Software Engineering Lab

Institut d'Informatique
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<< Tom **Mens**

Romuald **Deshayes** >>
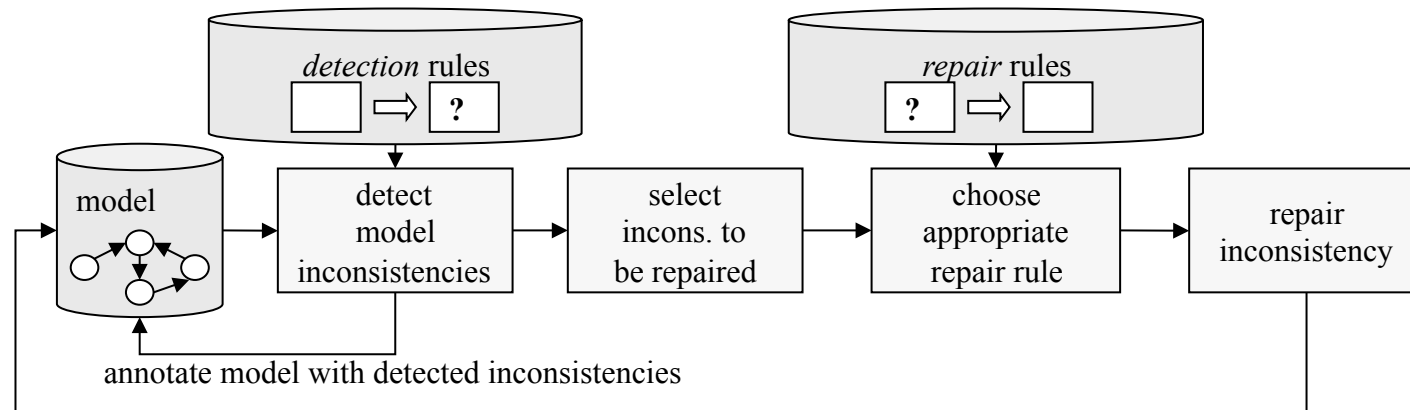
- **Model inconsistency management -** Detection and resolution of inconsistencies in software models
  - Using graph transformation (R. Van Der Straeten)
    - WADT 2007
  - Using automated planning (with J. Pinna Puissant)
    - ECMFA 2012
  - Using description logics and model checking (with R. Van Der Straeten)
    - ECMFA 2011
  - Using logic programming (with X. Blanc)
    - CAiSE 2009, ICSE 2008
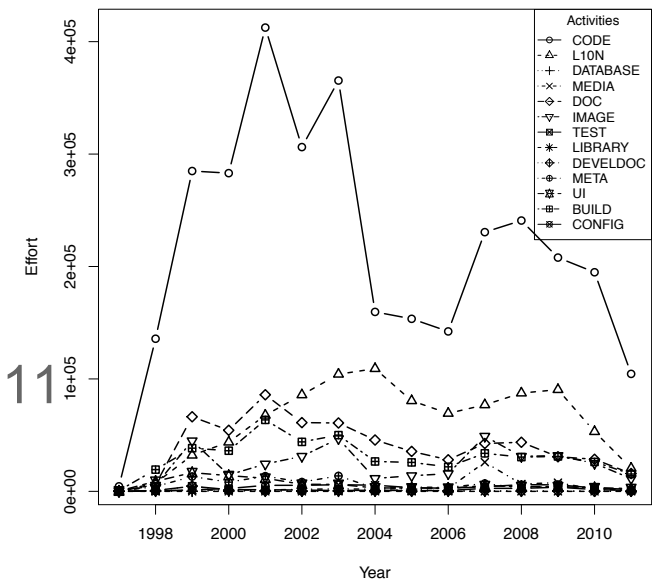
MPM Related Research

