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# Automatic Domain Model Migration to Manage Metamodel Evolution

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# Outline



- Motivation
- Model evolution
- Summary
- Conclusion



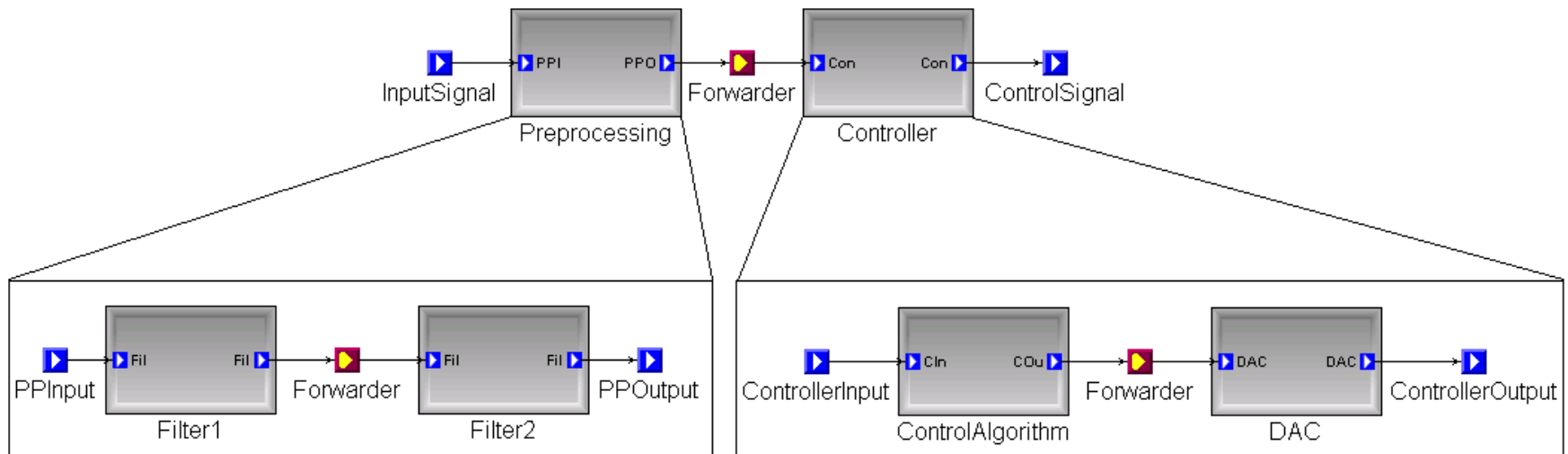
# Motivation



- Domain-Specific Languages
  - Understandability for domain expert
  - Support for code generation
  - Generative technique
- Metamodeling
  - Flexibility
  - Usability
- Challenge – industrial applications
  - Metamodels change due to better understanding, domain evolution, etc.
  - Treatment of legacy models and...



