



# Sirius by Example

Build your own diagram, tables  
and tree editors in 20 minutes

Pierre-Charles David (Obeo)  
Stéphane Bonnet (Thales)  
Alex Lagarde (Obeo)

<http://www.eclipse.org/sirius>

**THALES**



# What is Sirius?

# Sirius in a nutshell

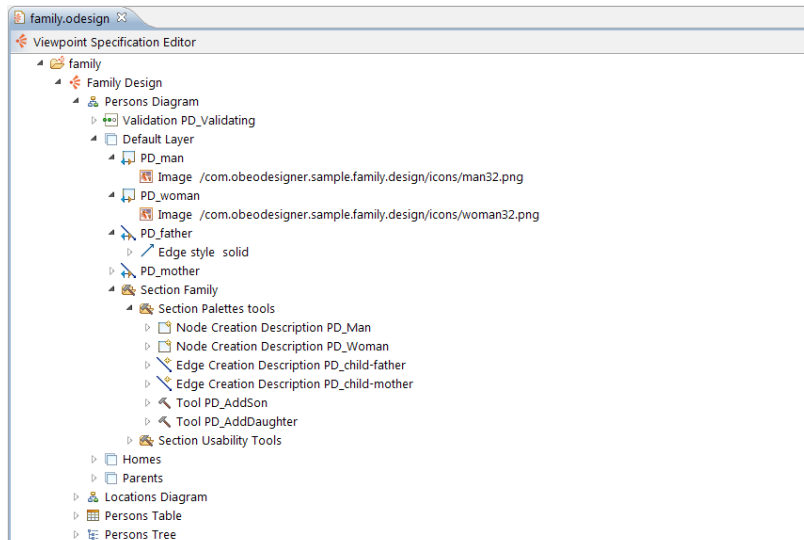
- A system to quickly define custom multi-view workbenches
  - Based on graphical editors/modelers
- Based on Eclipse Modeling Technologies
  - No need to be an expert for most uses
- New Eclipse Project
  - But already proven technology

# What benefits?

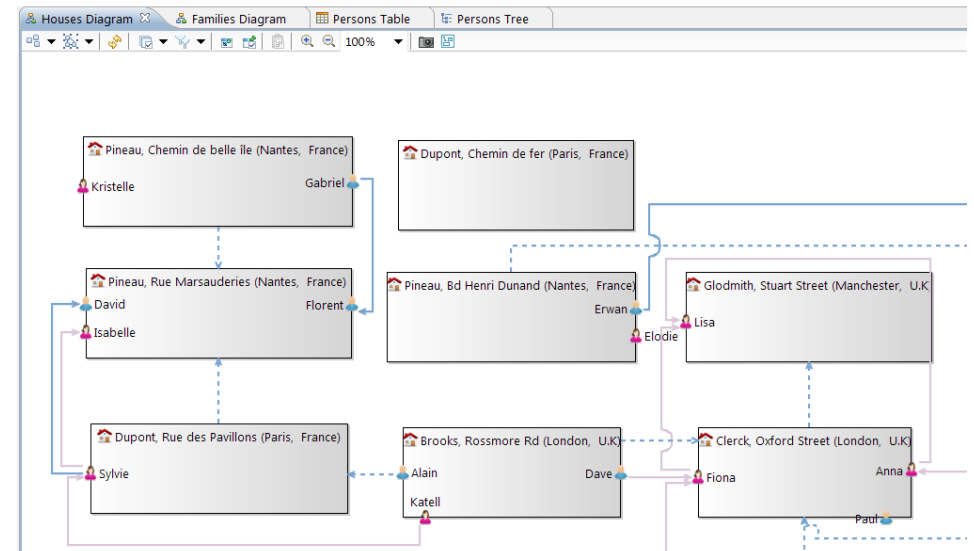
- For developers: reduce cost & complexity
  - No need to be a GMF expert
  - Dynamic & iterative (live) development
- For end-users
  - Tools adapted to their needs and workflows
  - Improved experience (compared to raw GMF)

