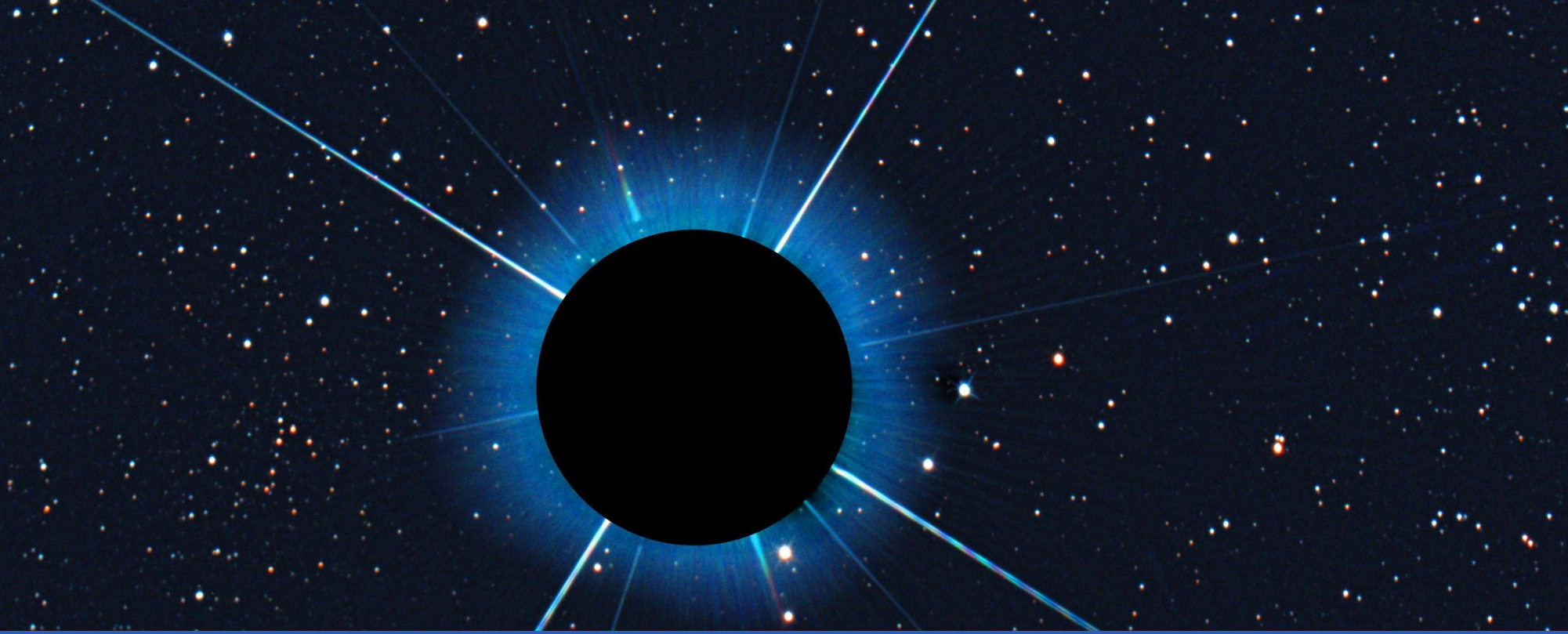


Tutorial: Create a graphical editor with Eclipse Sirius

Dr. Adel Ferdjoukh

Model Engineering, TU Wien

Synopsis

What you need to start this tutorial

Needed data

1. Ecore Meta-model (here we use maps.ecore).
2. Images and icons for elements (given images folder).
3. Eclipse EMF.
4. Install Sirius in Eclipse .

