Design For FUTURE

DFG

DFG Priority Programme 1593
Design For Future - Managed Software Evolution

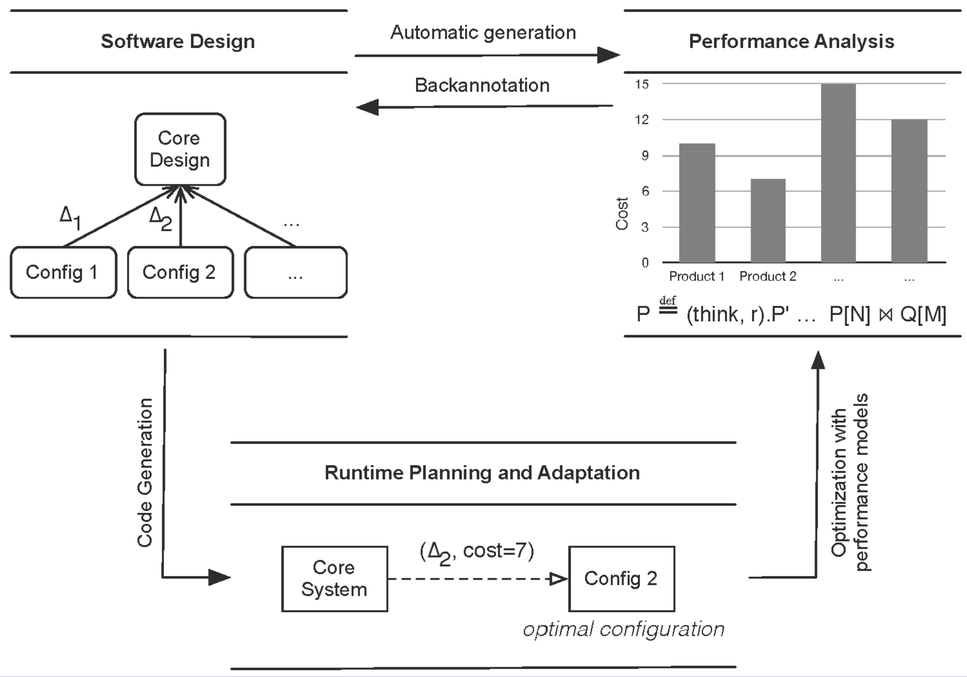
Scalable Design and Performance Analysis for Long-Living Software Families

DAPS

Project Goals

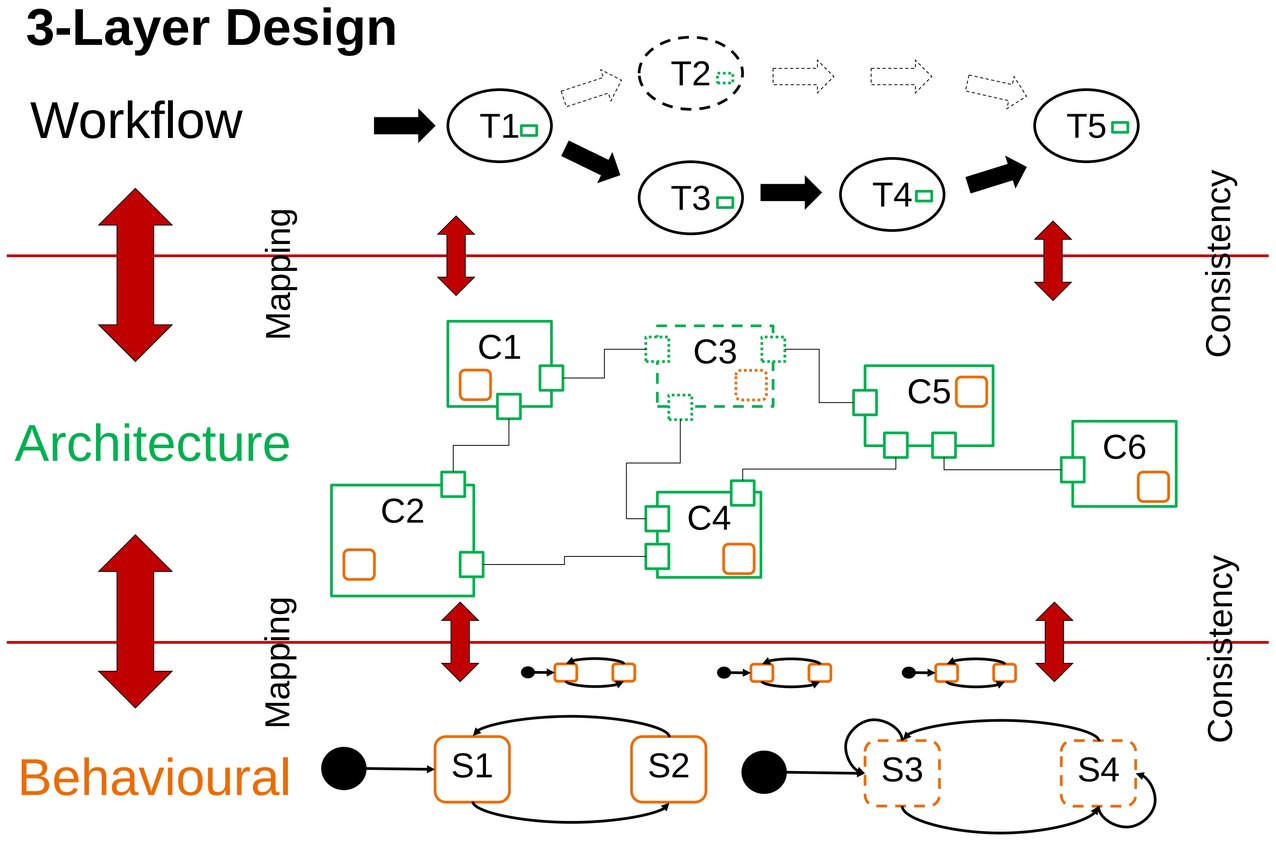
- Performance specification and analysis for deltas on high level models (e.g. UML)
- Construction of hierarchical delta-model structures for efficient analysis at runtime
- Efficient online optimization based on delta-models
- Model-based development tool chain for SPS/PLC programming of software families