# Two parts for two kinds of users

## Specification Environment (Specifier/Developer)

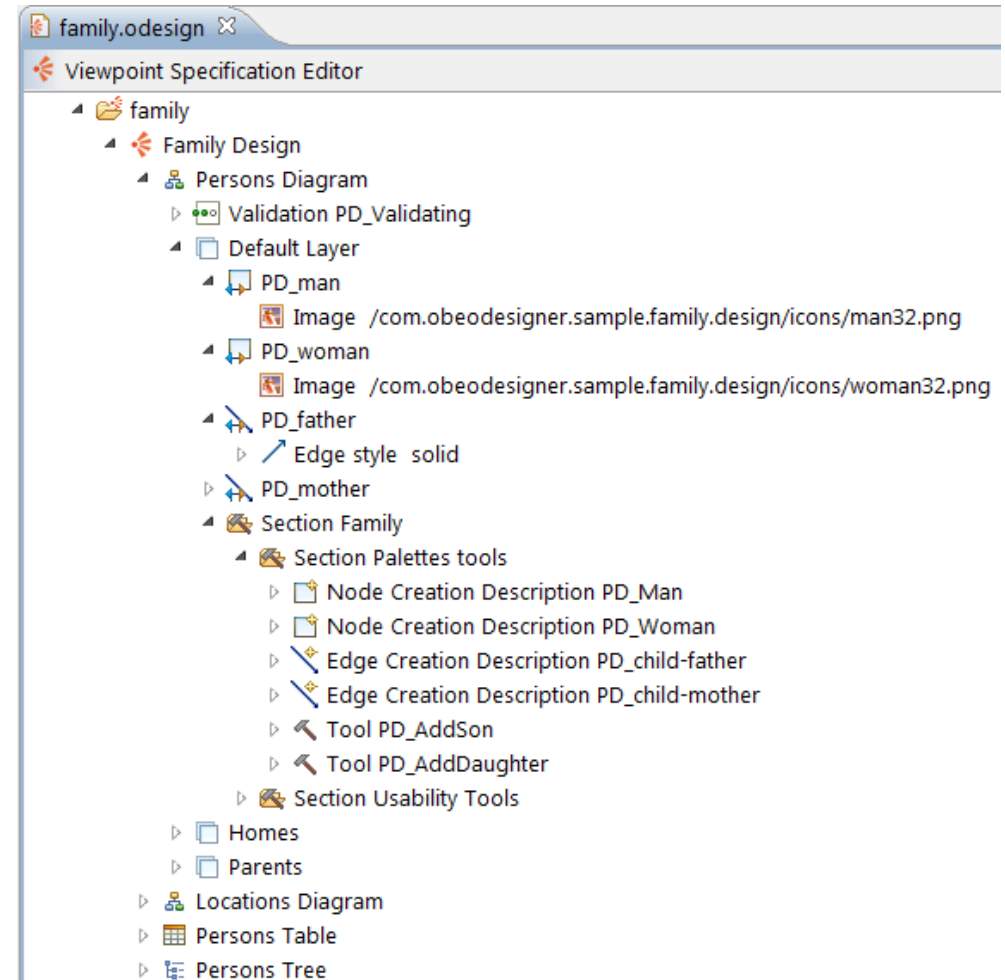


## Runtime Environment (End-user)



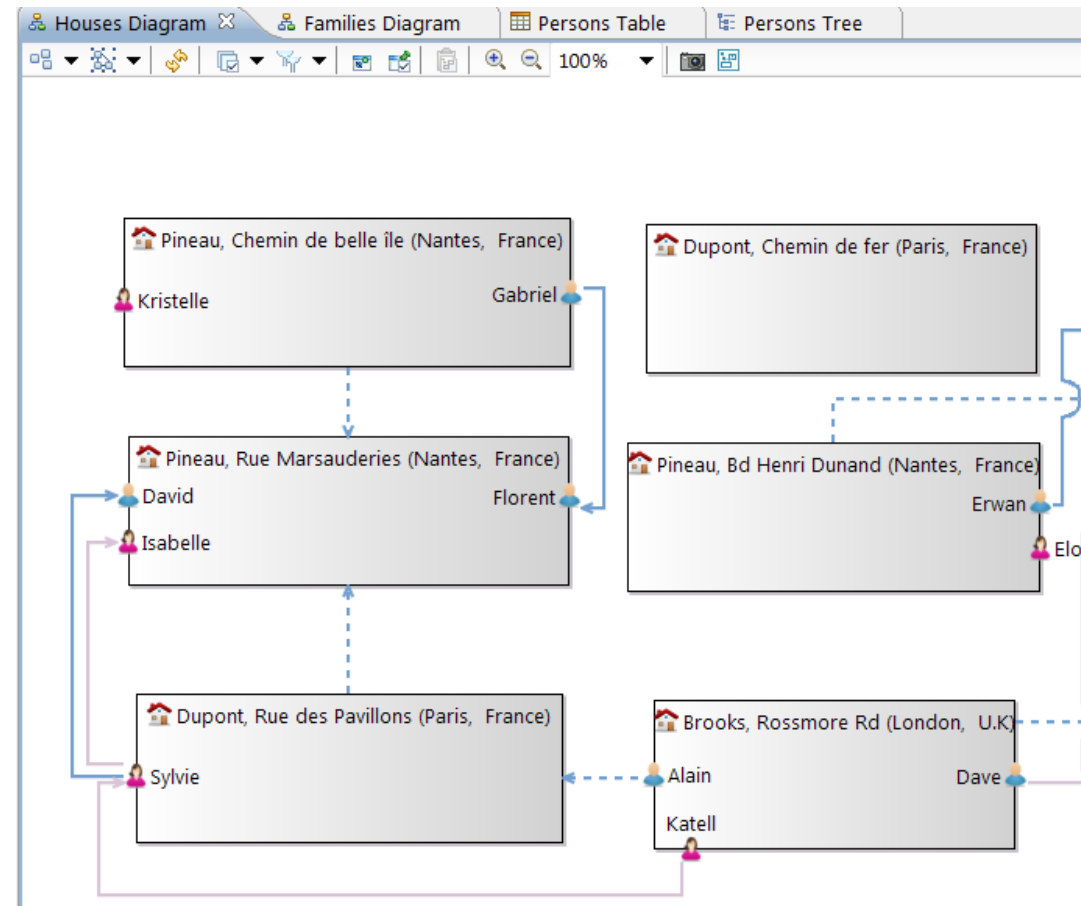
# The Specification Environment

- Define custom multi-view workbenches
  - Diagrams, Trees, Tables
- With little technical knowledge
- Get a working modeler fast
  - instant feedback
- Highly customizable
  - native tooling
  - Java or extension points



# The Runtime

- Executes the specification
  - No code generation
- Users manipulate models
  - Not just a drawing tool
- Environment adapted to user needs
  - Viewpoint-based
- Simplified workflow
  - Modeling Project



# A bit of history (1/2)

## Thales original needs

Thales previous experiences with UML profiling

- Poor adoption by system engineers
- Metamodels constrained by UML concepts
- Representations constrained by existing UML diagram



Need for DSLs

- More freedom in representations
- Heavier and more technical (GMF) developments
- Originally 2 or 3 foreseen modeling tools

Workbench/Business concerns separation

- Generic infrastructure for model management and representation
- Focus on business added-value
- Capitalization





# A bit of history (2/2)

**2007:** First Obeo/Thales prototype to validate the concepts

**2008:** Thales UML/SysML - like modeling workbench

**2009-Present:** Robustness

PROTOTYPING

