



RISE Process Model

Clemens Portele

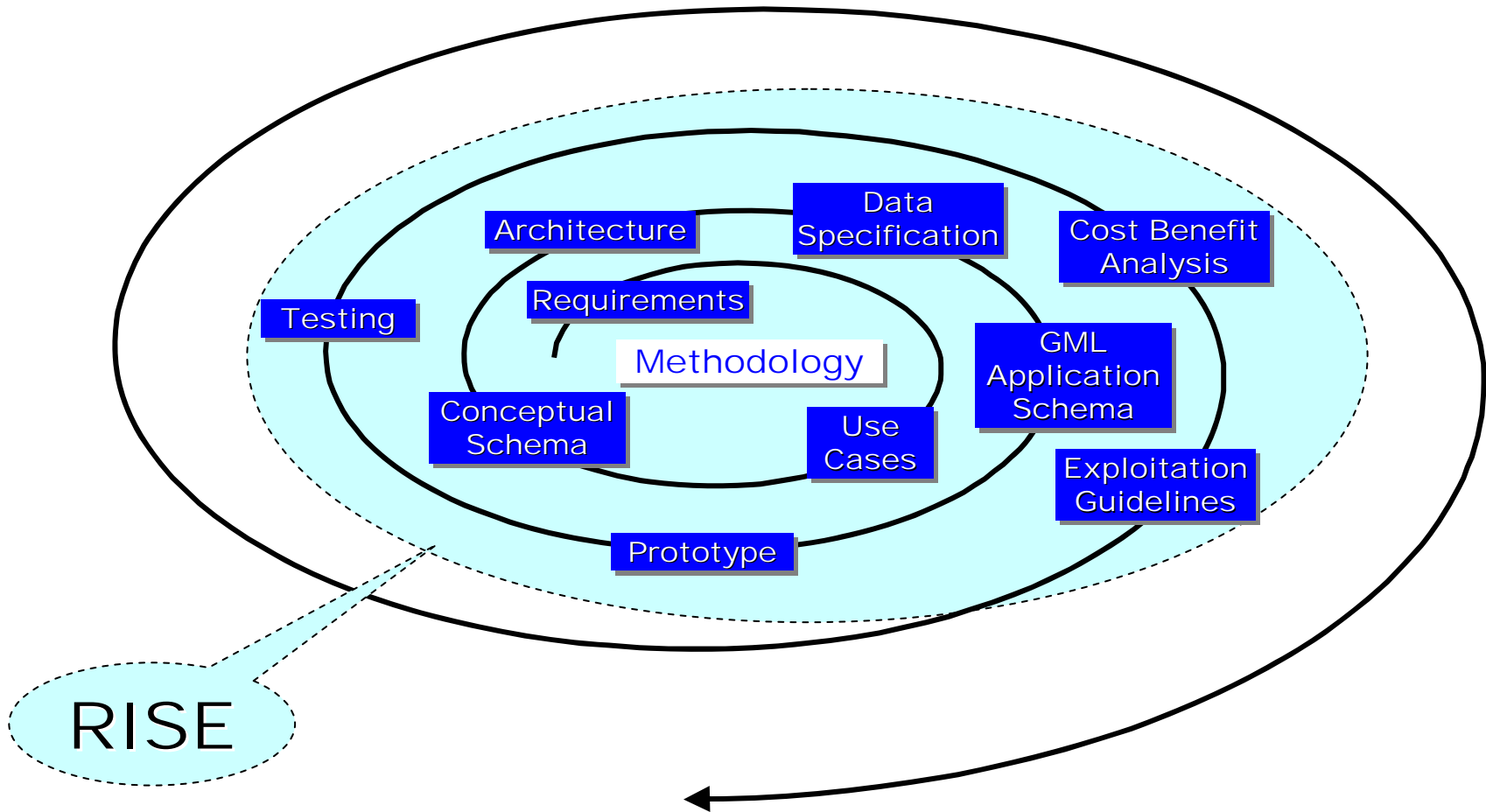
interactive instruments GmbH / OGC Europe



RISE Process

- RISE intends to create a repeatable methodology
 - To be tested with Water and Elevation
 - Usable for other use cases and scenarios
- Spiral engineering approach
 - Address a manageable part of the whole problem area at a time
 - Translate requirements to concepts
 - Translate the concepts to implementation specifications
 - Implement
 - Test and learn
 - Improve
- The following is an initial view which will be adapted and refined in the course of the project

