

# World Wide Modeling Made Easy

## A Simple, Lightweight Model Server

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POWERED BY NODE JS

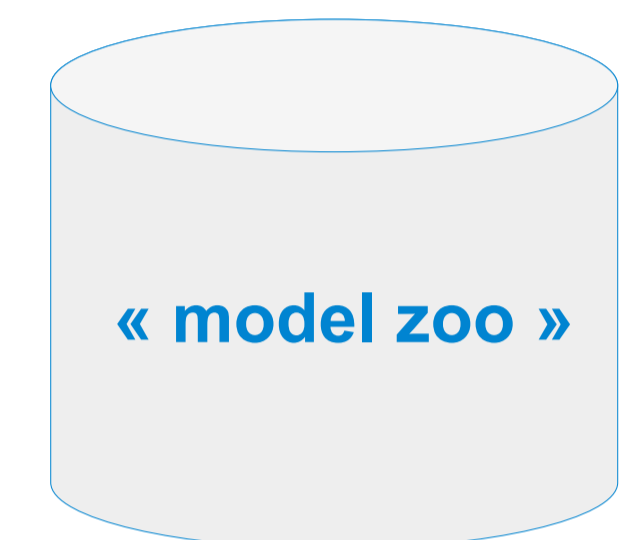
### Problem of interest



« Dear students,  
Today we are going to write a M2M transformation from UML StateCharts to Petri Nets as an EMF project.  
Wait...you will need 3 things:  
1. the UML metamodel (or a subset/fragment)  
2. the Petri Nets metamodel  
3. an input statecharts model to run the transformation  
...  
Good luck »

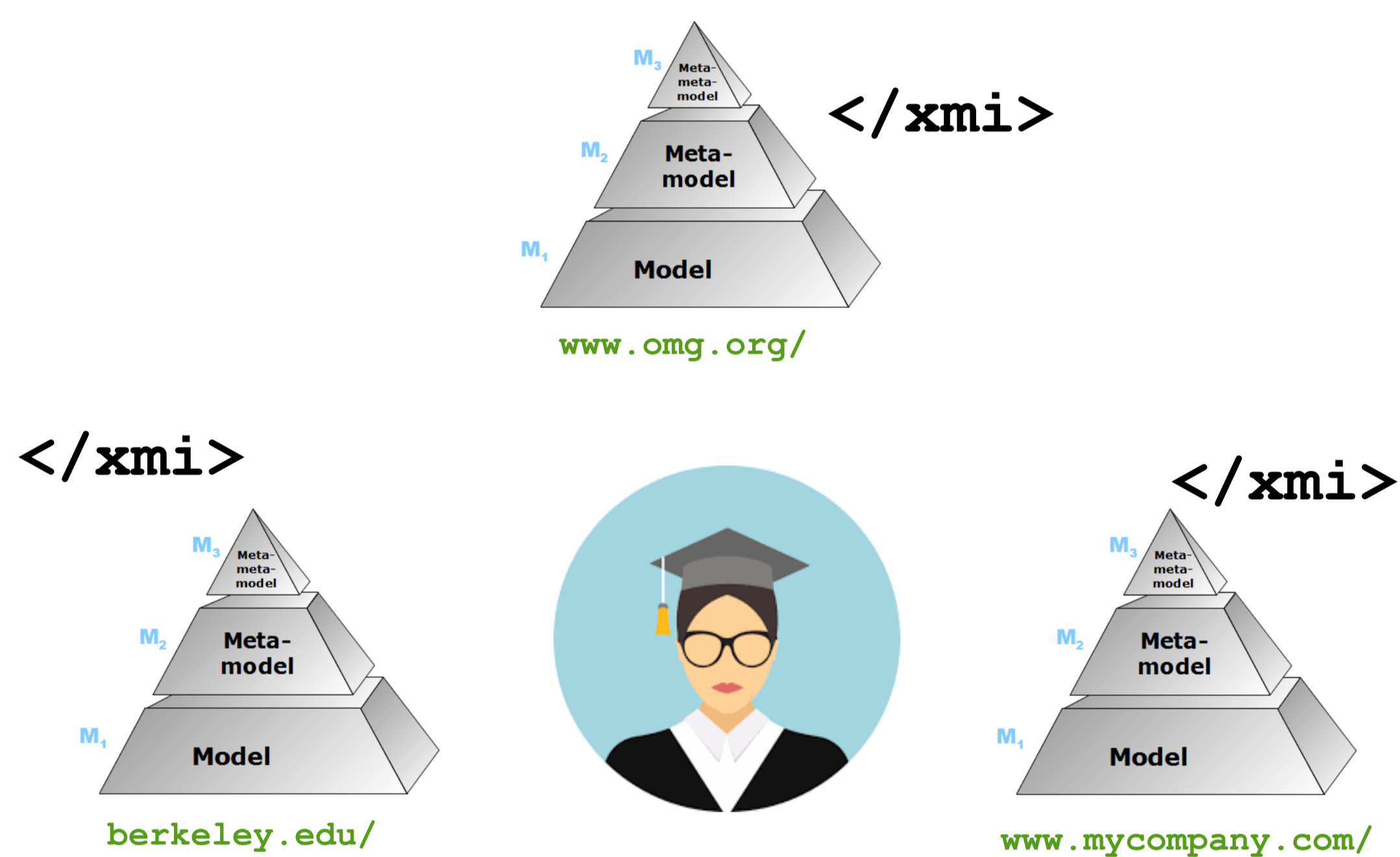
- How modeling assets are shared daily?
- Why models URIs are still not reality?

