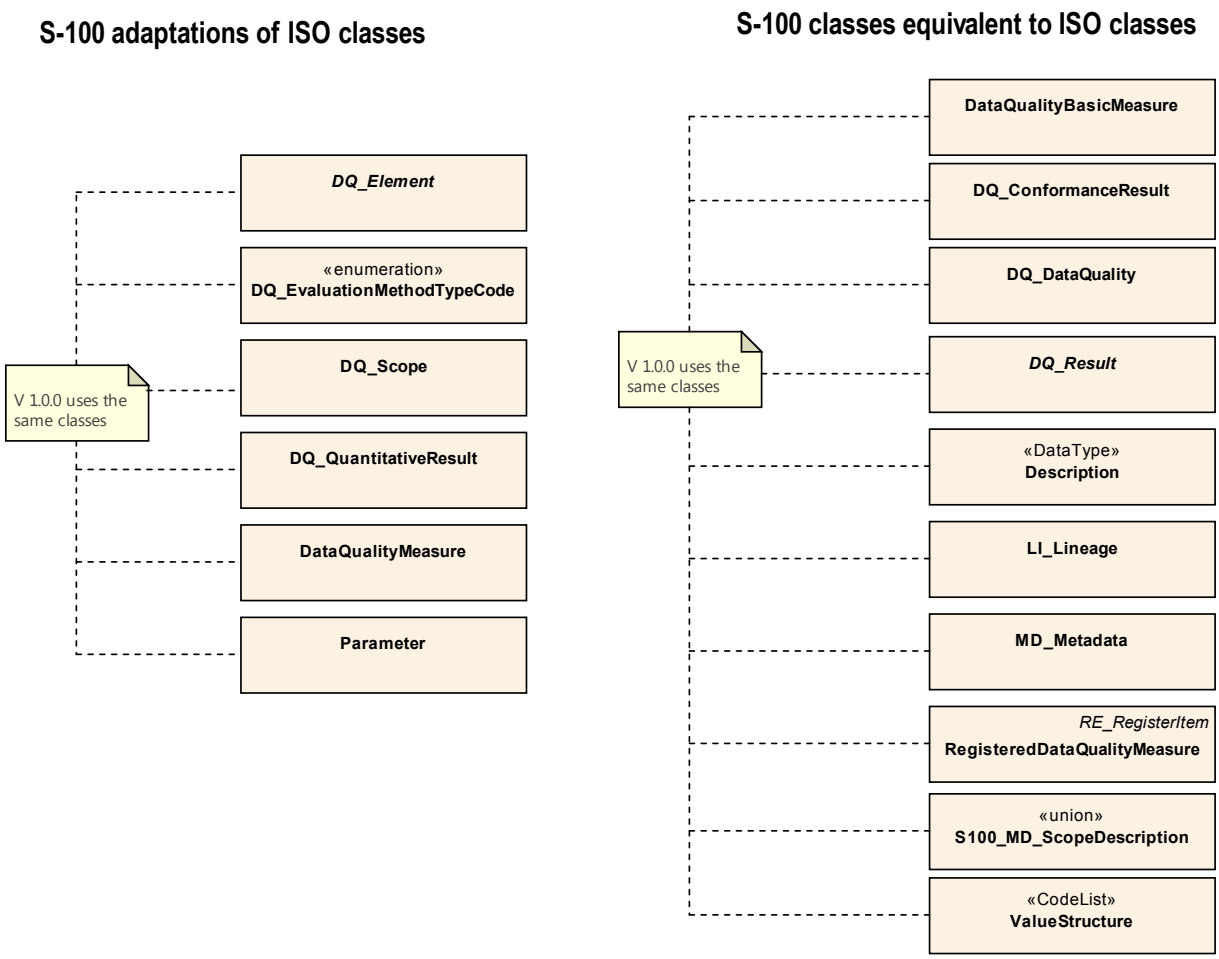
Traceability between classes in S-100 Part 4c Version 2.0.0 to Version 1.

All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.



S100 Part 4c V1 to V2

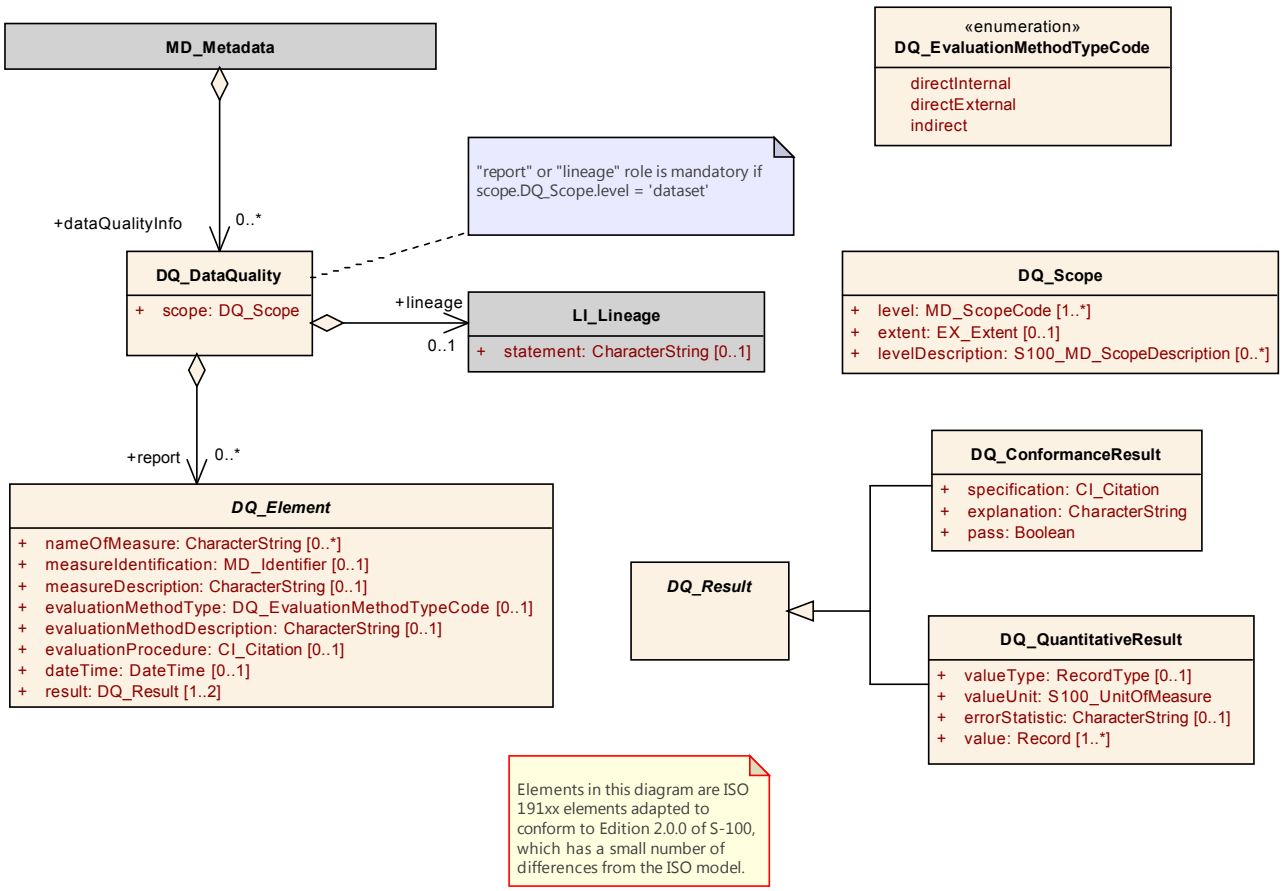
1.4.4.2 V2.0.0 Fig 4c-A1 Data Quality UML (diagram)

Data Quality UML from ISO 19115.
Elements in this diagram are ISO 191xx elements copied and adapted to conform to Edition 2.0.0 of S-100, which has a small number of differences from the ISO model (see diagram notes). It should either be harmonized with ISO or S100_ prefixes used.

S-100 edition 2.0.0 actually adapts a few of the ISO elements - either it should be harmonized with ISO or S100_ prefixes should be used.

- DQ_Element dateTime multiplcity
- DQ_EvaluationMethodTypeCode stereotype changed to enumeration
- DQ_Scope level multiplicity
- levelDescription type changed from MD_ScopeDescription to S100_MD_ScopeDescription
- DQ_QuantitativeResult valueUnit type S100_UnitOfMeasure

V2.0.0 Fig 4c-A1 Data Quality UML
Diagram Version 2.0



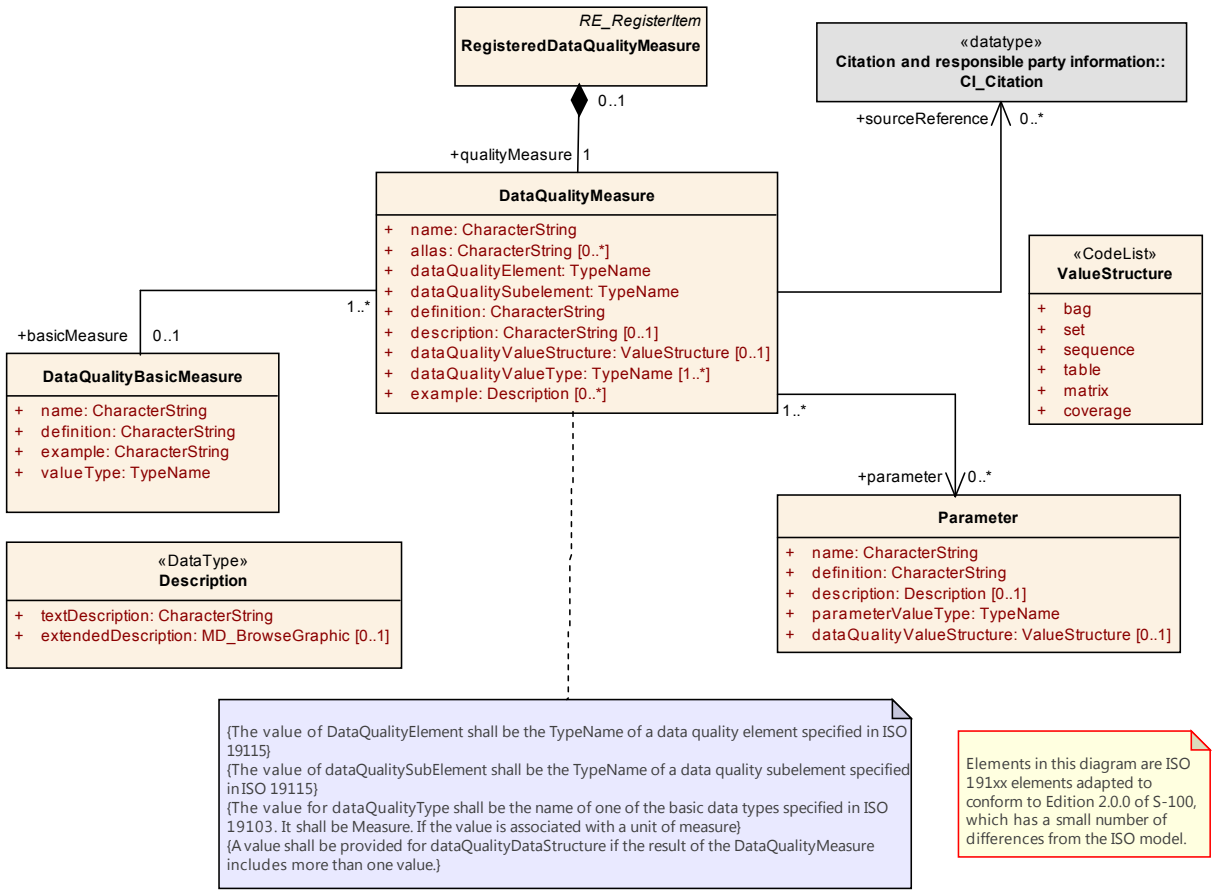
V2.0.0 Fig 4c-A1 Data Quality UML

1.4.4.3 V2.0.0 Fig 4c-A2 Quality Measure Registry (diagram)

Figure 4c-A2 — Data Quality Measure Registry UML (from ISO 19138)

S-100 edition 2.0.0 actually adapts a few of the ISO elements - either it should be harmonized with ISO or S100_ prefixes should be used.

V2.0.0 Fig 4c-A2 Quality Measure Registry
Diagram Version 2.0



V2.0.0 Fig 4c-A2 Quality Measure Registry

1.4.5 XC *(package)*

1.5 S100 V2 Part 5 Feature Catalogue *(package)*

1.5.1 S100 Part 5 V1 to V2.0.0 *(diagram)*

S100 Part 5 V1 to V2.0.0
Diagram Version 1.0

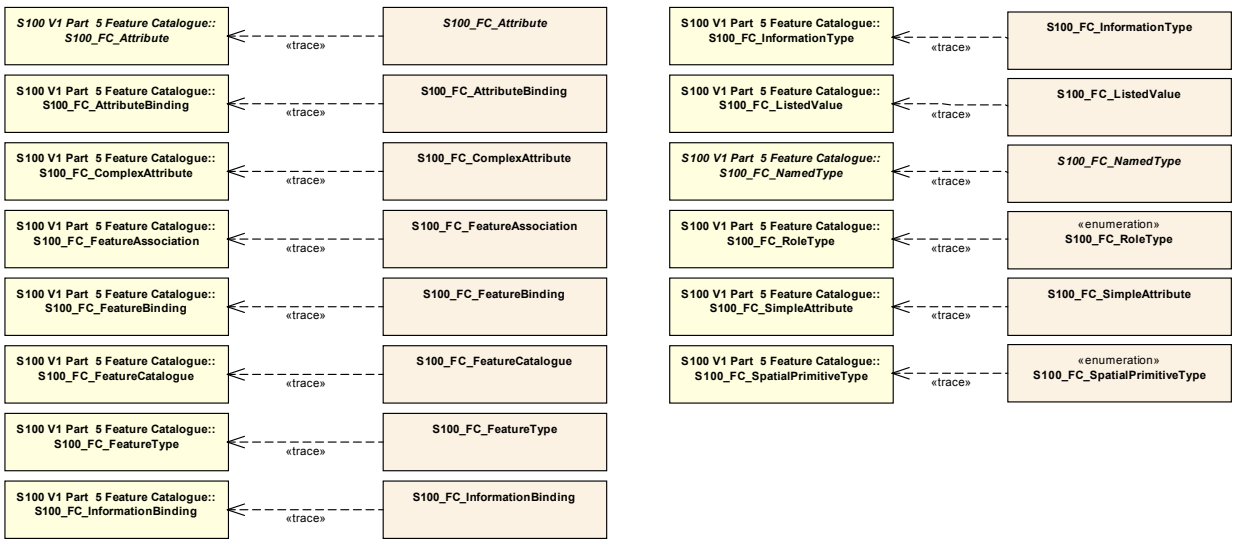
Traceability between classes in S-100 Part 5 Version 2.0.0 back to Version 1.

All classes use the versioning tags Version and Phase.

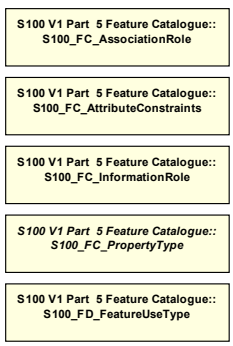
All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

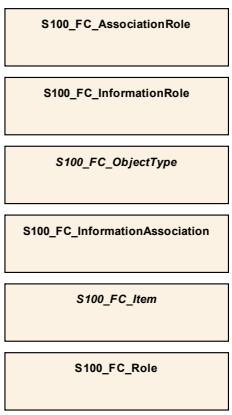
A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.



Elements used only in V1



Elements new in V 2.0.0

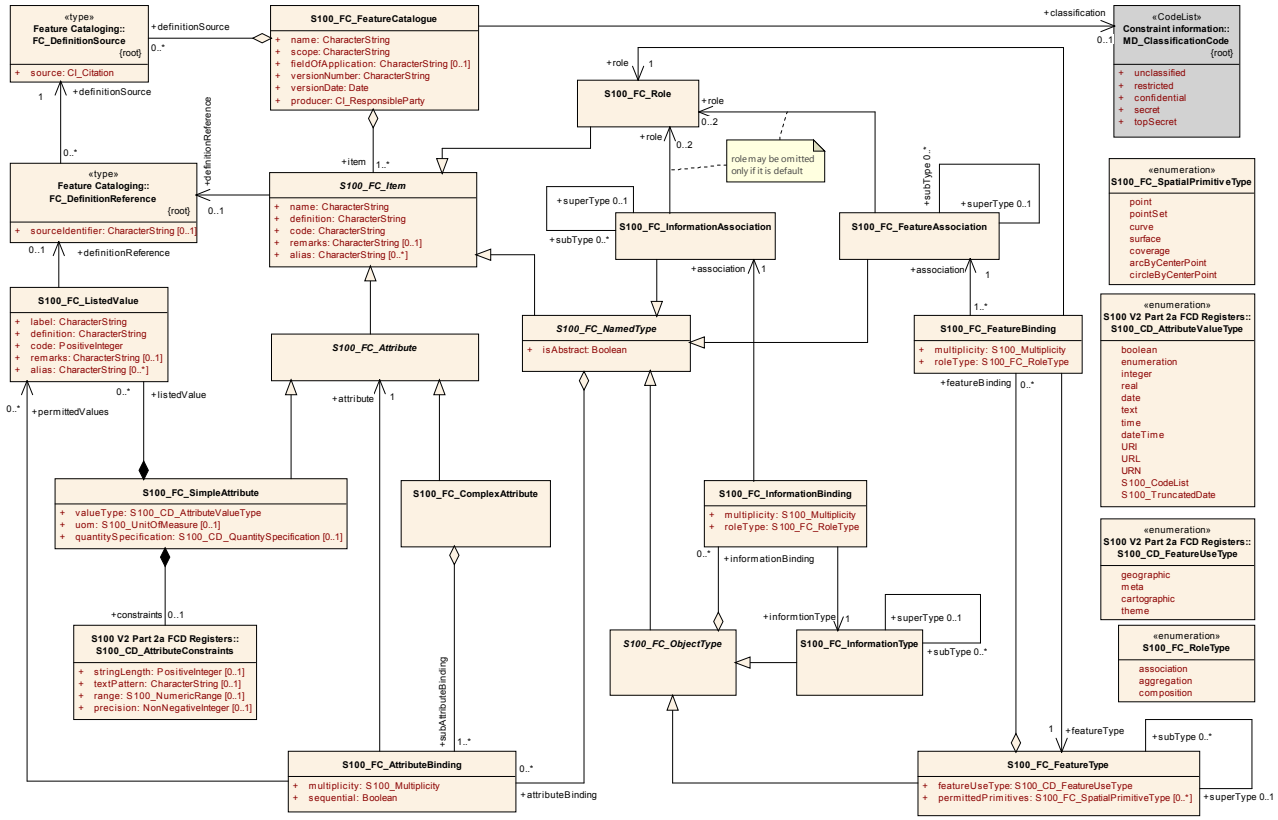


S100 Part 5 V1 to V2.0.0

1.5.2 V2.0.0 Fig 5 A-1 Feature Catalogue Model *(diagram)*

An S-100 based feature catalogue presents the abstraction of reality represented in one or more sets of geographic data as a defined classification of phenomena. The basic level of classification in the feature catalogue is the feature type. Features and attributes are bound in a feature catalogue. The definitions of features and attributes are drawn from a feature concept dictionary.

V2.0.0 Fig 5 A-1 Feature Catalogue Model
Diagram Version 2.0



V2.0.0 Fig 5 A-1 Feature Catalogue Model

1.6 S100 V2 Part 6 Coordinate Reference Systems *(package)*

1.6.1 S100 Part 6 S100 V1 to V2 *(diagram)*

S100 Part 6 S100 V1 to V2
Diagram Version 1.0

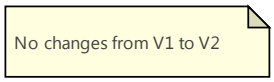
Traceability between classes in S-100 Part 6 Version 2.0.0 to Version 1.