SIRIUS  
DEVELOPMENT

THALES SYSTEM  
MODELING  
WORKBENCH  
DEVELOPMENT

FIRST  
OPERATIONAL  
DEPLOYMENTS

CONSOLIDATION  
AND NEW  
DEVELOPMENTS

**2008:** Specification and development of Sirius foundations

**2009:** First operational pilot projects, launch of Obeo Designer, based on Sirius

# Who already uses Sirius?

## Thales Operational Deployment Figures



**Avionic  
Systems for  
Airbus, Boeing,  
Dassault**

*France*



**Security**

*France*



**Space**

*France,  
Italy*



**Transportation**

*Canada,  
Germany*



**Ground and  
Air Radars**

*France,  
The Netherlands*



**Air Traffic  
Control**

*Australia,  
France*

XXX Modeling Tools

XXX Everyday Users

XX Operational or Pilot Projects

XXX Diagrams in Some Models

XXX Engineers Trained per day

XXXX Graphical Elements in Biggest Diagrams

# Who already uses Sirius?

- Embedded in the Obeo Designer and Obeo SmartEA (proprietary) products for 4 years
  - many use cases & customers
- Open Source modelers on Github and the MarketPlace
  - Many fields (UML, Risk Analysis, SysML, TOGAF, Entity...)
  - 1300+ installs in September 2013
- And now... **you!**
  - Integration builds for v0.9 available now
  - Version v1.0 planned for Eclipse 4.4 (Luna)

