The RICA metamodel
An organizational stance on ACLs

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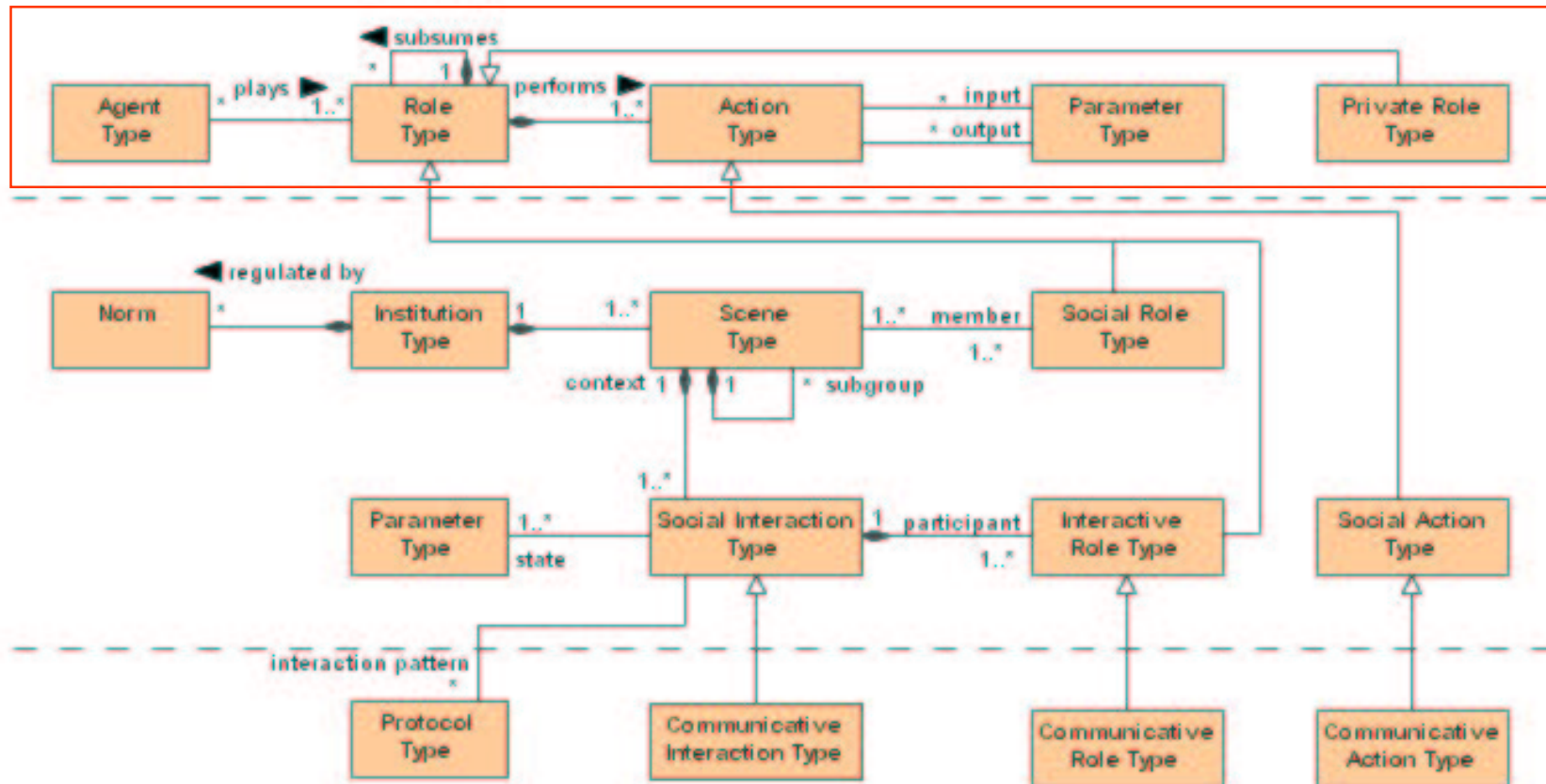
The RICA metamodel
Introduction

