



# **GenModelAddon / Modeling Symposium 2019**

**genModelAddon**

**Modeling Symposium ECE 2019**





## GenModelAddon

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A tooling for an extended EMF code generation.

## OPCoach

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**OPCOACH**  
ECLIPSE TRAINING AND CONSULTING

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ICPF & PSI  
Certification  
EXPERT

Image 1

- **Training/Consulting** : RCP, E4, Modeling, GIT in French, English and Spanish
- <http://www.opcoach.com/><sup>1</sup>
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## MDD best practices

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- Separate the generated code and the overridden code
- Do not commit the generated code
- Integrate the generation process into the build phase
- Override the generated classes using inheritance
- Generate a clean code: even if it is generated, it must be human readable
- Test generation with a default model

Source article : <http://www.infoq.com/articles/model-driven-dev-best-practices> <sup>2</sup>

## GMA

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GMA will apply this best practices:

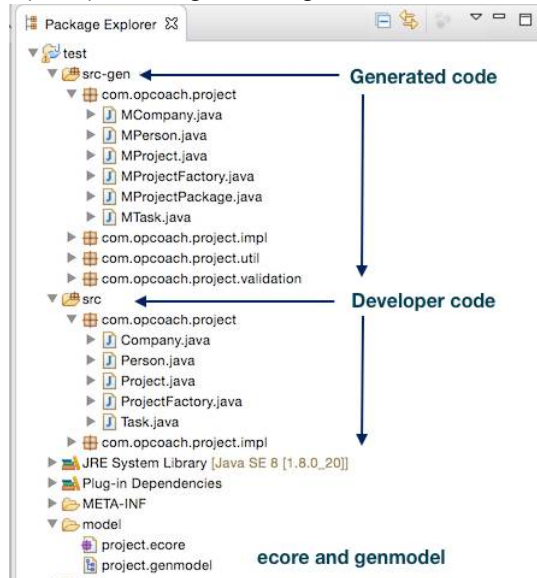
- It splits the generated code into src-gen and src
- It manages inheritance, subpackages and referenced models
- It works with generics

1 - <http://www.opcoach.com/en>

2 - <http://www.infoq.com/articles/model-driven-dev-best-practices>

- It generates an emf\_factory\_override extension
- In **src-gen** : generates using the current EMF generators
- In **src** : produces the classes extending the EMF generation

GMA is hosted here : <http://opcoach.github.io/genModelAddon/><sup>3</sup>



3 - <http://opcoach.github.io/genModelAddon/>

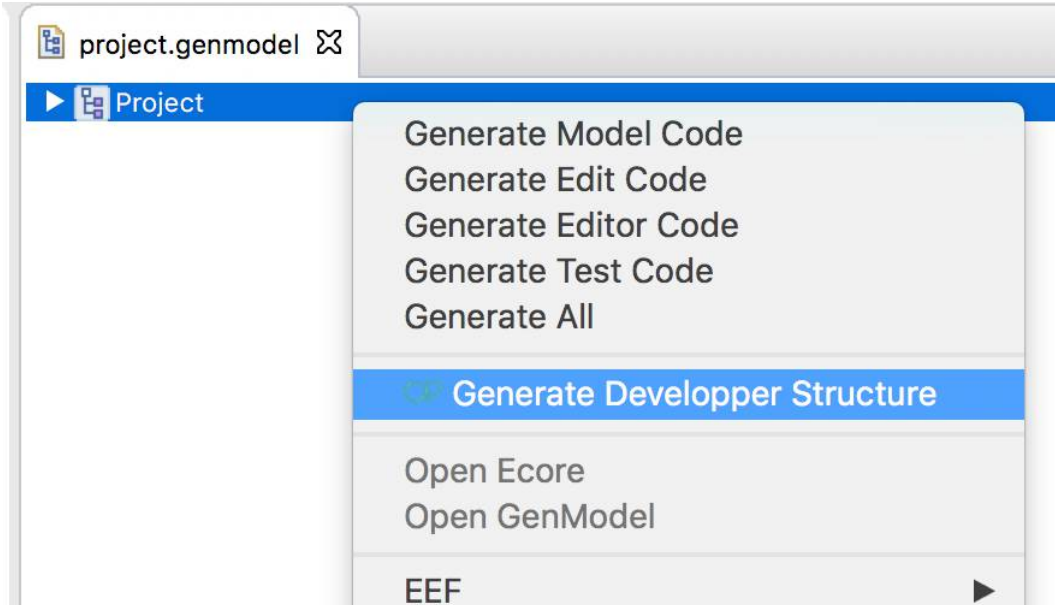
### How to install it ?

