

Assignment 2, Theme B: Conflict Management with Goal Oriented Requirements Engineering

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VL Requirements Engineering II

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Agenda

1. Conflicts and goal-driven requirements engineering
2. What is KAOS?
3. Managing conflicts with goal models

Conflicts and goal-driven requirements engineering

*„Inconsistencies originate from conflicting goals;
Inconsistency management should therefore proceed
at the goal level.“*

Robinson [in: van Lamsweerde et al. 1998, p.908]

- Elicitation from multiple stakeholders
- Conflicting goals can be desirable
- Specifications must be conflict free

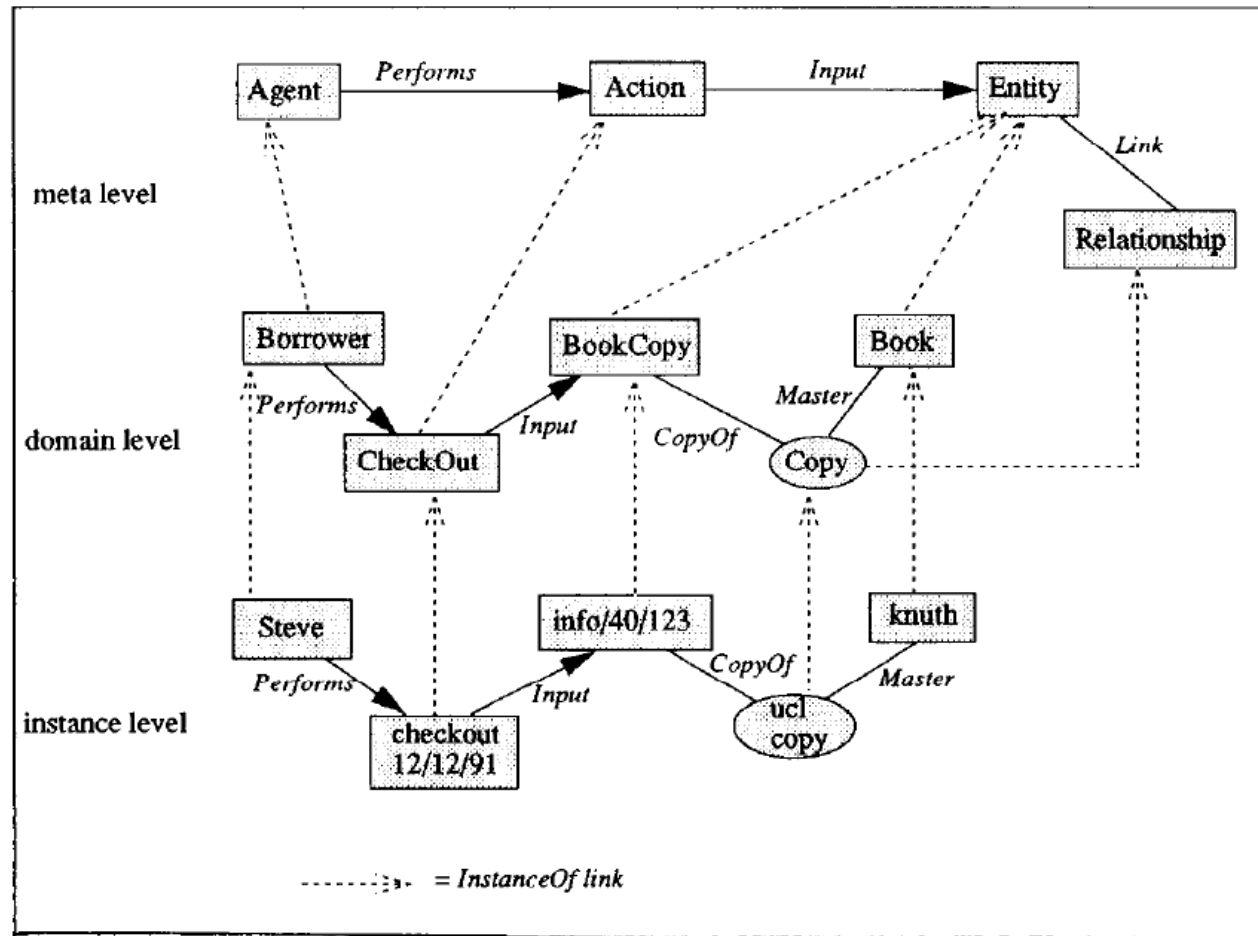
What is KAOS?

