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# Quality and Gatekeeping Use Cases for the OOR

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# Motivation

- Quality is a major concern
  - Emphasized at the Ontology Summit 2008
  - Ontologies are similar to standards and publications
  - A mechanism for review is necessary
- Gatekeeping
  - Ensures minimum level of quality
  - Allows for many policies and workflows

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# Sources of Requirements and Use Cases

- ISO 11179: Metadata Repository (MDR)
- XMDR Project: Extended MDR
- Ontology Summit 2008
  - Several sessions devoted to requirements
  - Wiki page for requirements and use cases
  - What are the requirements?

# Management Requirements

- Version management
- Configuration management
- Provenance and other metadata
- Metadata validation/authentication
  - Related to policy issues
- Ontology ownership and access control

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# Administration and Policy Issues

- Gatekeeping policies and enforcement
  - Overall policies or left to individual repositories
- Policy-making bodies
  - How are they constituted?
  - How can they interoperate?

# Development of OOR Use Cases

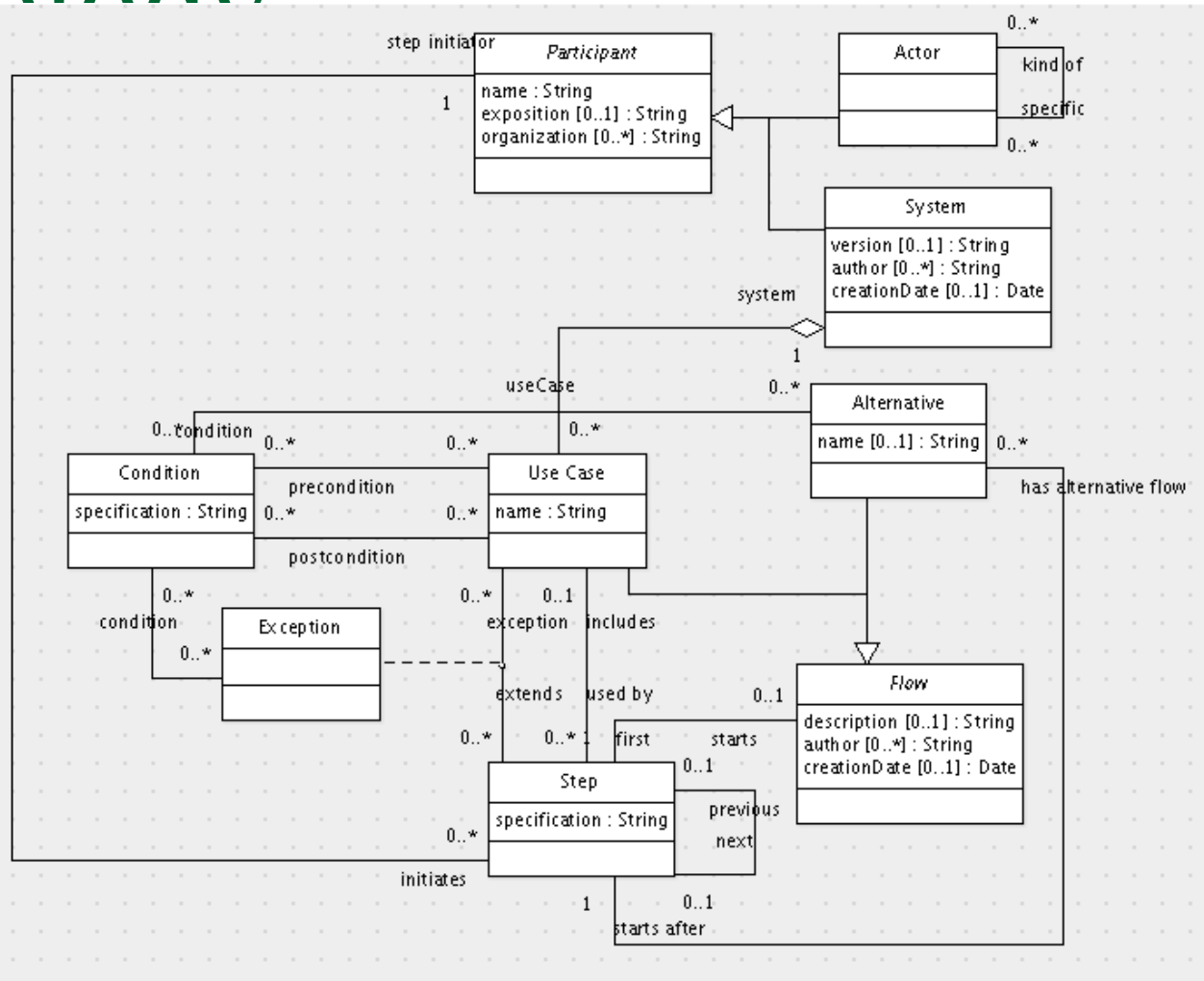
- Consulted existing examples
- Assignment in software engineering course
- Classified all of the examples
- Developed Use Case Description Ontology
- Developed OOR use cases as instances of UCDO
- Available at <http://www.ccs.neu.edu/home/kenb/ontologies/>