Spiral Development Process



RISE Deliverables

Data Harmonisation Requirements Report

General Templates and Guidelines for describing Use Cases

Use Case Descriptions

Final Report on Operation of the Test System

Cost Benefit Report

Exploitation Guidelines

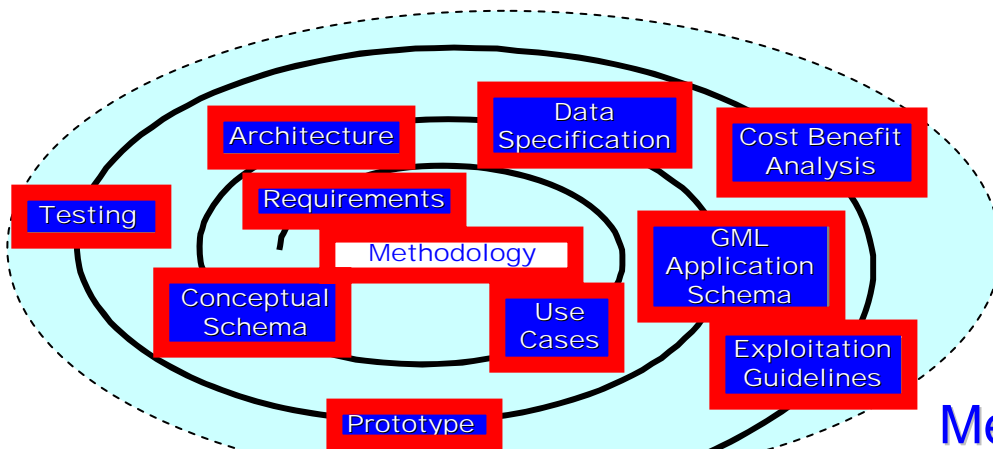
Draft Conceptual Schema in UML

Services Architecture Outline

Draft Data Product Specification

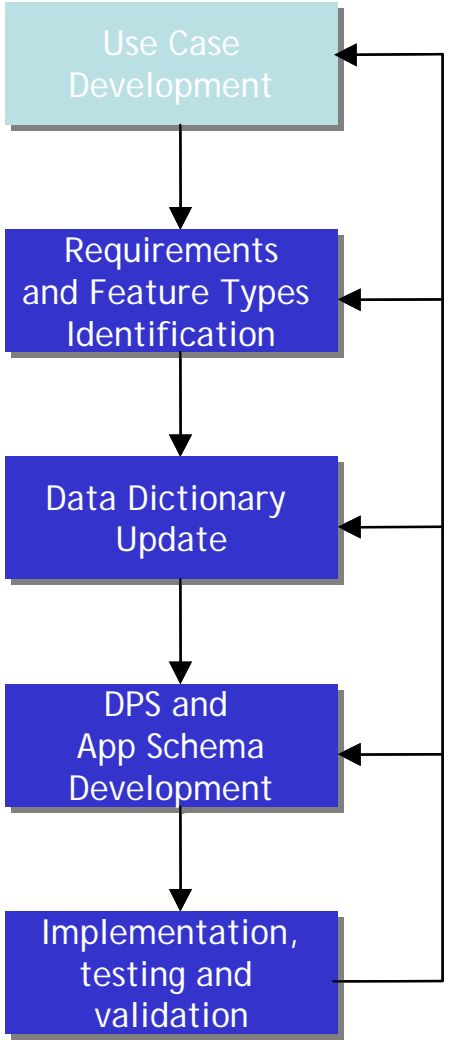
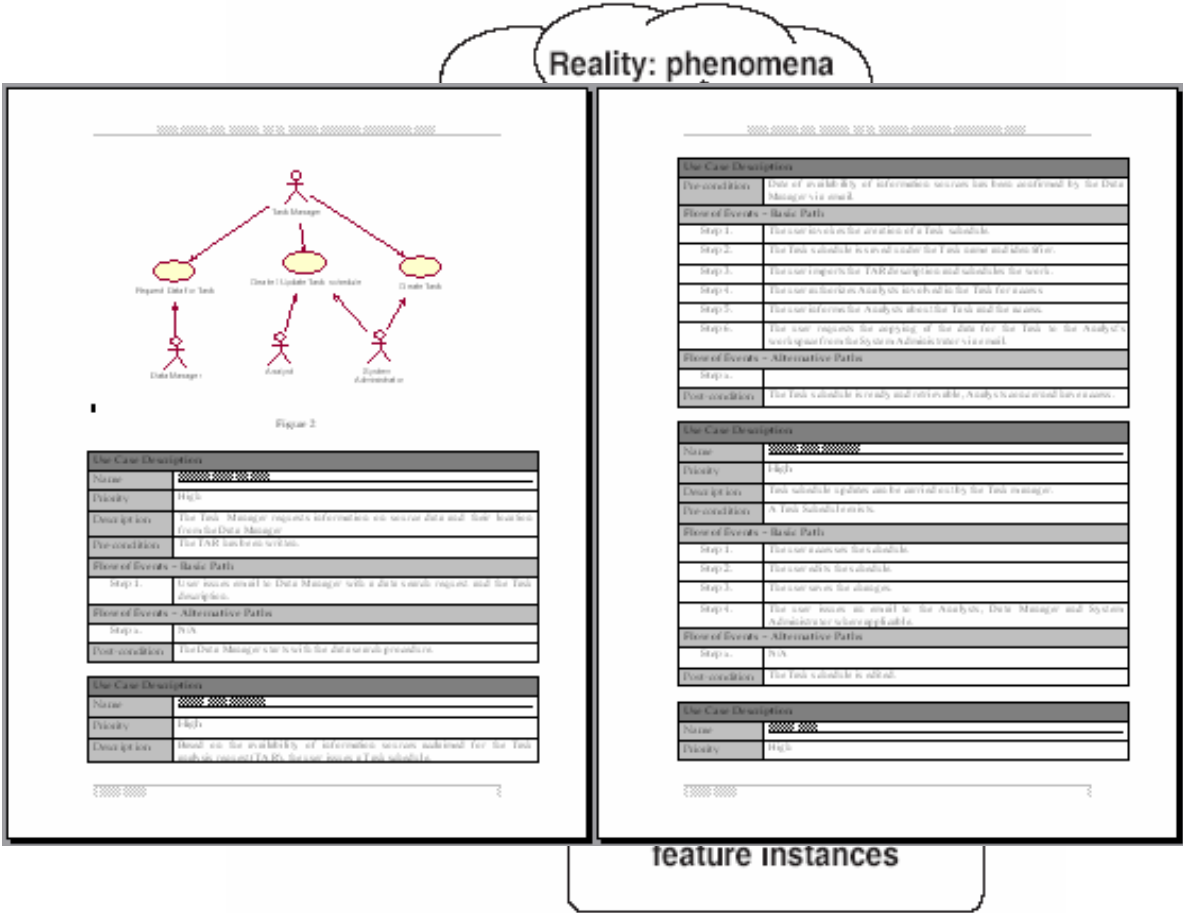
Draft GML Application Schema

