

# Approach Based Patterns for System-of-Systems Reconfiguration

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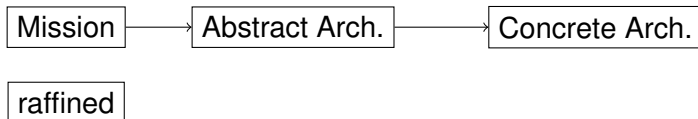
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# Plan

- 1 Introduction
  - SoS Engineering Process
  - SoSADL
  - Context
- 2 Patterns for SoS reconfiguration
  - Motivation
  - Approach
- 3 Related Works
- 4 Conclusion

# SoS Engineering Process



# Architecture description language : SoSADL

- Constituent System (CS)** : have their own managerial and operational independence while contributing to the global mission of the SoS
- Mediator** : controled by the SoS. They belong to the SoS. Mediateur are communicating element that specify, coordinate the interaction beetween CSs and SoS control over them.
- Coalition** : a set of constraints about the CSs and mediator required to accomplish a emergent behavior.

# Emergency service SoS

**Mission** : preserve human life and material

# Need of architectural reconfiguration

Cause :

- managerial and operational independence of the constituents

Consequence :

- architecture evolve continuously

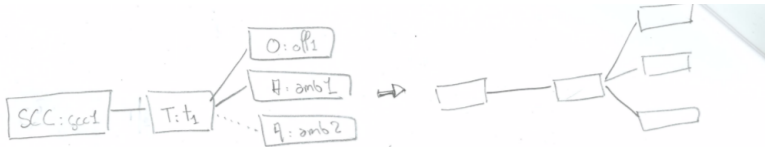
Problems :

- determine a set of reconfiguration' operations to maintain architectural pattern in the concrete architecture ?
- determine a set of reconfiguration' operations to make evolve the architectural pattern in a coherently way ?

# Architectural pattern

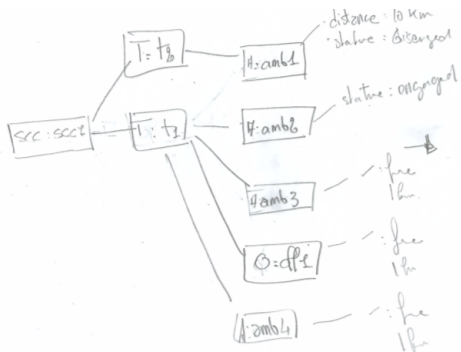


# Maintain architectural patterns





# Architectural pattern evolutions





# Challenges

- the choice of reconfiguration' operations in order to instanciate or reinstanciate the architectural pattern



# Challenge and Futur Work

Challenge :



Futur Work :

