

RISE23 Conceptual Schema in UML Annex 2

UML Application Schema (textual description)

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Class Model

The logical model is made up of the Domain Model - a high level model of business objects and relationships between objects suitable for analysing the business process, and the class model - a rigorous model of classes and their inter-relationships, suitable for building a software product.

RISE

Type: Package «Application Schema»
Status: Proposed. Version 1.0.
Package: Logical View
Detail: Created on 30.10.2006 11:28:46. Last modified on 04.01.2007 13:22:53

RISE - (Logical diagram)

Created By: Sabine Afflerbach on 17.10.2006
Last Modified: 08.03.2007
Version: 1.0. False

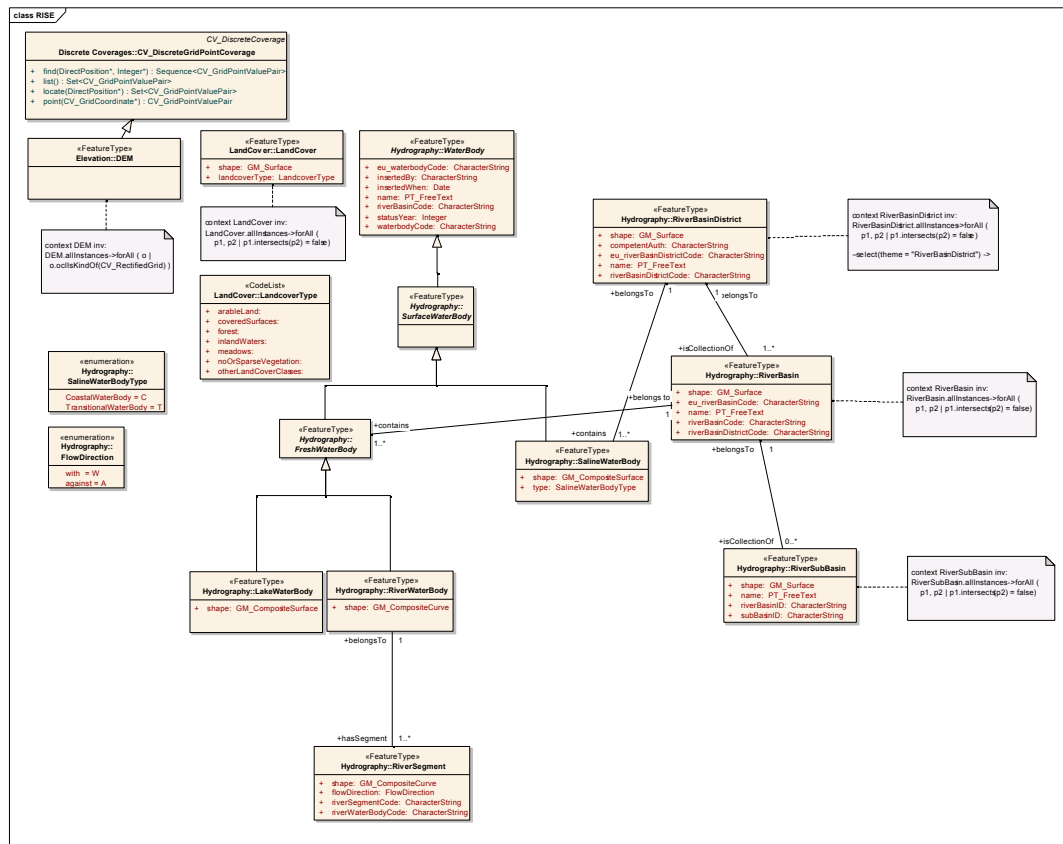


Figure 1: RISE UML Model

Elevation

Type: Package «Application Schema»
Status: Proposed. Version 1.0.
Package: RISE
Detail: Created on 08.03.2007 16:24:11. Last modified on 08.03.2007 16:24:17

DEM

Type: **Class CV_DiscreteGridPointCoverage**
Status: Proposed. Version 1.0.
Package: Elevation
Detail: Created on 17.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Generalization Source -> Destination	Public DEM	Public CV_DiscreteGridPointCoverage
NoteLink Source -> Destination	Public Note	Public DEM

Hydrography

Type: **Package «ApplicationSchema»**
Status: Proposed. Version 1.0.
Package: RISE
Detail: Created on 08.03.2007 16:23:01. Last modified on 08.03.2007 16:23:10

FlowDirection

Type: **Enumeration**
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 08.12.2006. Last modified on.08.03.2007.