Revised Schemas and Specifications



Methodology & Standards Guidelines
on Use Case & Schema Development

Use Cases

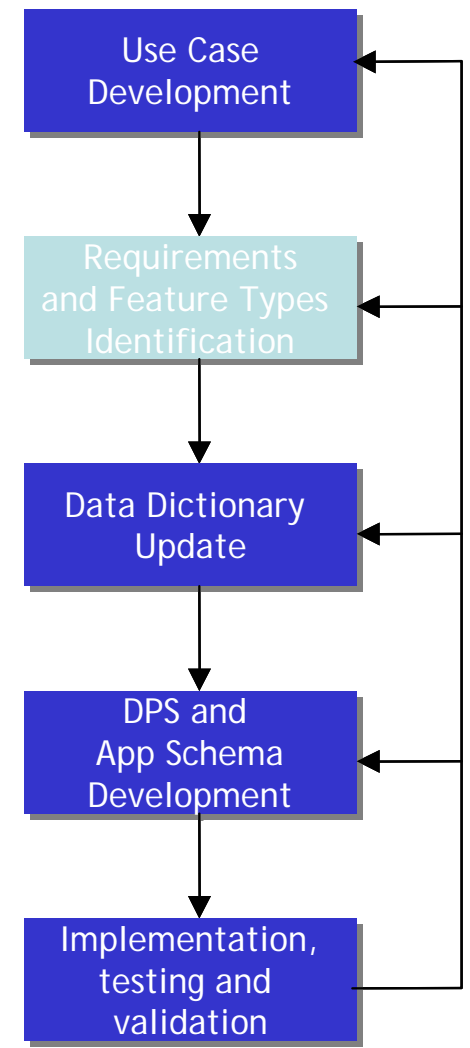


Feature Types (ISO 19109)