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# Classification of Use Cases

- Administer user authorizations and privileges
- Assign identifiers
- Define workflows and policies
- Federate OOR instances
- Harmonize and map ontologies
- Publicize ontologies
- Query metadata
- Register ontologies
- Review and evaluate ontologies

# Use Case Description Ontology





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# Prototype Implementation

- Experimental
- Web Services Based
- ISO 11179 Foundations
- JBPM as Workflow Engine

# Prototype: User Hierarchies

Accreditor

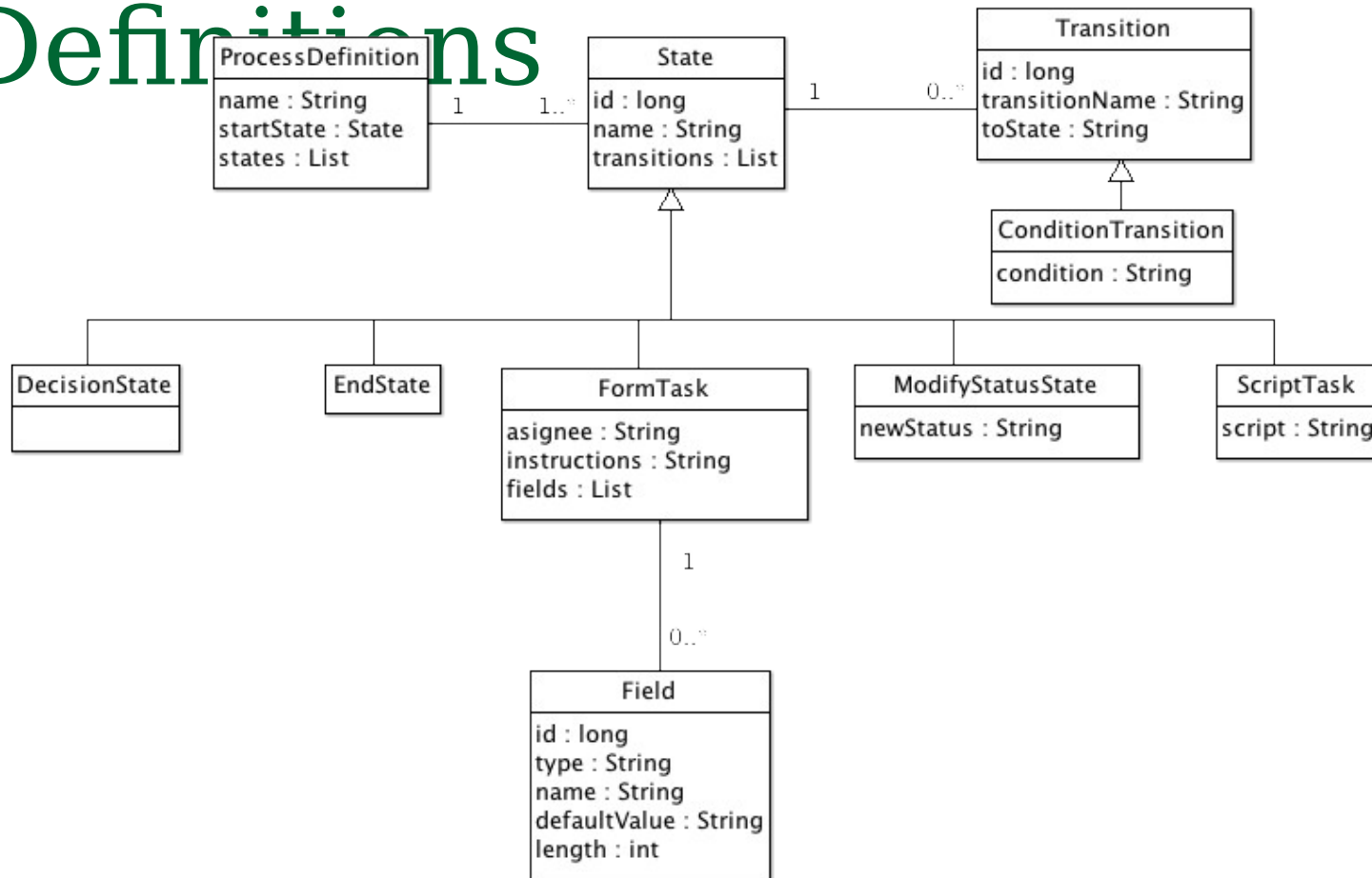
Registrar

Steward

Submitter

User

# Prototype: Process Definitions



# Prototype: Sample Scenario

- Registrar uploads process definition:  
“Stewards validates model before it becomes a standard”
- Submitter uploads new model (Status=PENDING)
- Workflow Engine notifies Steward (according to process definition)
- Steward Validates Model (Form Task)
- Workflow Engine Modifies Status (Status=STANDARD)