Solution Approach



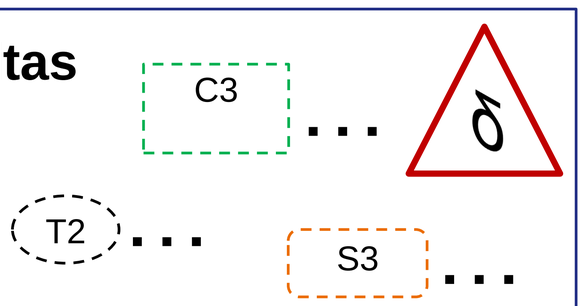
Behavioural Modelling

3-Layer Design



Variability modeling by deltas

- to modify core product
- to cover all variants
- for all layers



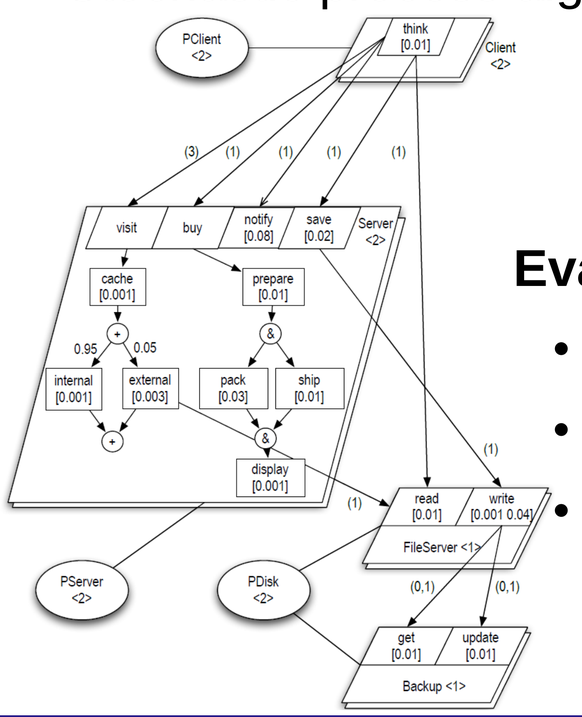
Case Studies

- SPP AIS case study
- Assembly line at Fraunhofer ESK
- Assembly line at TU Braunschweig

Performance Analysis

Models

- Ordinary queueing networks
- Layered queueing networks
- Stochastic process algebra



Evaluation techniques

- Product-form solutions
- Stochastic analysis
- Fluid techniques

Principal Investigators

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