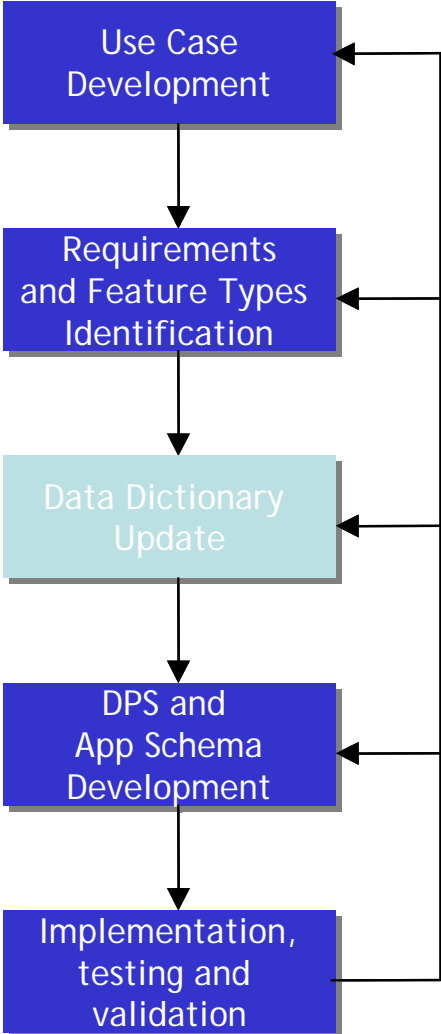
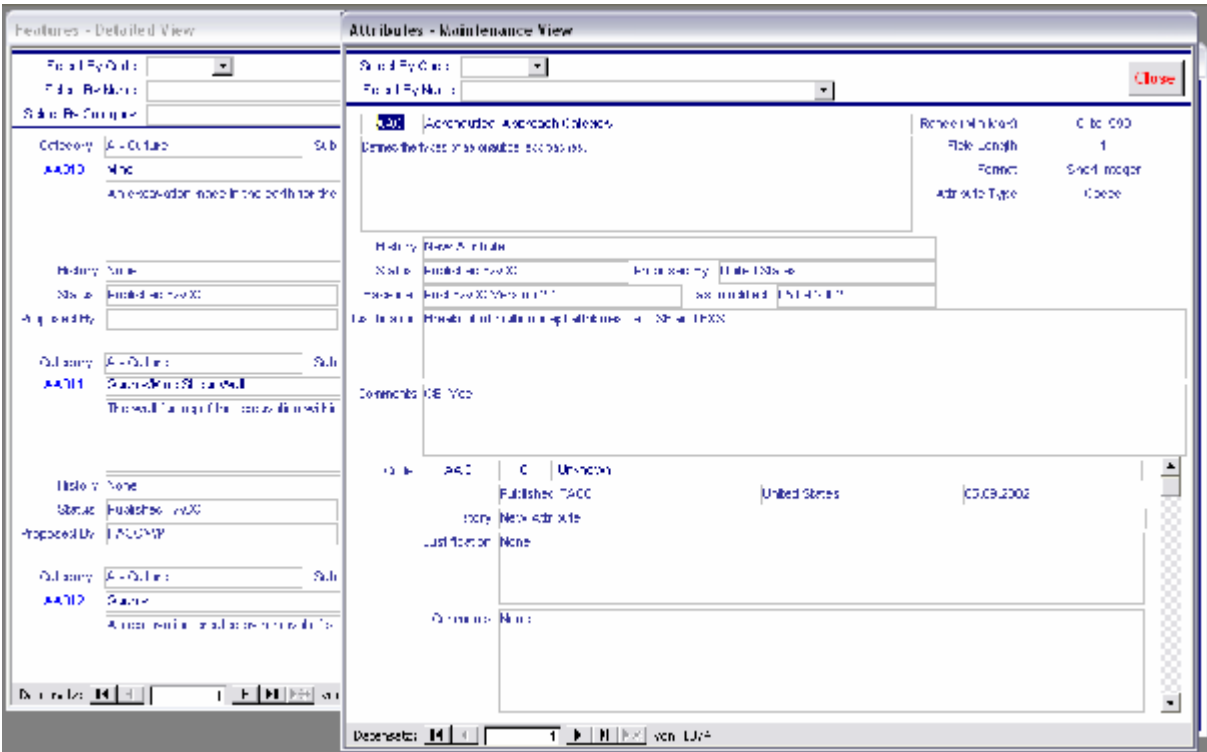
Reality phenomena