,**K**nowledge **A**cquisition in aut**O**mated **S**pecification‘

Benefits of KAOS

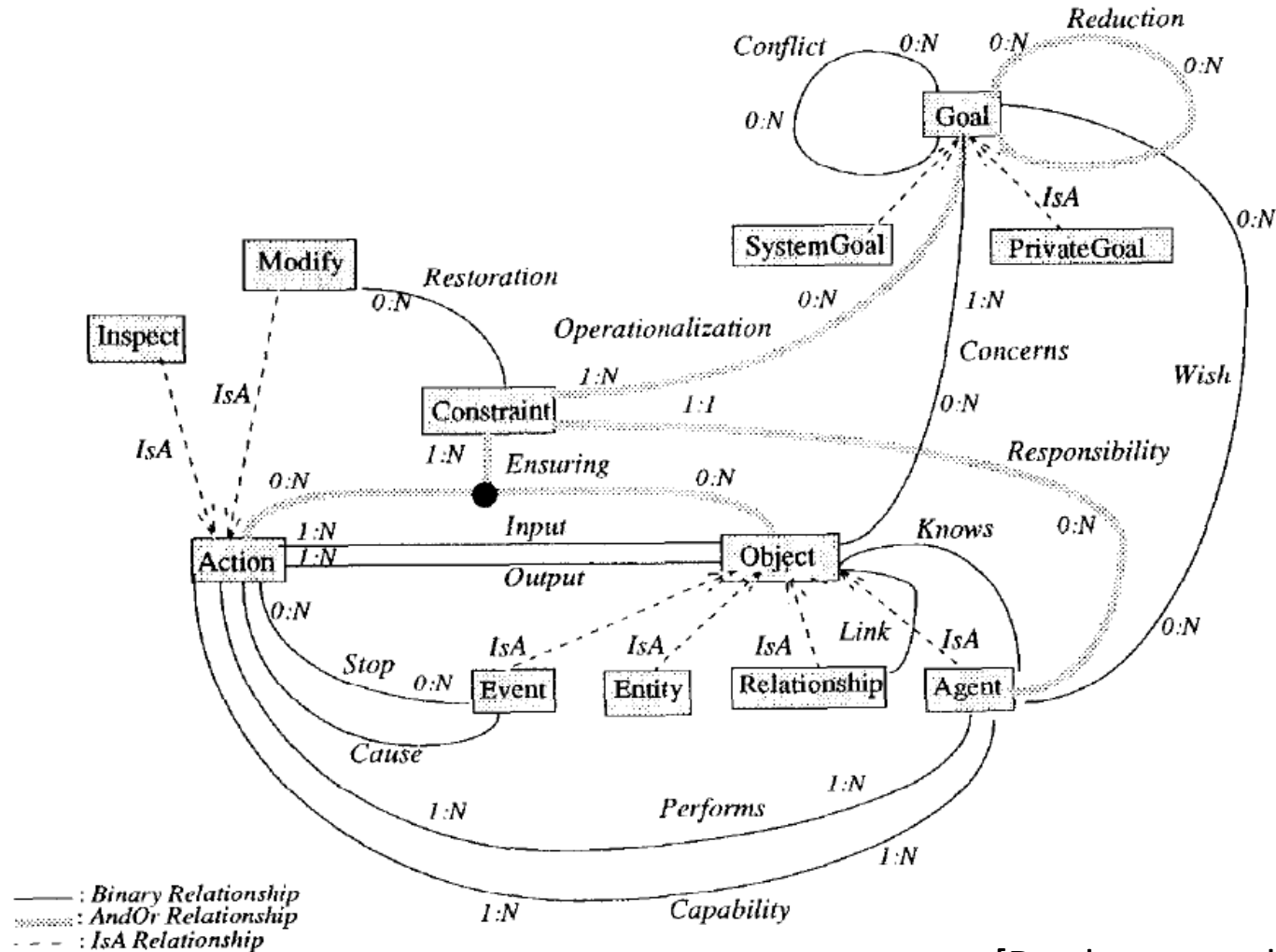
- Traditional formal specification methods deal with data and operation abstractions.
- Higherlevel information informally in requirements.
- KAOS provides a formal framework to also capture goals and non-functional requirements.