All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

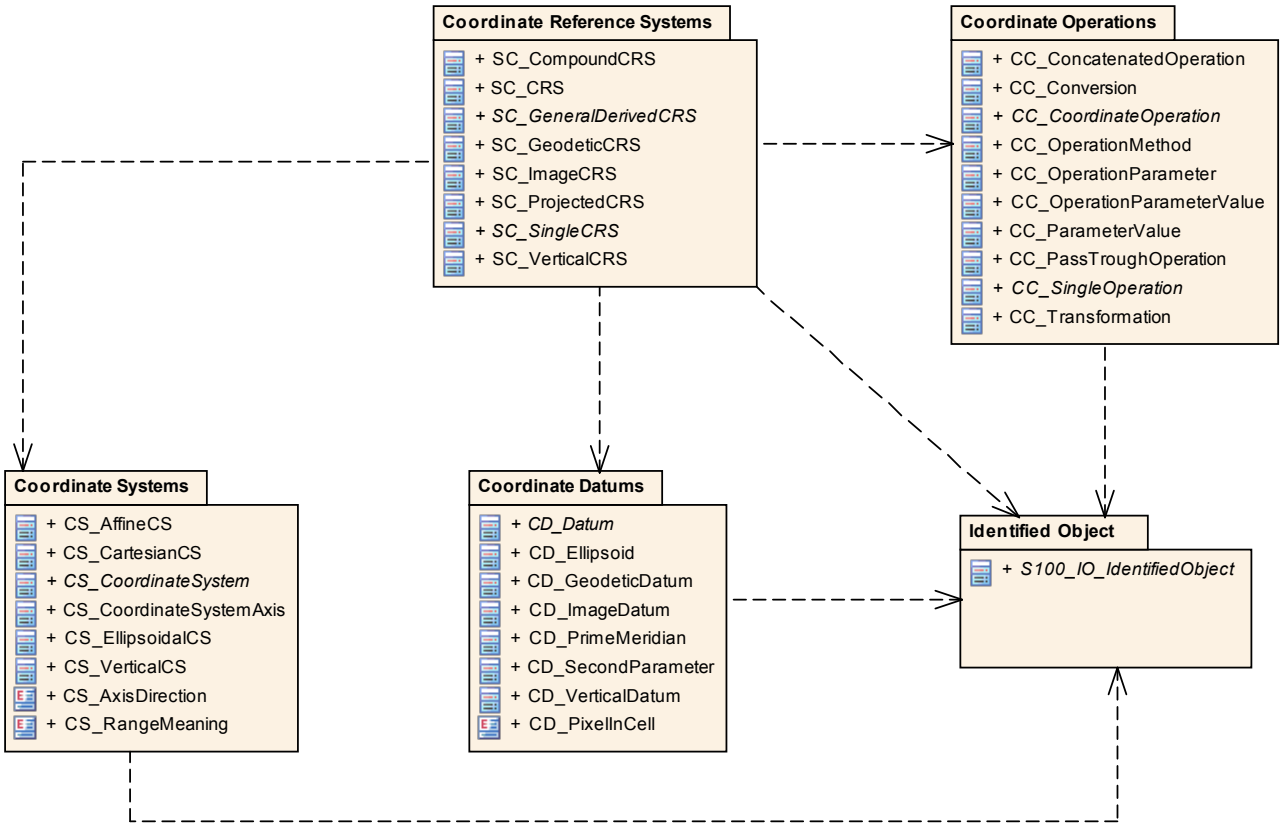
A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.



S100 Part 6 S100 V1 to V2

1.6.2 V2.0.0 Fig 6-1 The CRS Packages *(diagram)*

V2.0.0 Fig 6-1 The CRS Packages
Diagram Version 1.0

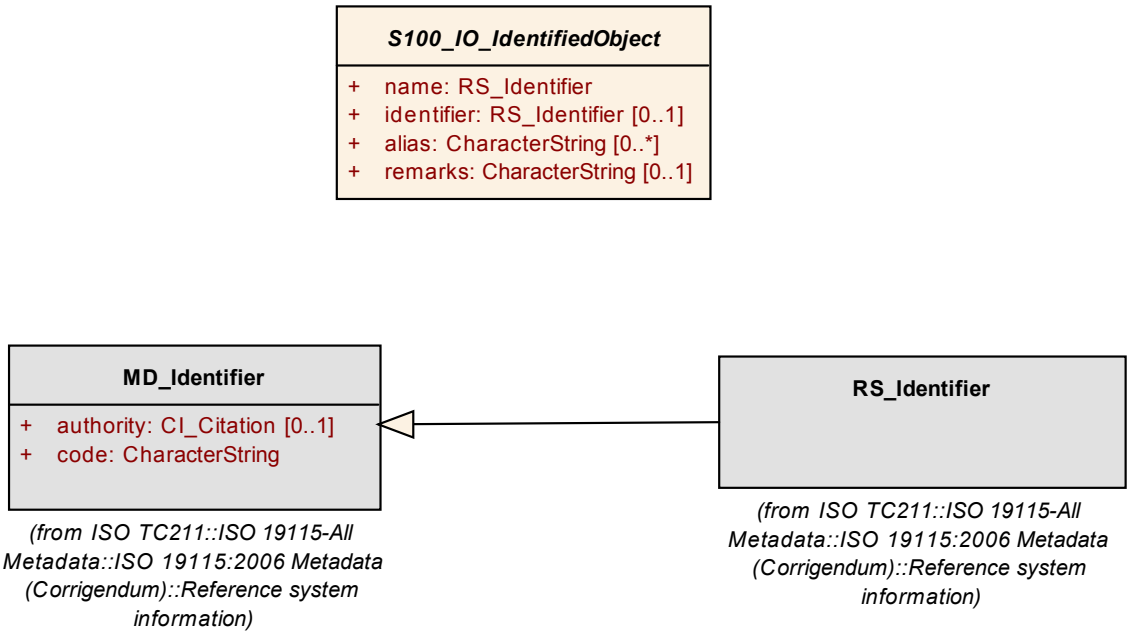


V2.0.0 Fig 6-1 The CRS Packages

1.6.3 Identified Object *(package)*

1.6.3.1 V2.0.0 Fig 6-2 The Identified Object Class Diagram (diagram)

V2.0.0 Fig 6-2 The Identified Object Class Diagram
Diagram Version 1.0

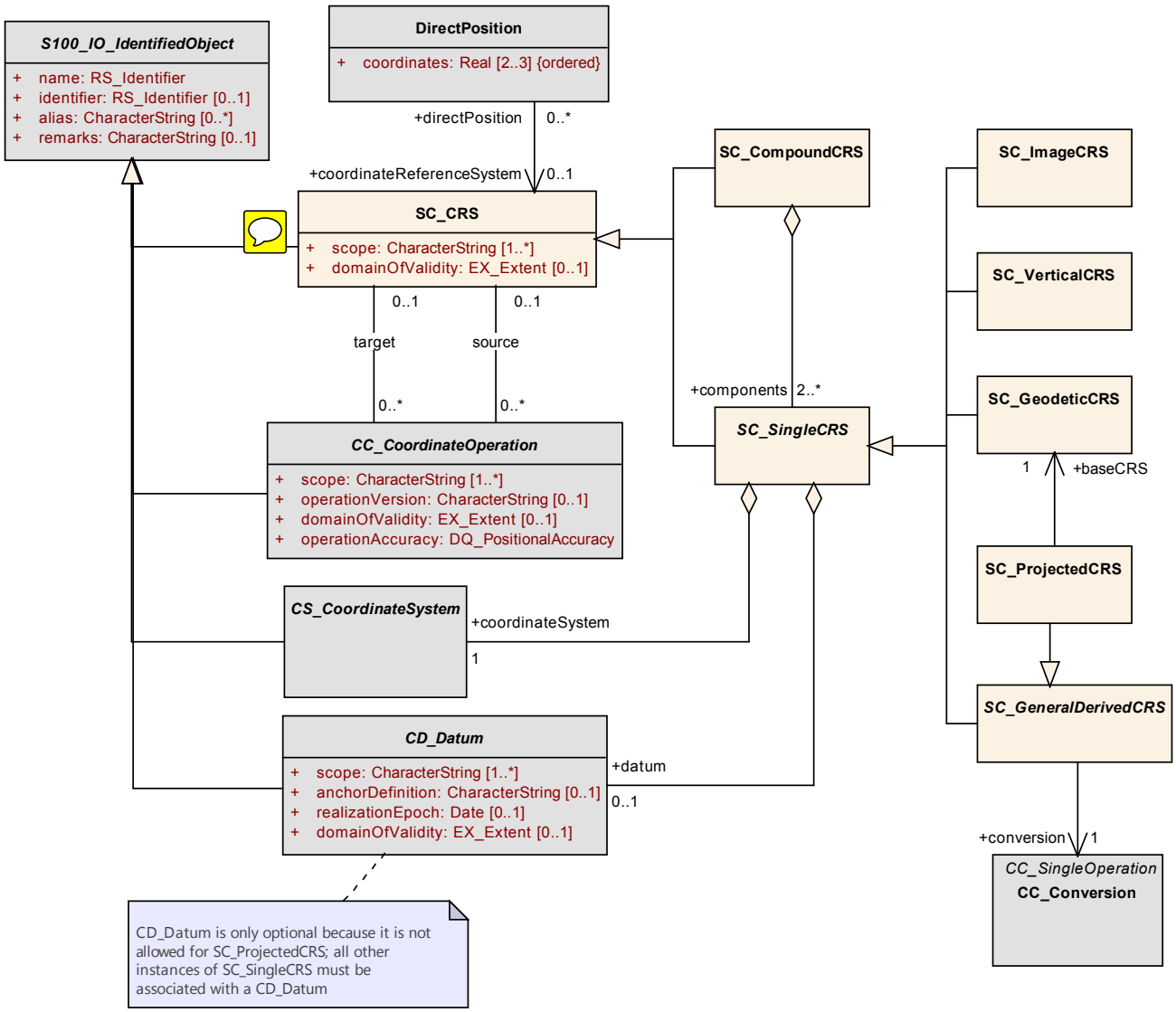


V2.0.0 Fig 6-2 The Identified Object Class Diagram

1.6.4 Coordinate Reference Systems *(package)*

1.6.4.1 V2.0.0 Fig 6-3 The Coordinate Reference System class diagram (diagram)

V2.0.0 Fig 6-3 The Coordinate Reference System class diagram
Diagram Version 1.0

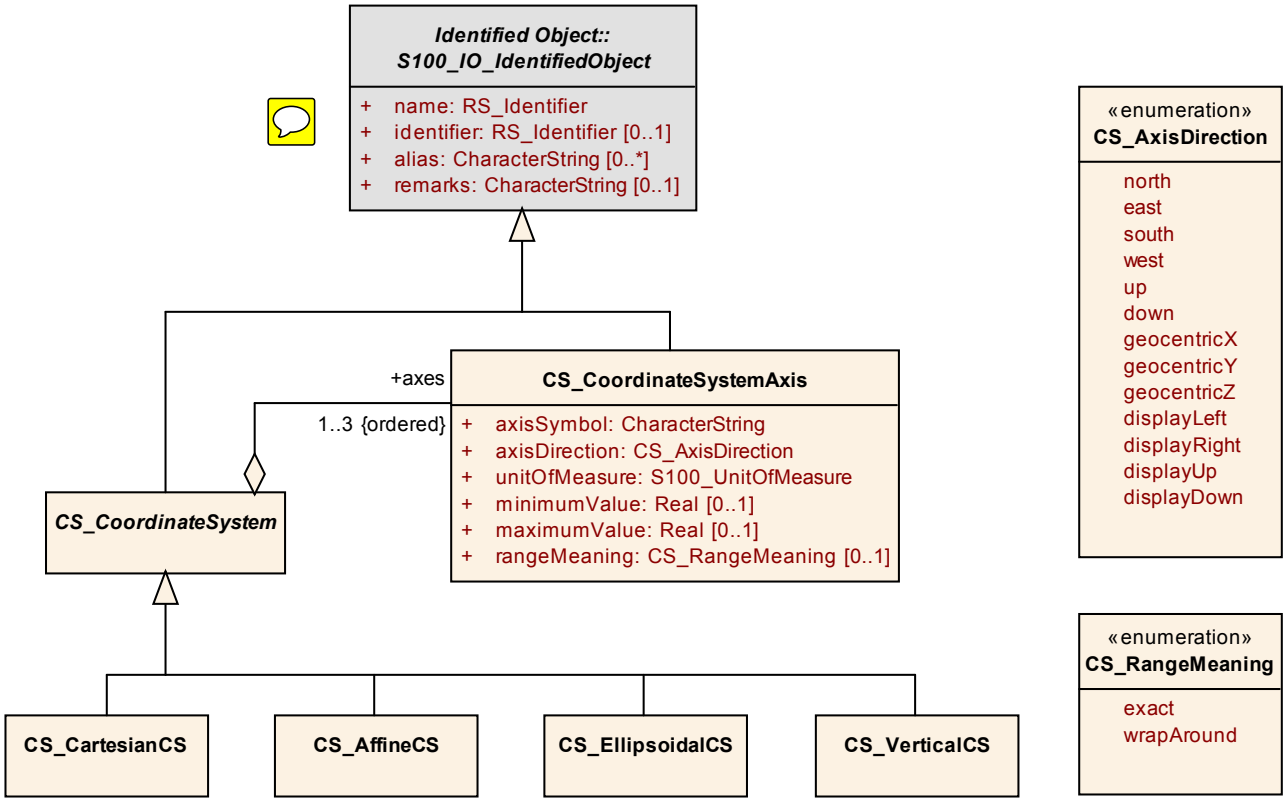


V2.0.0 Fig 6-3 The Coordinate Reference System class diagram

1.6.5 Coordinate Systems *(package)*

1.6.5.1 V2.0.0 Fig 6-4 The Coordinate System Class Diagram (diagram)

V2.0.0 Fig 6-4 The Coordinate System Class Diagram
Diagram Version 1.0



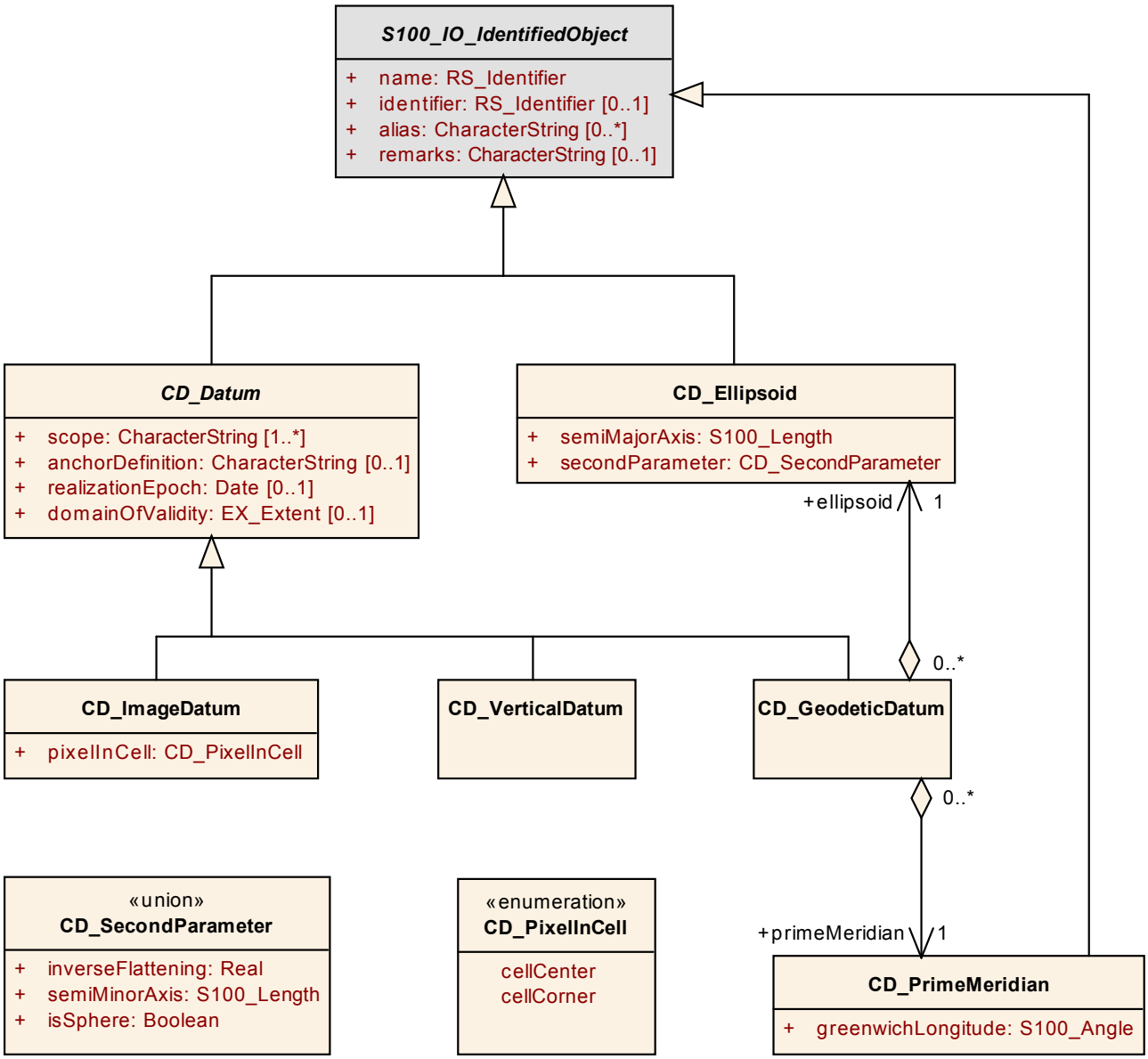
V2.0.0 Fig 6-4 The Coordinate System Class Diagram

1.6.6 Coordinate Datums *(package)*

1.6.6.1 V2.0.0 Fig 6-5 The Datum class diagram (diagram)

A datum is a parameter or set of parameters that defines the position of the origin, the scale, and the orientation of a coordinate system. Three types of datums are described by S-100.
1) A geodetic datum
2) A vertical datum
3) An image datum

