Software Engineering Research Group

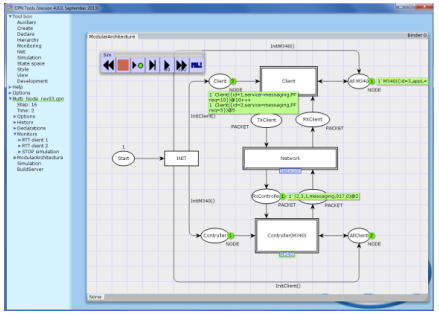
DPF
DIAGRAM PREDICATE FRAMEWORK

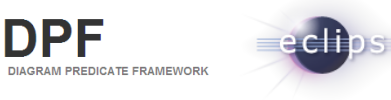
Department of Computing, Mathematics, and Physics
Western Norway University of Applied Sciences, NORWAY
http://prosjekt.hib.no/ict/research/software-engineering/

Software Engineering

- programvareutvikling

- **Methods and technology for the design, implementation, evaluation, deployment and maintenance of software:**

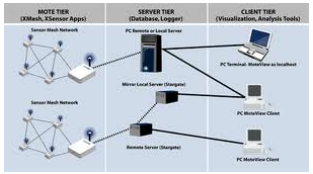




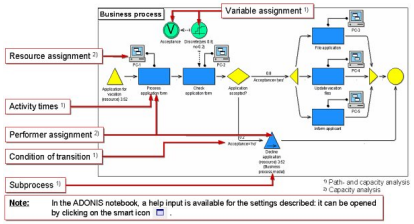
- **Areas for master's thesis projects:**

Smart city

Robotics software

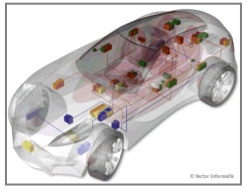


Networked embedded systems (IoT)