The Meta-Level



[Dardenne et al. 1993, p. 9]

The Meta-Model

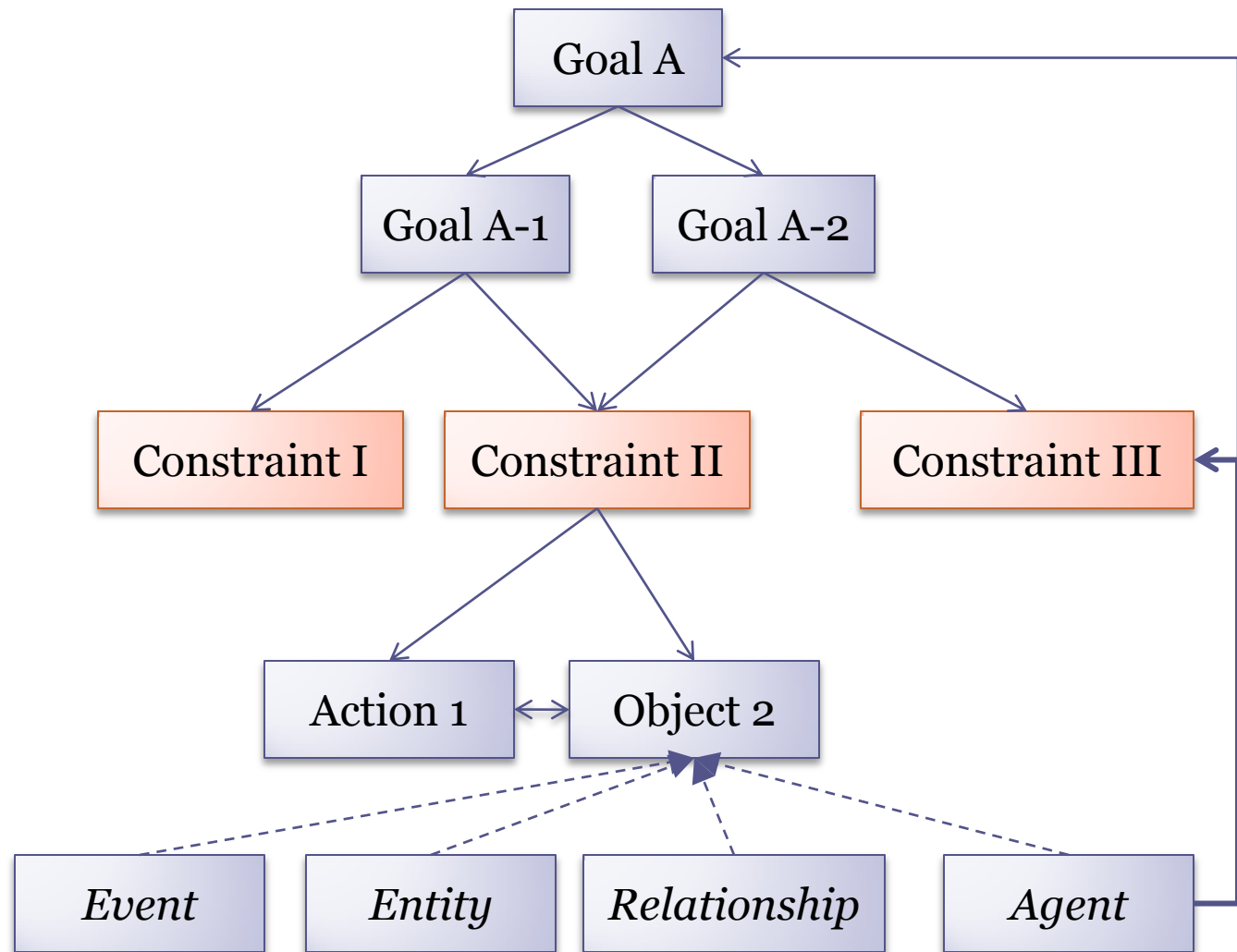


[Dardenne et al. 1993, p. 14]

Applied KAOS: key points

Process :

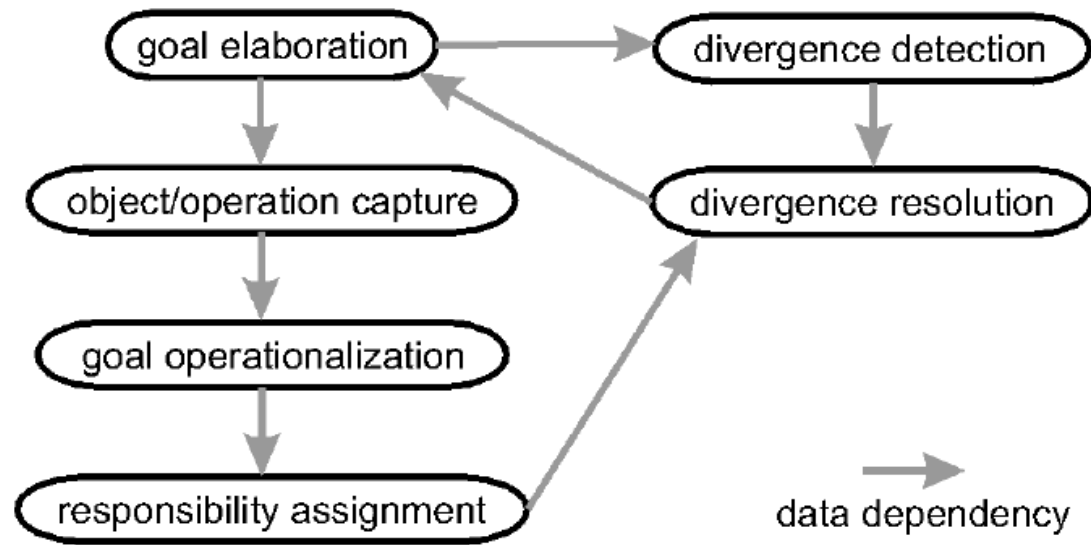
- ① Goal elaboration
 - *Hierarchy*
 - *Classification*
- ② Object/Operation capture
 - *Hierarchy*
 - *Agents viewpoint*
- ③ Operationalization
 - *Classification*
- ④ Responsibility assignment



Goal-driven conflict management

Based on KAOS

Conflict management in goal-driven RE



[Van Lamsweerde et al. 1998, p. 917]

Inconsistency types

Process-level deviation

Instance-level deviation

Terminology clash

Designation clash

Structure clash

Conflict

Competition

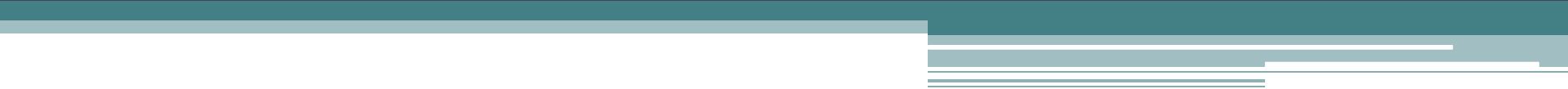
Divergence

Obstruction

Resolving inconsistencies

- Top-down approach
 - Alternative goal refinement
 - Goal weakening
- Bottom-up approach
 - Object Refinement
 - Agent Refinement

Discussion

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