# Sirius in Action

# Live Demo

- Eclipse 4.3 (Kepler)
- Sirius 0.9 (integration build)
- All materials available on GitHub
  - <https://github.com/pcdavid/eclipsecon-europe-2013>

Alex will play the  
**Customer**

Expresses the needs

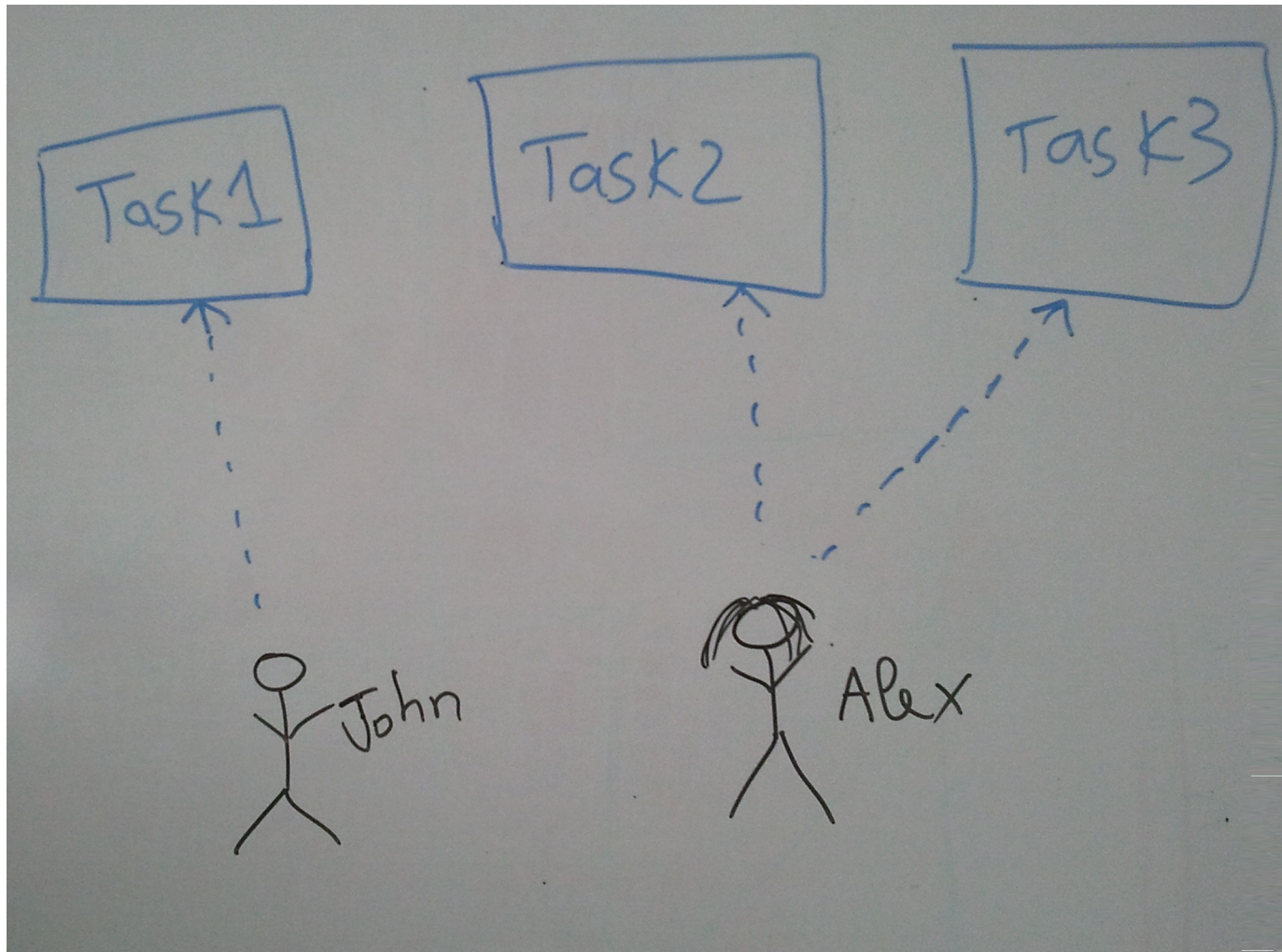
No technical knowledge

Pierre-Charles will play  
the **Specifier**

Implements the modelers

