Project Group VICToRy

(Visual Interactive Consistency in Tolerant Rule-Based Systems)

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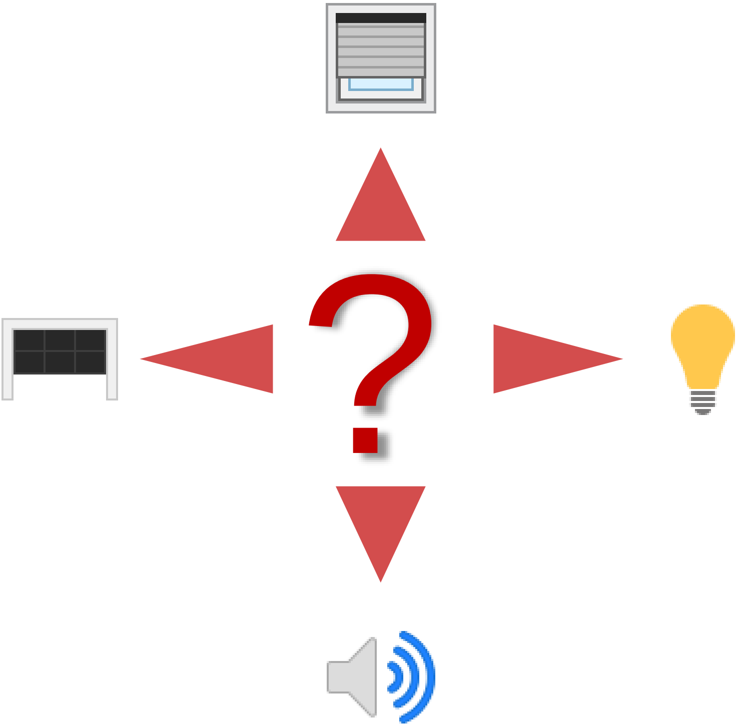
„When I come home, I want the window blinds to open, and the lights should be switched on. And some nice music would be great!“

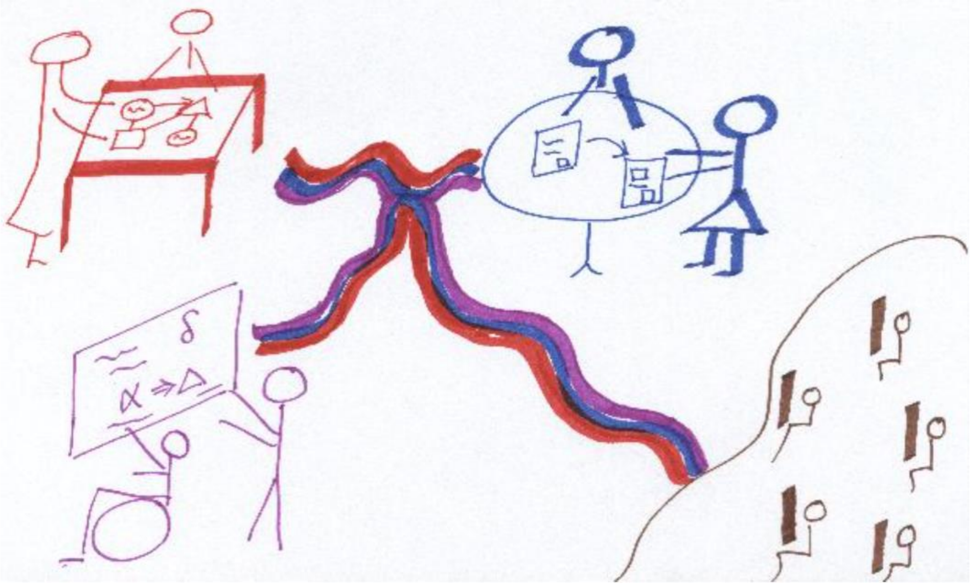


How to synchronize Smart Home devices?

Can this be done by everybody?