- *R*ole/ *I*nteraction/ *C*ommunicative *A*ction metamodel

- Motivation
  - Unstructured ACL catalogues (e.g. FIPA CAL, FIPA IPL)
  - Lack of integration between organisational and ACLs metamodels
  - Ad-hoc MAS ACL design

- Scope
  - Not macro-organisational issues
    - Institutions, norms, organizations, groups, ….
  - …. but micro-organisational concepts
    - Roles, interactions
    - Only those features directly pertaining to ACLs

- Extended version:
  - Integration with the e-institution framework of Noriega, Sierra, et al.
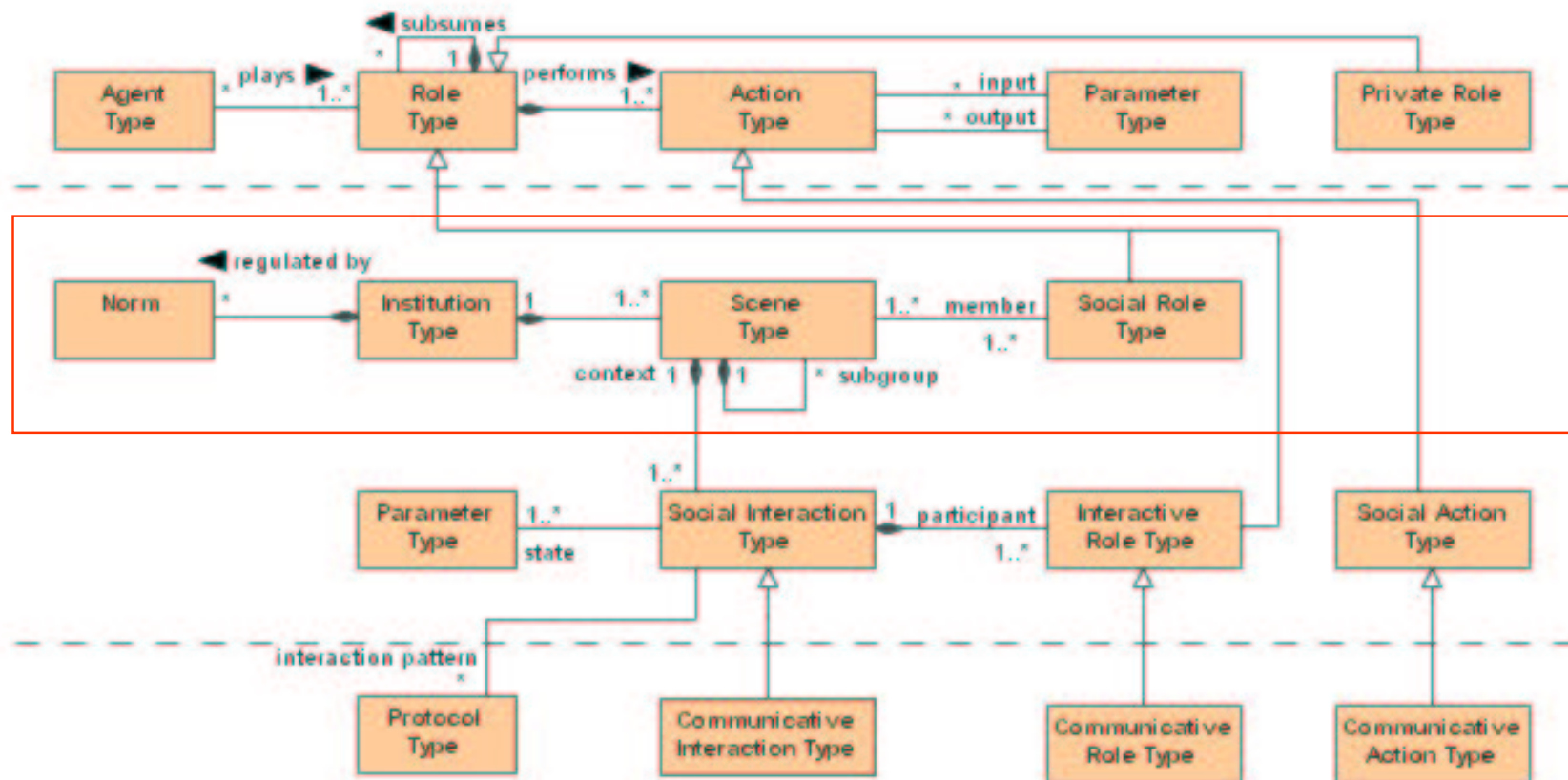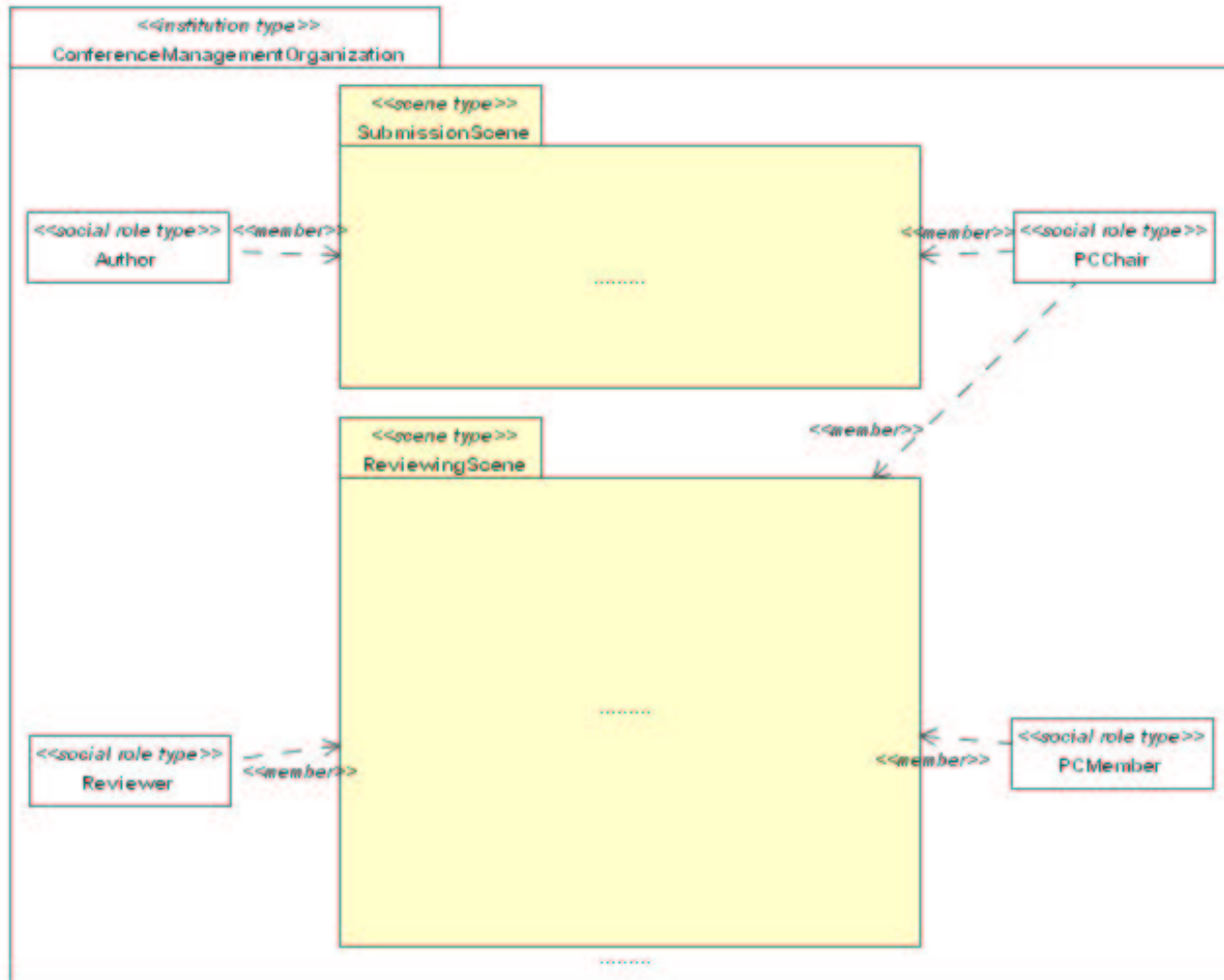
The RICA metamodel
Generic layer

