

# Insights on real time system architecture modelling from a software engineering viewpoint

*PhD context : How to integrate an "High-level" architecture description to model, analyse and prototype real-time systems ?*

## Architecture Description Language ?

- Abstract out details of implementation
- Provide formalized modelling notations
- Examples for real time : AADL, Fractal/Qinna
- Focus on interconnected architectural elements
- Tools (design, V & V steps)

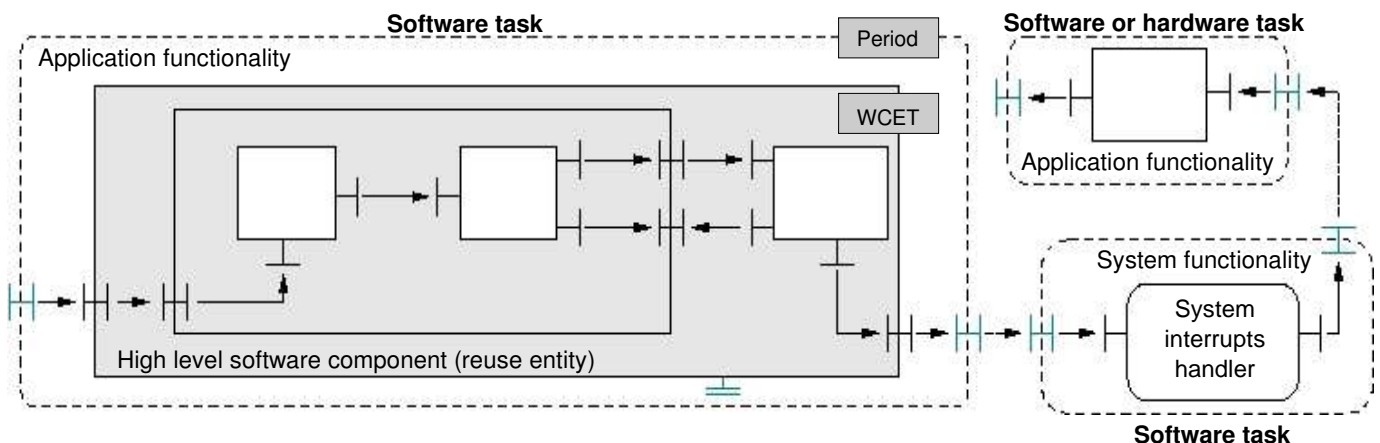
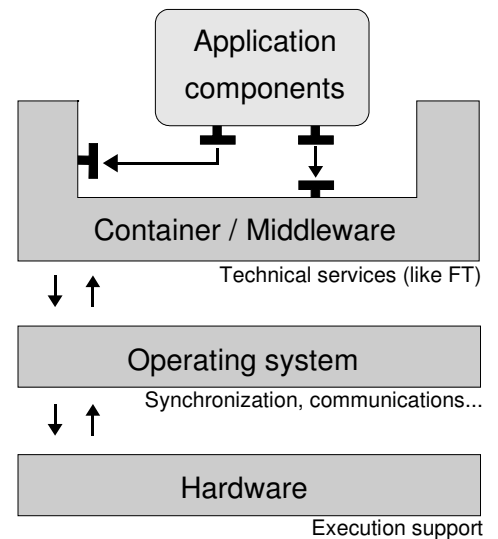
### An unified approach based an architecture

- Model system architecture and execution platform abstractions
- Link them to application architecture

### A component model

- Semantic of architectural elements and bindings
- Express the provided and the required from the environment on rich interfaces
- Structural and behavior refinement
- Express non-functional properties

Needs to model functionalities and express non-functional constraints of underlying platform



- Component-oriented design
- **Upstream analysis at the model level**
- **Implementation on a component-based operating system**