Look for 'genModelAddon' on the market place :

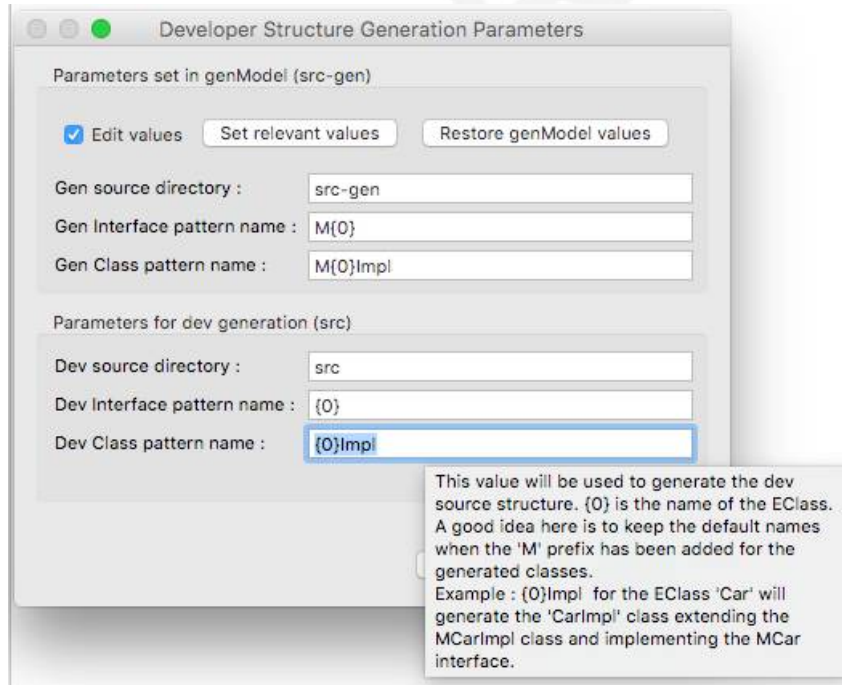


### How to use it ?

In your genmodel editor, right click on the root node :



And then fill the dialog with relevant values :



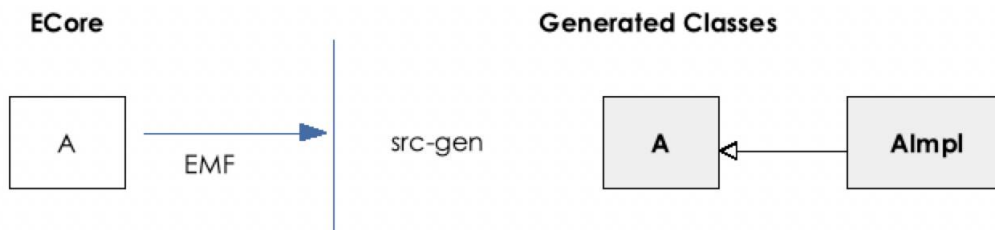
In your code you can directly use your developer code :

```
// MProjectFactory is the generated factory. It was used like this :
MProjectFactory mfactory = MProjectFactory.eINSTANCE;
MTask mt = mfactory.createTask();

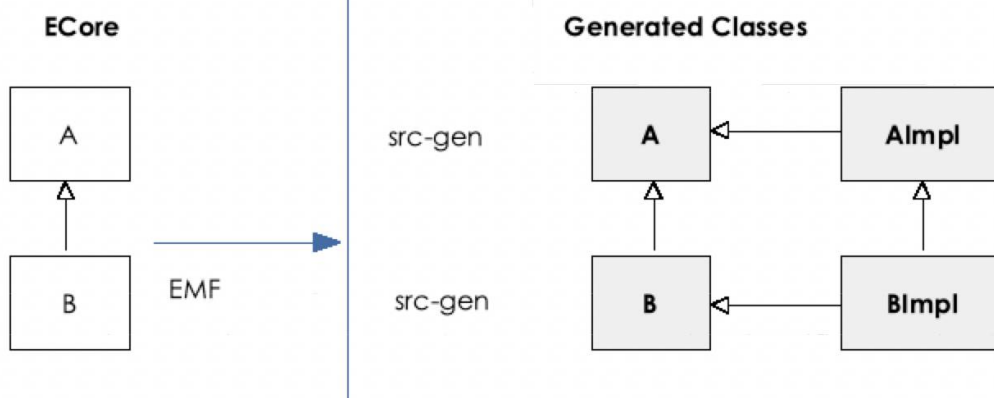
// Now the ProjectFactory extends the MProjectFactory and
// creates instances of the developer objects. You can get it directly like this :
ProjectFactory factory = ProjectFactory.eINSTANCE;
Task t = factory.createTask();
```