Attributes

Attribute	Type	Notes
with	Public	W
against	Public	A

FreshWaterBody

Type: **Class SurfaceWaterBody**
Status: Proposed. Version 1.0.

Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Association Unspecified	Public belongs to RiverBasin	Public contains FreshWaterBody
Generalization Source -> Destination	Public LakeWaterBody	Public FreshWaterBody
Generalization Source -> Destination	Public FreshWaterBody	Public SurfaceWaterBody
Generalization Source -> Destination	Public RiverWaterBody	Public FreshWaterBody

LakeWaterBody

Type: **Class FreshWaterBody**
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Generalization Source -> Destination	Public LakeWaterBody	Public FreshWaterBody

Attributes

Attribute	Type	Notes
shape	Public <i>GM_CompositeSurface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"

RiverBasin

Type: **Class**
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Association Unspecified	Public belongs to	Public contains

Connector	Source	Target
	RiverBasin	FreshWaterBody
Association Unspecified	Public isCollectionOf RiverBasin	Public belongsTo RiverBasinDistrict
NoteLink Source -> Destination	Public Note	Public RiverBasin
Association Unspecified	Public isCollectionOf RiverSubBasin	Public belongsTo RiverBasin

Attributes

Attribute	Type	Notes
shape	Public <i>GM_Surface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
eu_riverBasinCode	Public <i>CharacterString</i>	Unique code for a river basin at EU level. Equivalent to the WFD EuropeanCode, incorporating the 2 digits ISO country code plus the member state code (see coding guidelines in the WFD Guidance Document).
name	Public <i>PT_FreeText</i>	Locally used name
riverBasinCode	Public <i>CharacterString</i>	Unique code for a river basin within member state. Equivalent to the WFD MSCode (see coding guidelines in the WFD Guidance Document)
riverBasinDistrictCode	Public <i>CharacterString</i>	Code for the River Basin District the basin belongs to.

RiverBasinDistrict

Type: **Class**

Status: Proposed. Version 1.0.

Package: Hydrography

Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
NoteLink Source -> Destination	Public Note	Public RiverBasinDistrict
Association Unspecified	Public contains SalineWaterBody	Public belongsTo RiverBasinDistrict

Connector	Source	Target
Association Unspecified	Public isCollectionOf RiverBasin	Public belongsTo RiverBasinDistrict

Attributes

Attribute	Type	Notes
shape	Public <i>GM_Surface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
competentAuth	Public <i>CharacterString</i>	Code of the competent authority for the River Basin District
eu_riverBasinDistrictCode	Public <i>CharacterString</i>	Unique code for a river basin district at EU level. Equivalent to the WFD EuropeanCode, incorporating the 2 digits ISO country code plus the member state code (see coding guidelines in the WFD Guidance Document).
name	Public <i>PT_FreeText</i>	Locally used name
riverBasinDistrictCode	Public <i>CharacterString</i>	Unique code for a river basin district within member state. Equivalent to the WFD MSCode (see coding guidelines in the WFD Guidance Document)

RiverSegment

Type: **Class**
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Association Unspecified	Public belongsTo RiverWaterBody	Public hasSegment RiverSegment

Attributes

Attribute	Type	Notes
shape	Public <i>GM_CompositeCurve</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
flowDirection	Public <i>FlowDirection</i>	Flow direction with respect to digitized direction
riverSegmentCode	Public <i>CharacterString</i>	Unique code for the river segment. Equivalent to the WFD MSCode (see coding guidelines in the WFD Guidance Document)

Attribute	Type	Notes
riverWaterBodyCode	Public <i>CharacterString</i>	Unique code of RiverWaterBody to which this river segment belongs.

RiverSubBasin

Type: *Class*
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
<u>NoteLink</u> Source -> Destination	Public Note	Public RiverSubBasin
<u>Association</u> Unspecified	Public isCollectionOf RiverSubBasin	Public belongsTo RiverBasin

Attributes

Attribute	Type	Notes
shape	Public <i>GM_Surface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
name	Public <i>PT_FreeText</i>	Locally used name
riverBasinID	Public <i>CharacterString</i>	defines relationship between RiverSubBasin and RiverBasin
subBasinID	Public <i>CharacterString</i>	Unique code for each RiverSubBasin

RiverWaterBody

Type: *Class FreshWaterBody*
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
<u>Generalization</u> Source -> Destination	Public RiverWaterBody	Public FreshWaterBody
<u>Association</u> Unspecified	Public belongsTo RiverWaterBody	Public hasSegment RiverSegment

Attributes

Attribute	Type	Notes
shape	Public <i>GM_CompositeCurve</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"