# Example hierarchical SF





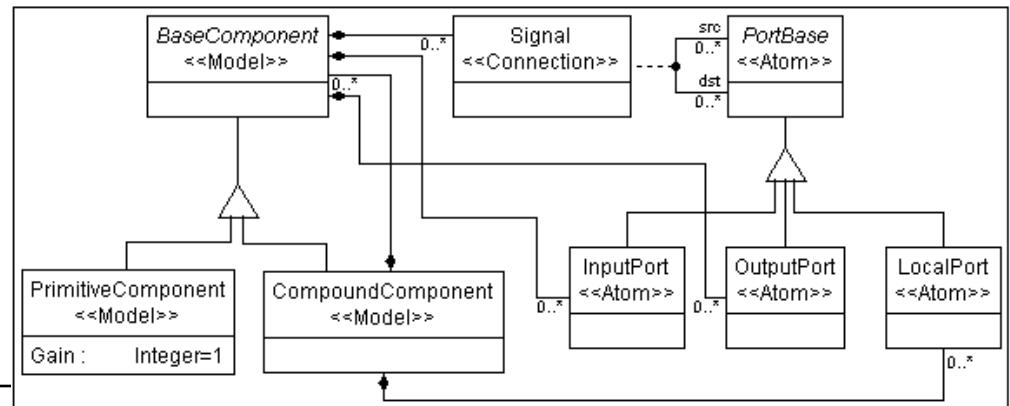
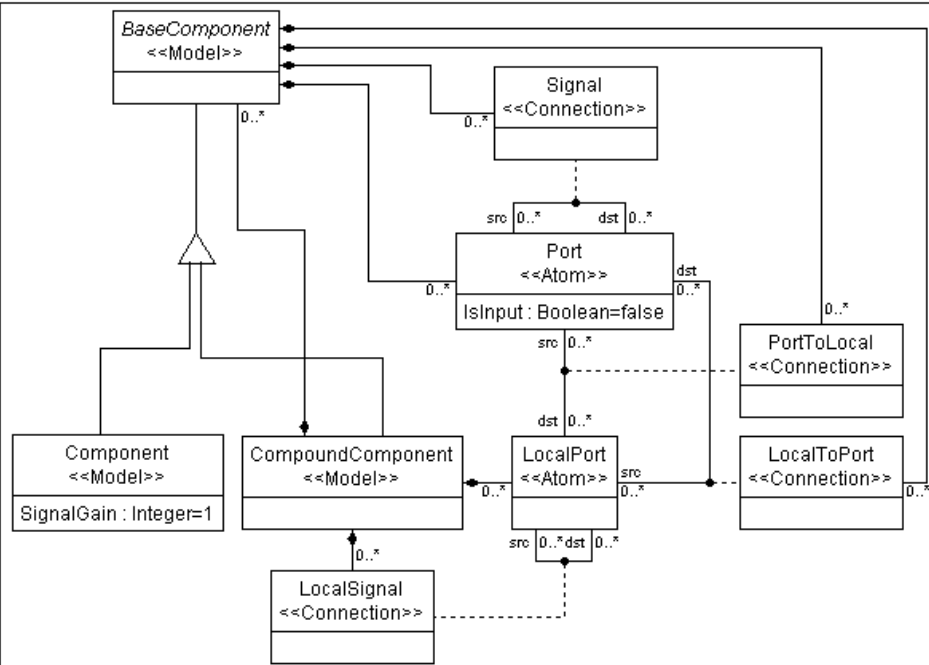
# Evolving Legacy Models



Continuous, step-by-step evolution

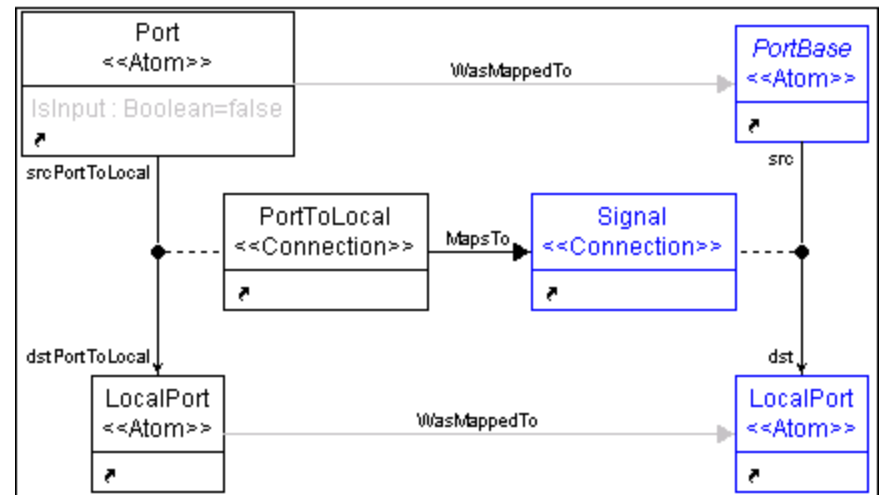
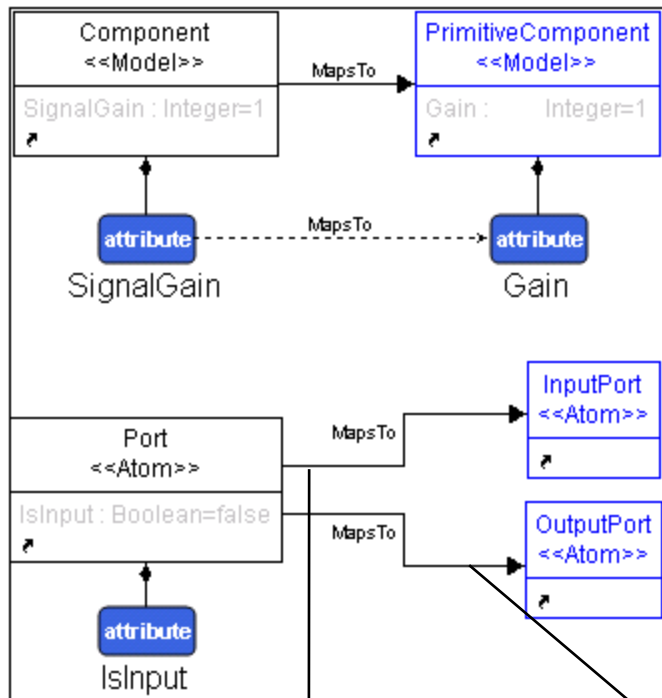
## MCL Rules