Create a Modelling project

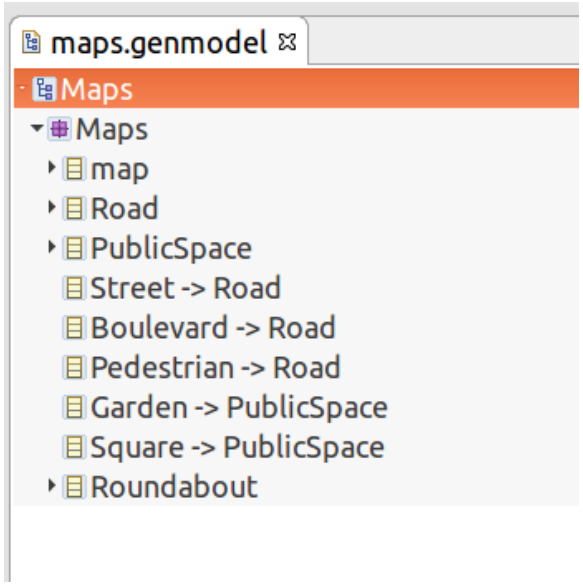
step 1: Create an empty modelling project

1. File → New → Empty modelling project.
2. Copy *maps.ecore* and *images/* into the new project.

Create an EMF generator model

step 2: Create an EMF Generator Model

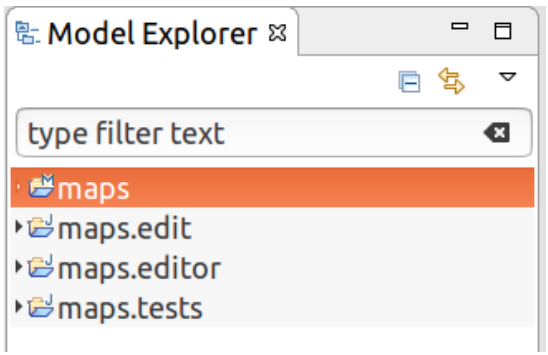
1. maps.ecore Right → New → EMF Generator Model



Generate the code of the meta-model

step 3: Generate the code of the meta-model

1. in maps.genmodel → Maps Right → generate all



Run maps project as a new Eclipse

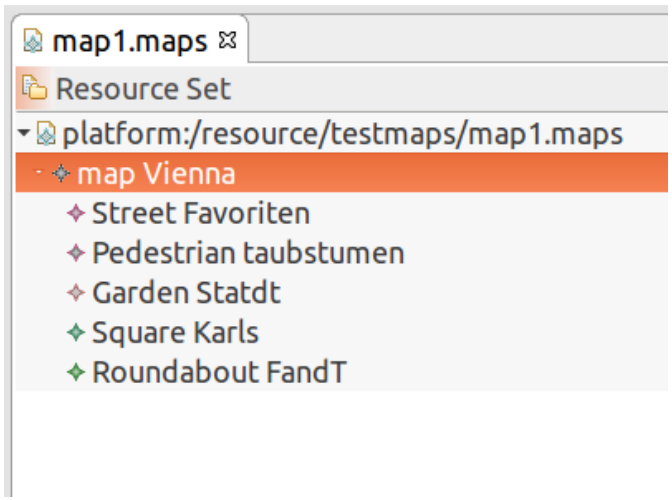
Step 4: Run as new Eclipse application

1. Run → Run as → Eclipse Application

Create a first instance of the meta-model

step 5: Create maps Model

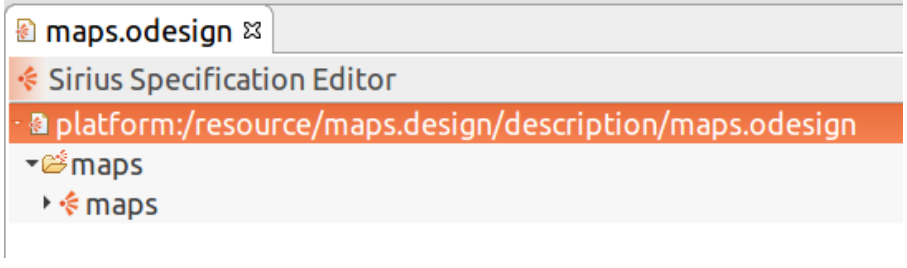
1. In runtime Eclipse: Create a Sirius Project (eg. test)
2. New → maps Model (eg. mapVienna.maps)
3. Create some elements in mapVienna.maps (new Street, Garden ...)