Domain experts should be able to solve problems in their domain…

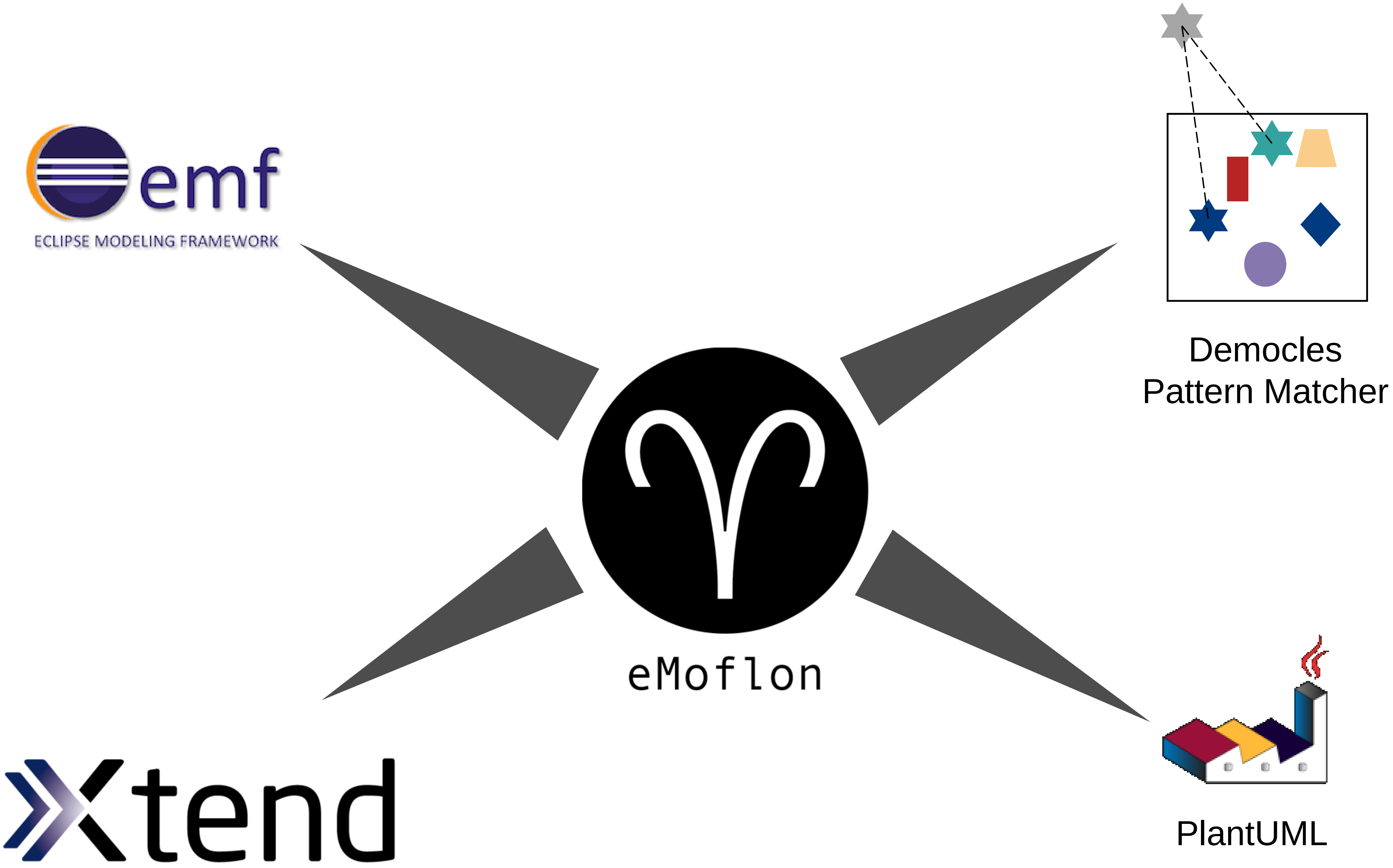
Models, model **transformations**, model **synchronizations**



