

Non-Invasive Palladio Development

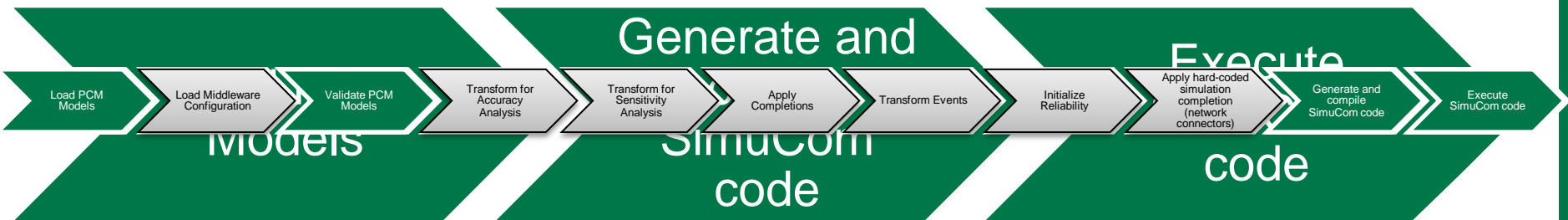
Palladio Days 2011

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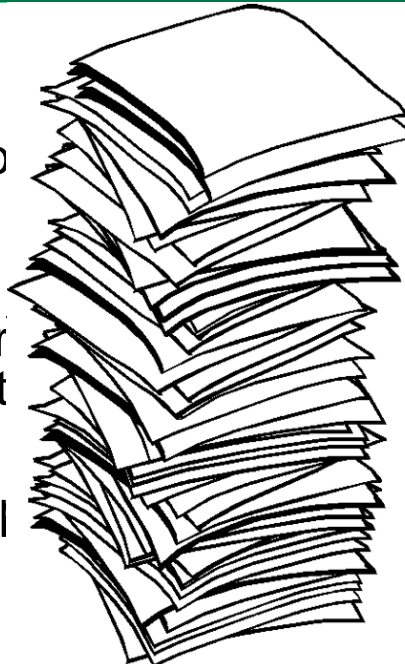
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Motivation

- Take a simple SimuCom run – this is what we want:



- The Palladio Tooling codebase is getting larger and larger
- More people and more code are being added to the codebase
- Different steps to ensure code quality (or have already been taken)
- In this talk, we want to introduce new extension concepts we introduced into Palladio



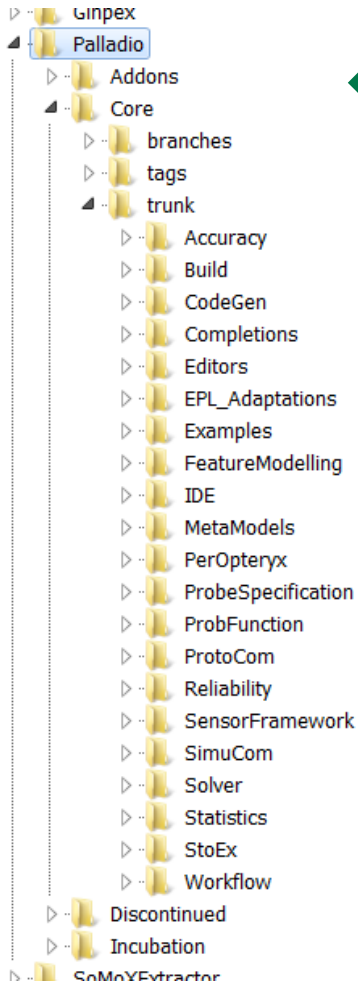
larger and larger
and developing Palladio
codebase have to be taken
extension concepts we introduced

Extending the SimuCom Workflow

- With an extensible workflow, workflow jobs can be defined in a „non-invasive“ way
 - PCM Core functionality does not depend on extensions
 - Smaller core build
 - Extensions are optional (only install and activate if needed)
 - Extension also help to structure code belonging together