Original metamodel





# MCL Rules

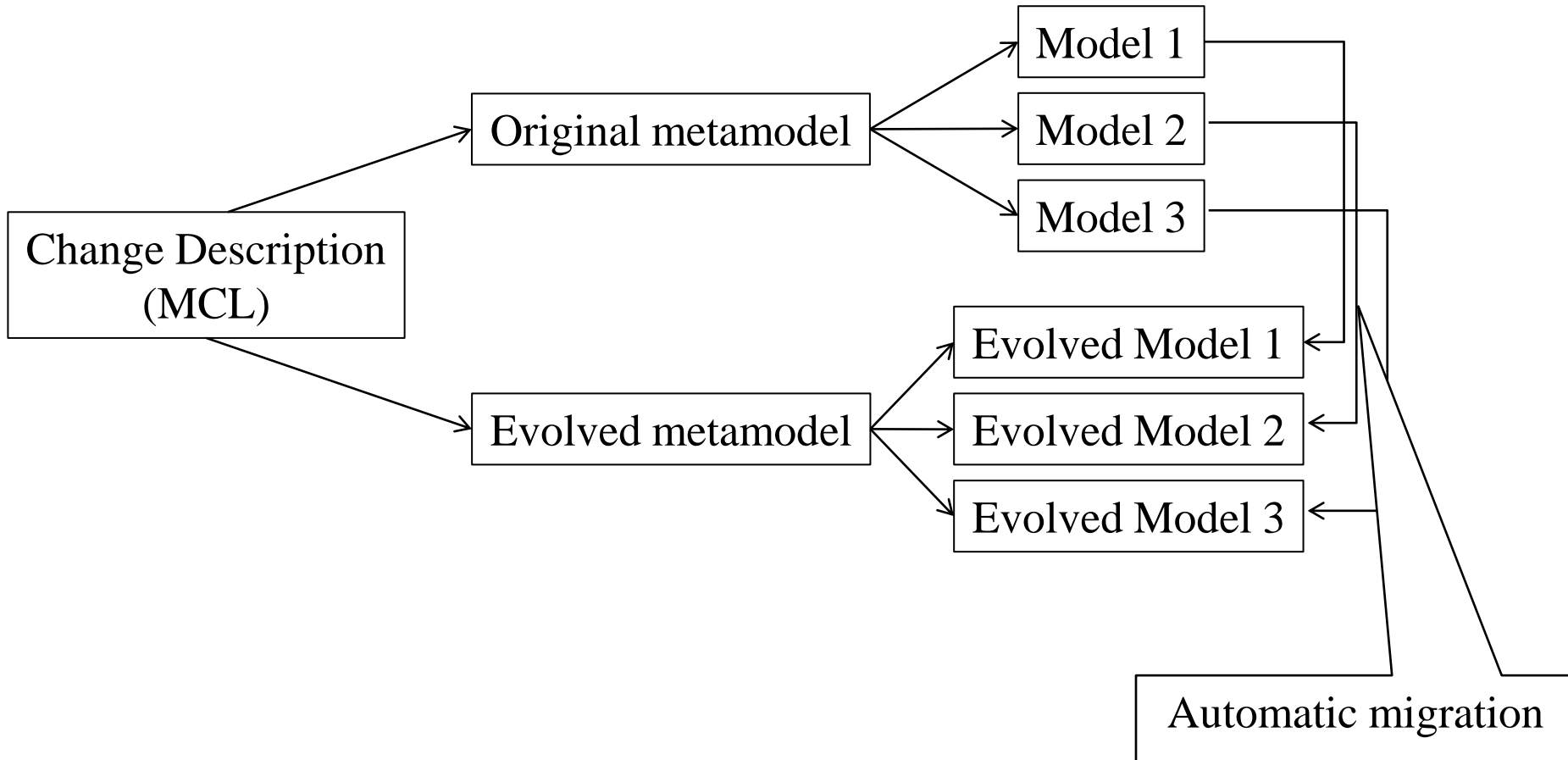


```
return (Port.IsInput());
```

```
return !(Port.IsInput());
```



# Summary





# Conclusions



- A step-by-step evolution concept
- Using a DSML for specifying migrations
  - Attach original and updated meta-models
  - Define correspondences only between elements that have changed
  - More efficient than the general transformation
- Automatic migration of legacy models