

# New Domain, Less Pain: Integrated Specification of Model Edit Operations



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1 Introduction

2 Motivation

3 Tool Demo

4 Summary

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Main research area: Model Driven Software Development

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## Integrated Specification of MEO

D. Reuling  
C. Pietsch

Introduction

Motivation

Tool Demo

Summary

# Section 1

## Introduction

## Integrated Specification of MEO

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### Introduction

### Motivation

### Tool Demo

### Summary

- . . . define **Building Blocks** of (common) changes
- . . . are specified as a **rule**, defining:
  - (Parameterizable) Context
  - Changes to apply
  - Application Conditions
- . . . can be used for:
  - Differencing
  - Patching
  - Merging
  - Refactoring
  - . . .

## Integrated Specification of MEO

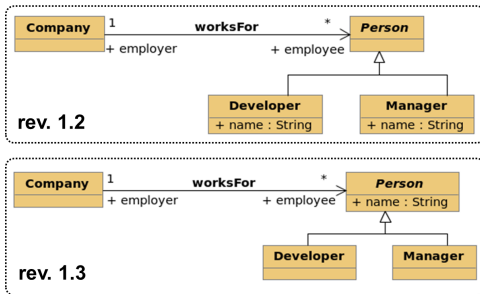
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### Introduction

### Motivation

### Tool Demo

### Summary



**Refactoring:**  
Pull up attribute



## Integrated Specification of MEO

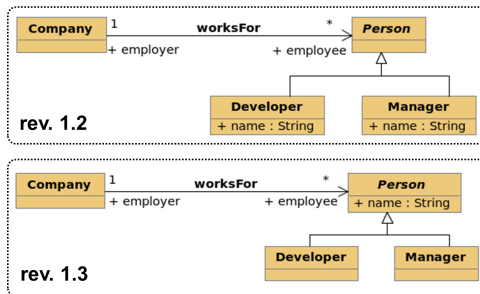
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### Introduction

### Motivation

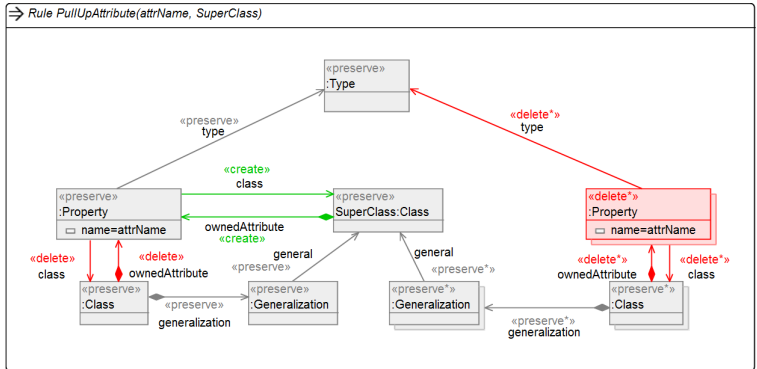
### Tool Demo

### Summary



**Refactoring:**  
Pull up attribute

**Edit Operation**





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Introduction

Motivation

Tool Demo

Summary

# Section 2

## Motivation

## Integrated Specification of MEO

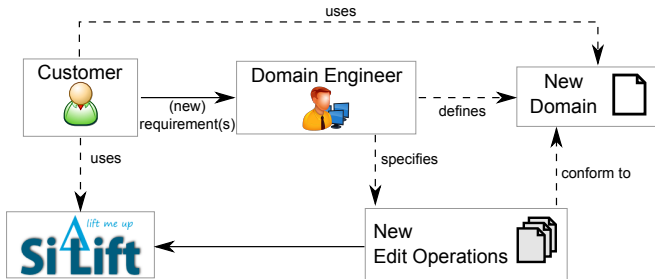
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Introduction

Motivation

Tool Demo

Summary



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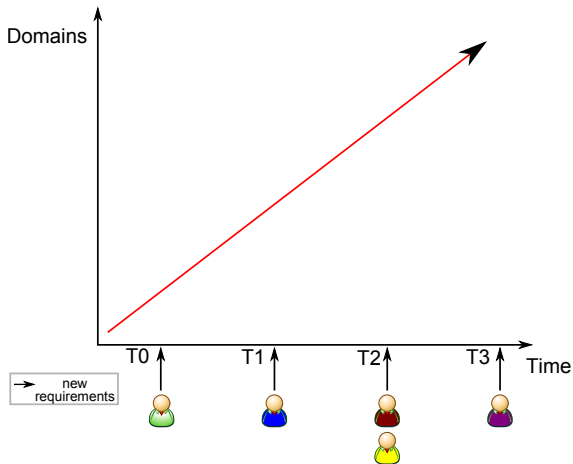
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Introduction

Motivation

Tool Demo

Summary



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Introduction

Motivation

Tool Demo

Summary

Support the Domain Engineer:

- Offer a framework for defining and using edit operations (see [1])
- Tight Eclipse Integration (Wizards, Dialogues, Views, ...)
- Generate a **basic** set of edit operations **automatically** (see [2])
- **Validate** edit operations according to tool mechanisms
- Build derived artifacts **automatically**
- Offer automatic **Quickfix** if available

[1] T. Kehrer, U. Kelter, and G. Taentzer, "Consistency-preserving edit scripts in model versioning", in ASE 2013

[2] M. Rindt, T. Kehrer, U. Kelter, "Automatic Generation of Consistency-Preserving Edit Operations for MDE Tools", in Models 2014

## Summary

## Tool Demo



## Integrated Specification of MEO

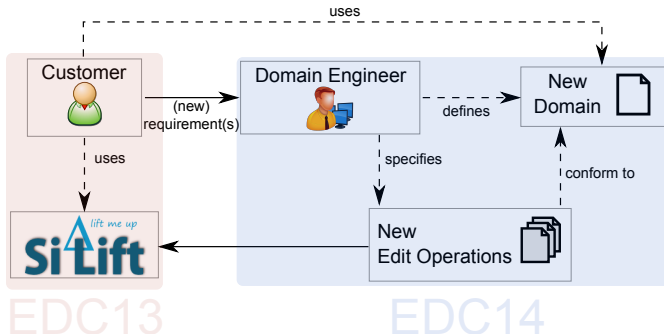
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Introduction

Motivation

Tool Demo

Summary



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Introduction

Motivation

Tool Demo

Summary

# Let's do it!

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Introduction

Motivation

Tool Demo

Summary

# Section 4

## Summary



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Introduction

Motivation

Tool Demo

Summary

### ■ Edit Operations as **Building Blocks**

### ■ Can be used in many scenarios:

- Differencing
- Patching
- ...

### ■ New Domain: New Pain

### ■ Integrated Specification:

- Eclipse-based Technologies
- Editors/Projects
- Generated basic Edit Operation set
- Builder for derived artefacts
- Validation + Quickfixing

▷ **New Domain - Less Pain**

## Integrated Specification of MEO

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Introduction

Motivation

Tool Demo

Summary

## Download

- Used Tools (including library meta model):  
<http://pi.informatik.uni-siegen.de/Projekte/SiLift/updatesite-edc14/>
- Example Instances + Edit Operations (as Projects):  
[http://pi.informatik.uni-siegen.de/Projekte/SiLift/downloads/edc14\\_example.zip](http://pi.informatik.uni-siegen.de/Projekte/SiLift/downloads/edc14_example.zip)

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## Personal

- Now ;-)