The RICA metamodel
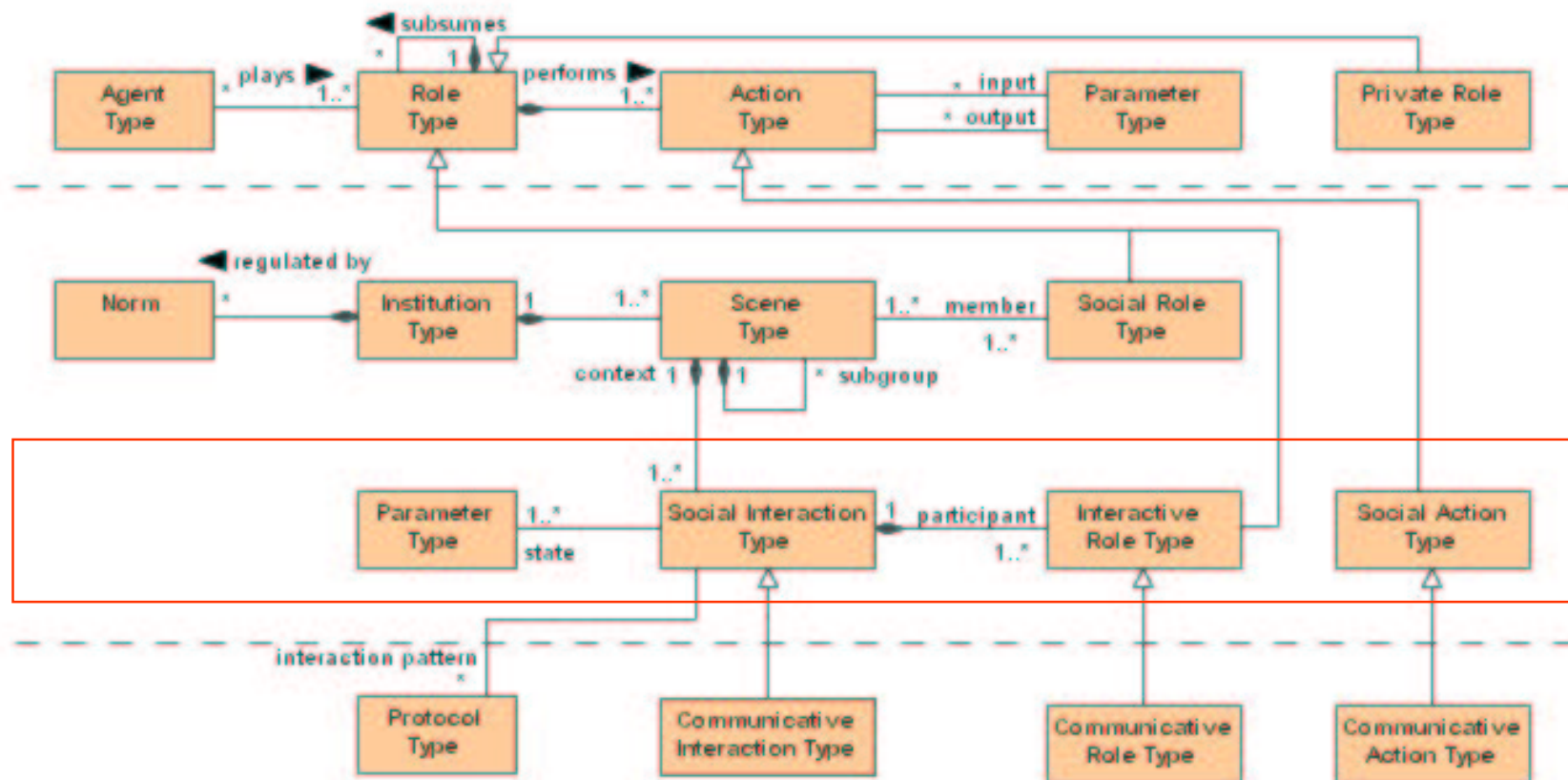## Social layer (I)