… using suitable **domain-specific languages**

end-users have a consistent, complete software system

Source: Perdita Stevens (2016): https://youtu.be/sxhGwJkcDuI



emf
ECLIPSE MODELING FRAMEWORK

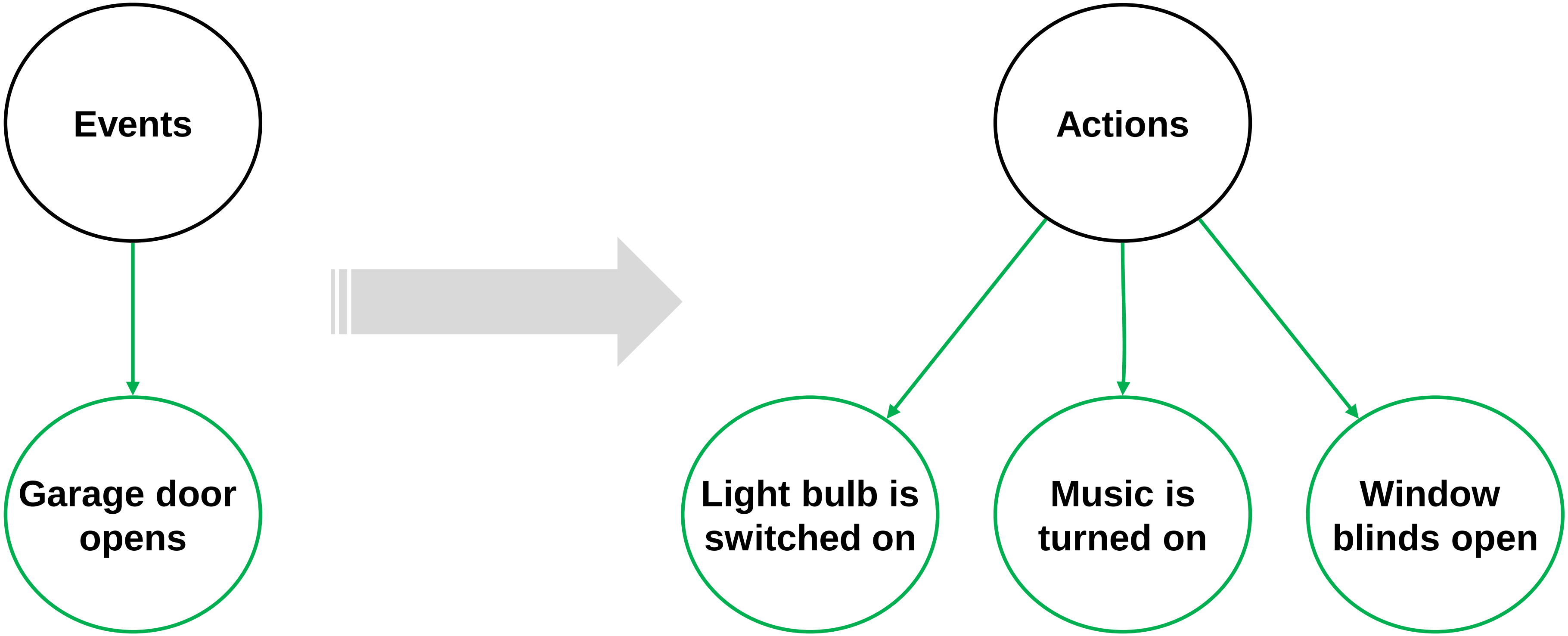
Democles
Pattern Matcher