V2.0.0 Fig 6-5 The Datum class diagram
Diagram Version 1.0



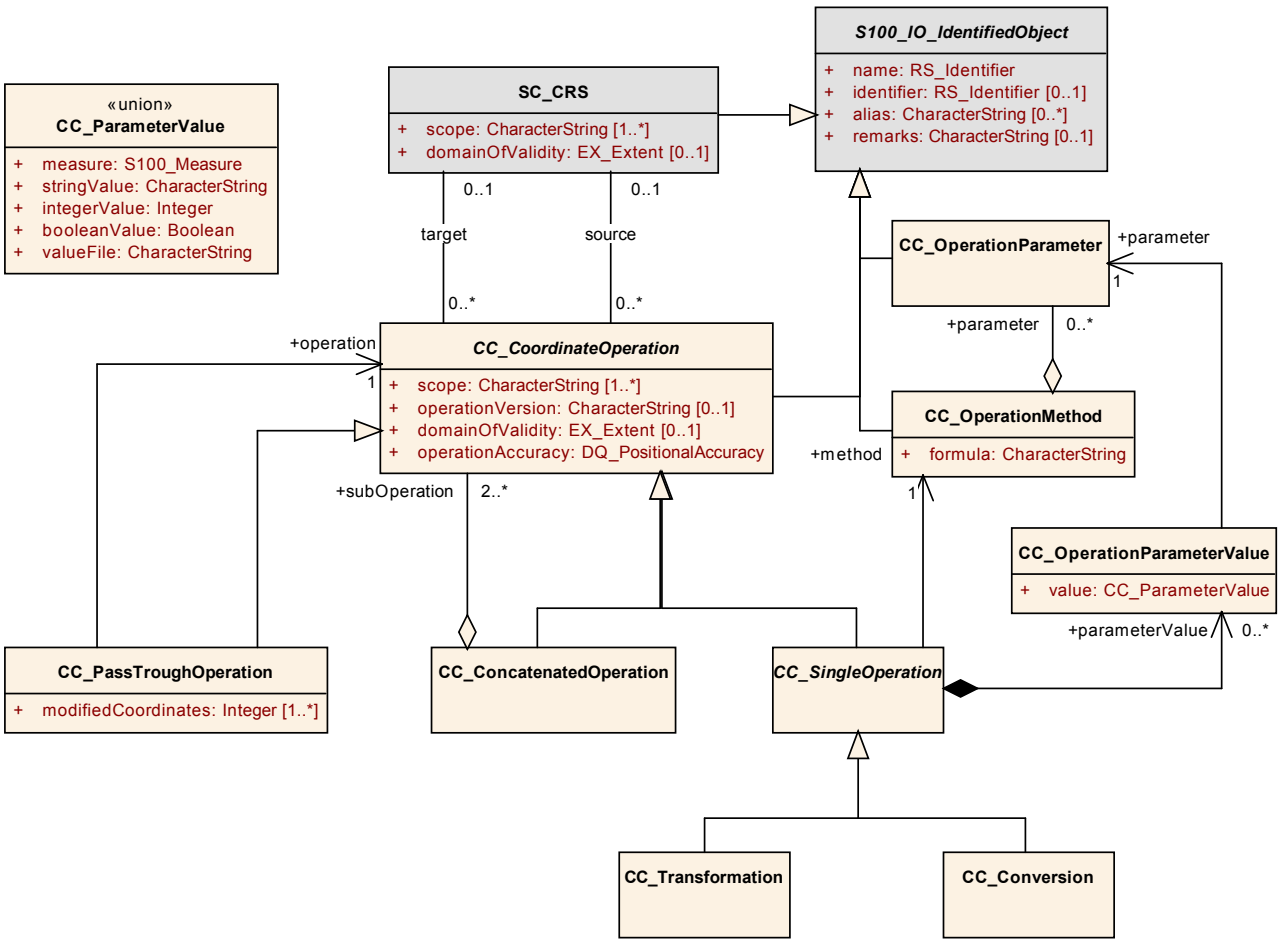
V2.0.0 Fig 6-5 The Datum class diagram

1.6.7 Coordinate Operations *(package)*

1.6.7.1 V2.0.0 Fig 6-6 The Coordinate Operation class diagram (diagram)

Coordinate operations convert coordinates which refer to one coordinate reference system to coordinates that refer to another coordinate reference system. Therefore each coordinate operation has a source CRS and a target CRS.
The following types of coordinate operations are defined by S-100:
1) Coordinate Transformation
2) Coordinate Conversion
3) Pass Through Operation
4) Concatenated Coordinate Operation

V2.0.0 Fig 6-6 The Coordinate Operation class diagram
Diagram Version 1.0



V2.0.0 Fig 6-6 The Coordinate Operation class diagram

1.7 S100 V2 Part 7 Spatial Schema *(package)*

1.7.1 S100 V2 Part 7 V1 to V 2.0.0 *(diagram)*

S100 V2 Part 7 V1 to V 2.0.0
Diagram Version 1.0

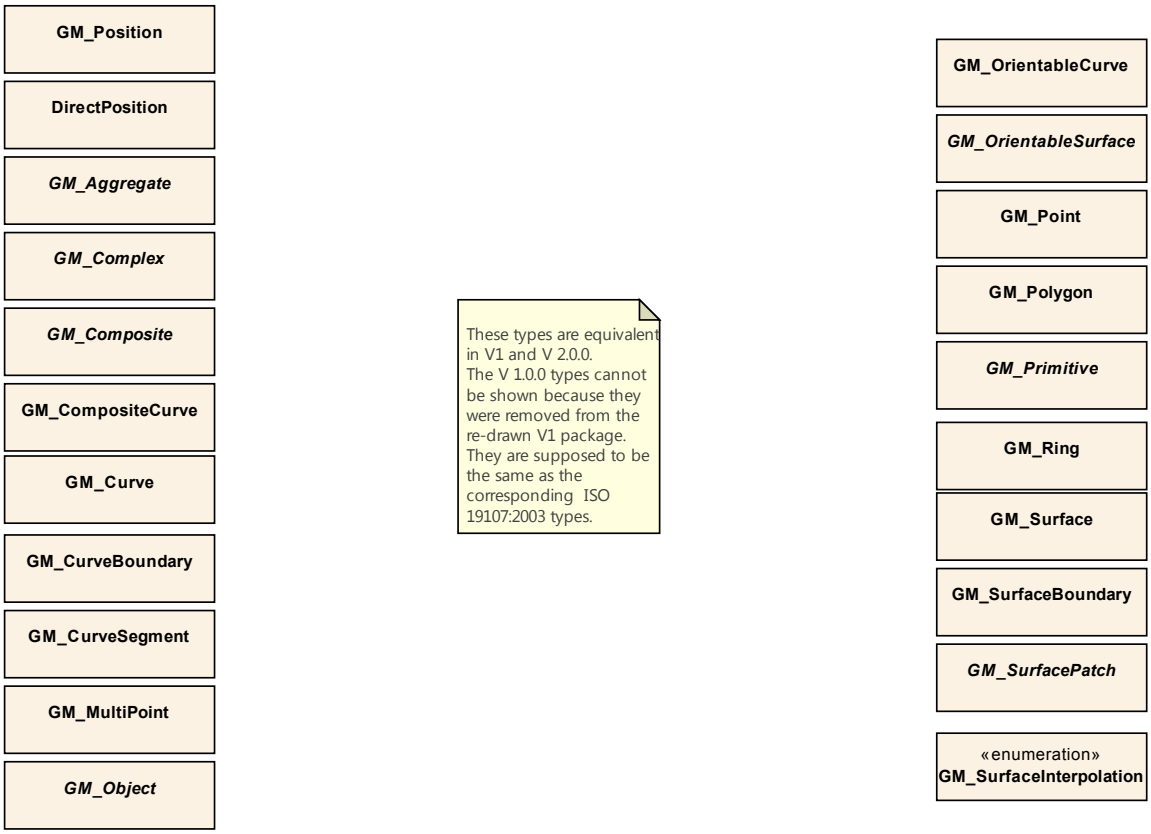
Traceability between elements in S-100 Part 7 Version 2.0.0 and Version 1.

All classes use the versioning tags Version and Phase.

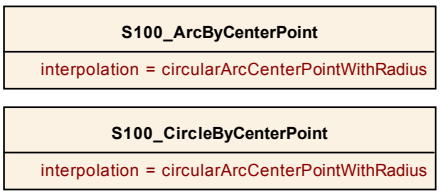
All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

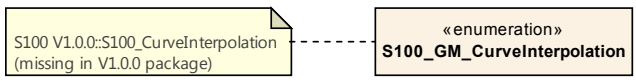
A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.



Elements that are new in V 2.0.0



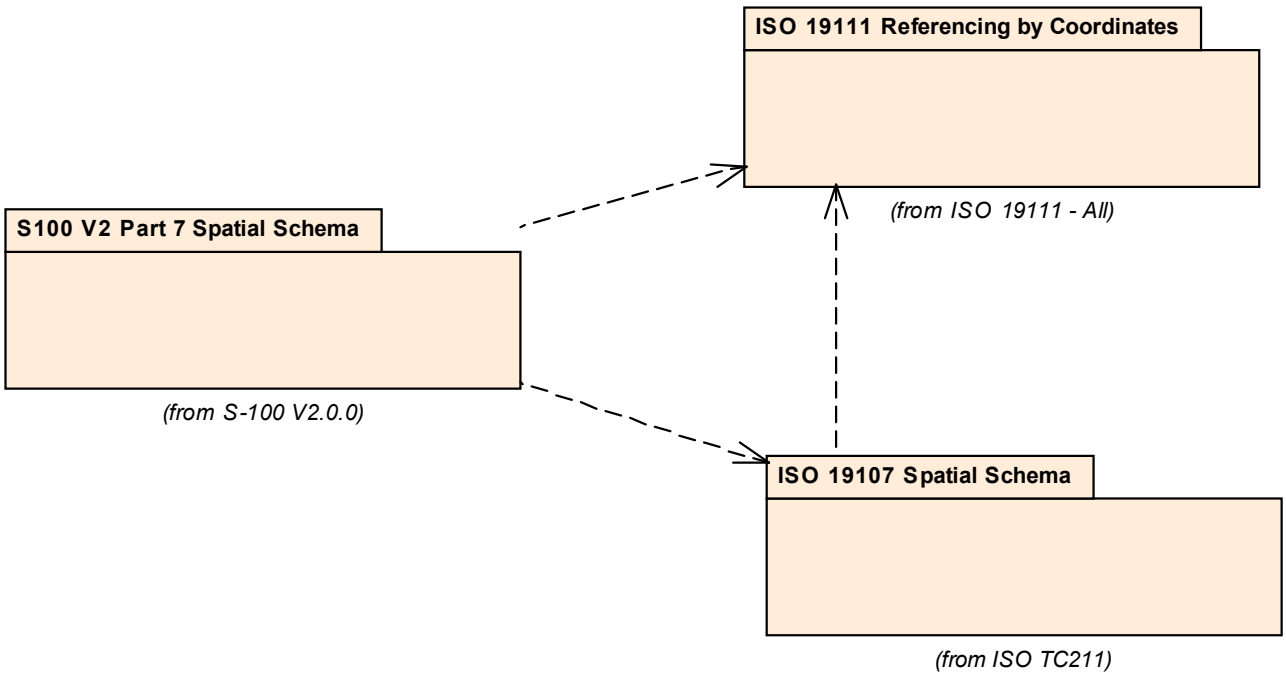
Elements that were revised from V 1 to V 2.0.0



S100 V2 Part 7 V1 to V 2.0.0

1.7.2 2.0.0 Fig 7-1 S-100 Spatial Schema relationship with ISO 19100 packages *(diagram)*

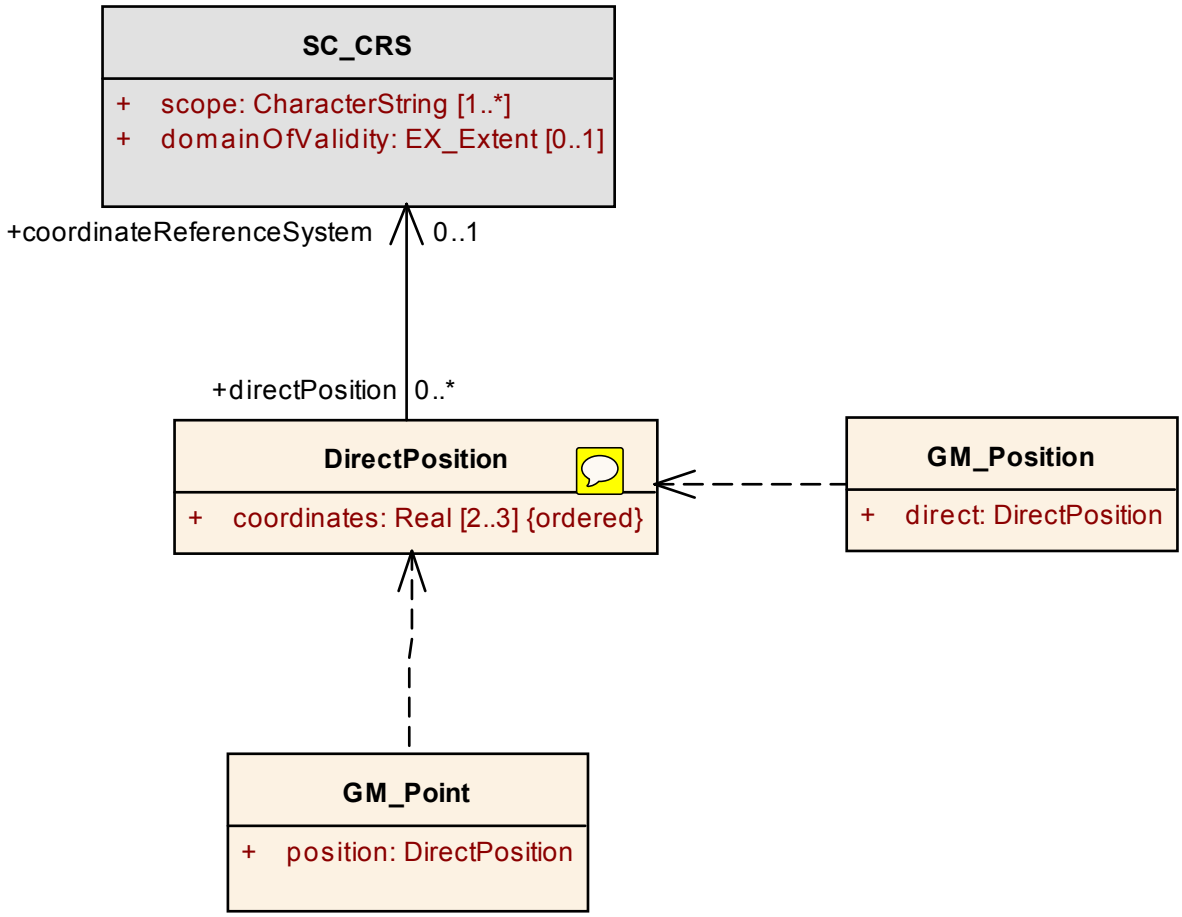
2.0.0 Fig 7-1 S-100 Spatial Schema relationship with ISO 19100 packages
Diagram Version 2.0



2.0.0 Fig 7-1 S-100 Spatial Schema relationship with ISO 19100 packages

1.7.3 2.0.0 Fig 7-2 Coordinate Geometry *(diagram)*

2.0.0 Fig 7-2 Coordinate Geometry
Diagram Version 1.0



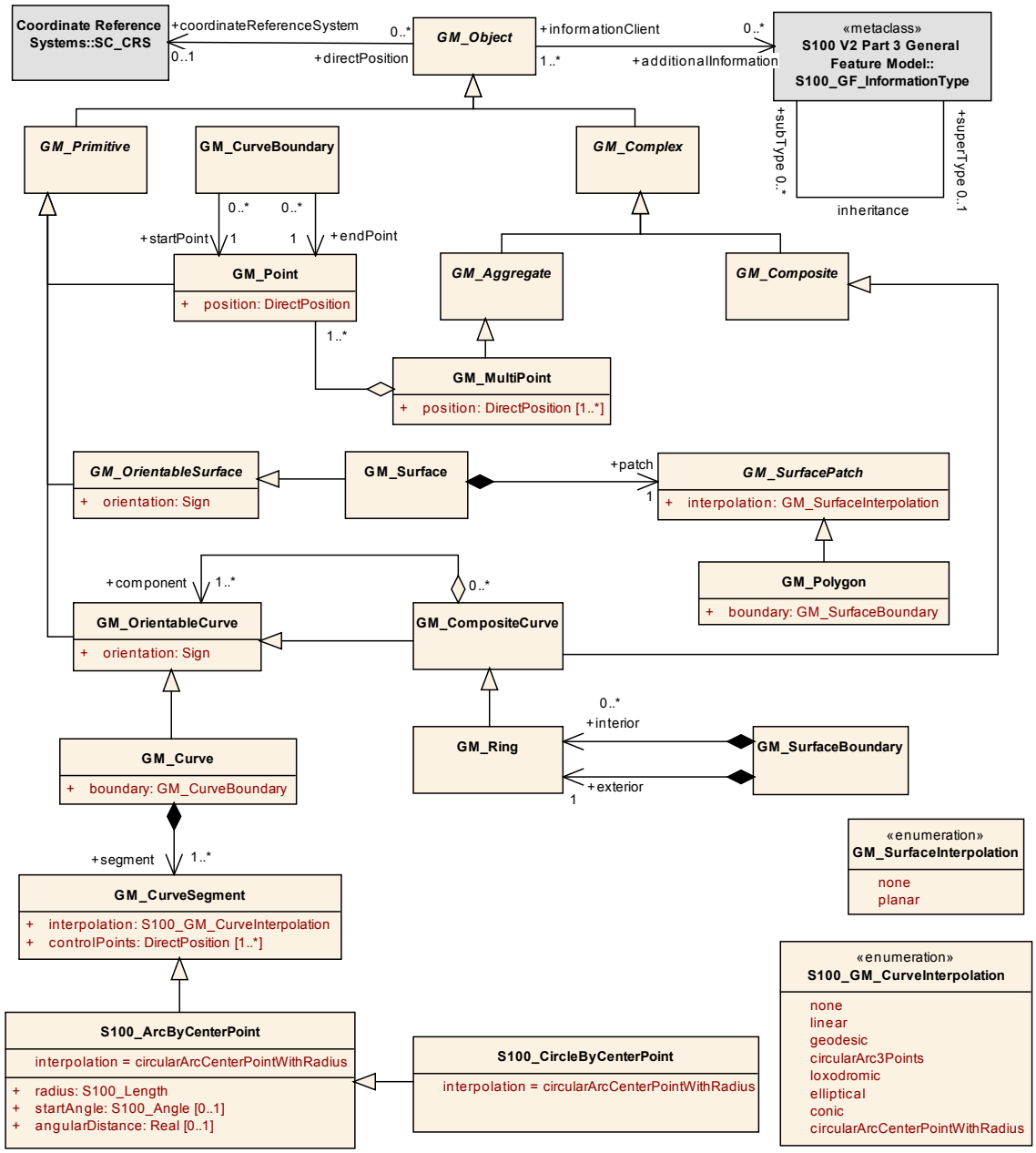
2.0.0 Fig 7-2 Coordinate Geometry

1.7.4 2.0.0 Fig 7-3 Geometry *(diagram)*

Edition 2.0.0. ~~Proposed at TSMAD 27 and refined at Hamburg meeting.~~ Defines Circle and Arc by CP and adds a direction attribute as discussed in Hamburg (March 2014). Also adds conic, elliptical, and circularArcCenterPointWithRadius curve interpolation types.

Note: The GM_ classes in the current UML are actually copies of the ISO 19107 classes, pending resolution of relationship discrepancies between S-100 and ISO 19107 (and potentially the forthcoming new version of ISO 19107).

2.0.0 Fig 7-3 Geometry
Diagram Version 2.0



2.0.0 Fig 7-3 Geometry

1.8 S100 V2 Part 8 Imagery and Gridded Data *(package)*

1.8.1 S100 Part 8 V1 to V2.0.0 *(diagram)*

S100 Part 8 V1 to V2.0.0
Diagram Version 1.0

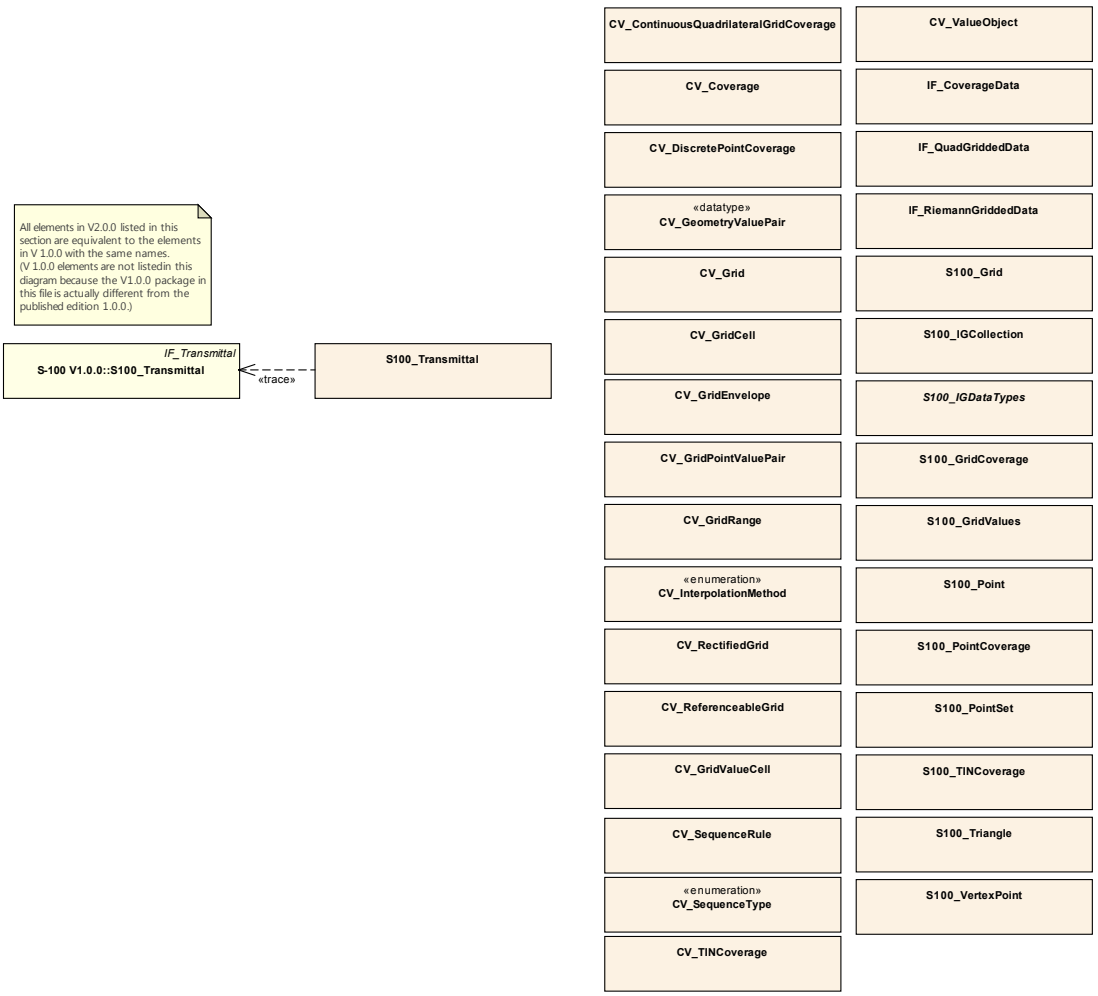
Traceability between elements in S-100 Part 8: Version 2.0.0 to Version 1.