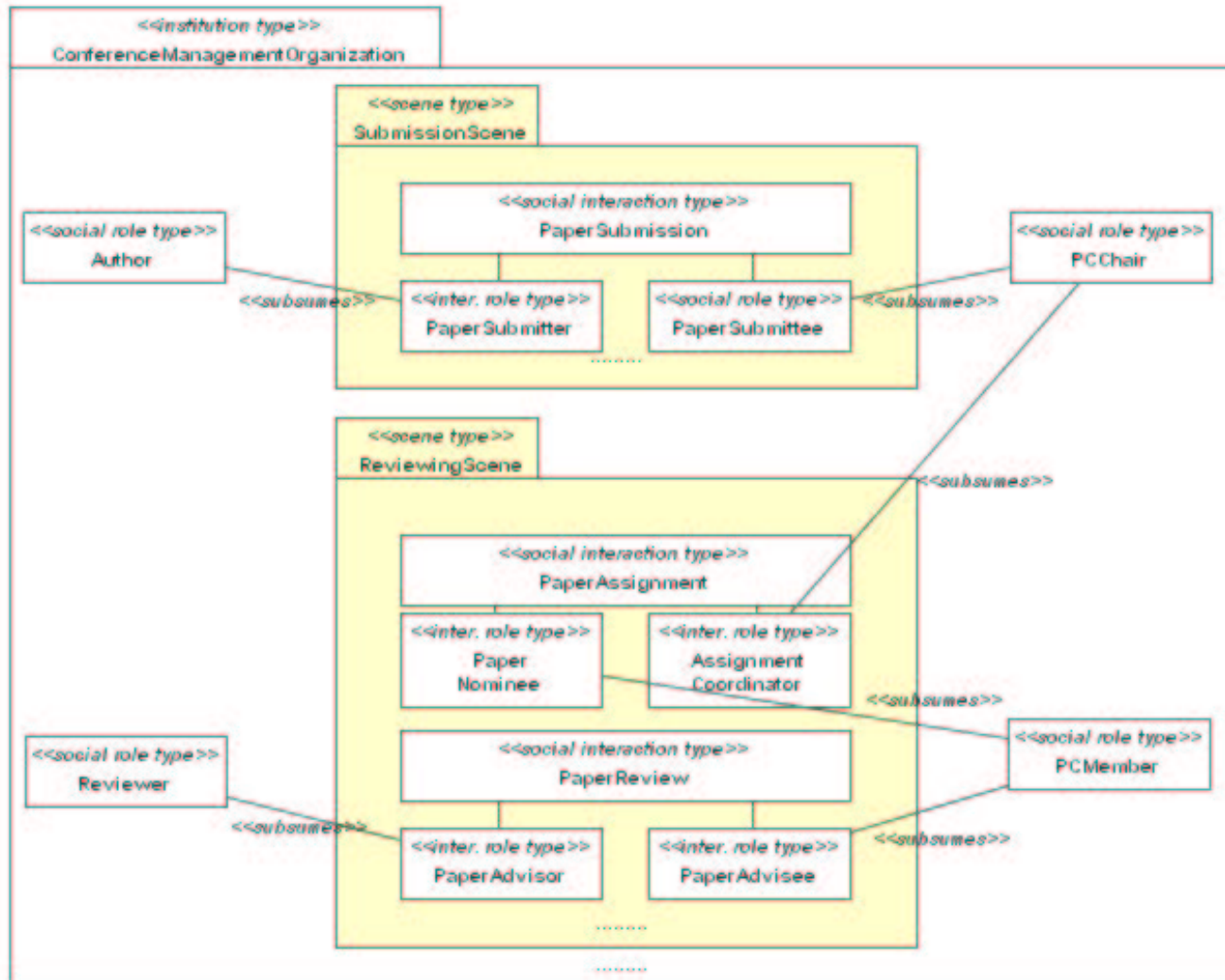
A conference management model