Create a Viewpoint Specification Project

Step 6: Create a Viewpoint Specification Project

1. In runtime Eclipse: New → Viewpoint Specification Project (eg. maps.design)
2. a Viewpoint Specification Model is automatically created (maps.odesign)
3. Rename the root element of .odesign file and set it to maps.
4. Do the same for the viewpoint element.



Create a new Diagram Description

step 7: Create a new Diagram description

1. In maps.odesign: maps viewpoint right click → new representation → new Diagram Description
2. set the properties of the created element: id = map, Domain class= maps.map (the root class of the meta-mode)
3. Now you can start the creation of you editor

Test you editor

step 8: Create a representation

1. In test project: expand .maps model and right click of root element (use modelling perspective)
2. New representation → other → select map
3. Now you can open map diagram (normally it is empty because no element was created)

Create a first node I

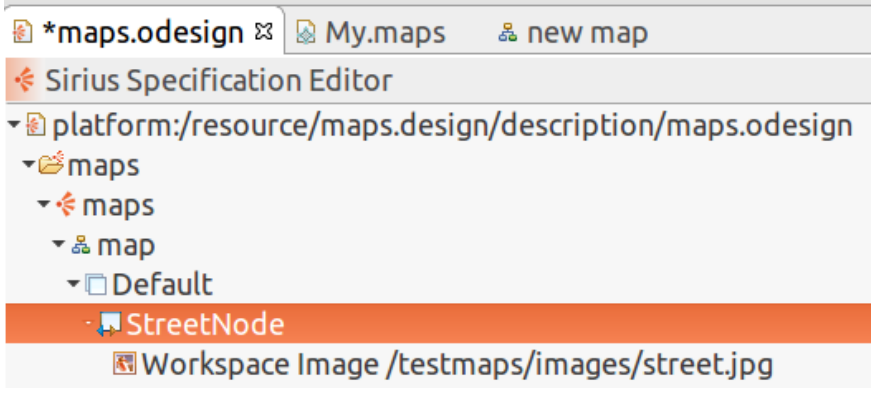
Create a first node

1. on Default layer → new Diagram Element → new Node
2. set id, domain class and semantic candidate expression of this node.
3. Create a style for your node (eg. workspace image).
4. Save and go to the opened diagram. All created streets are now visible.

Create a first node II

Remark

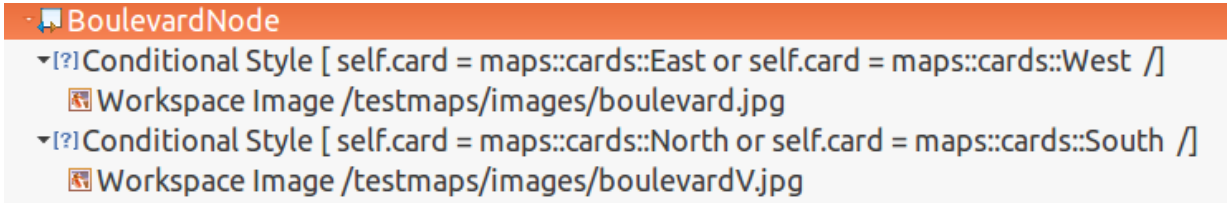
If the Semantic Candidates Expression is not set, then all the streets in you project are selected. To fix that, set: **feature:roads**. Now, only the roads of the current maps model are selected.



Create a conditional style node I

Our goal here is to create a conditional style for Boulevard (horizontal or vertical Boulevard). For that we have two different images for Boulevard.

1. Create the Boulevard node
2. Create a conditional style (set it to [self.card = maps::cards::East or self.card = maps::cards::West /])
3. Create a style for this conditional style
4. Create a second conditional style



Some other examples I

Remark

You can find a completed example of a graphical editor created with Sirius (maps.odesign)

More examples

In the completed example maps.odesign, you can find the following examples created:

1. Relation based Edge
2. Palette creation of Node
3. Palette creation of Relation based Edge