All classes use the versioning tags Version and Phase.

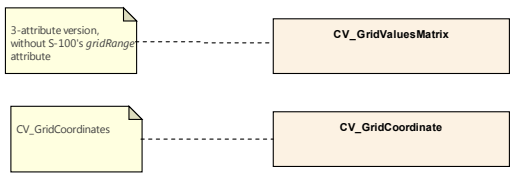
All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

Elements in Part 8 that are equivalent in V1 and V2.0.0



Elements in Part 8 that are revised from V1 to V2



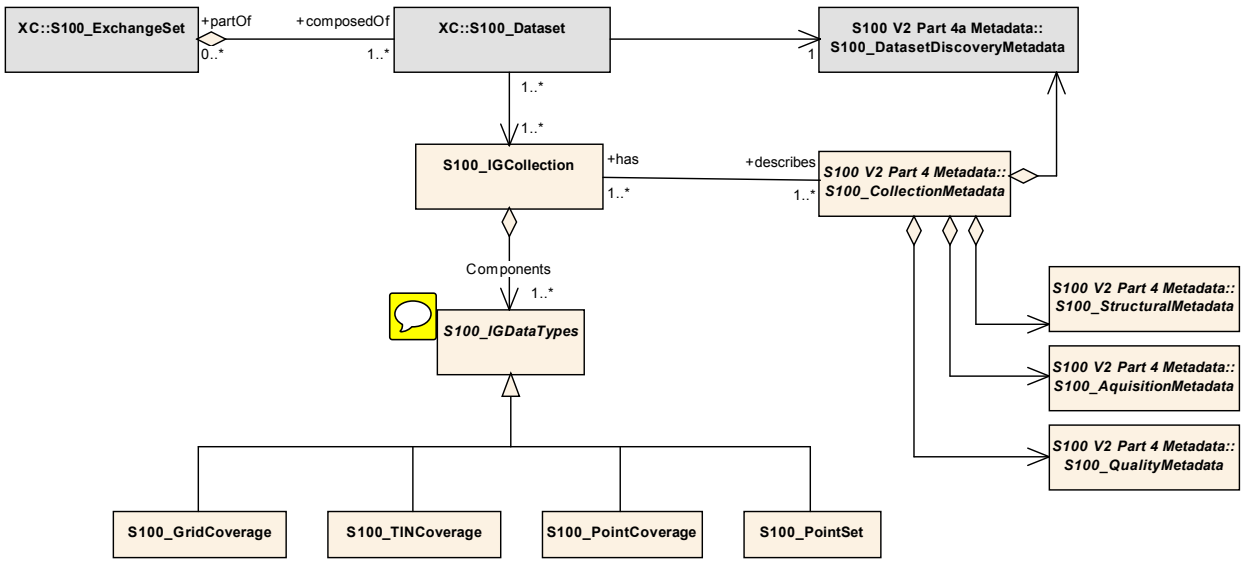
New Elements in V2

S100 Part 8 V1 to V2.0.0

1.8.2 V2.0.0 Fig 8-18 Data Set Structure *(diagram)*

8-6.3.9 has name as "S100_IGData Type", not "100_IGDataTypes" as shown in this diagram
The generalization relationship between the 4 types and S100_IGDataTypes is dubious since it introduces multiple inheritance for S100_TINCoverage. Multiple inheritance for class S100_TINCoverage was not obvious because class S100_TinCoverage was also defined.
This diagram seems to be intended only for illustrative purposes so consider revising it in the next iteration of Part 8.

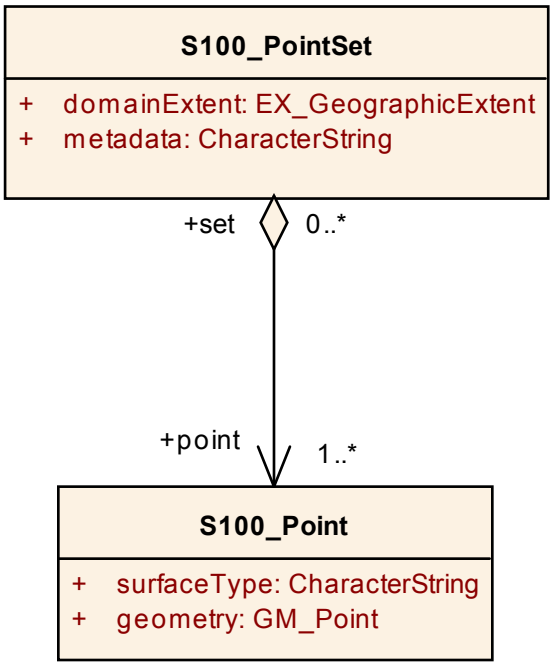
V2.0.0 Fig 8-18 Data Set Structure
Diagram Version 1.0



V2.0.0 Fig 8-18 Data Set Structure

1.8.3 V2.0.0 Fig 8-20 S100_Point *(diagram)*

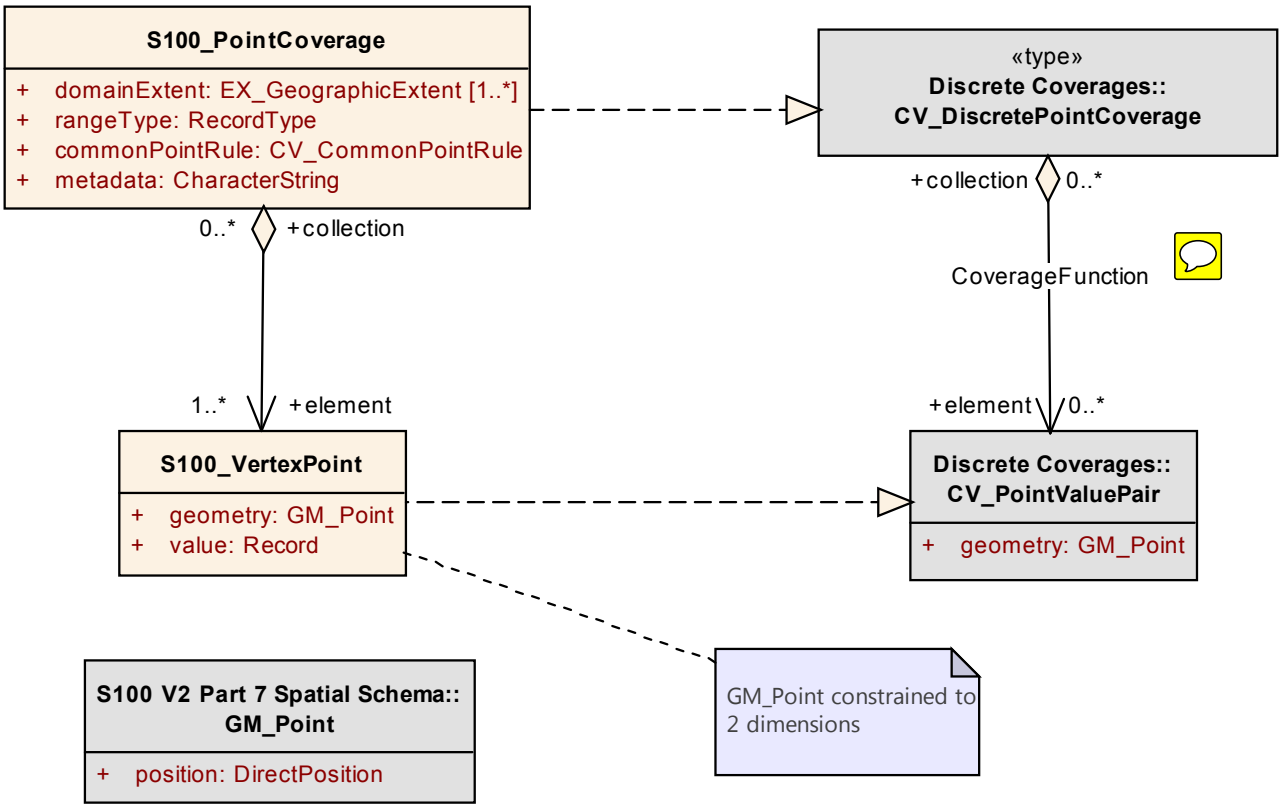
V2.0.0 Fig 8-20 S100_Point
Diagram Version 1.0



V2.0.0 Fig 8-20 S100_Point

1.8.4 V2.0.0 Fig 8-21 S100_PointCoverage *(diagram)*

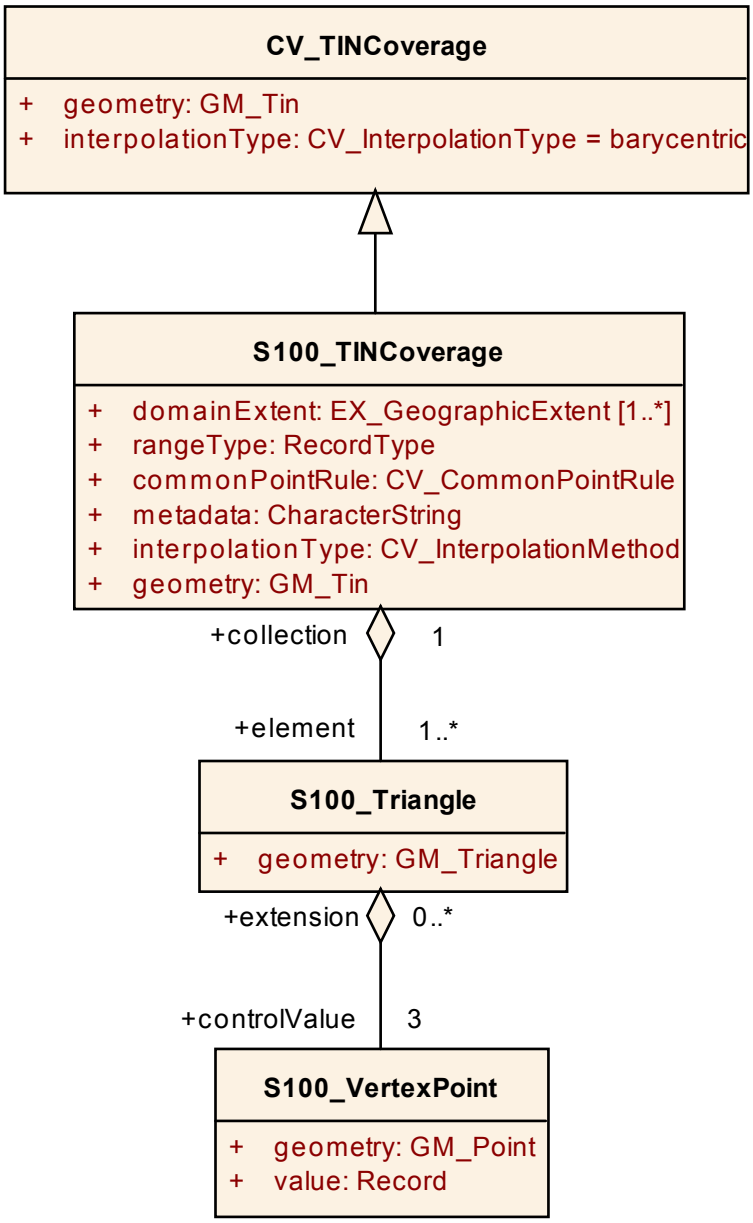
V2.0.0 Fig 8-21 S100_PointCoverage
Diagram Version 1.0



V2.0.0 Fig 8-21 S100_PointCoverage

1.8.5 V2.0.0 Fig 8-22 S100_TINCoverage *(diagram)*

V2.0.0 Fig 8-22 S100_TINCoverage
Diagram Version 1.0

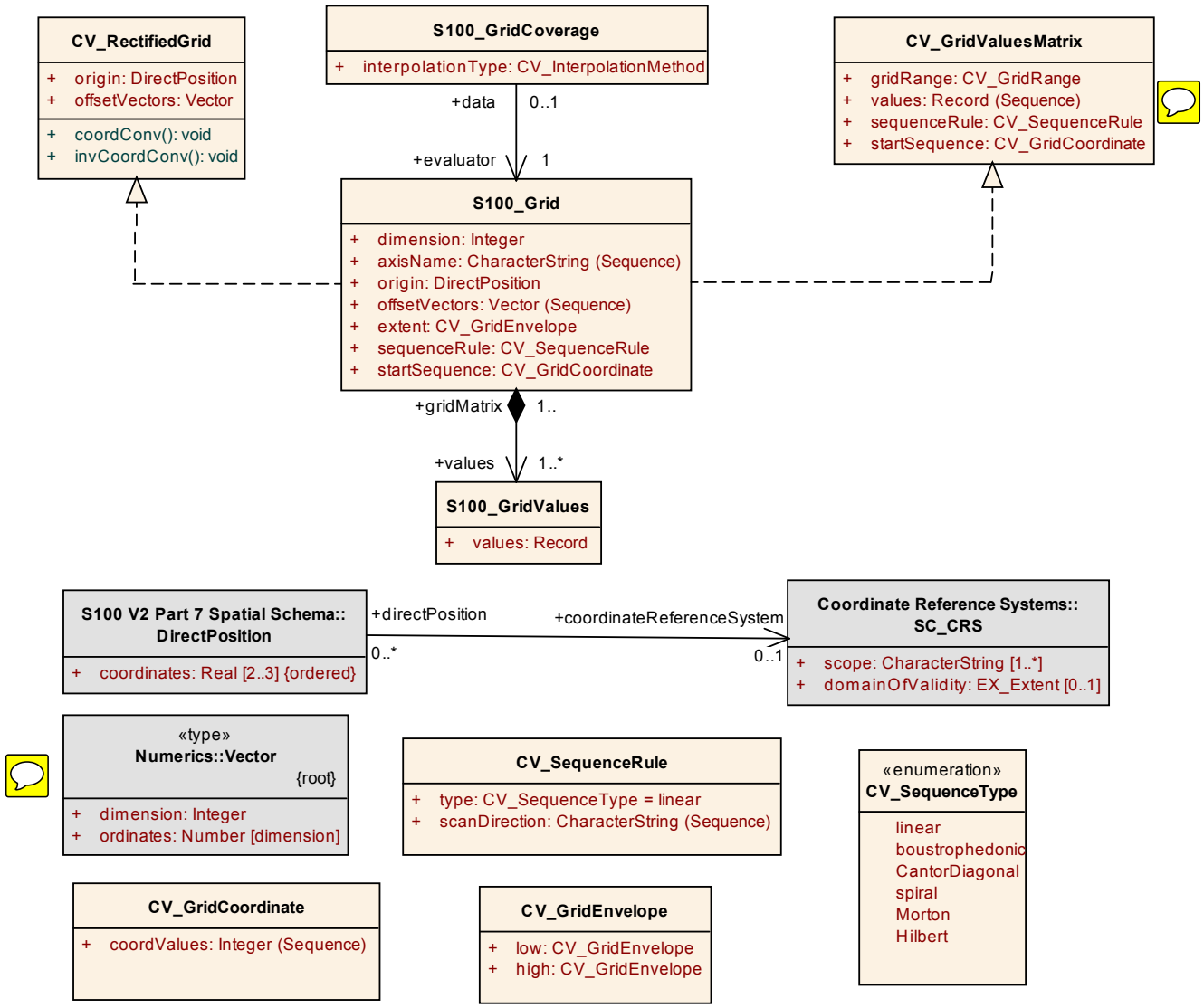


V2.0.0 Fig 8-22 S100_TINCoverage

1.8.6 V2.0.0 Fig 8-23 S100_GridCoverage *(diagram)*

Class Vector as in Figure 8-23 in published text of edition 2.0.0 was not found anywhere in the UML. The printed diagram appears to have an intermediate version or a mixture of 19123:2005 and later definition for Vector. Using Numerics:Vector from ISO 19103.