What We Did Last Summer

A new code repository structure

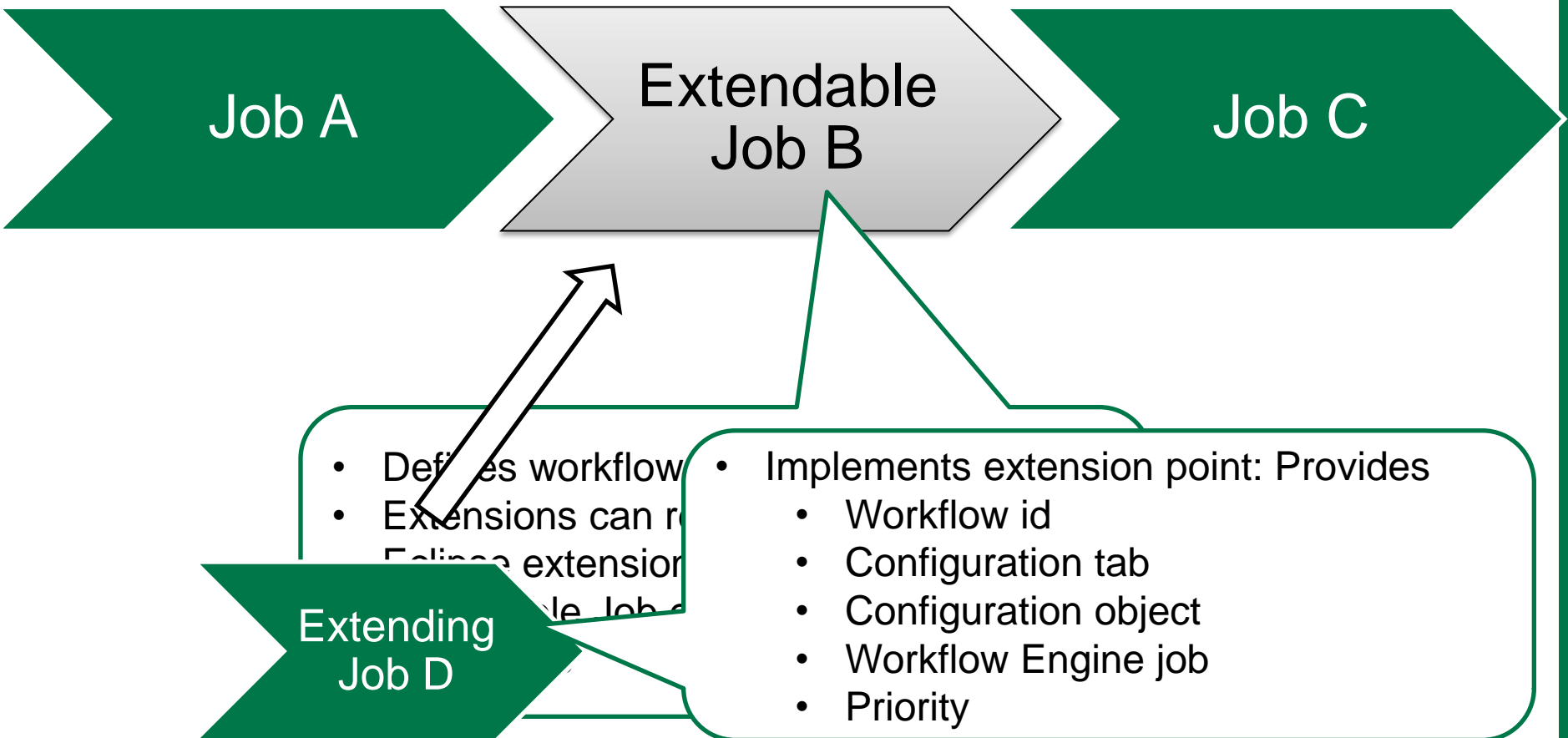


The traditional PCM plugins have been moved to Core

New PCM enhancements should be developed in the Incubation area to avoid breaking the PCM build

Addons area: For projects which extend PCM, but on which the PCM core functionality does not depend

Extending a Workflow:



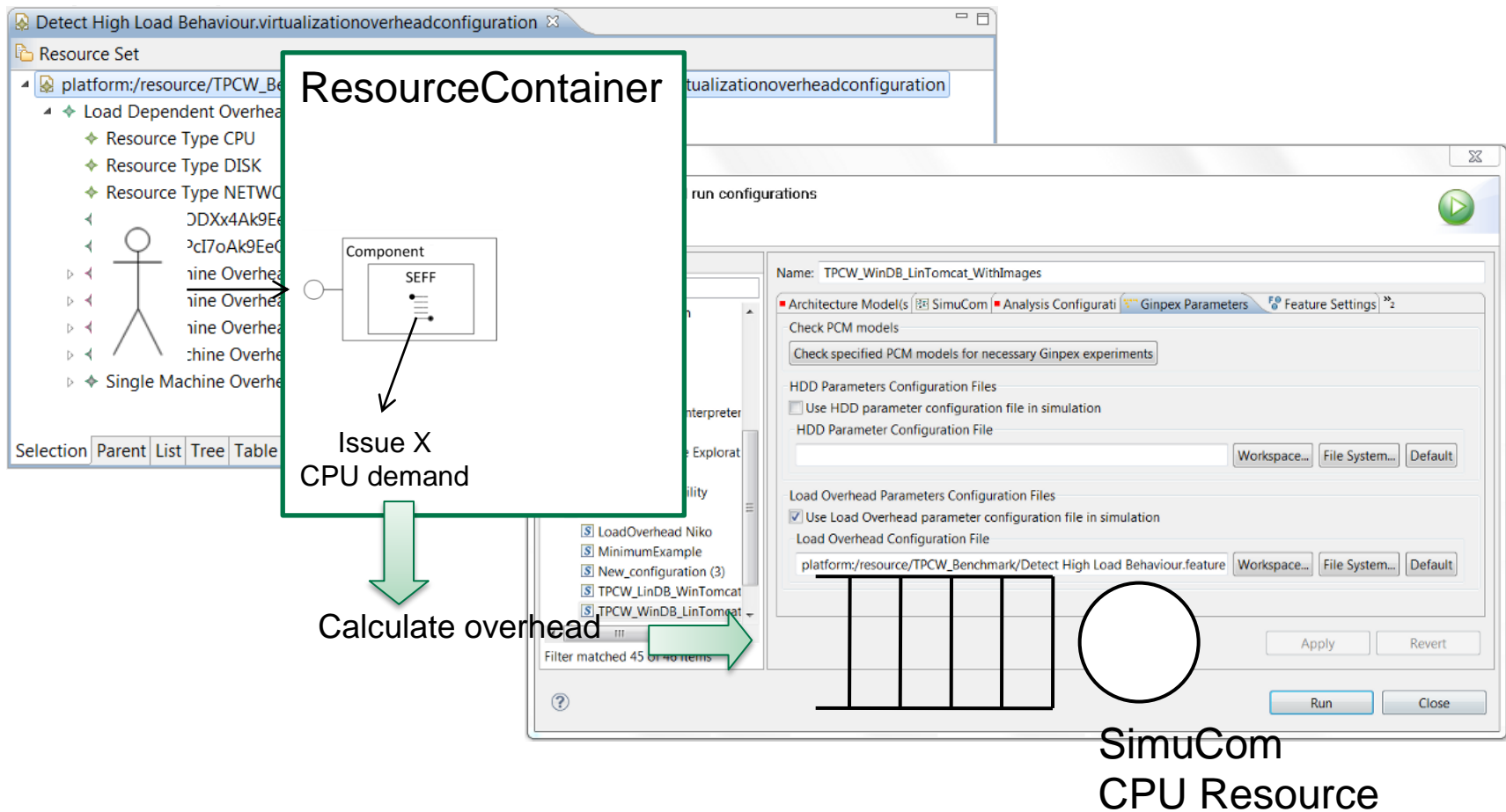
Extending a SimuCom Workflow:



- Currently, SimuCom provides 3 workflow extension IDs to provide Job extensions:
 - *WORKFLOW_ID_AFTER_LOAD_VALIDATE*
 - Executes jobs directly after initial model has been loaded and validated
 - *WORKFLOW_ID_BEFORE_DOCK*
 - Executes jobs after SimuCom code has been created
 - *WORKFLOW_ID_AFTER_DOCK*
 - Executes jobs just before SimuCom code is about to be executed

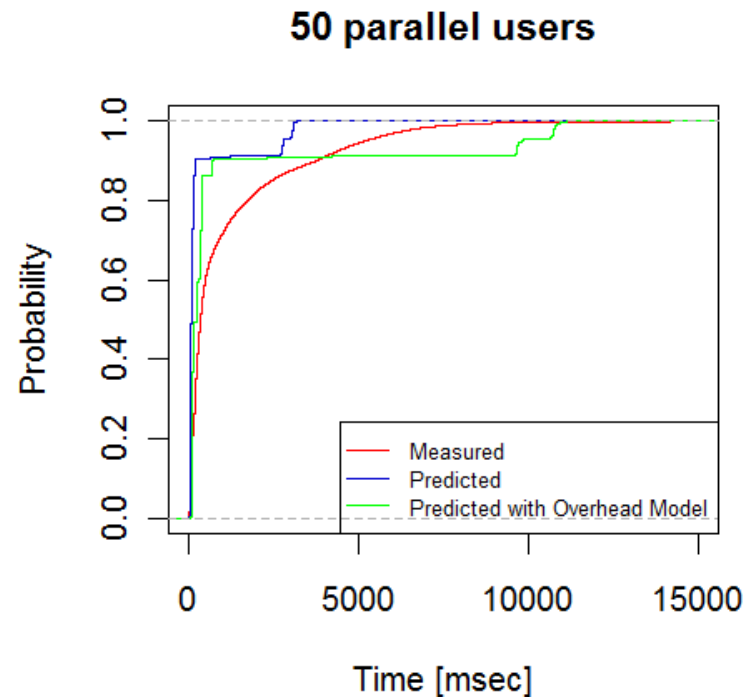
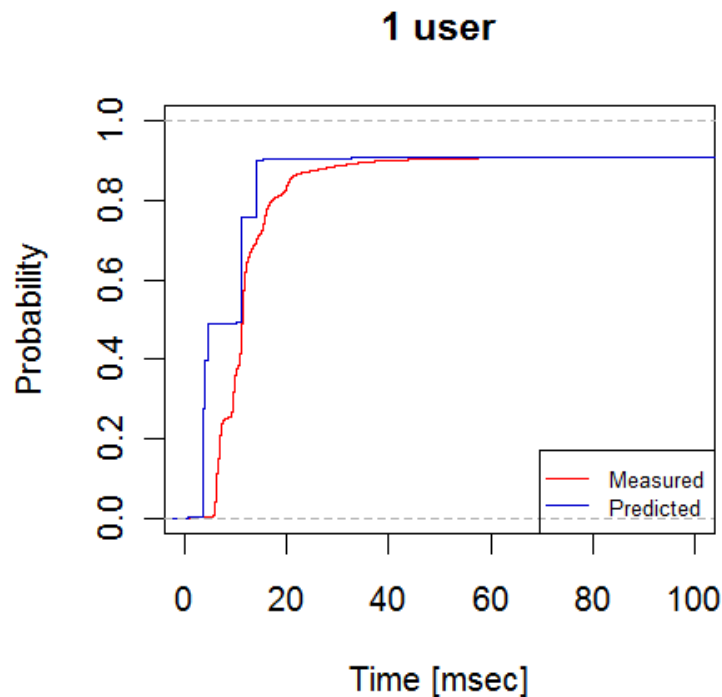
Example: Integrating Infrastructure Performance Overheads into SimuCom

- Ginpex tool provides overhead model & SimuCom extension
- If activated, SimuCom extension adds overhead to resource