Meeting, 5 November 2005	Meeting, 5 November 2005
FEATURE CODES	A0000
A - Culture	A0000
<p>AA - Culture-Extraction</p> <p>A0010 Mine An excavation made in the earth for the purpose of extracting natural deposits. (See also A0000)</p> <p>A0011 Quarry/Mine Sluice Wall The wall facing of the excavation within a quarry/mine.</p> <p>A0012 Quarry An excavation created by removal of stone by blasting or cutting.</p> <p>A0013 Pit An excavation where gravel, sand, or clay are removed for use elsewhere.</p> <p>A0040 Rig/Support structure A vertical structure fitted for drilling or lifting operations.</p> <p>A0050 Well A hole, drilled or dug into the earth or sea bed for the extraction of liquids or gases. (See also A0010)</p> <p>A0051 Wellhead The top of a well, as in oil, gas, or water well, that caps the well structure and which may be located on land or partially submerged offshore which may contain a seal or casing for leakage.</p> <p>A0052 Oil/Gas Field An area where oil and gas is pumped or otherwise removed from the ground.</p> <p>A0060 Gradation Works Traffic covered with gravel or other material that is concentrated through increased evaporation.</p> <p>A0511 Vypytka N/A</p> <p>A0514 Surface Mining/Pit/Mine/Open Quarry Area where soil/rock material is quarried above ground.</p> <p>AB - Culture-Disposal</p> <p>A0000 IS-Dagonal Site/Waste Pile/UK-Refuse Tip/Slag Heap A site for the collecting depositing of refuse or discarded material. (See also A0010, A0011 and A0100)</p> <p>A0010 Wrecking Yard/Scrap Yard An area or site engaged in the wrecking, dismantling, storage, or reuse of discarded products. (See also A0000)</p> <p>A0020 IS-Burner/UK-Flare Stack A permanent structure used for the disposal of waste products by burning.</p> <p>A0021 Diffuser An artificial installation at or below water level, where liquids (e.g. cooling water, effluents) are spread out.</p>	<p>AB000 Waste Processing Facility Operational site with buildings and other facilities, where waste is processed through chemical, physical, biological or thermal processes or a combination of these processes. (See also A0000 and A0020)</p> <p>AB007 Fill/Heap Area where heaped material (waste, spoil etc.) is deposited.</p> <p>AC - Culture-Processing Industry</p> <p>AC000 Processing Plant/Treatment Plant A site used for changing or refining a particular material.</p> <p>AC010 Blast Furnace A heat chamber used for smelting iron ore.</p> <p>AC020 Catalytic Cracker A unit in which petroleum separation is carried out in the presence of a catalyst.</p> <p>AC030 Smelting Basin/Slag Pond A site where solid material is precipitated from a liquid by evaporating or settling.</p> <p>AC040 Oil/Gas Facilities An area involved in the production or distribution of oil or natural gas.</p> <p>AC050 Works The structures, ground, machinery etc. of a manufacturing establishment or structures in engineering such as docks, bridges.</p> <p>AC064 Wastewater Operational area with buildings and other facilities for the production of (drinking) water.</p> <p>AC067 Sewage Purification Plant Operational area with buildings and facilities for the purification of wastewater.</p> <p>AD - Culture-Power Generation</p> <p>AD010 IS-Power Plant/UK-Power Station The building(s) and equipment necessary for the generation of electric power. (See also AD020)</p> <p>AD020 Solar Panels Arrays of solar cells for converting sunlight into electrical energy or heat. (See also AD010)</p> <p>AD030 Substation/Transformer Yard A facility along a powerline route, in which electric current is transformed and/or distributed.</p> <p>AD040 Nuclear Reactor An apparatus in which a nuclear chain reaction is initiated, sustained, and controlled. (See also AD010) This code is used to define a nuclear reactor which may be connected with a power plant.</p> <p>AD050 Heating Plant Operational site with buildings and other facilities for the generation of thermal energy for heating purposes.</p>
A - 1	A - 2

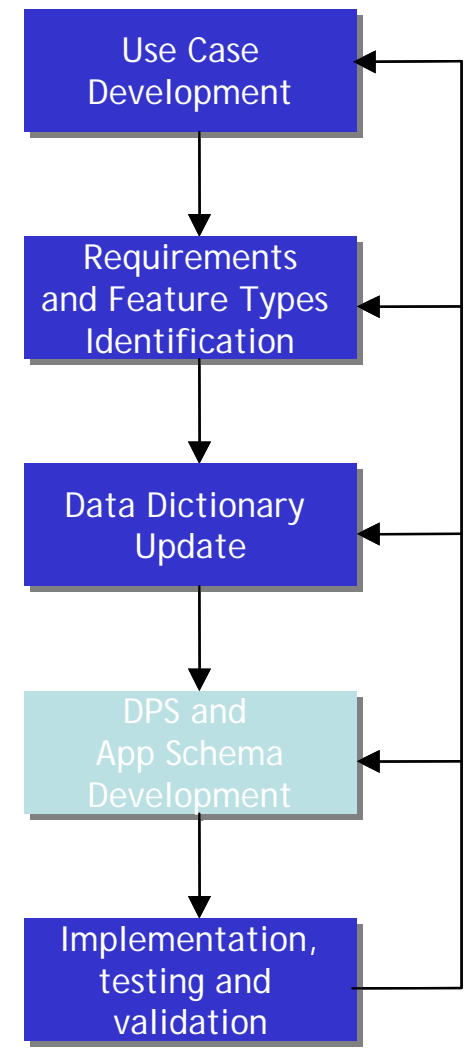
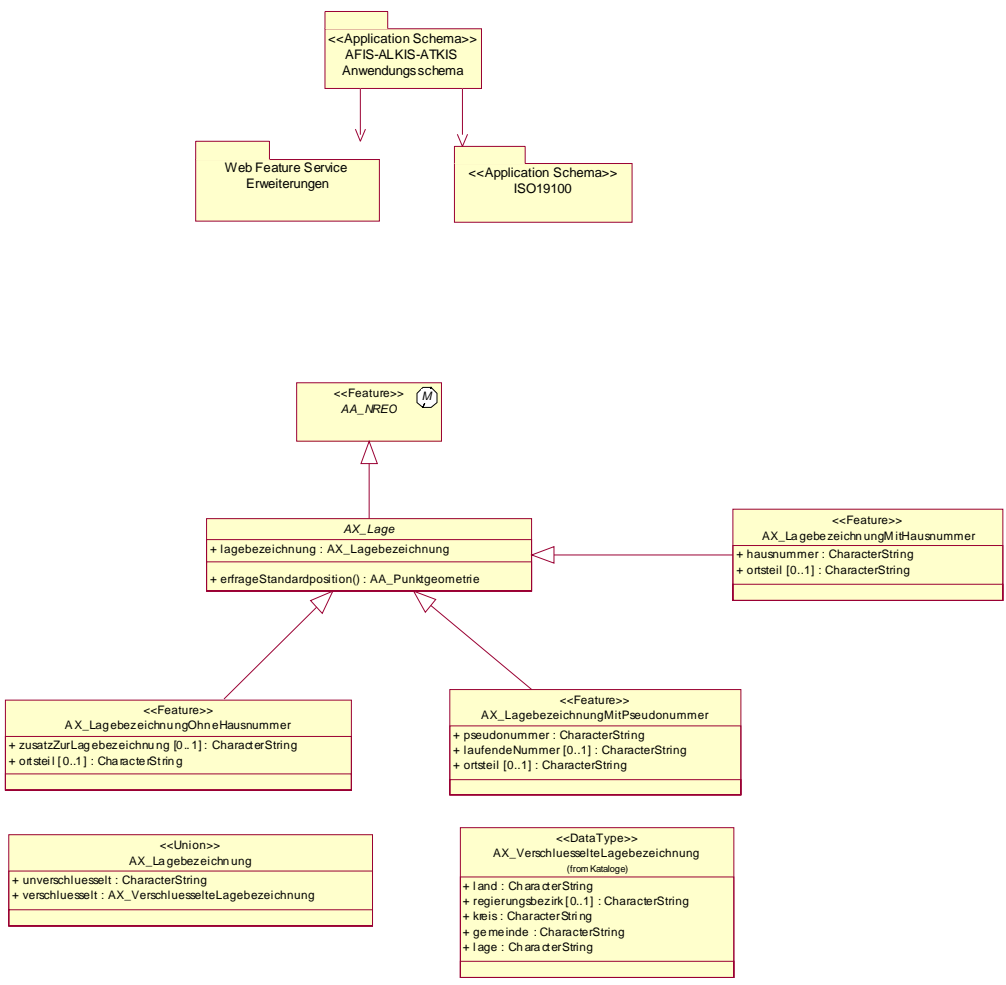
feature instances