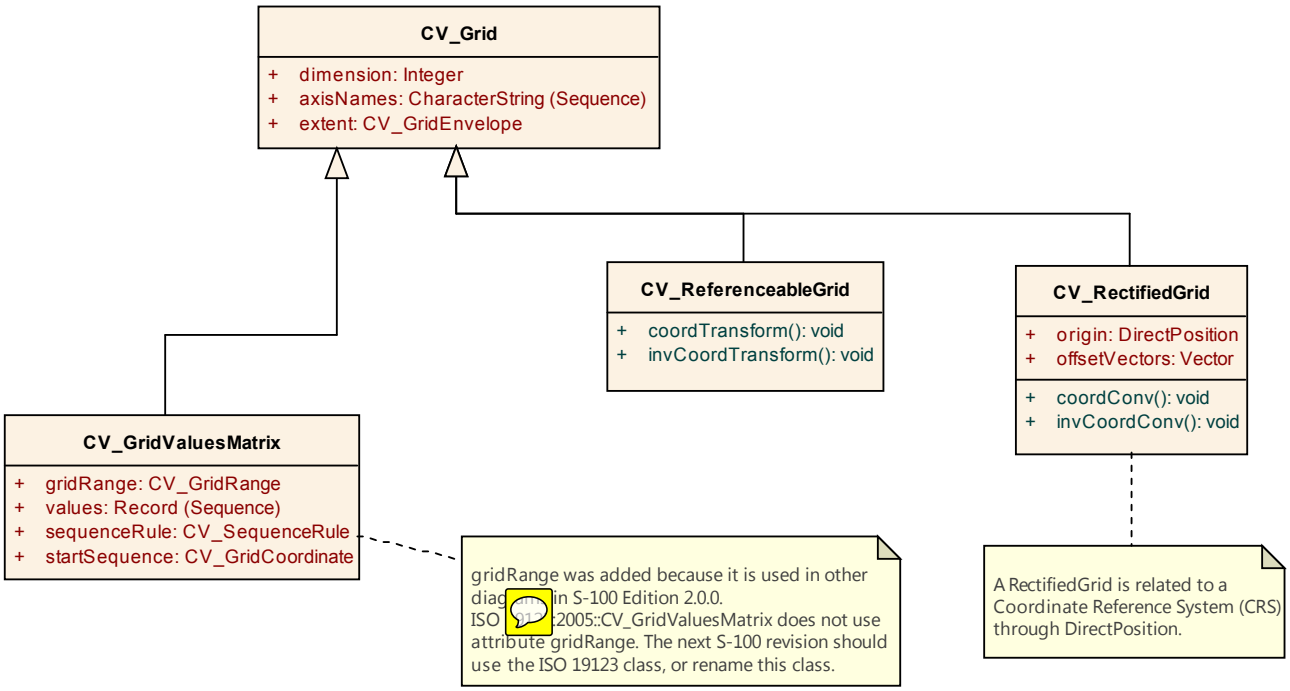
V2.0.0 Fig 8-23 S100_GridCoverage
Diagram Version 1.0



V2.0.0 Fig 8-23 S100_GridCoverage

1.8.7 V2.0.0 Fig 8-24 Rectified or Georeferencable Grids *(diagram)*

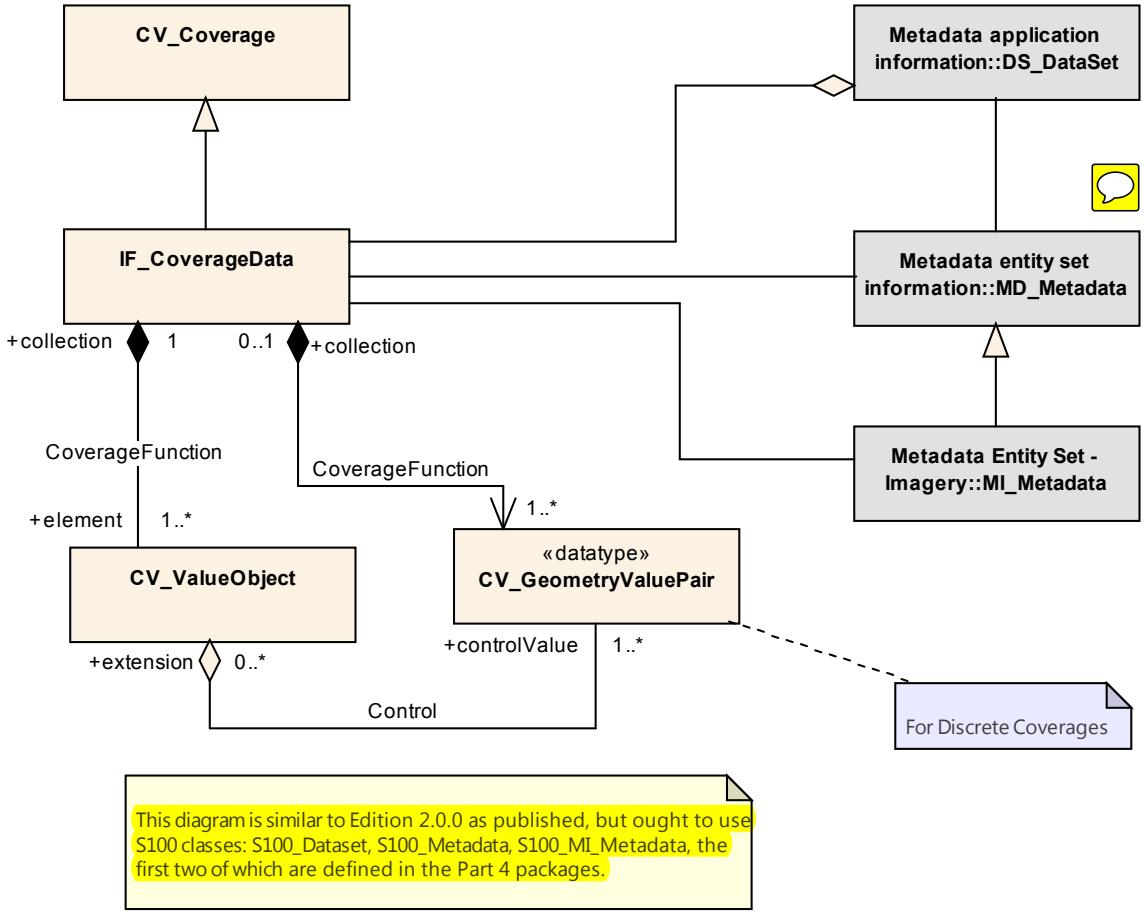
V2.0.0 Fig 8-24 Rectified or Georeferencable Grids
Diagram Version 1.0



V2.0.0 Fig 8-24 Rectified or Georeferencable Grids

1.8.8 V2.0.0 Fig 8-27 Relationship to Metadata *(diagram)*

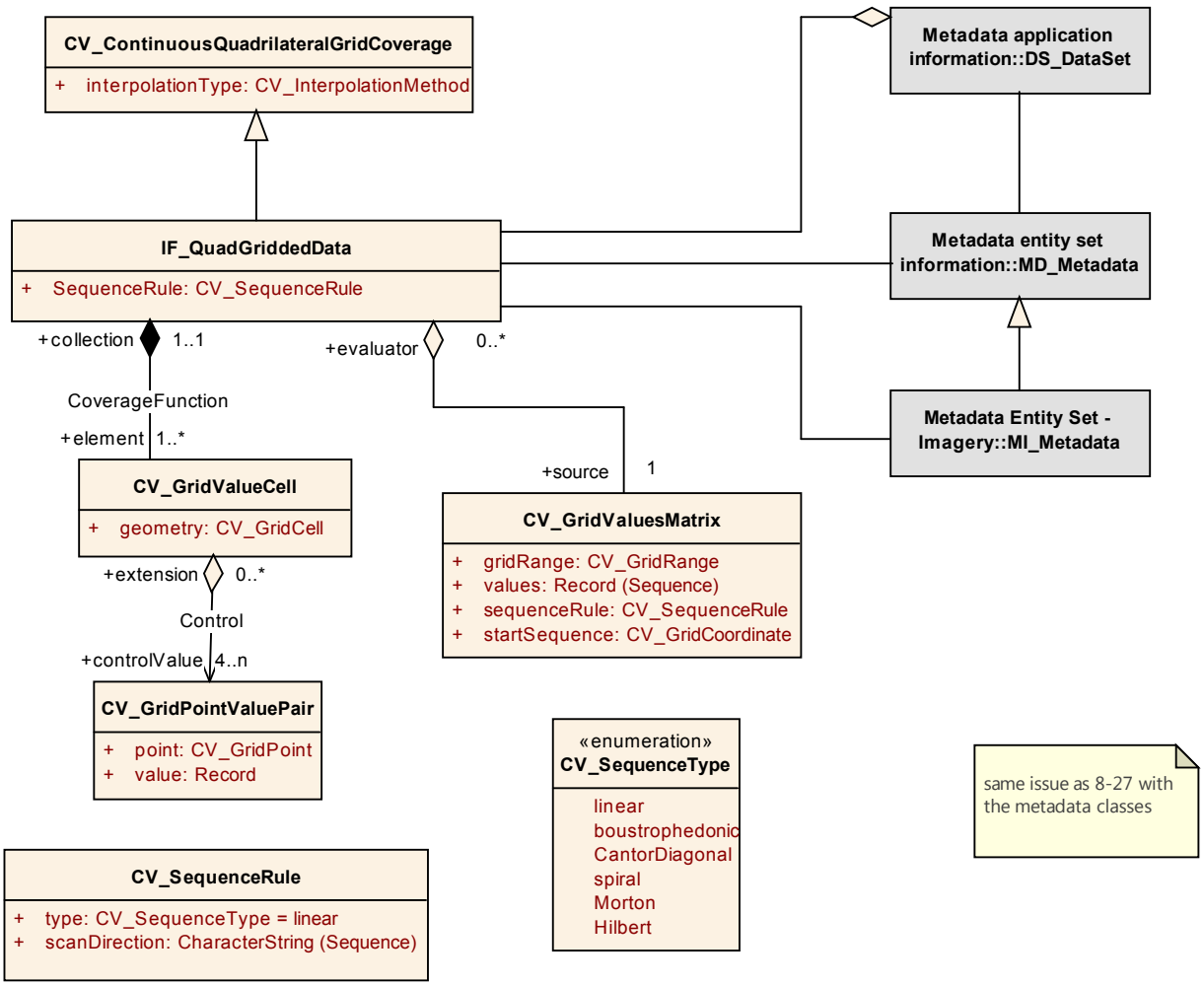
V2.0.0 Fig 8-27 Relationship to Metadata
Diagram Version 1.0



V2.0.0 Fig 8-27 Relationship to Metadata

1.8.9 V2.0.0 Fig 8-28 Template Application Schema for a Quadrilateral Grid Coverage *(diagram)*

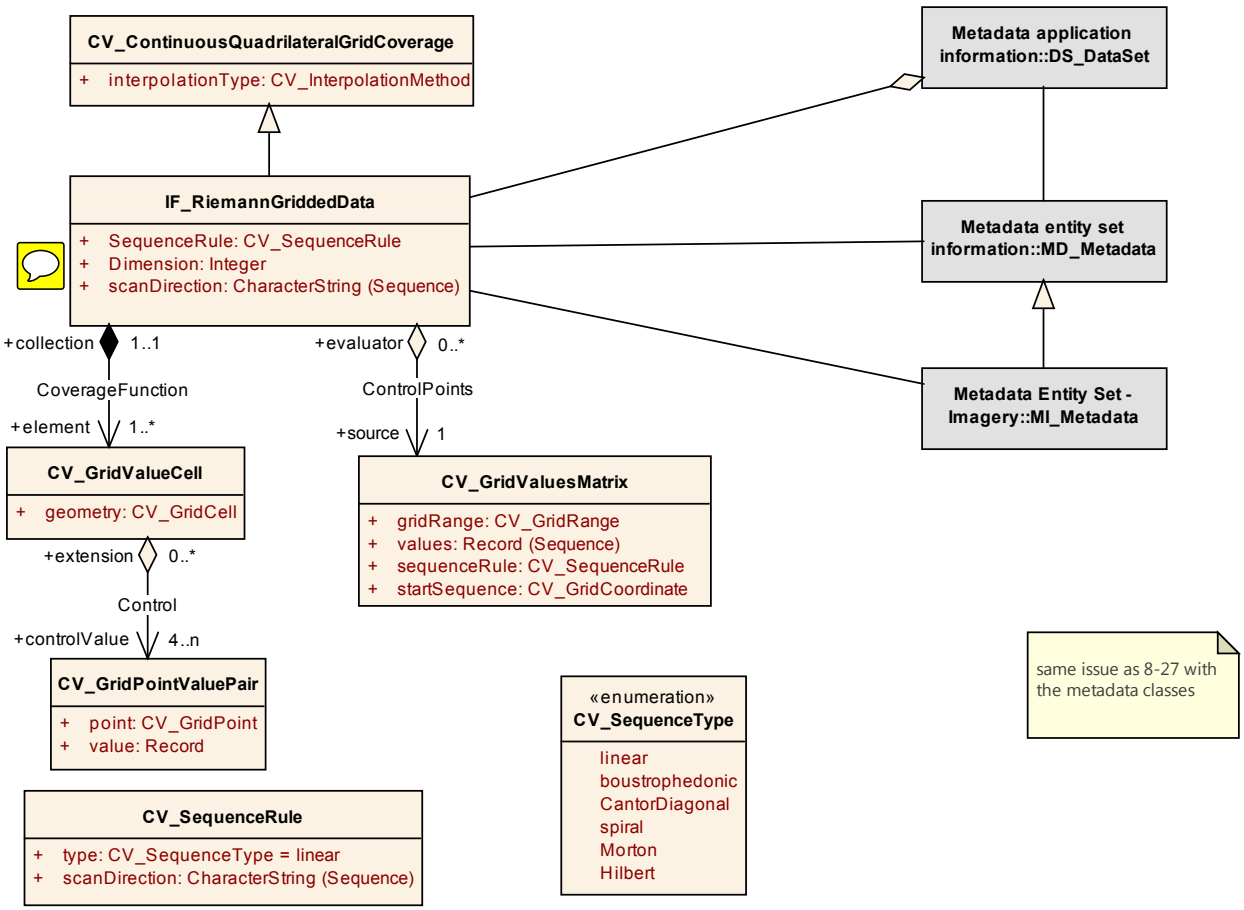
V2.0.0 Fig 8-28 Template Application Schema for a Quadrilateral Grid Coverage
Diagram Version 1.0



V2.0.0 Fig 8-28 Template Application Schema for a Quadrilateral Grid Coverage

1.8.10 V2.0.0 Fig 8-29 Template Application Schema for a Riemann Grid Coverage *(diagram)*

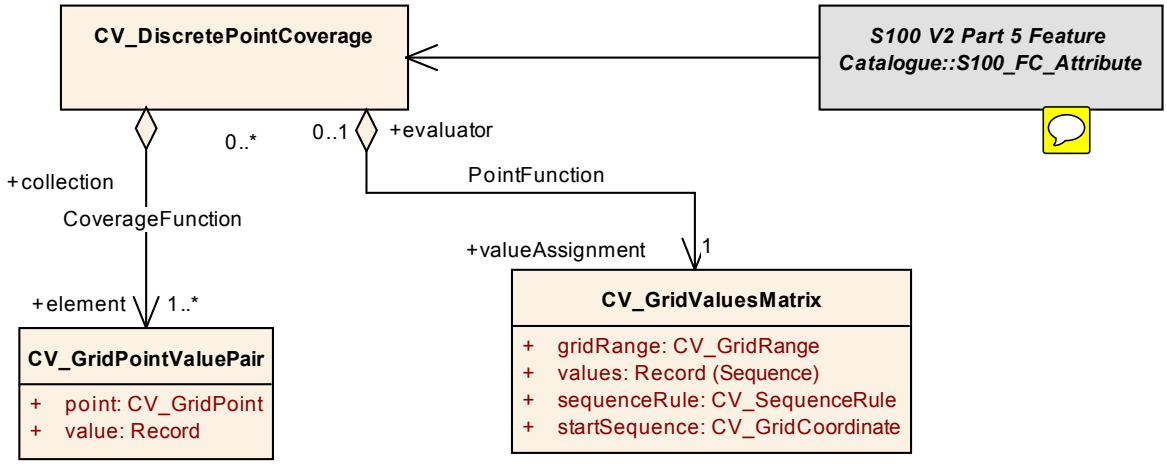
V2.0.0 Fig 8-29 Template Application Schema for a Riemann Grid Coverage
Diagram Version 1.0



V2.0.0 Fig 8-29 Template Application Schema for a Riemann Grid Coverage

1.8.11 V2.0.0 Fig 8-30 Feature Oriented Discrete Coverage *(diagram)*

V2.0.0 Fig 8-30 Feature Oriented Discrete Coverage
Diagram Version 1.0

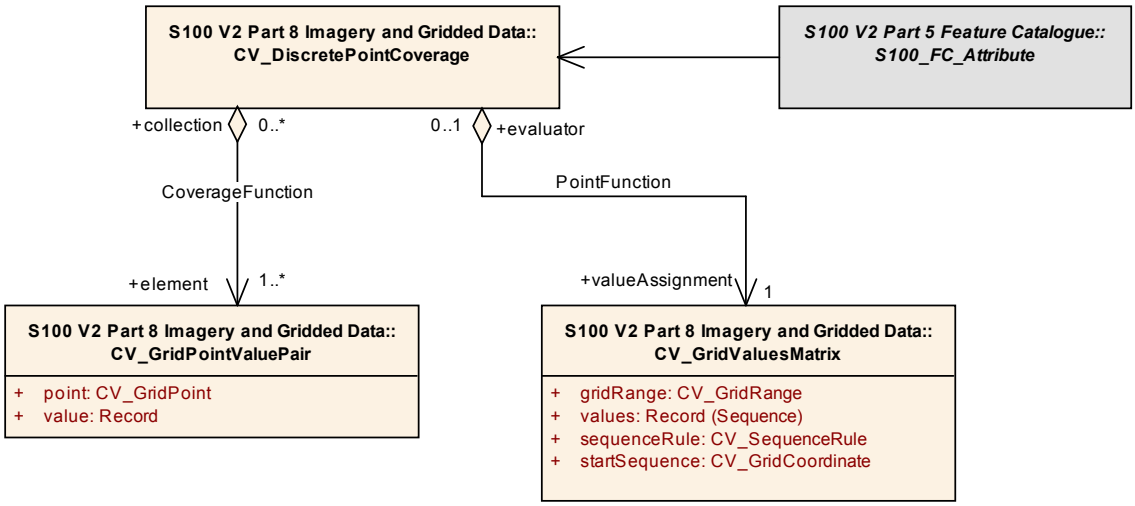


V2.0.0 Fig 8-30 Feature Oriented Discrete Coverage

1.8.12 S100 V2 Appendix 8-F *(package)*

1.8.12.1 V2.0.0 Fig 8-F.1 Feature Oriented Discrete Coverage (diagram)

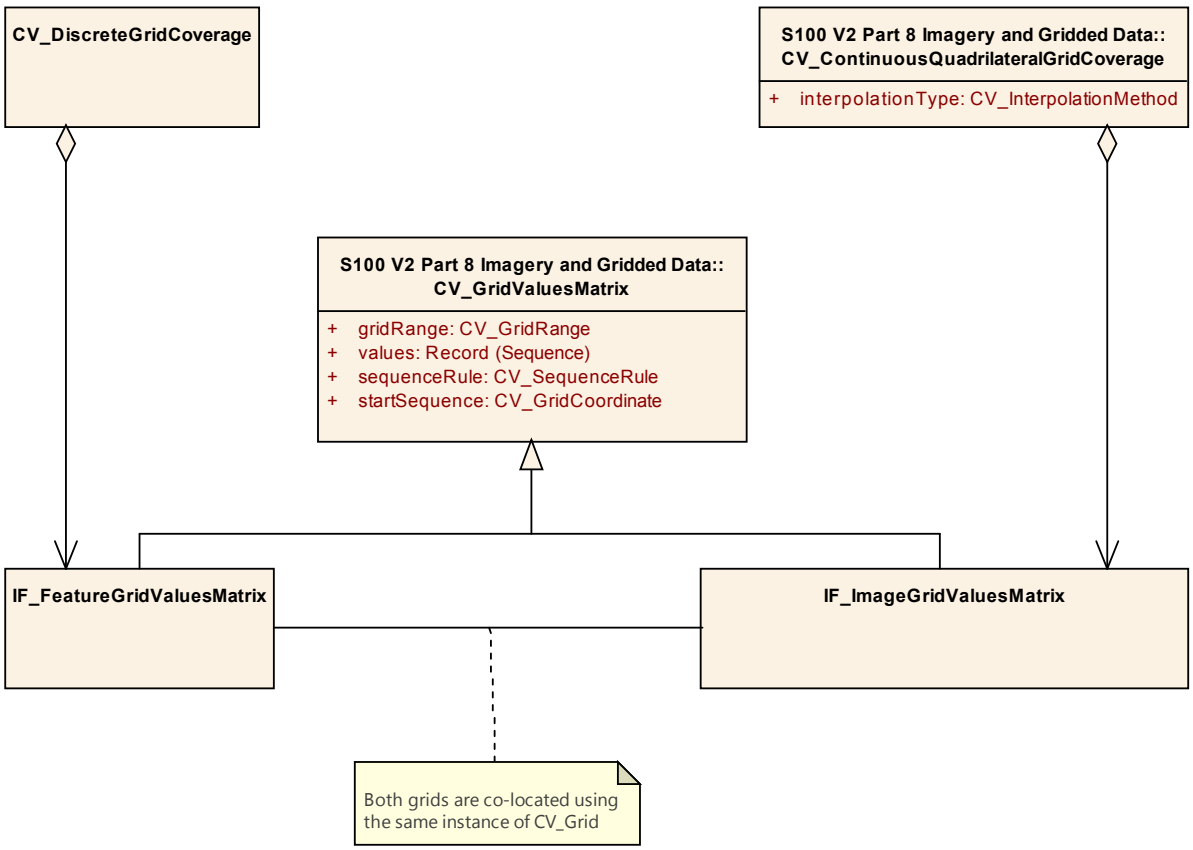
V2.0.0 Fig 8-F.1 Feature Oriented Discrete Coverage
Diagram Version 1.0



V2.0.0 Fig 8-F.1 Feature Oriented Discrete Coverage

1.8.12.2 V2.0.0 Fig 8-F.2 Assigning Feature Codes to Pixels in an Image (diagram)

V2.0.0 Fig 8-F.2 Assigning Feature Codes to Pixels in an Image
Diagram Version 1.0



V2.0.0 Fig 8-F.2 Assigning Feature Codes to Pixels in an Image

1.9 S100 V2 Part 9 Portrayal *(package)*

1.9.1 S100 Part 9 V1 to V2 *(diagram)*

S100 Part 9 V1 to V2
Diagram Version 1.0

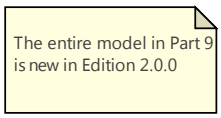
Traceability between classes in S-100 Part 9 Version 2.0.0 to Version 1.

