Engineering of Concurrent and Distributed Systems

Lars M. Kristensen

Western Norway University of Applied Sciences

Email: lmkr@hvl.no

Office: E503
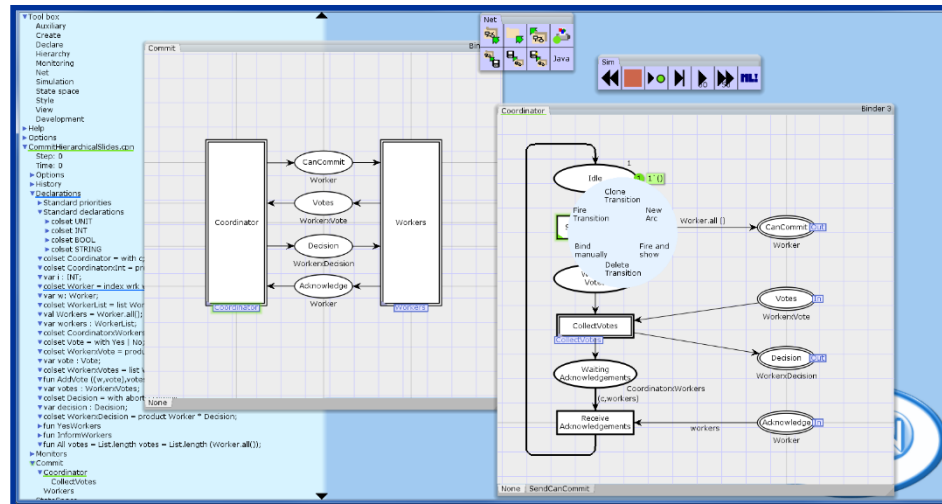
https://github.com/lmkr/mscprojects

Project 1:
New CPN Editor and Simulator

- **Next generation of tool support for the Coloured Petri Nets modelling language**

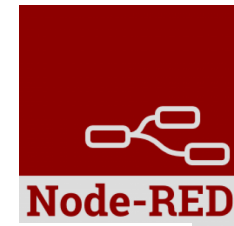- **Editing** and **syntax check**.
- Interactive- and automatic **simulation**.
- Application domain **visualisation**.

- **Verification** based on state space exploration.
- Simulation-based **performance analysis**.

Technology for Cloud-IoT

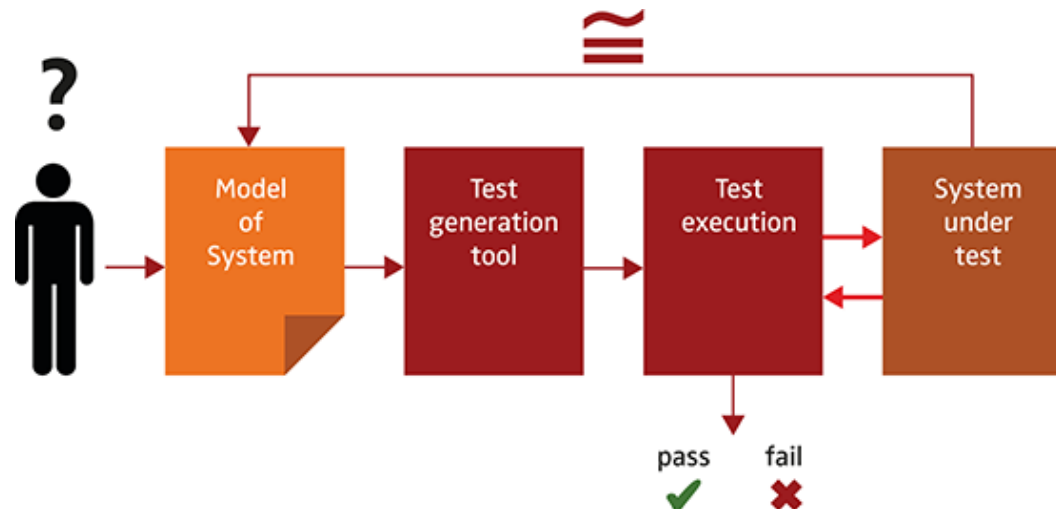- **A comparative study on Cloud-IoT platforms and software frameworks:**