Data Dictionary (ISO 19126)



Application Schema (ISO 19109 etc)





Data Product Specification (ISO 19131)

ISO/CD 19131

Annex E
(informative)
Example of a product specification

E.1 Overview

E.1.1 Informal description

The National Road Network, Canada, Level 1 (NRNCL1) focuses on providing a quality geometric description and a set of basic attributes of Canadian road phenomena. The first release of the NRNCL1 product will not include Resource/Recreation roads. NRNCL1 data will be revised on a regular basis. Geographic Data Files (GDF) V4 from ISO/TC 294 were used as a guideline for this model. The NRNCL1 product strives to comply, to the degree possible, with GDF vocabulary (Class names, attribute names, and definitions).

Unique identifiers are associated with each geometric and event object. These IDs (called National Identifiers – NIDs) will lead to more efficient management of updates between data producers and data users.

The Centre for Topographic Information – Sherbrooke (CTIS), part of Natural Resources Canada (NRCAN), produced the first version of the NRNCL1. CTIS continues to pursue its goal of capturing and managing NRNCL1 data within a network of partners. These partner organizations are selected for their specific interests or for their name in offering adequate, up-to-date representations of road phenomena. These data must be the product of a homogeneous, standardized view of the entire Canadian landmass.

The data model can (and must) extend beyond the smallest common denominator obtained with the partners. The model must therefore contain two levels of information: mandatory data and optional data. Data homogeneity will thereby be ensured by a minimum set of data. Beyond the minimum level, the model serves as a target for all partners. Over the years, we will therefore work towards raising the minimum and redefining new targets. Minimum content has been defined for attributes and geometric data.

The NRNCL1 data will serve as a foundation for several applications. This common geometric base will be maintained close to the source and used by all who participate. This common infrastructure should facilitate data integration with supplementary data.

The available output file format for the product are: GML (Geography Markup Language) in ASCII and SHAPE (ESRI™).

E.1.2 Data product specification metadata

This section provides metadata about this data product specification.

Dataset title: National Road Network, Canada, Level 1

Dataset reference date: January 2003

Dataset responsible party: Natural Resources Canada
Centre for Topographic Information
2144, King Street West, Suite 010
Sherbrooke (Quebec) Canada J1J 2E8

Geographic location of the dataset: Canadian landmass

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ISO/CD 19131

Dataset language: French, English

Dataset topic category: Transportation

Spatial resolution of the dataset: 1/9 000

Abstract describing the dataset: The National Road Network, Canada, Level 1 (NRNCL1) focuses on providing a quality geometric description and a set of basic attributes of Canadian road phenomena. The first release of the NRNCL1 product will not include Resource/Recreation roads. NRNCL1 data will be revised on a regular basis. Geographic Data Files (GDF) V4 from ISO/TC 294 were used as a guideline for this model. The NRNCL1 product strives to comply, to the degree possible, with GDF vocabulary (Class names, attribute names, and definitions).