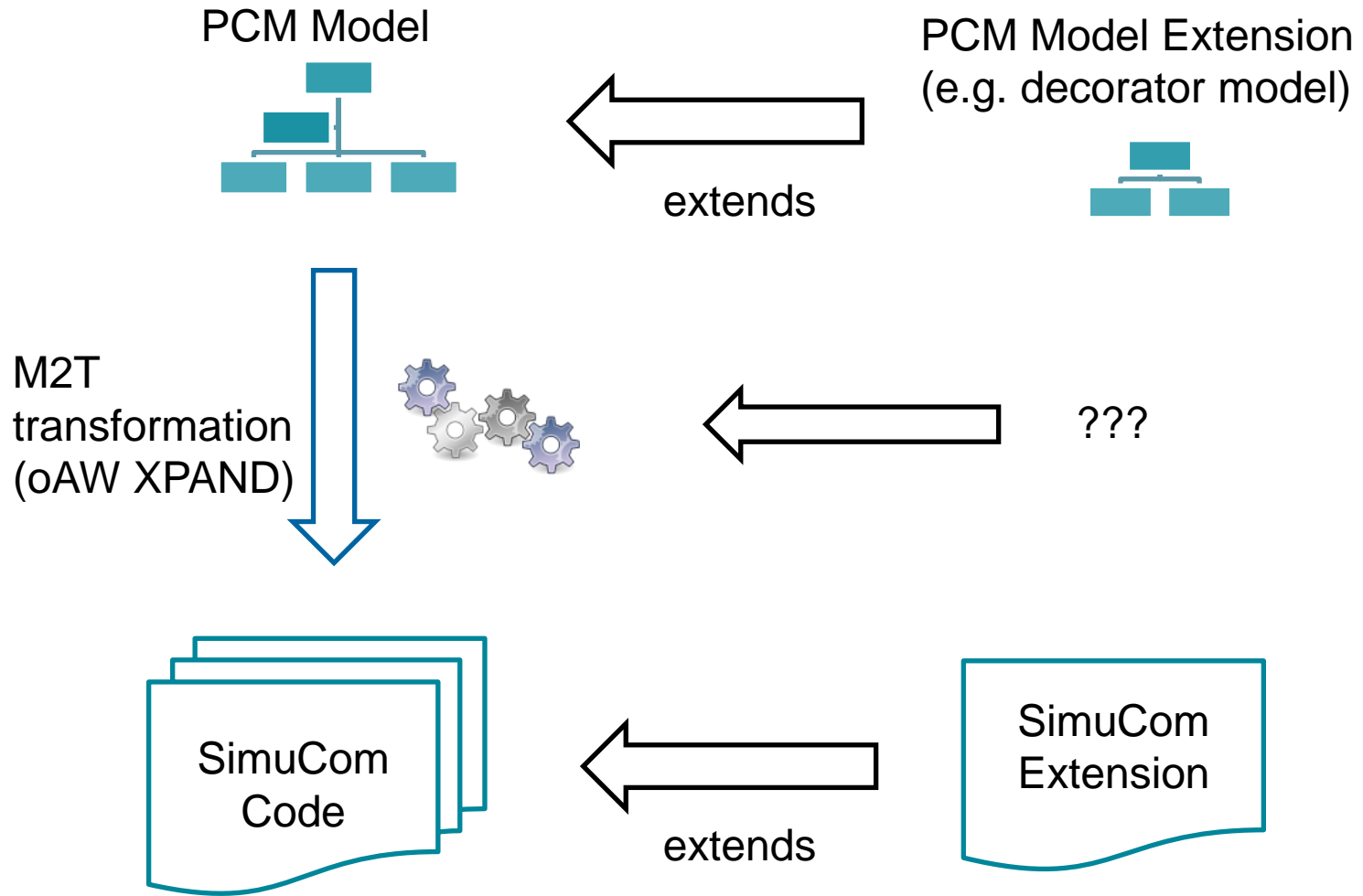


Example: Integrating Infrastructure Performance Overheads into SimuCom

- Influence on prediction accuracy



Open Issues



Conclusions

- New code repository structure
- Workflow Engine now features extendable jobs – start using them!



- Workflow Engine documentation:
http://sdqweb.ipd.kit.edu/wiki/Palladio_Workflow_Engine
- How can we use the new feature (or improve it) to improve the PCM workflow code?