

Lecture Notes in Software Engineering: From Domains to Requirements

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Start of Lecture 1: COVER & INTRODUCTION

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.

Lecture Notes

A Tentative Lecture Schedule

Lecture 1: Introduction Mo.8.11.2010	5–8
Lecture 2: Specification Ontology Mo.8.11.2010	9–53
Entities: Simple Entities, Actions, Events, Behaviours	
Lecture 3: Domain Facets I Tu.9.11.2010	54–98
Intrinsics, Support Technologies, Rules & Regulations	
Lecture 4: Domain Facets II We.10.11.2010	99–145
Scripts, Management & Organisation, Human Behaviour	
Lecture 5: Requirements Facets I Th.11.11.2010	146–184
Domain Requirements I: Projection, Instantiation, Determination	
Lecture 6: Requirements Facets II Fr.12.11.2010	185–222
Domain Requirements II: Extension, Fitting	
Interface Requirements	
Machine Requirements	

Lecture 7: RSL I Mo.15.11.2010 Types	241–265
Lecture 8: RSL II Tu.16.11.2010 Values and Operations	266–307
Lecture 9: RSL III We.17.11.2010 Logic, λ -Calculus, Other Applicative Constructs	308–347
Lecture 10: RSL IV Th.18.11.2010 Imperative Constructs, Process Constructs, Specifications	348–384
Lecture 11: Conclusion Fr.19.11.2010	223–240

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*

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`].

- before delving into the description ontology of facets:
 - *intrinsic*,
 - *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.

End of Lecture 1: COVER & INTRODUCTION