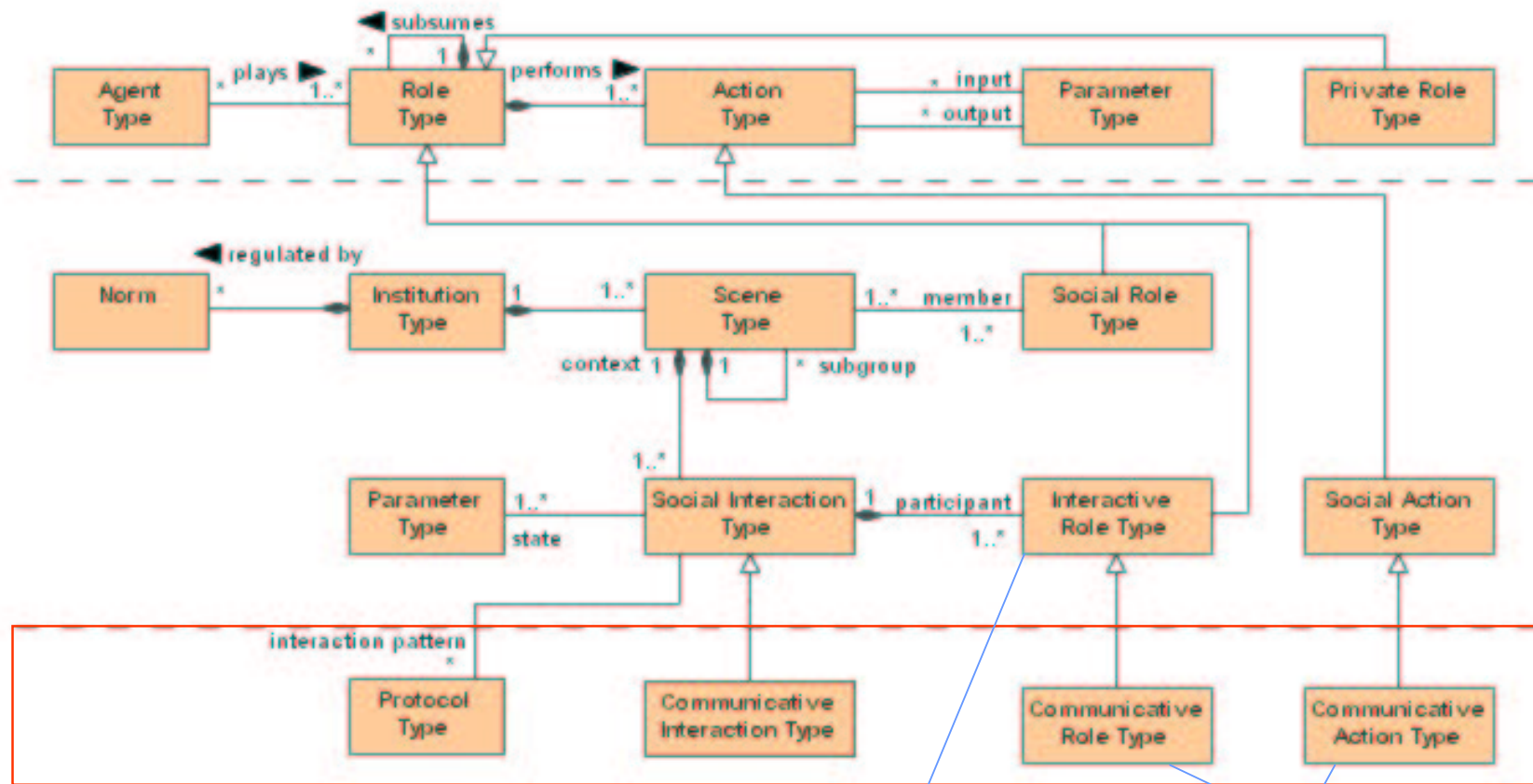## Social layer (I)

