0. Abstract

● We present “standard” domain description and requirements prescription examples using the RAISE [RaiseMethod] Specification Language, RSL [RSL].

● The illustrated example is that of transportation networks.

-- These notes shall serve as lecture notes for my lectures at Uppsala, Nov.8-19, 2010.

-- The present document is the ordinary “book-form”-like notes.

-- A separate document, compiled from the same files, present 11 sets of lecture slides.

-- The “funny” small numbers you see in the present document, in margins and at almost end of display lines refer to slide page numbers of the slides document.
1. Introduction

1.1. The Problem

- The problem to be solved by this technical note is to present in one specific formal specification language, RSL [RaiseMethod],
  - a domain description and
  - a requirements prescription developed according to the “triptych approach” [TheSEBook3].

1.2. The Triptych Approach

- The “triptych approach” calls for
  - a thorough description (cum analysis) of the domain
  - before one attempts prescribing requirements for specific software.
- As part of the triptych approach to domain engineering one starts by exploring the description ontology of specification entities:
  - simple entities,
  - actions,
  - events and
  - behaviours
- before delving into the description ontology of facets:
  - intrinsics,
  - support technologies,
  - rules & regulations,
  - scripts (licenses and contracts),
  - management & organisation and
  - human behaviour.
And, as part of the triptych approach to requirements engineering — one starts by exploring the reengineering of business processes — before delving into *domain requirements* concepts of

* projection,
* instantiation,
* determination,
* extension and
* fitting —

followed by a number of *interface requirements* stages.