eMoflon

Xtend

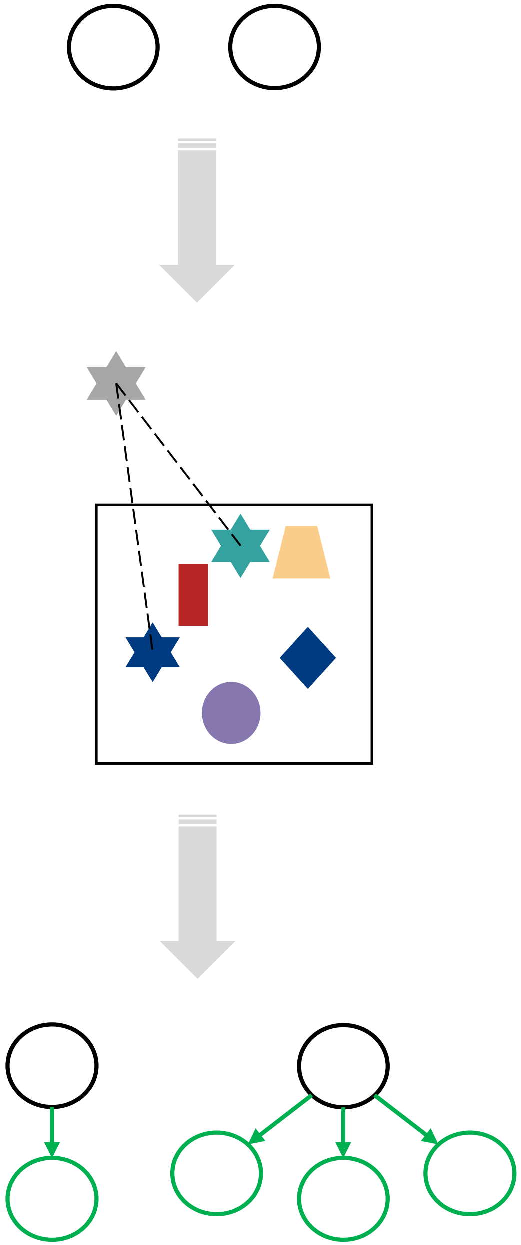
PlantUML

Further information: https://emoflon.org/

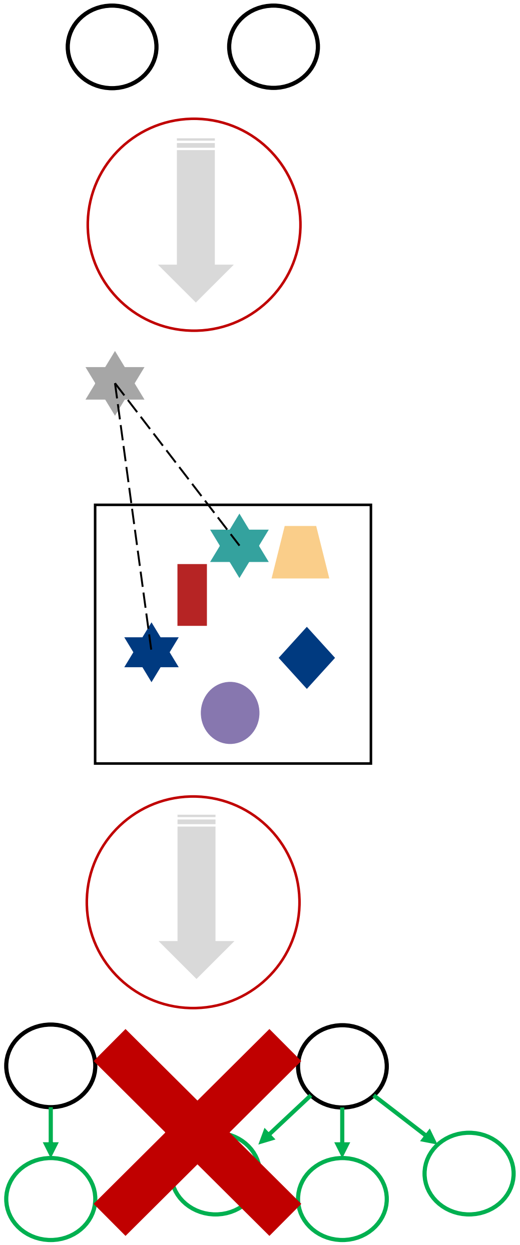


Behavior is specified by rules

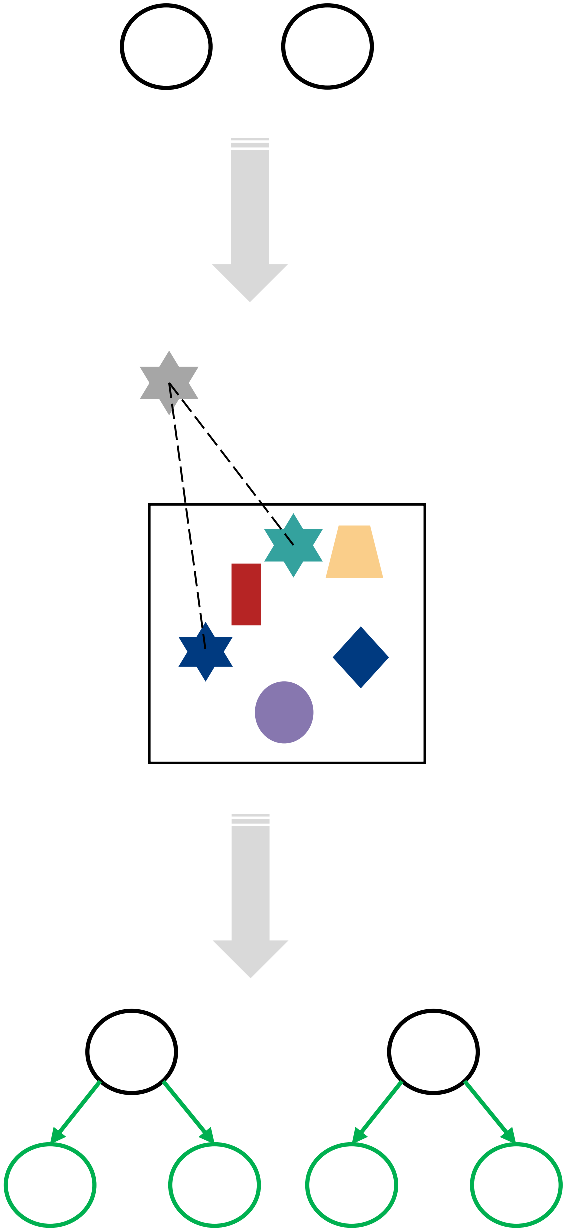
Applicability is checked by pattern matching