The RICA metamodel
Social layer (II)

A conference management model
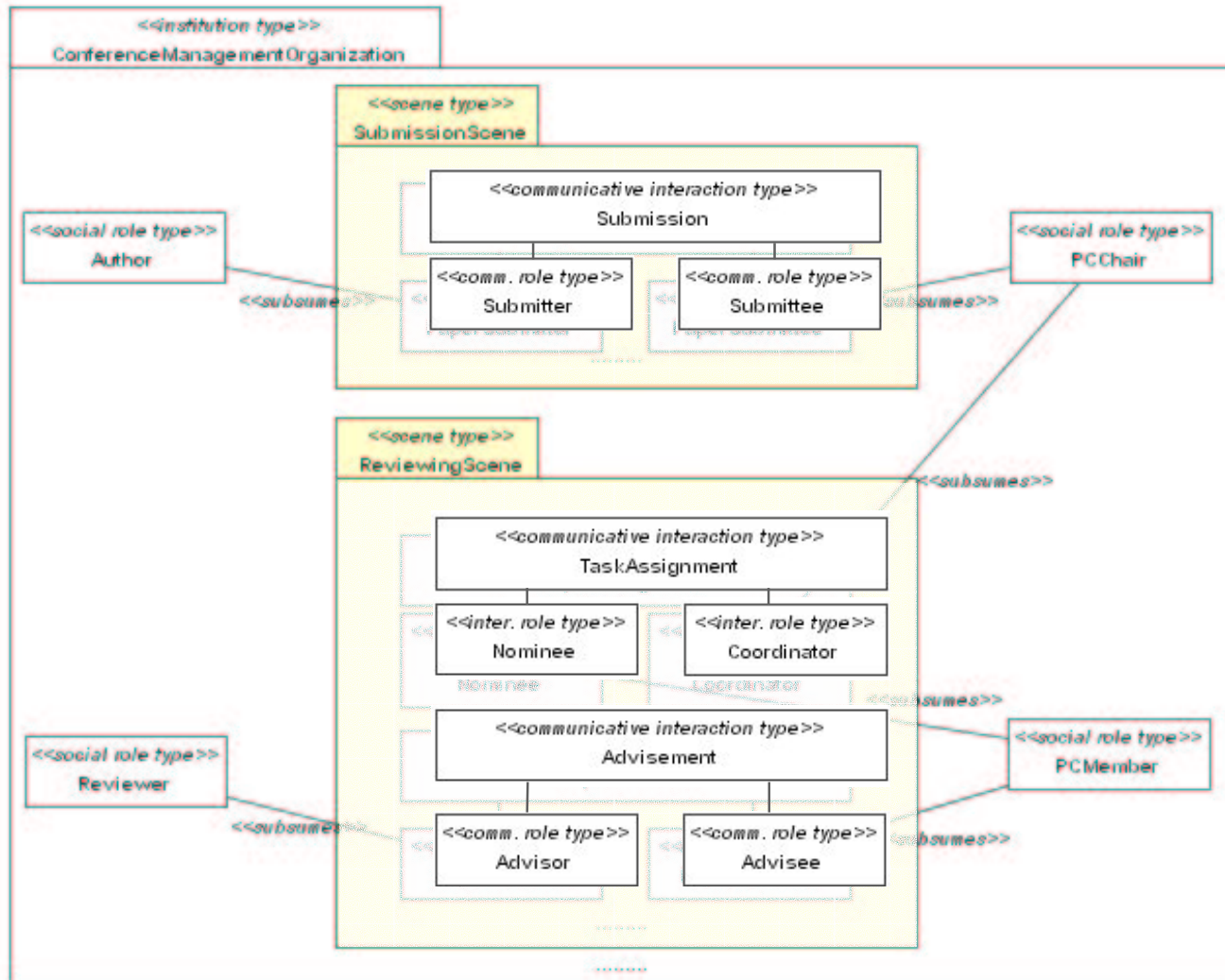## Social layer (II)