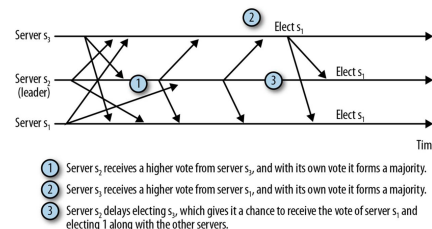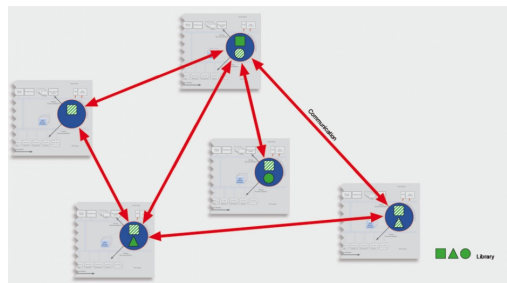- **IoT Protocol implementation and evaluation: COAP, MQTT, ...**

  http://mqtt.org/ / http://coap.technology/

Model-based Software Testing

- **Use of models for advanced testing of distributed system protocols:**

- **Evaluation could be based on cloud replication protocols (e.g., RAFT: https://raft.github.io/).**

Process Models and Mining

- **Collaboration project with Helse Bergen/ Haukeland University Hospital:**
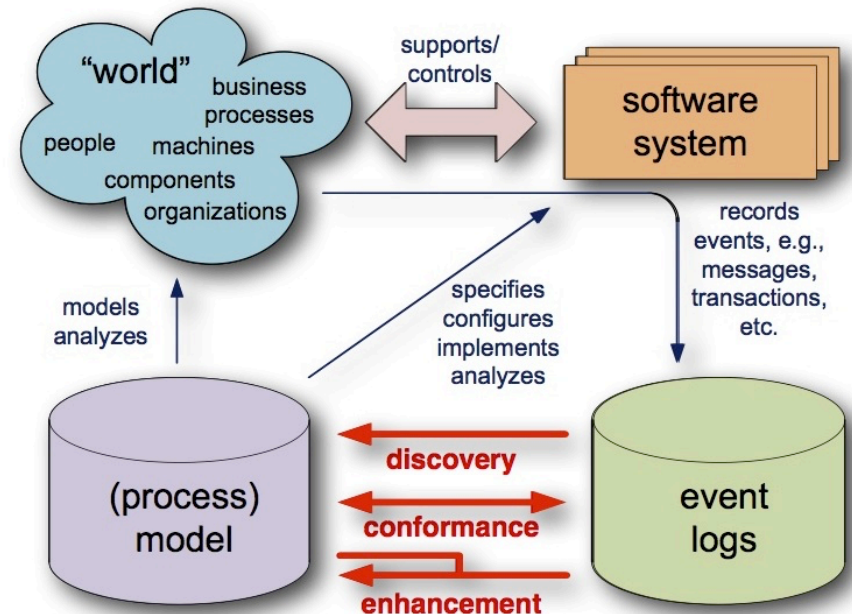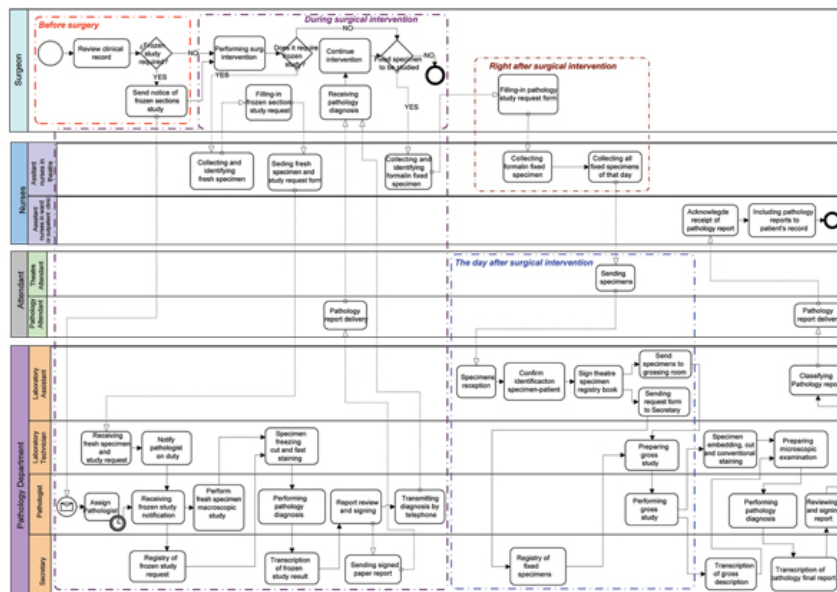
- **Investigate use of process models to improve planning of personnel, capacity, ...**