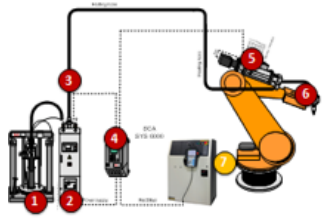


Healthcare systems

Automotive software



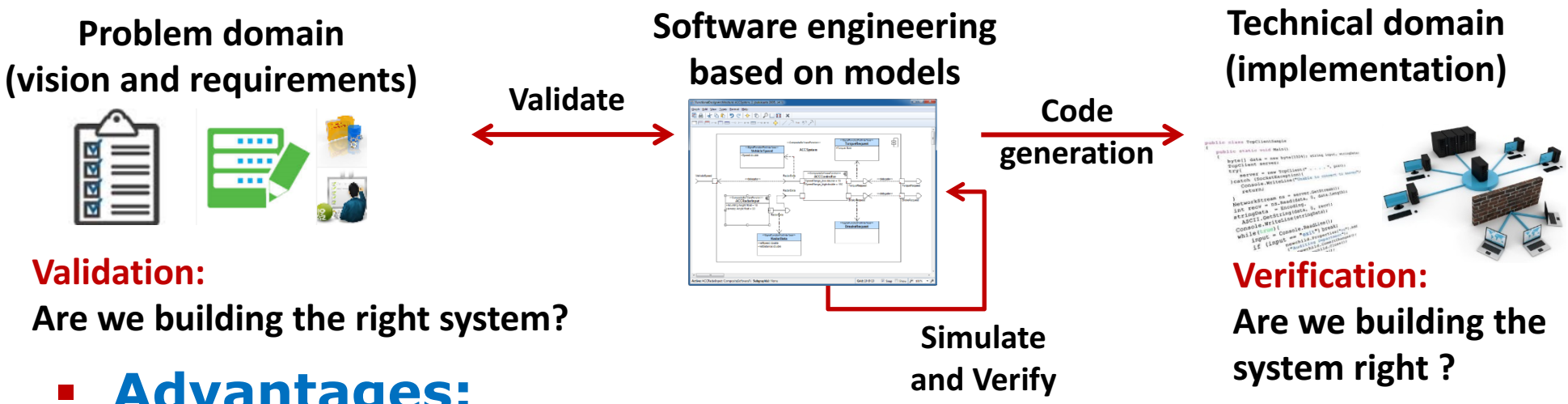
Mobile and cloud applications



Automation software

Model-driven Software Engineering

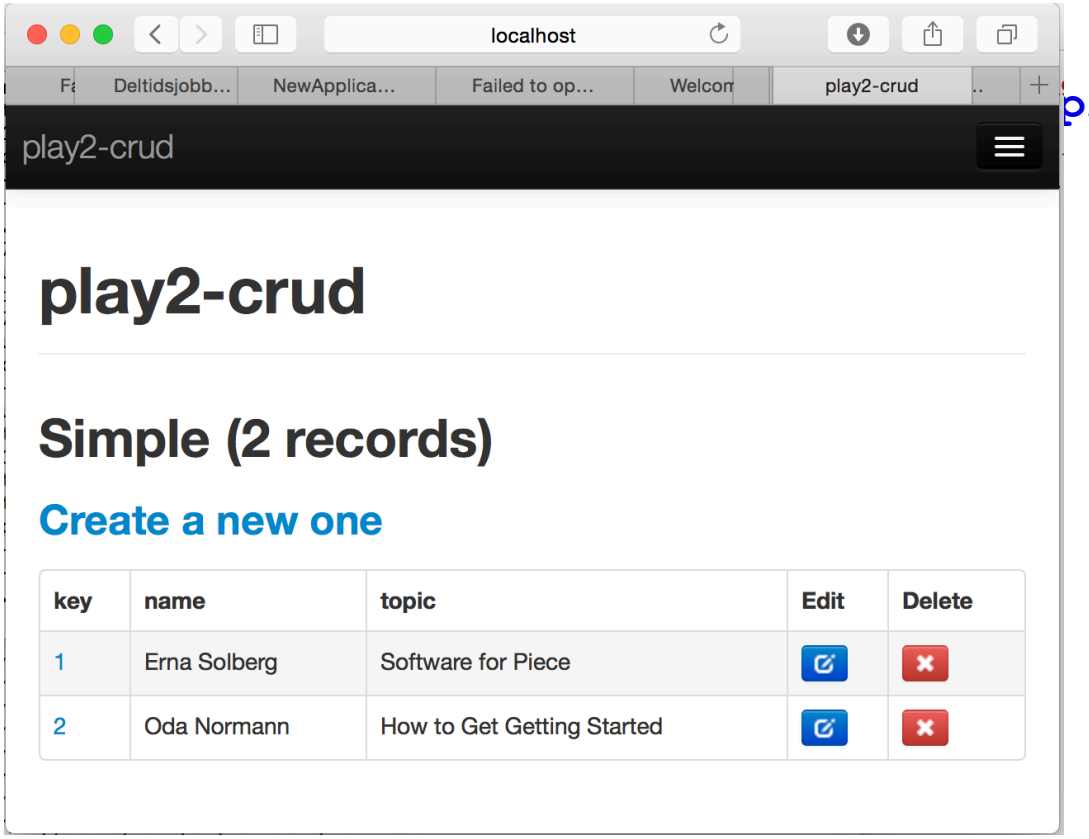
- **A prominent approach to software engineering based on the construction of models:**



- **Advantages:**
  - **Adaptability:** Use of high-level and domain-specific languages for software and system development.
  - **Productivity:** Automated code generation for a wide range of platforms based on the same underlying model.
  - **Reliability:** Simulation and verification prior to implementation and deployment.

Simple MDSE: The Play Framework

- **A simple CRUD web application based on an object-oriented domain model:**

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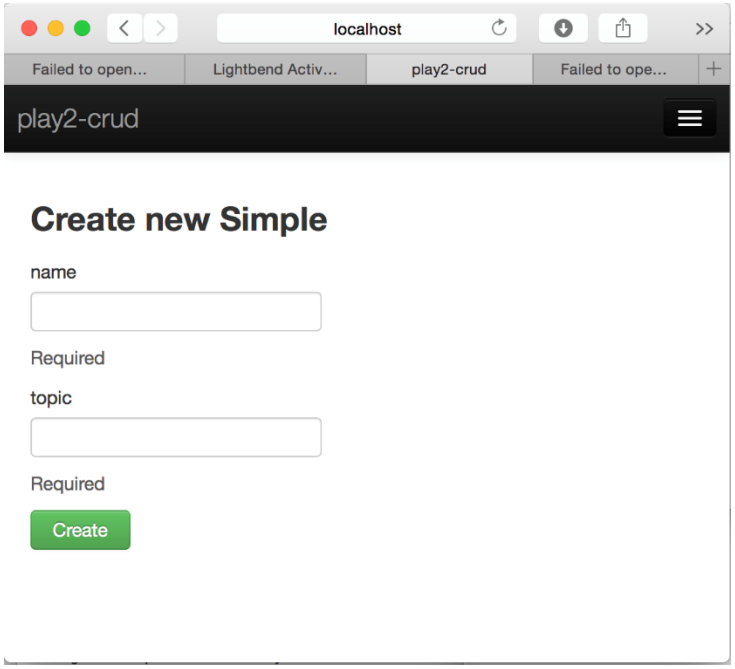

Collaboration and Projects

- **Collaboration with several international research group (Germany, Spain, Canada, France, Sweden,…).**
- **Projects with regional and international partners:**
  - *INTROMAT* - INtroducing personalized TReatment Of Mental health problems using Adaptive Technology. *NFR* IKTPluss Lighthouse Project (2016-2022) (YL).
  - *COEMS - Continuous Observation of Embedded Multicore Systems*. EU Horizon 2020 project (2016-2019) (VS).
  - *EDoCS: Model-driven Software Engineering of Doser Control Software* with SCA Solutions (2017/18) (LMK).
  - *Next Generation Electrical Architecture*. VINNOVA project with Volvo and automotive suppliers (2015-2018) (RH).

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- Marburg University, Germany

- **PhD students**
- **Post-doctoral researchers**
- **Master's students**