### EMF Simple generation

Simple EClass

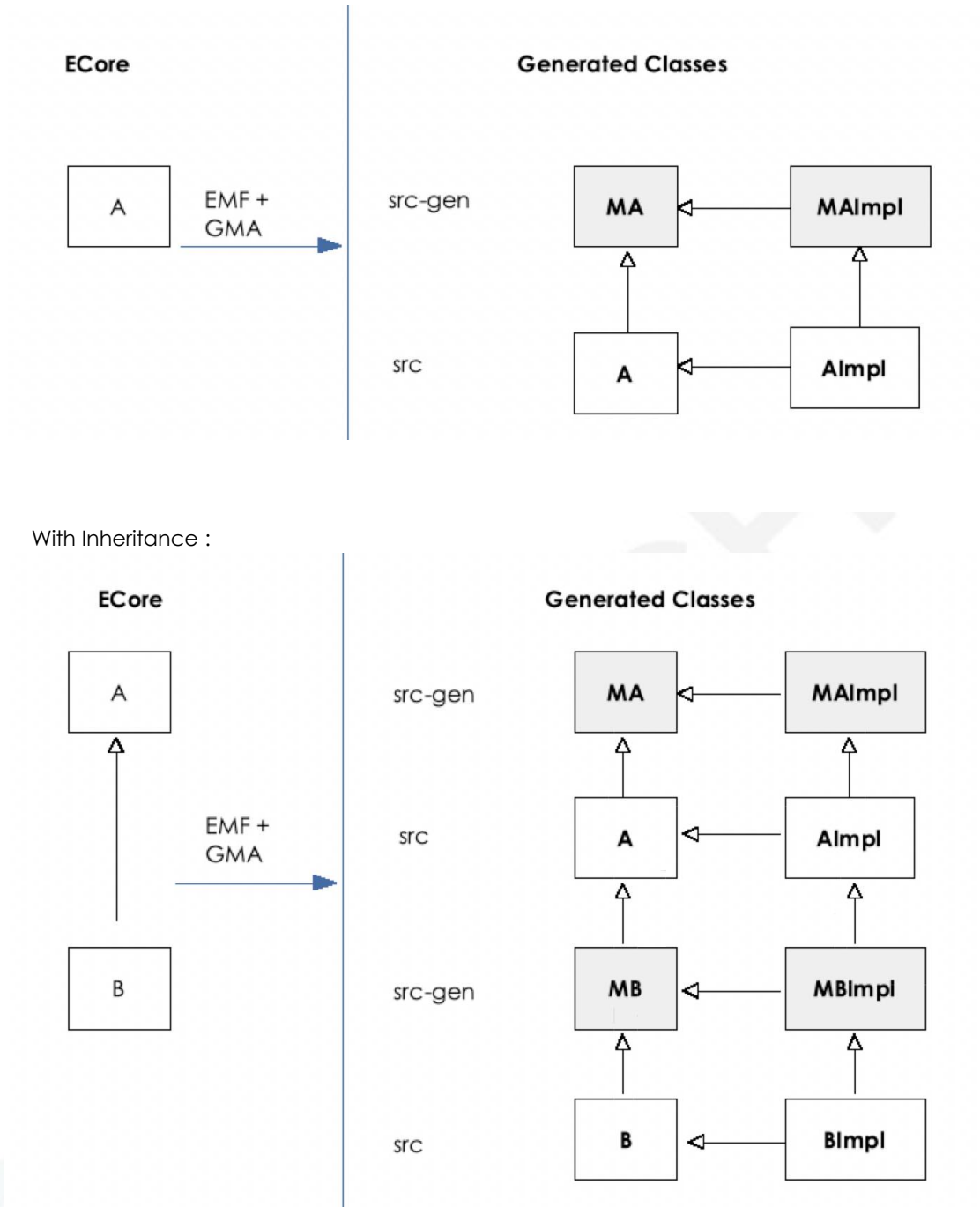


With inheritance



### GMA Generation

Simple EClass



### ***GMA technical implementation***

- Fully written in Eclipse 4 (injection and model fragments)
- Use the **current** EMF code generators
  - Override the GenModel factory to compute expected names
- Generators are written in XTend



- Fully tested on several advanced use cases (create a workspace and generate)
- Totally rewritten for version 2.X

### **GMA metrics**

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- Project started in december 2014
- 78 issues (72 closed)
- 103 unit tests
- hosted on github : <http://opcoach.github.io/genModelAddon/>
- used by several companies (Sogeti, Airbus, Continental, Thales Alenia Space, Altran...)

### **Q & A**

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- **Any Questions ?**

After the conference :

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