All classes use the versioning tags Version and Phase.

All classes in the Version 1 package are labeled as Phase 1 and all classes in the Version 2 package are labeled as Phase 2.

All classes in Version 1 are labeled as Version 1. Classes in Version 2 that are identical to the classes in Version 1 (including having the same relations) are labeled as Version 1 defined classes. All classes in Version 2 that are new or have changed from Version 1 are labeled as being Version 2 classes.

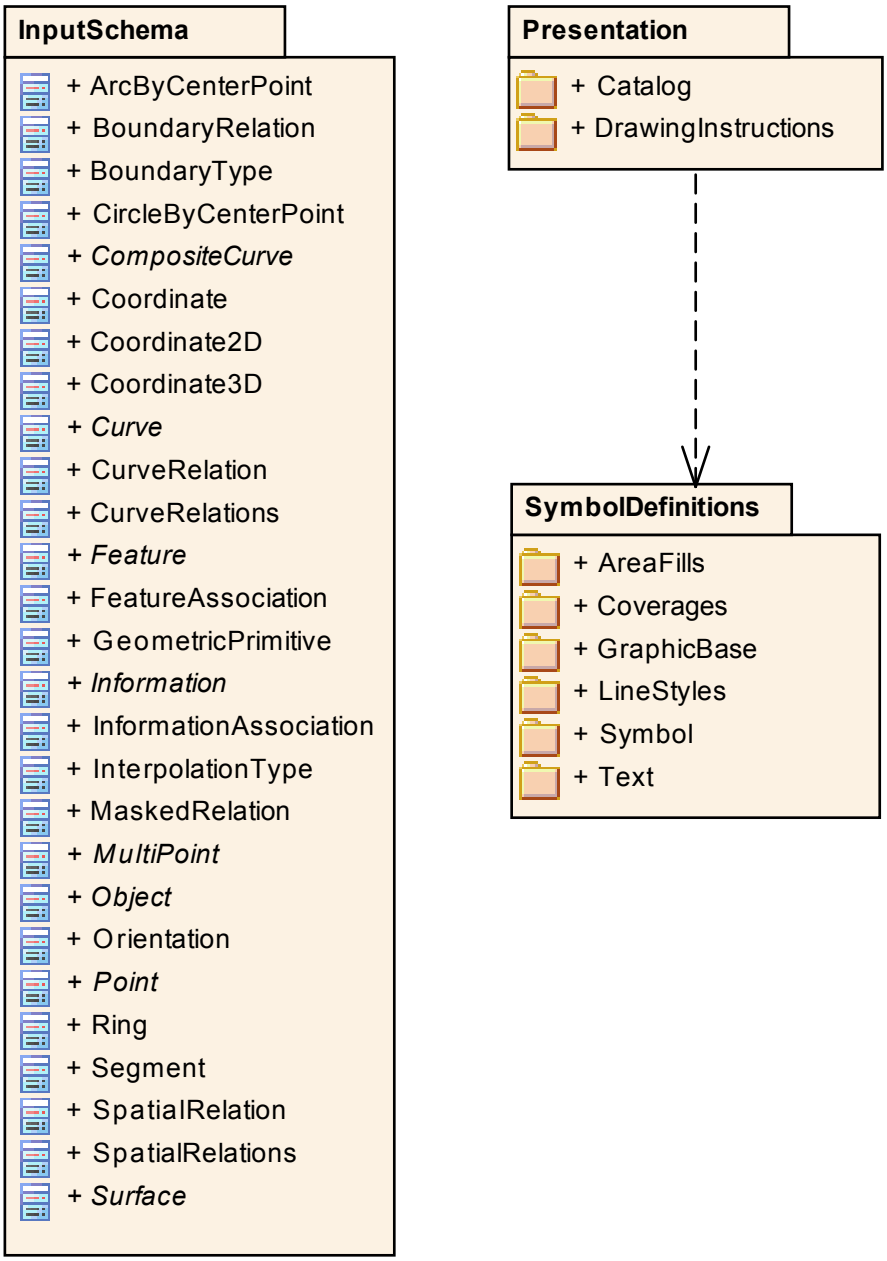
A <trace> relationship is established between classes in the Version 2 package back to class in the Version 1 package that is either equivalent or is the base class for the change in Version 2.



S100 Part 9 V1 to V2

1.9.2 V2.0.0 Fig 9-3 Packages *(diagram)*

V2.0.0 Fig 9-3 Packages
Diagram Version 1.0

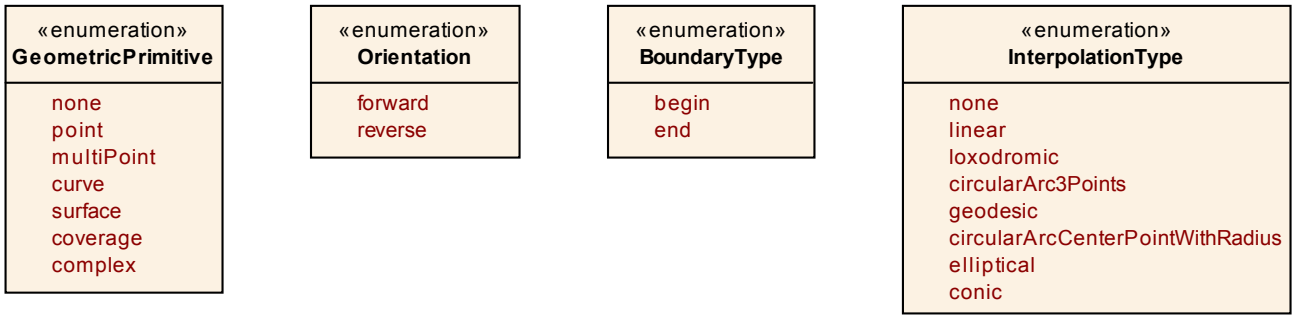


V2.0.0 Fig 9-3 Packages

1.9.3 InputSchema *(package)*

1.9.3.1 V2.0.0 Fig 9-4 Input Schema Enumerations (diagram)

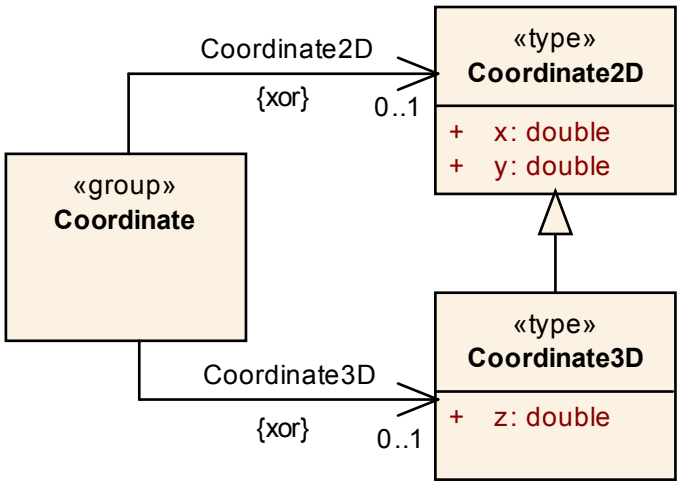
V2.0.0 Fig 9-4 Input Schema Enumerations
Diagram Version 1.0



V2.0.0 Fig 9-4 Input Schema Enumerations

1.9.3.2 V2.0.0 Fig 9-5 Input Schema Coordinates (diagram)

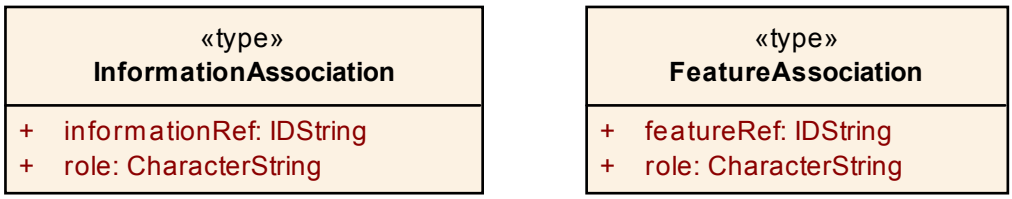
V2.0.0 Fig 9-5 Input Schema Coordinates
Diagram Version 1.0



V2.0.0 Fig 9-5 Input Schema Coordinates

1.9.3.3 V2.0.0 Fig 9-6 Input Schema Associations (diagram)

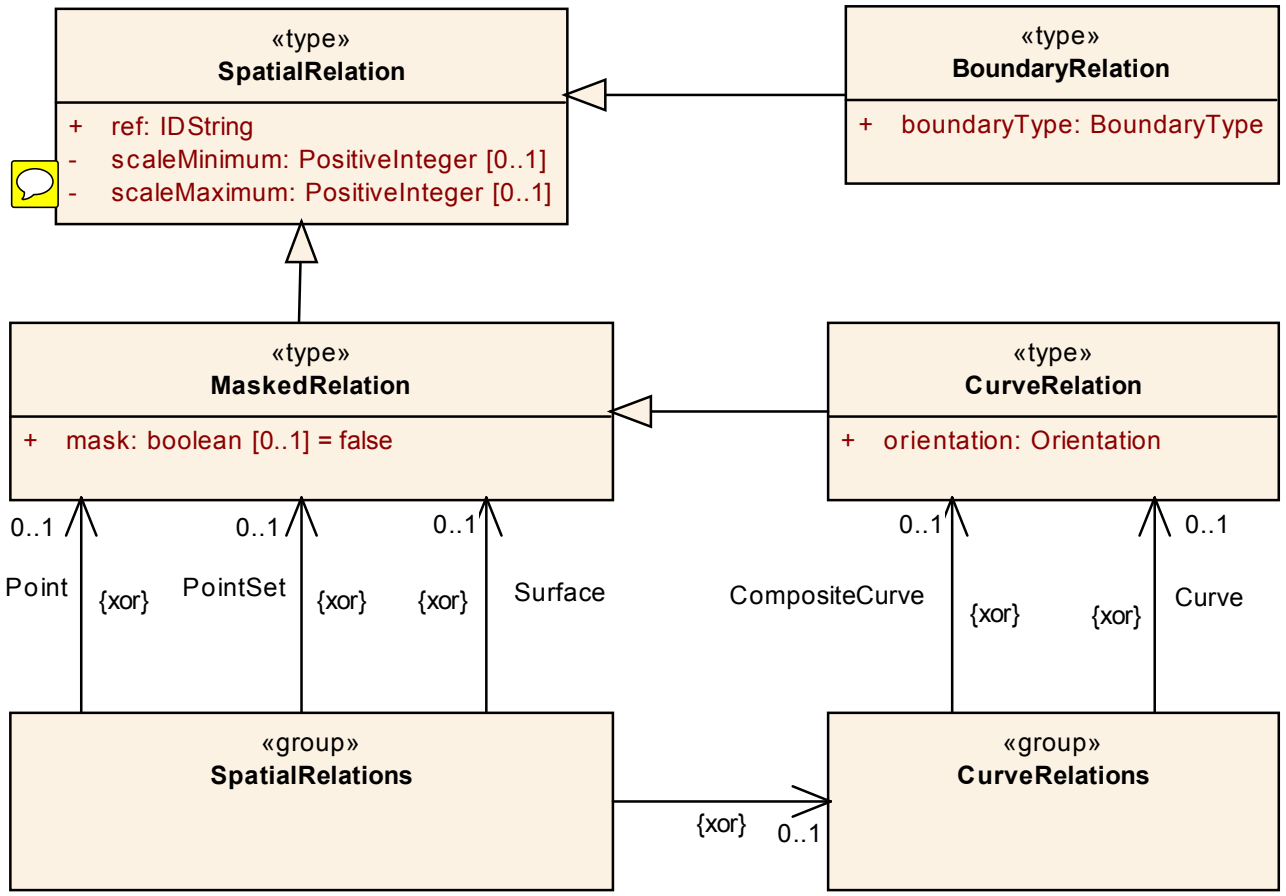
V2.0.0 Fig 9-6 Input Schema Associations
Diagram Version 1.0



V2.0.0 Fig 9-6 Input Schema Associations

1.9.3.4 V2.0.0 Fig 9-7 Input Schema Spatial Relations (diagram)

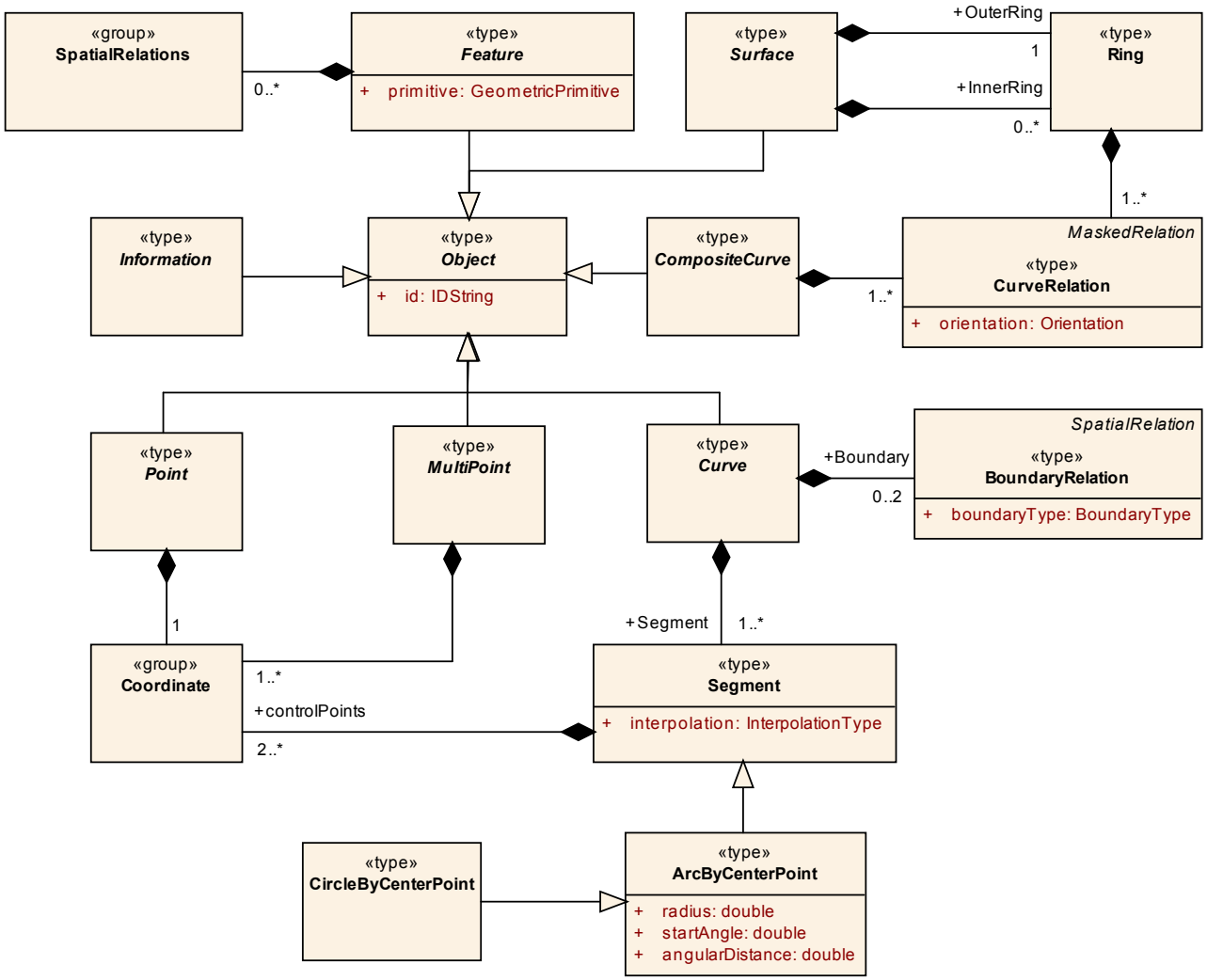
V2.0.0 Fig 9-7 Input Schema Spatial Relations
Diagram Version 1.0