- Model transformation (using graph transformation)
  - Model and program refactoring (with G. Taentzer)
    - STTT 2010
    - AGTIVE 2007, SOSYM 2007, GTTSE 2005
  - Architectural restructuring (with D. Tamzalit)
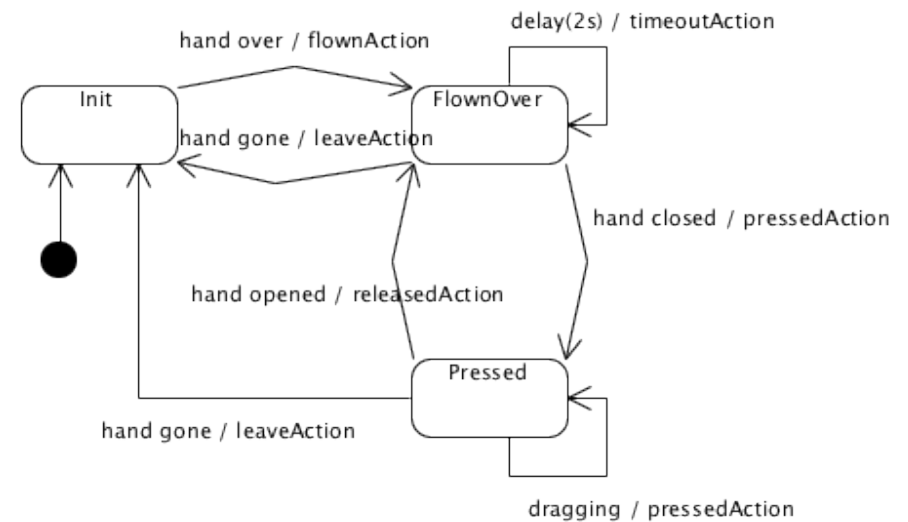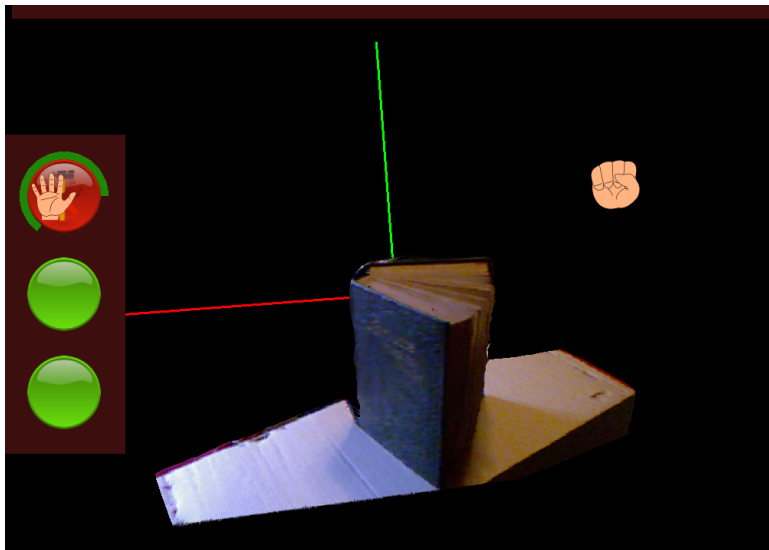   - ECBS 2010; IEEE Computer 2010

Non MPM research

- Empirical analysis of open source software ecosystems (with M. Goeminne, A. Serebrenik)
  - Technical aspects: Study software *quality* (code or design models) and *complexity*
  - Social aspects: study software *community* and their interaction, communication and collaboration
  - Study how software *evolves* over time
    - Increase or decrease in complexity, quality, size, productivity, popularity, …
- Papers
  - IWSECO 2011, SQM 2011, CSMR 2011
  - ICSM 2008, OSS 2009, IWST 2009

Non MPM research

- Modeling of HMI applications
  - See presentation by Romuald Deshayes
  - Discrete modeling of user interaction + continuous modeling of physical interaction

Current research projects

ARC Project « Ecological Studies of Open Source Software Ecosystem »
- 2012-2016
- Applying theories of biological evolution and ecosystems to software evolution and ecosystems

ARC Project « Model-Driven Software Evolution »
- 2008-2012
- Focus on model quality improvement, model inconsistency management and model refactoring

FEDER Project « Centre d'Expertise en Ingénierie et Qualité des Systèmes »
- 2008-2013
- CETIC, CENA, FUNDP, Multitel, UCL, ULB, Umons

FRFC Project « Centre de Recherche en Adaptabilité Logicielle »
- 2009-2012
- In collaboration with K. Mens (UCL) and P. Heymans (FUNDP)