### Model directories' failure



- Unmaintainable and hence quickly deprecated
- Inevitably incomplete
- Hard to process automatically (website front-end)
- Bulk download formats

### Ideal solution



### Model-specific Server

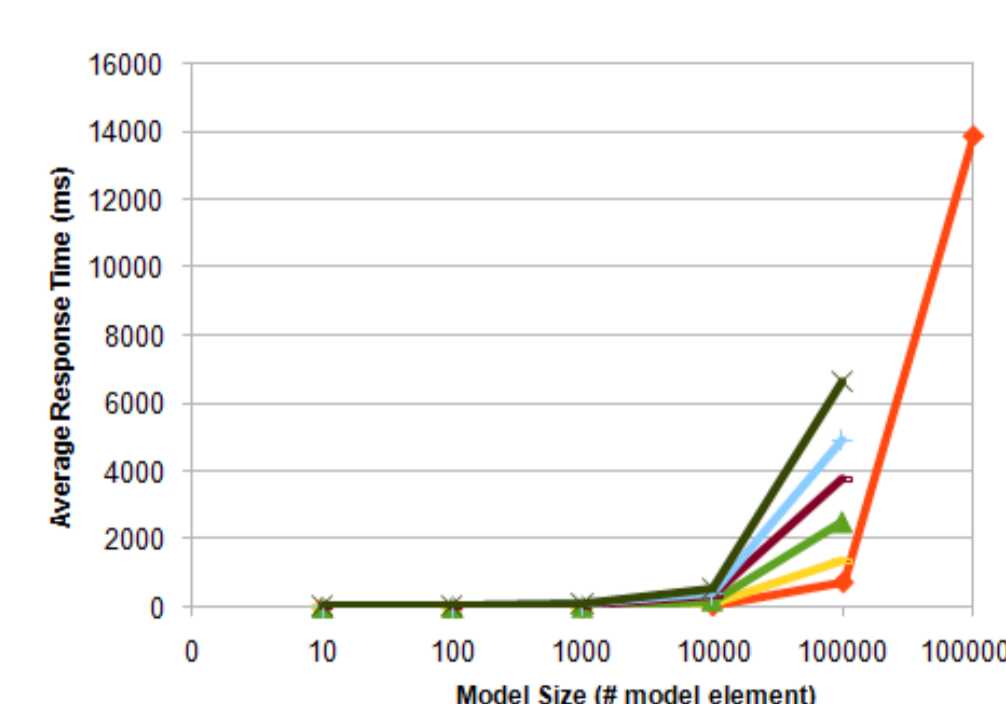
- Easy installation. Ready-to-use
  - npm install wwm
- Server fundamentals
  - Built-in M3-M2-M1 directories
  - XML format (EMF-compliant) + fragment annotations
  - Optional .nfo descriptors
- Model-specific URIs
  - model://host:port/M3/M2/M1#fragment
- Extra commands
  - ?list
  - ?info

```
model://www.univ-pau.fr/ecore/bpmn/purchase
model://www.univ-pau.fr/ecore/uml2#classDiagram
model://www.univ-pau.fr/ecore?list
...
```

### JS API Client

```
var wwm = require('wwm'); //import
var client = wwm.createClient();
//registering callbacks
client.on('model', function (m) {
  wwm.util.save(m);
  console.log(m.name + 'downloaded');
}).on('info', function (i) {
  console.log(i);
}).on('error', function (e) {
  console.error(e);
}).on('list', function (l) {
  console.log(l.count + 'found');
}).on('fragment', function (f) {
  wwm.util.save(f);
});
//query example (ask for all ecore metamodels found)
client.connect('model://www.univ-pau.fr/ecore?list');
```

### Benchmarks



◀ Load testing for model queries

Load testing for fragment queries ▶