V2.0.0 Fig 9-7 Input Schema Spatial Relations

1.9.3.5 V2.0.0 Fig 9-8 Input Schema Objects (diagram)

V2.0.0 Fig 9-8 Input Schema Objects
Diagram Version 1.0

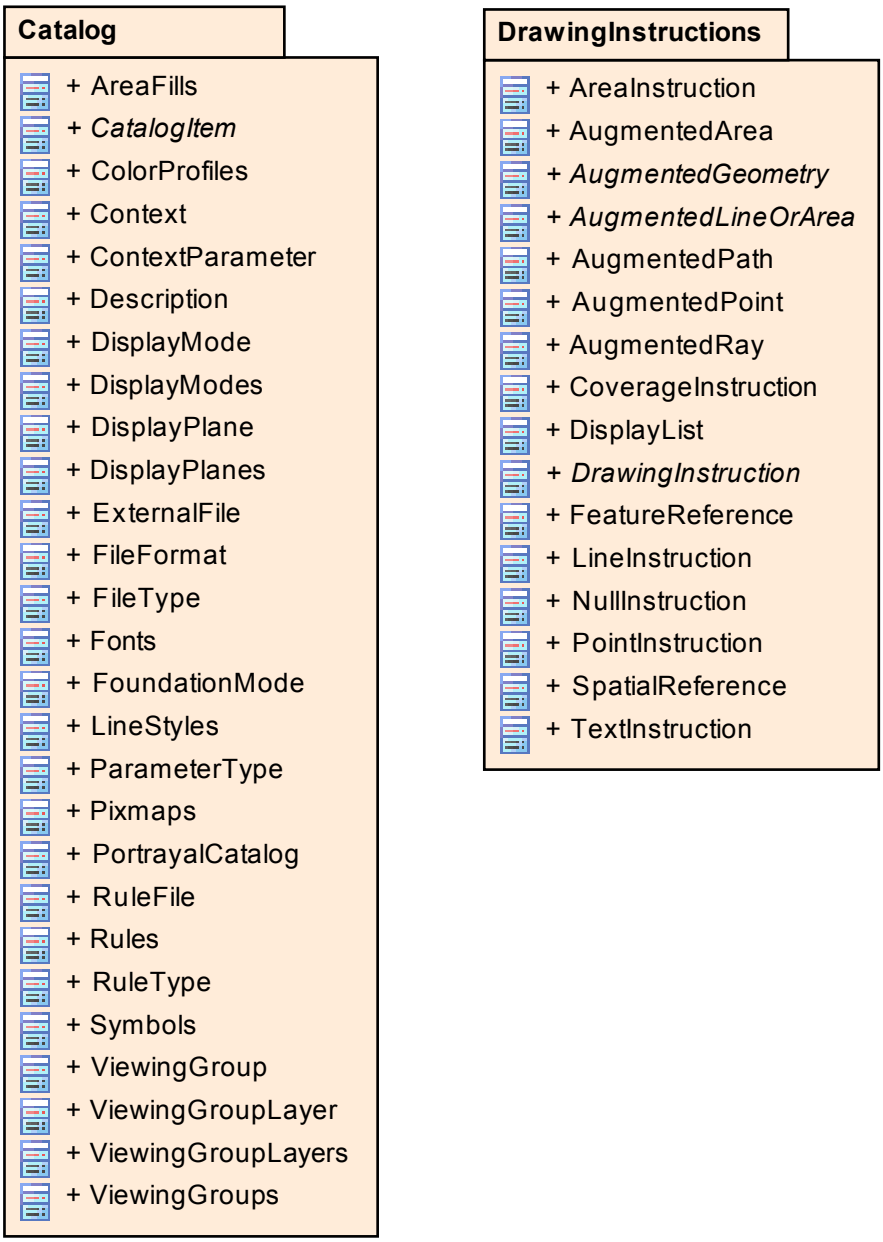


V2.0.0 Fig 9-8 Input Schema Objects

1.9.4 Presentation *(package)*

1.9.4.1 V2.0.0 Fig 9-x (none) Presentation (diagram)

V2.0.0 Fig 9-x (none) Presentation
Diagram Version 1.0

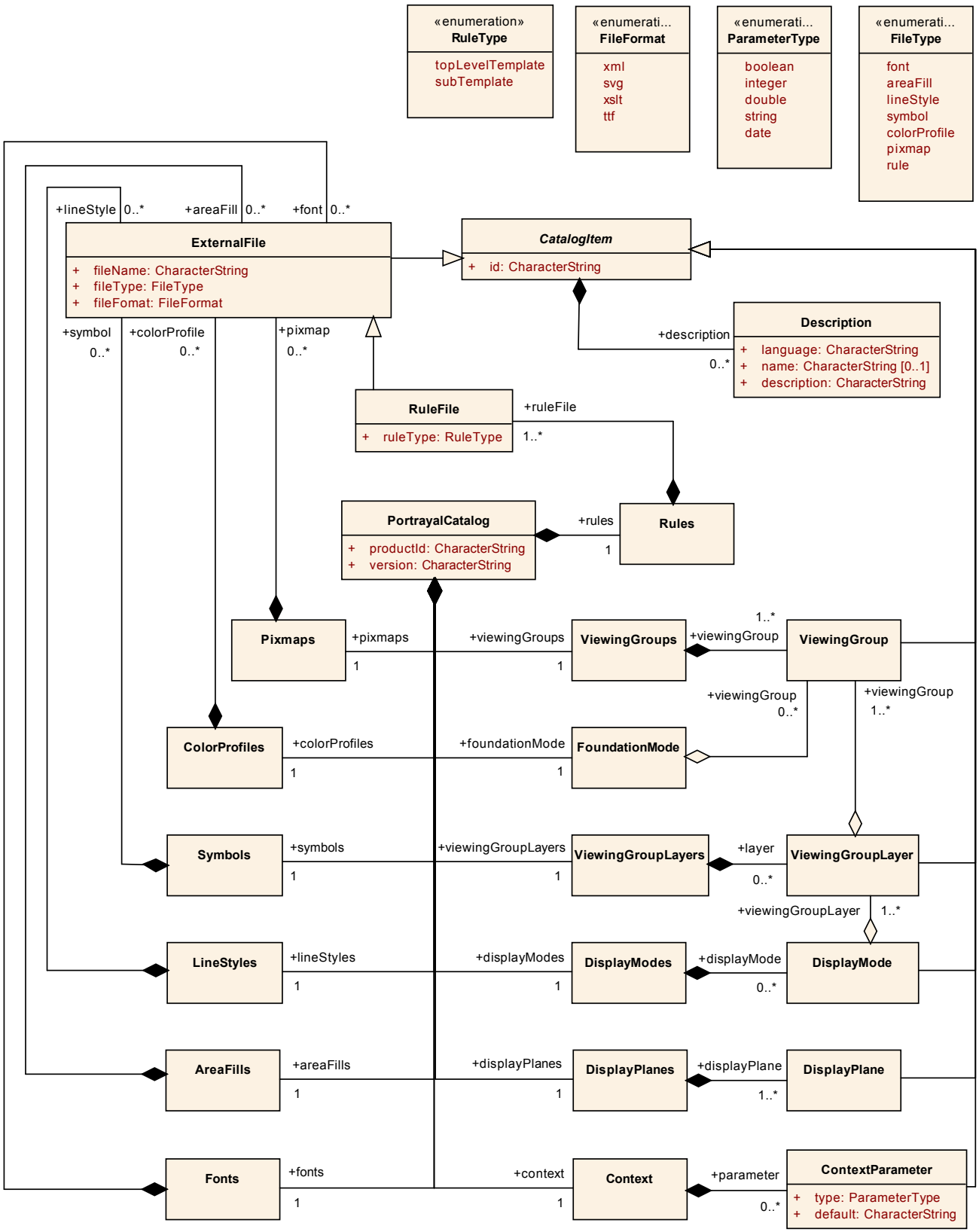


V2.0.0 Fig 9-x (none) Presentation

1.9.4.2 Catalog (package)

1.9.4.2.1 V2.0.0 Fig 9-20 Catalogue *(diagram)*

V2.0.0 Fig 9-20 Catalogue
Diagram Version 1.0

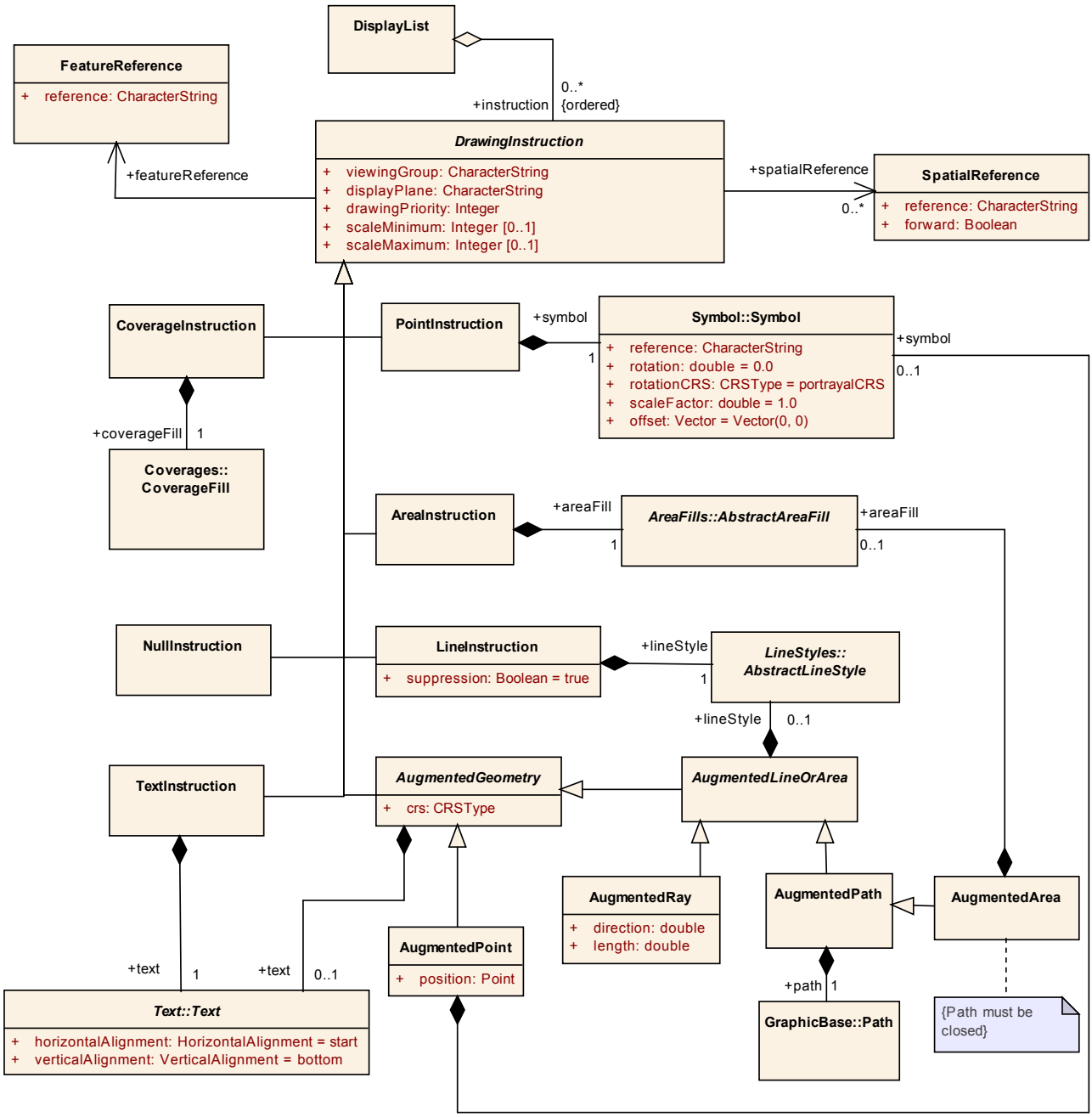


V2.0.0 Fig 9-20 Catalogue

1.9.4.3 DrawingInstructions (package)

1.9.4.3.1 V2.0.0 Fig 9-10 Drawing Instructions *(diagram)*

V2.0.0 Fig 9-10 Drawing Instructions
Diagram Version 1.0

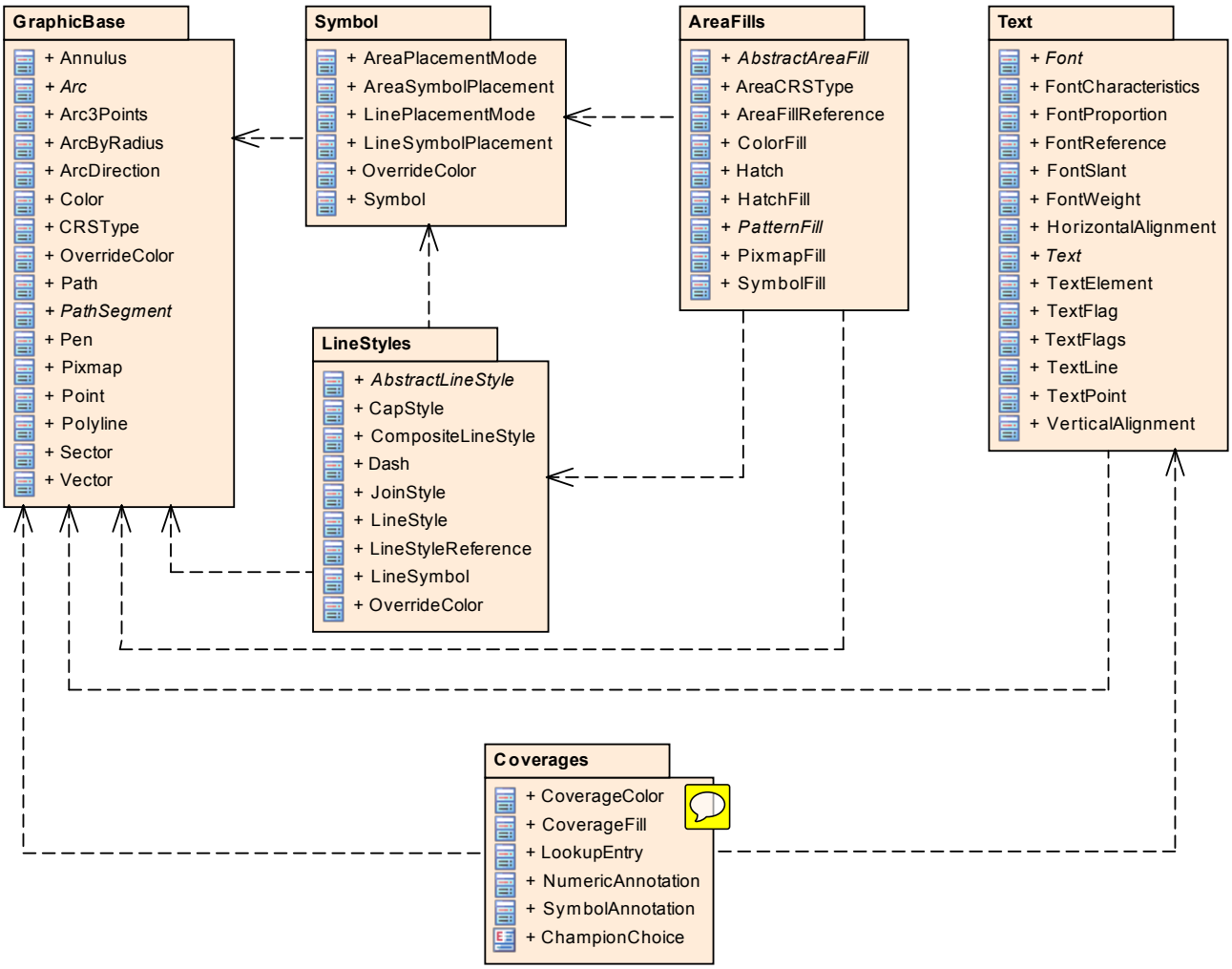


V2.0.0 Fig 9-10 Drawing Instructions

1.9.5 SymbolDefinitions *(package)*

1.9.5.1 V2.0.0 Fig 9-11 Symbol Definition Packages (diagram)

V2.0.0 Fig 9-11 Symbol Definition Packages
Diagram Version 1.0

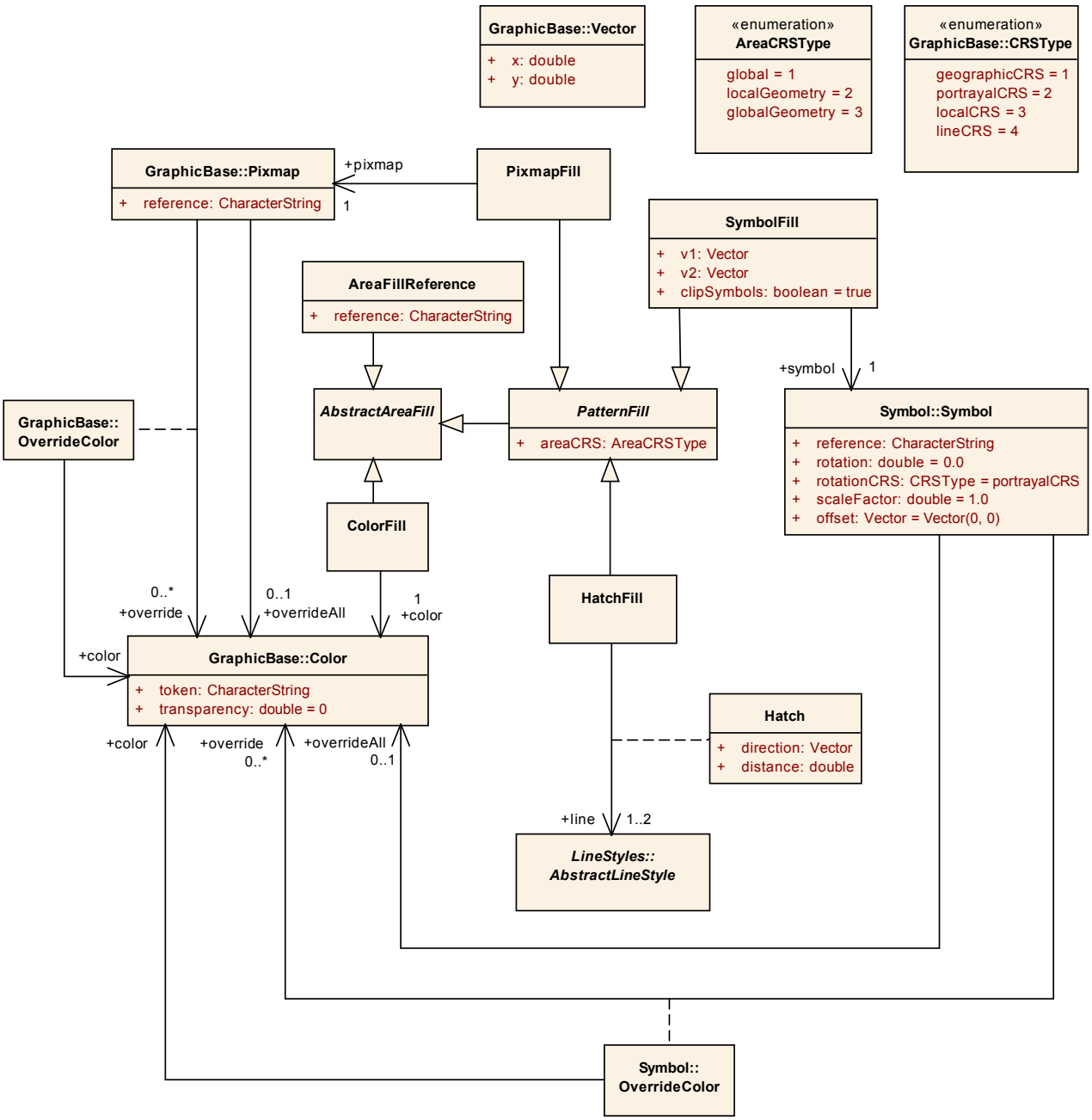


V2.0.0 Fig 9-11 Symbol Definition Packages

1.9.5.2 AreaFills (package)

1.9.5.2.1 V2.0.0 Fig 9-17 Area Fills Package *(diagram)*

V2.0.0 Fig 9-17 Area Fills Package
Diagram Version 1.0

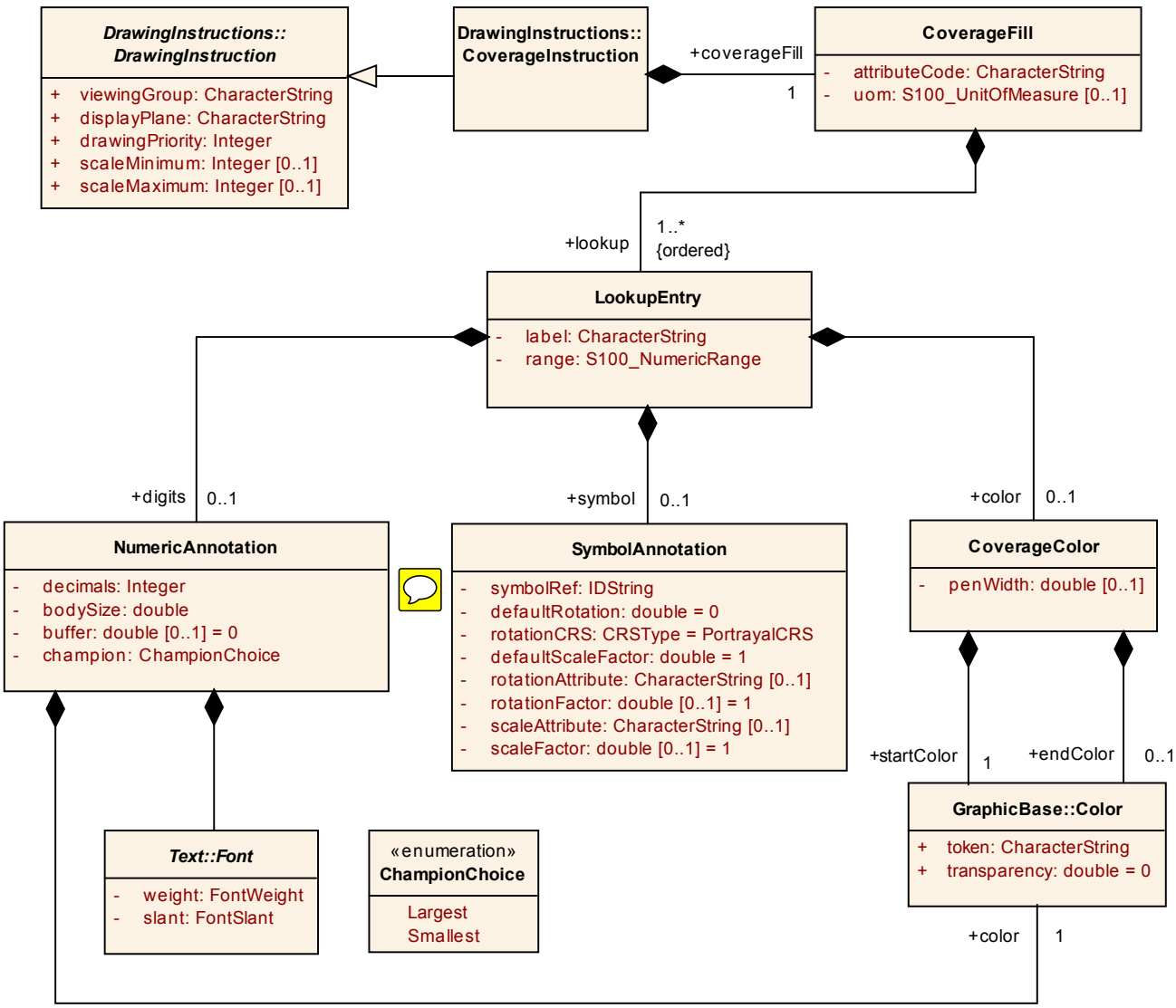


V2.0.0 Fig 9-17 Area Fills Package

1.9.5.3 Coverages (package)

1.9.5.3.1 V2.0.0 Fig 9-19 Coverage Package *(diagram)*

V2.0.0 Fig 9-19 Coverage Package
Diagram Version 1.0

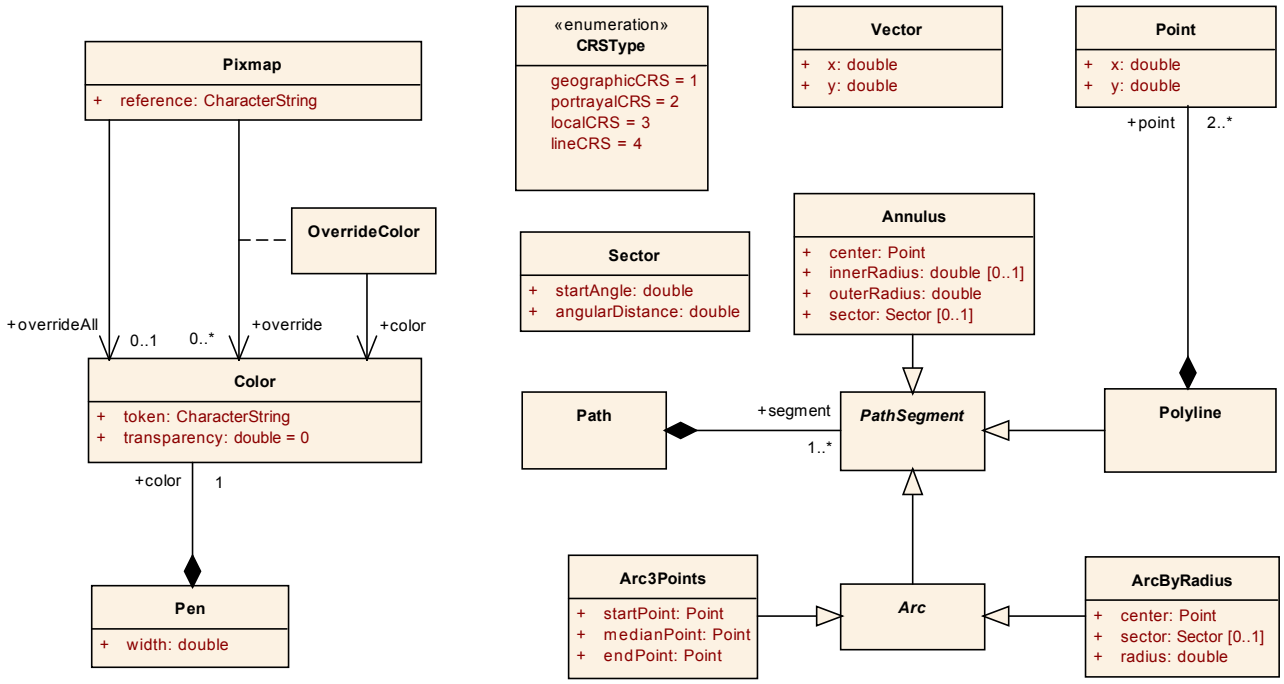


V2.0.0 Fig 9-19 Coverage Package

1.9.5.4 GraphicBase (package)

1.9.5.4.1 V2.0.0 Fig 9-12 Graphics Base *(diagram)*

V2.0.0 Fig 9-12 Graphics Base
Diagram Version 1.0

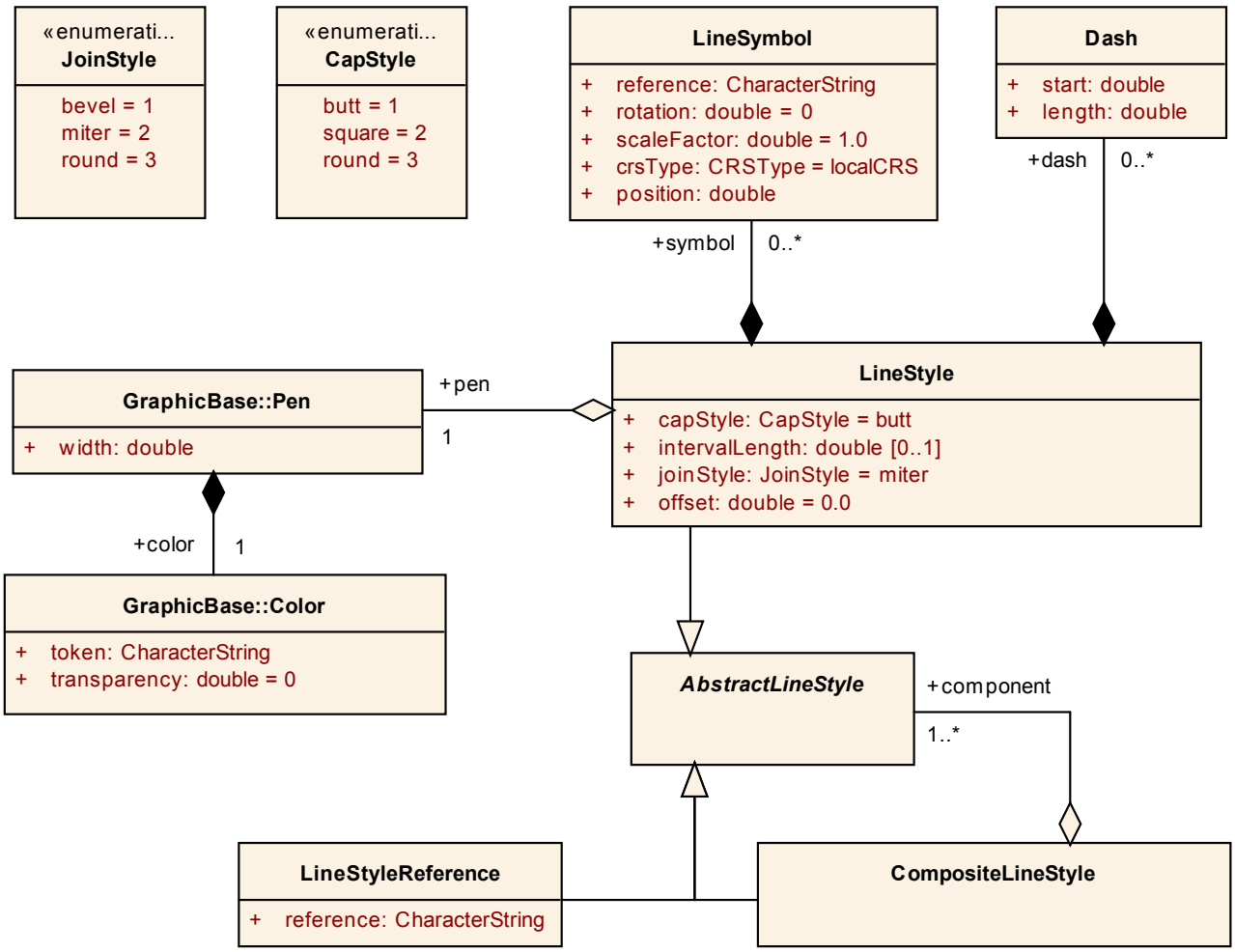


V2.0.0 Fig 9-12 Graphics Base