Distribution format: GML 2.0, Shape (ESRI™)

Reference system: Canadian spatial reference system (CSRS) NAD83

Metadata point of contact: Natural Resources Canada
Centre for Topographic Information
2144, King Street West, Suite 010
Sherbrooke (Quebec) Canada J1J 2E8

Metadata date stamp: January 2003

E.1.3 Terms and definition

feature attribute
characteristic of a feature

NOTE For example, number of lanes or pavement status.

class
description of a set of objects that share the same attributes, operations, methods, relationships, and semantics [UML Semantics]

NOTE A class does not always have an associated geometry (e.g., the metadata class).

event
characteristic of a feature measured along a road object without modifying the associated geometry

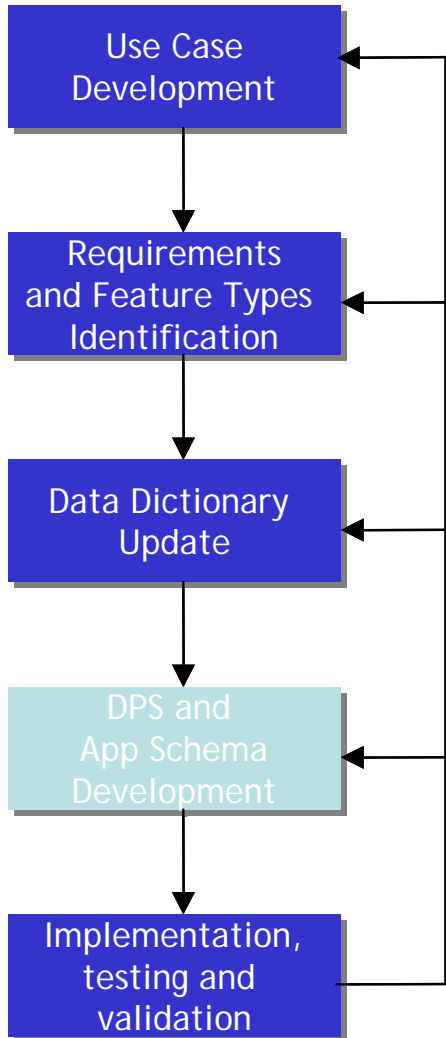
feature
abstraction of real world phenomena

object
entity with a well defined boundary and identity that encapsulates state and behaviour [UML Semantics]

NOTE An object is an instance of a class.

package

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GML Application Schema (GML/ISO 19136)