- Search for a consistent solution by pattern matching and rule applications is a complex task
- Intermediate steps are incomprehensible for the user
- Complete consistency is sometimes hard to achieve
- User is not able yet to take part in the process



- Visualization of consistency management steps
- Concept for enabling interactive user decisions



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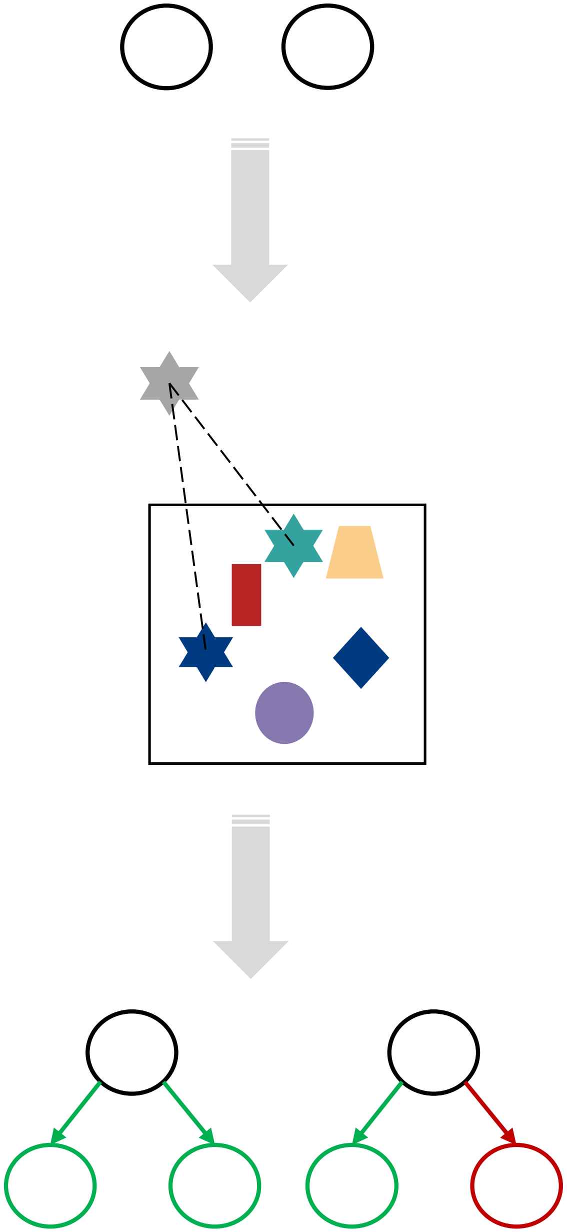

- Visualization of consistency management steps
- Concept for enabling interactive user decisions
- Concept for representing inconsistencies to the user in a scalable manner

- Plugin development with Eclipse

- Model-driven engineering with EMF, code generation with Xtend, consistency management with eMoflon

- Continuous integration, versioning control systems

- Project management, planning, self-organization, presentation of ideas, creativity

Prerequisites

- Sound programming skills in an object-oriented language, preferably Java
- Basic knowledge about the concepts of MDE
- Motivation to work in a team, self-organize yourself and be creative
- Formal requirements to participate in a project group

Optional, but helpful

- Experience in the area of plugin development and EMF
- Prior knowledge:
  - Fundamentals of Model-Driven Engineering (FMDE),
  - Model-Driven Software Development (MDSD),
  - Modellbasierte Softwareentwicklung (MBSE, Bachelor)
  - Seminar on Model-Driven Engineering

Letter of Motivation

- We want to get to know you in advance!
- Describe yourself according to the following criteria...
  - Programming experience (languages, projects, …)
  - MDE concepts (metamodelling, DSLs, model transformation, …)
  - Working experience (university, industry)
  - Lectures, seminars or other courses in the area of MDE that you completed successfully

  - … and last but not least: What do you expect from this project group? Why do you want to participate in this particular PG?
  - Submission in the first registration period (**until 24.08.2018**) via email to nilsweid@mail.upb.de

Contact and Further Information

- Ask questions after the presentations
- Contact us via email:

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- Visit our web page:

  https://nilsweidmann.github.io/pg-victory/

Thank you for listening !