1.9.5.5 LineStyles (package)

1.9.5.5.1 V2.0.0 Fig 9-16 Symbol Package *(diagram)*

V2.0.0 Fig 9-16 Symbol Package
Diagram Version 1.0

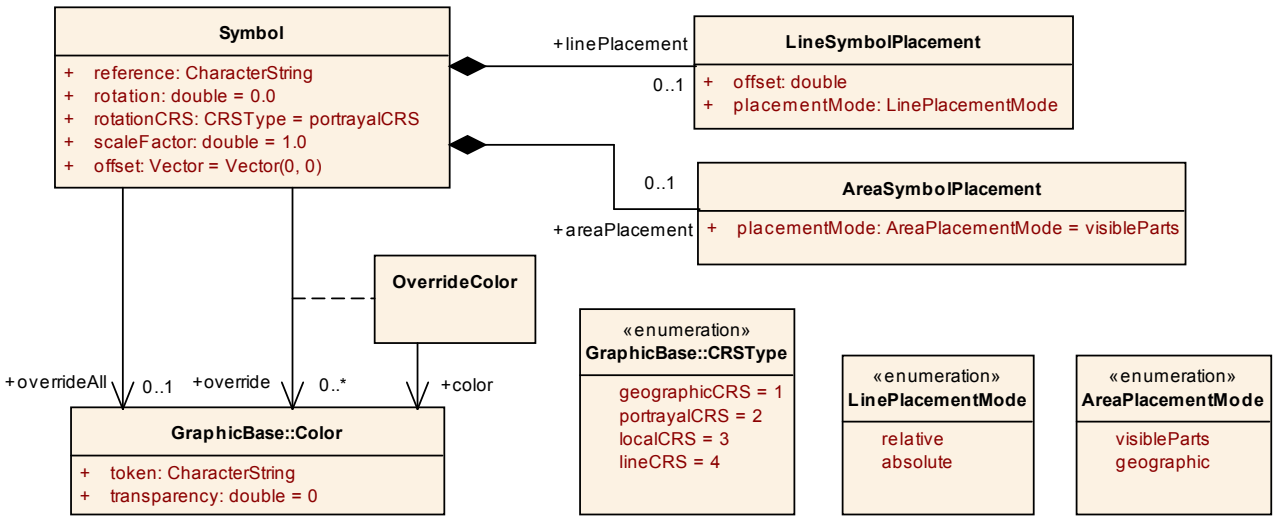


V2.0.0 Fig 9-16 Symbol Package

1.9.5.6 Symbol (package)

1.9.5.6.1 V2.0.0 Fig 9-15 Symbol Package *(diagram)*

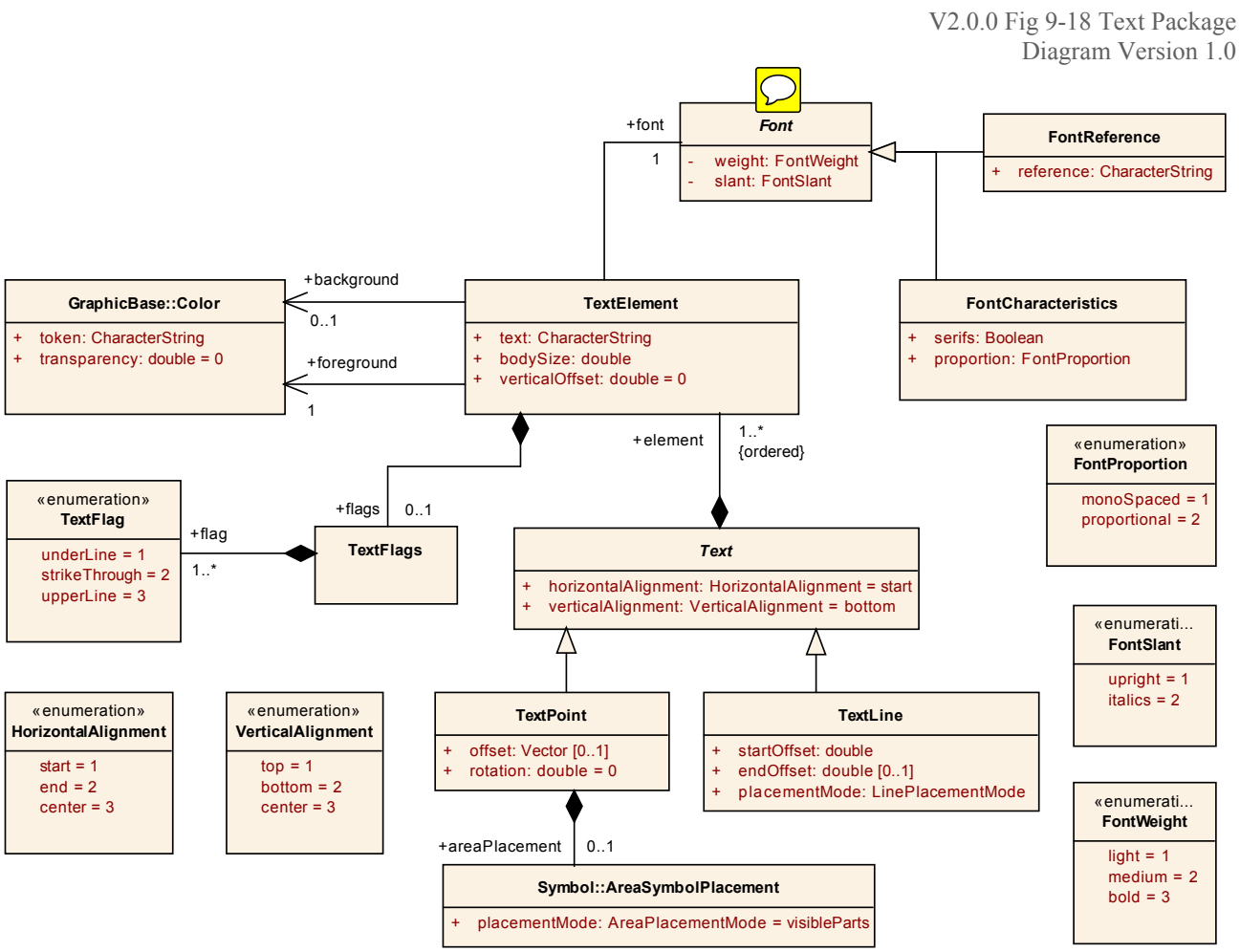
V2.0.0 Fig 9-15 Symbol Package
Diagram Version 1.0



V2.0.0 Fig 9-15 Symbol Package

1.9.5.7 Text (package)

1.9.5.7.1 V2.0.0 Fig 9-18 Text Package *(diagram)*



V2.0.0 Fig 9-18 Text Package

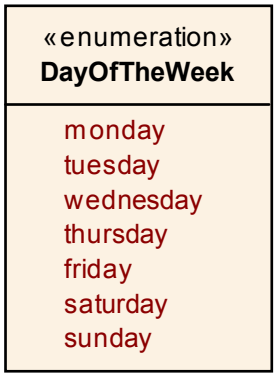
1.10 V2 Examples *(package)*

1.10.1 V2.0.0 Part 1 Examples *(package)*

1.10.1.1 V2.0.0 Fig 1-7 Enumeration (diagram)

Example of Enumeration for Figure 1-7.

V2.0.0 Fig 1-7 Enumeration
Diagram Version 2.0

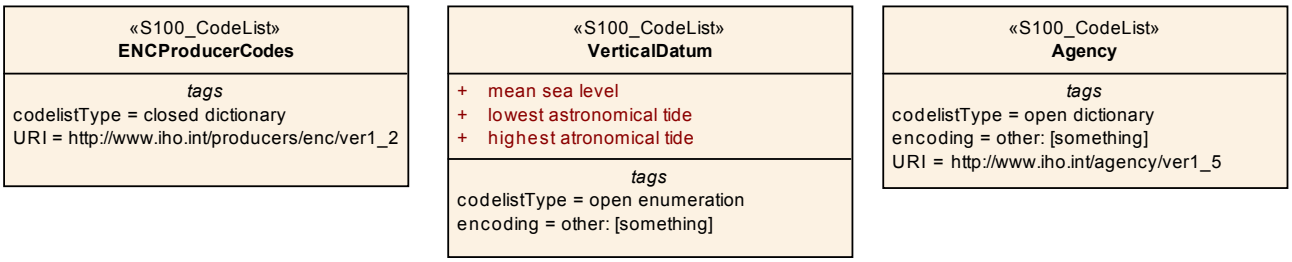


V2.0.0 Fig 1-7 Enumeration

1.10.1.2 V2.0.0 Fig 1-8 Codelists (diagram)

S100 Codelist examples for Figure 1-8.

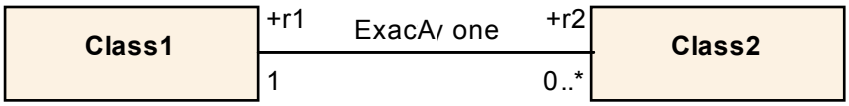
V2.0.0 Fig 1-8 Codelists
Diagram Version 2.0



V2.0.0 Fig 1-8 Codelists

1.10.1.3 V2.0.0 Fig 1-10 Association (diagram)

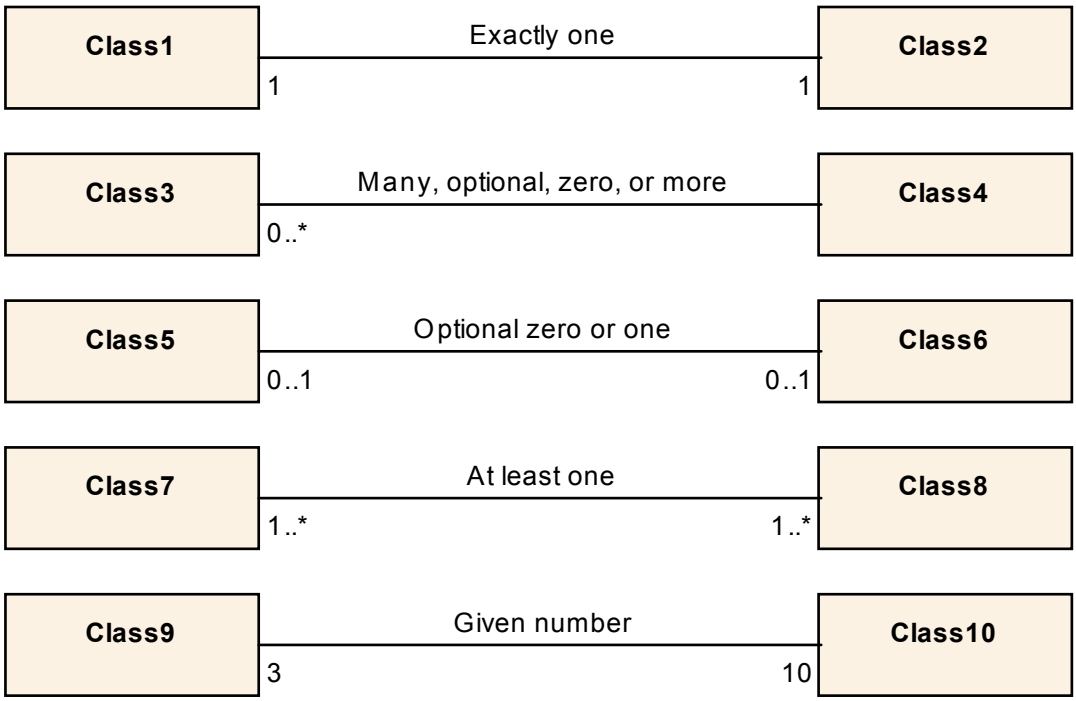
V2.0.0 Fig 1-10 Association
Diagram Version 1.0



V2.0.0 Fig 1-10 Association

1.10.1.4 V2.0.0 Fig 1-11 Specification of multiplicity (diagram)

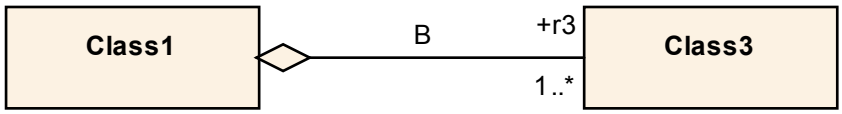
V2.0.0 Fig 1-11 Specification of multiplicity
Diagram Version 1.0



V2.0.0 Fig 1-11 Specification of multiplicity

1.10.1.5 V2.0.0 Fig 1-12 Aggregation (diagram)

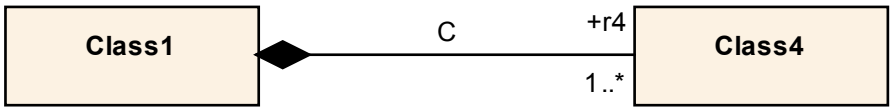
V2.0.0 Fig 1-12 Aggregation
Diagram Version 1.0



V2.0.0 Fig 1-12 Aggregation

1.10.1.6 V2.0.0 Fig 1-13 Composition (strong aggregation) (diagram)

V2.0.0 Fig 1-13 Composition (strong aggregation)
Diagram Version 1.0



V2.0.0 Fig 1-13 Composition (strong aggregation)