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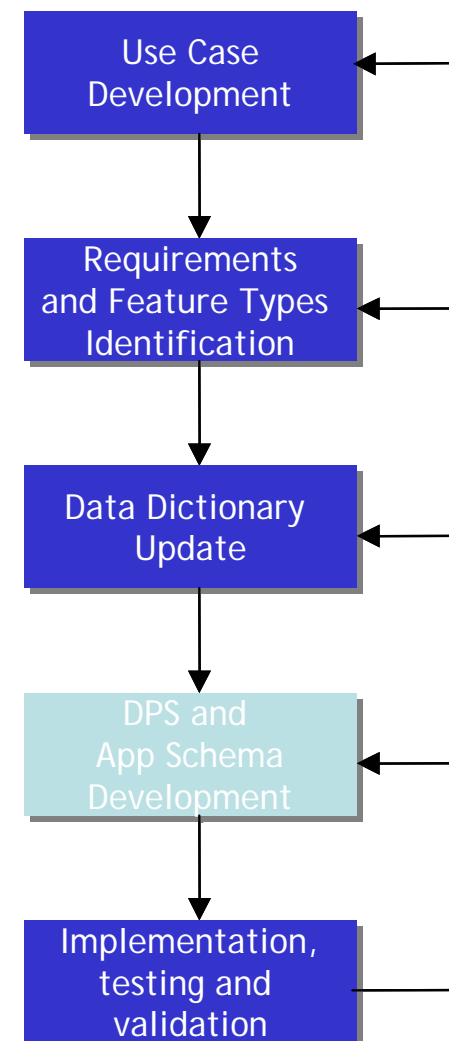
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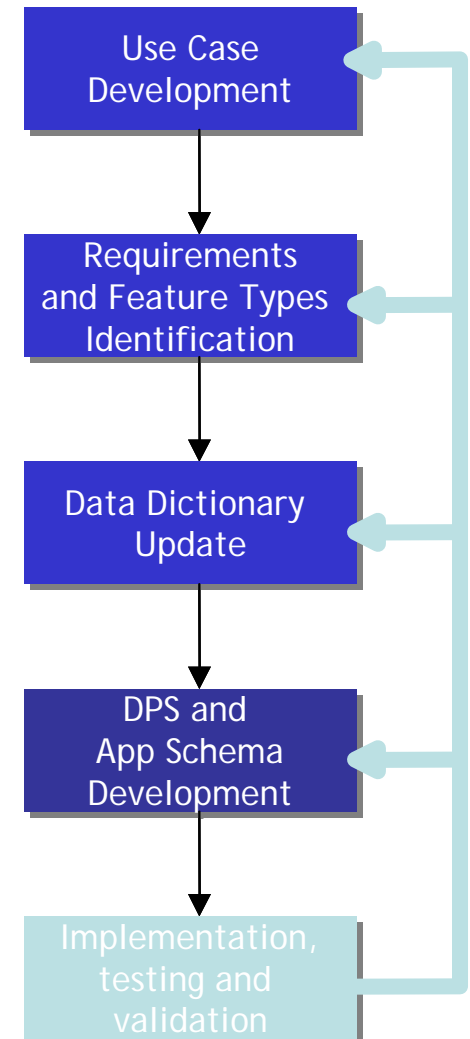
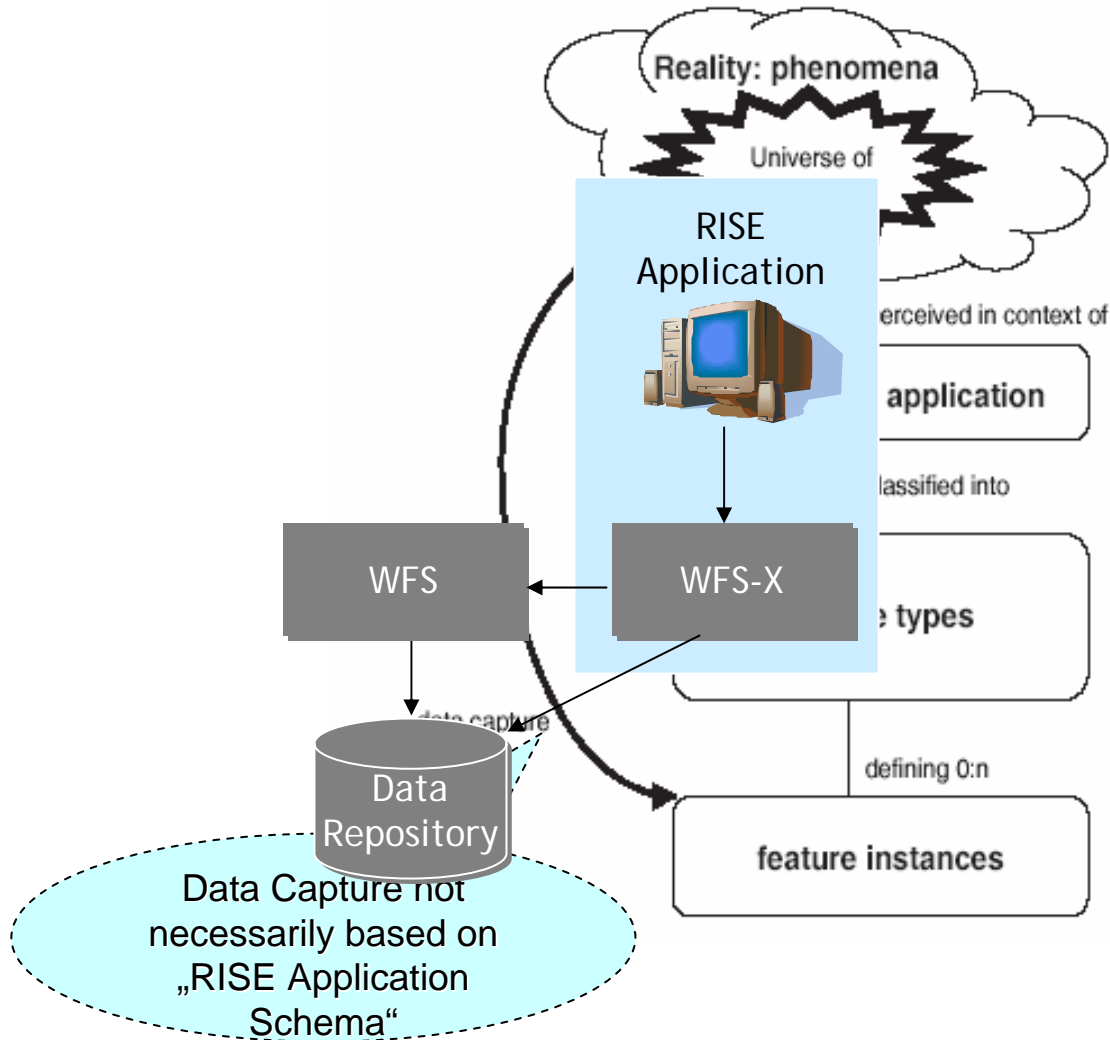
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(Translating) Web Feature Service

(WFS+FES / ISO 19142+43)



RISE and INSPIRE Drafting Team „Data Specifications“



- RISE methodology is an important input into the work of the INSPIRE Drafting Team on „Data Specifications“
- Co-ordination between RISE and the Drafting Team has started; several participants active in both activities