SalineWaterBody

Type: **Class SurfaceWaterBody**
 Status: Proposed. Version 1.0.
 Package: Hydrography
 Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Generalization Source -> Destination	Public SalineWaterBody	Public SurfaceWaterBody
Association Unspecified	Public contains SalineWaterBody	Public belongsTo RiverBasinDistrict

Attributes

Attribute	Type	Notes
shape	Public <i>GM_CompositeSurface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
type	Public <i>SalineWaterBodyType</i>	

SalineWaterBodyType

Type: **Enumeration**
 Status: Proposed. Version 1.0.
 Package: Hydrography
 Detail: Created on 08.01.2007. Last modified on.08.03.2007.

Attributes

Attribute	Type	Notes
CoastalWaterBody	Public	C
TransitionalWaterBody	Public	T

SurfaceWaterBody

Type: *Class WaterBody*
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 26.10.2006. Last modified on.08.03.2007.

Connections

Connector	Source	Target
Generalization Source -> Destination	Public SurfaceWaterBody	Public WaterBody
Generalization Source -> Destination	Public SalineWaterBody	Public SurfaceWaterBody
Generalization Source -> Destination	Public FreshWaterBody	Public SurfaceWaterBody

WaterBody

Type: *Class*
Status: Proposed. Version 1.0.
Package: Hydrography
Detail: Created on 19.10.2006. Last modified on.08.03.2007.
 Lakes ≥ 0.5 km², rivers with catchment areas ≥ 10 km², coastal areas and transitional waters.

Connections

Connector	Source	Target
Generalization Source -> Destination	Public SurfaceWaterBody	Public WaterBody

Attributes

Attribute	Type	Notes
eu_waterbodyCode	Public <i>CharacterString</i>	Unique code for a waterbody at EU level, incorporating the 2 digits ISO country code plus the member state code (see coding guidelines in the WFD Guidance Document)
insertedBy	Public <i>CharacterString</i>	
insertedWhen	Public <i>Date</i>	
name	Public <i>PT_FreeText</i>	
riverBasinCode	Public <i>CharacterString</i>	The relationship between a water body and its parent RiverBasin is via the riverBasinCode

Attribute	Type	Notes
statusYear	Public <i>Integer</i>	
waterbodyCode	Public <i>CharacterString</i>	The unique code for the water body defined in the Member State (see coding guidelines in the WFD Guidance Document)

LandCover

Type: **Package «Application Schema»**
Status: Proposed. Version 1.0.
Package: RISE
Detail: Created on 08.03.2007 16:24:29. Last modified on 08.03.2007 16:24:36

LandCover

Type: **Class**
Status: Proposed. Version 1.0.
Package: LandCover
Detail: Created on 19.10.2006. Last modified on 08.03.2007.

Land cover is a feature type describing different classes defined for the purpose of Nutrient leakage modelling.

Connections

Connector	Source	Target
NoteLink Source -> Destination	Public Note	Public LandCover

Attributes

Attribute	Type	Notes
shape	Public <i>GM_Surface</i>	Defined in ISO standard 19107 "Geographic information - Spatial Schema"
landcoverType	Public <i>LandcoverType</i>	

LandcoverType

Type: **Class**
Status: Proposed. Version 1.0.
Package: LandCover
Detail: Created on 19.10.2006. Last modified on 08.03.2007.

Attributes

Attribute	Type	Notes
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Attribute	Type	Notes
arableLand	Public	Crop land for agricultural purposes. Similar to Corine class group 2.1 (arable land), 2.2 (permanent crops) and 2.4.4 (agro-forestry areas)
coveredSurfaces	Public	All areas covered by human constructions. Similar to Corine class group 1 (artificial surfaces).
forest	Public	Forest and inland wetlands. Similar to Corine class group 3 (forest and semi-natural areas) except 3.2.
inlandWaters	Public	Lakes and broad rivers. Similar to Corine class group 5.1 (inland waters).
meadows	Public	Land used for grazing. Similar to Corine class group 2.3 (pastures), 2.4 (heterogeneous areas) except 2.4.4 (agro-forestry areas) and 3.2.1 (natural grassland).
noOrSparseVegetation	Public	Open spaces with little or no vegetation including glaciers. Similar to Corine class group 3.3 (open spaces with little or no vegetation).
otherLandCoverClasses	Public	Moors and heathland. Similar to Corine class group 3.2.2 (moors and heathland), 3.2.3 (sclerophyllous vegetation) and 3.2.4 (transitional woodland/shrub)