The RICA metamodel
Communicative layer

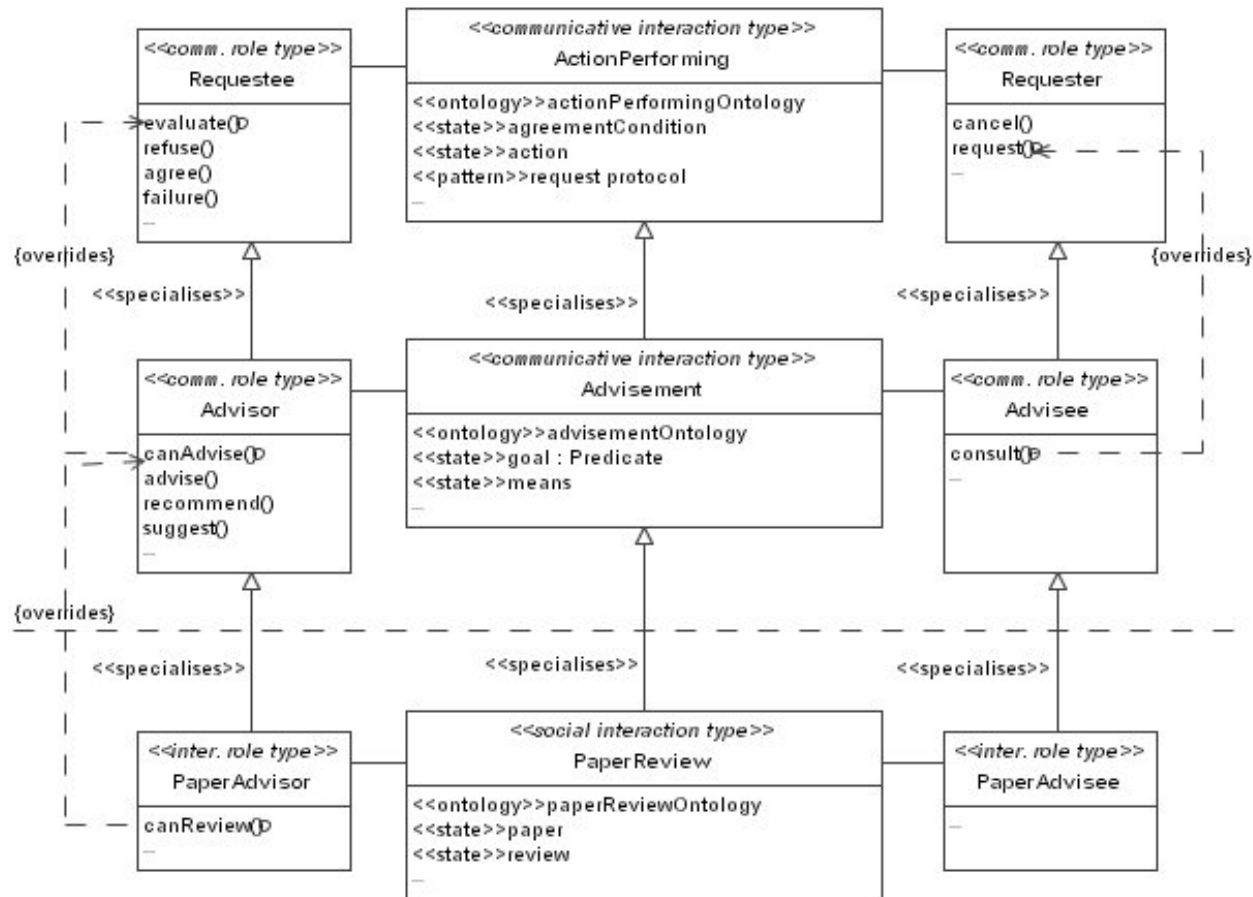Constraint: IRs specialises CRs

Constraint: CAs declared by CRs

A conference management model
Communicative layer

A conference management model
Communicative layer

Conclusion

- **Advantages**
  - Structuring of FIPA ACL & other performative proposals
    - Argumentation-based dialogue games, negotiation, etc.
  - Integration of ACLs and Organisational models
    - Communicative roles & interactions: bridge abstractions
  - Interaction design: principled reused approach
    - Communicative interactions as generic application-independent patterns
  - ACL design: an organisational approach

- **Towards a unified metamodel:**
  - Integration requirements:
    - *Subsume* relationship
    - Introduction of *Interactive role, ….*