# Sirius in Action

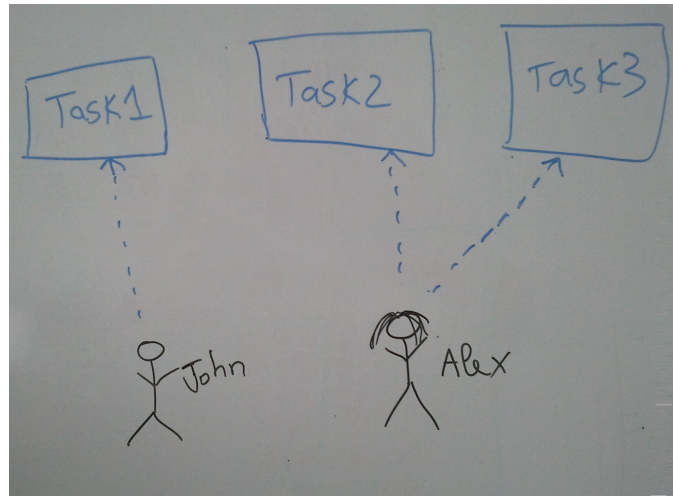
What the customer wants:



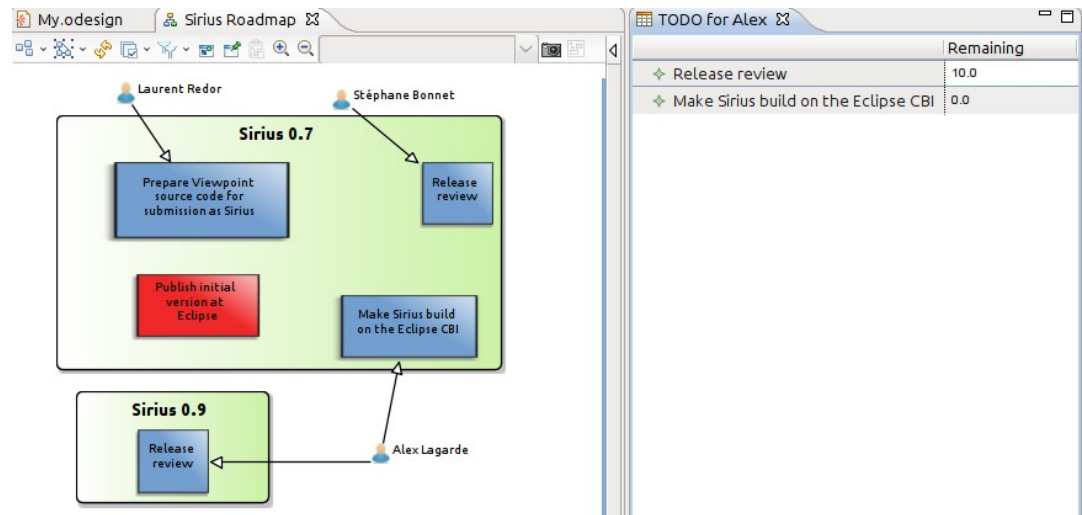


# Sirius in Action

What the customer  
asked for:

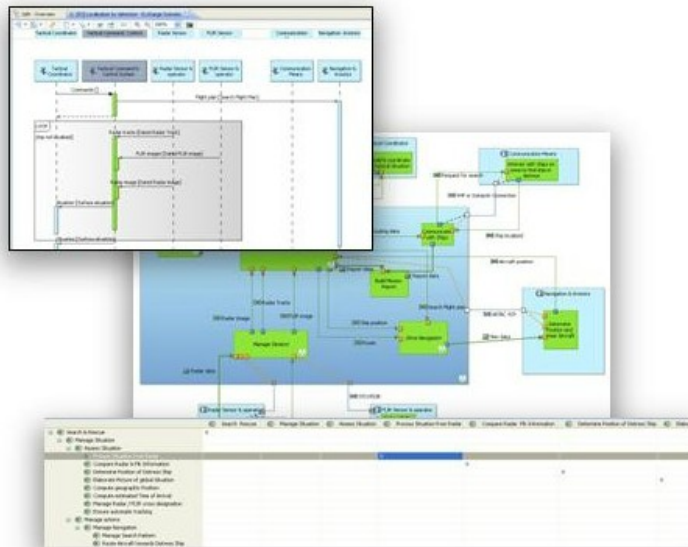


What he actually  
needed and got:



# What the customer can get in more than 20 minutes

## Sirius in the Thales Flagship Engineering Modeling Workbench



THALES

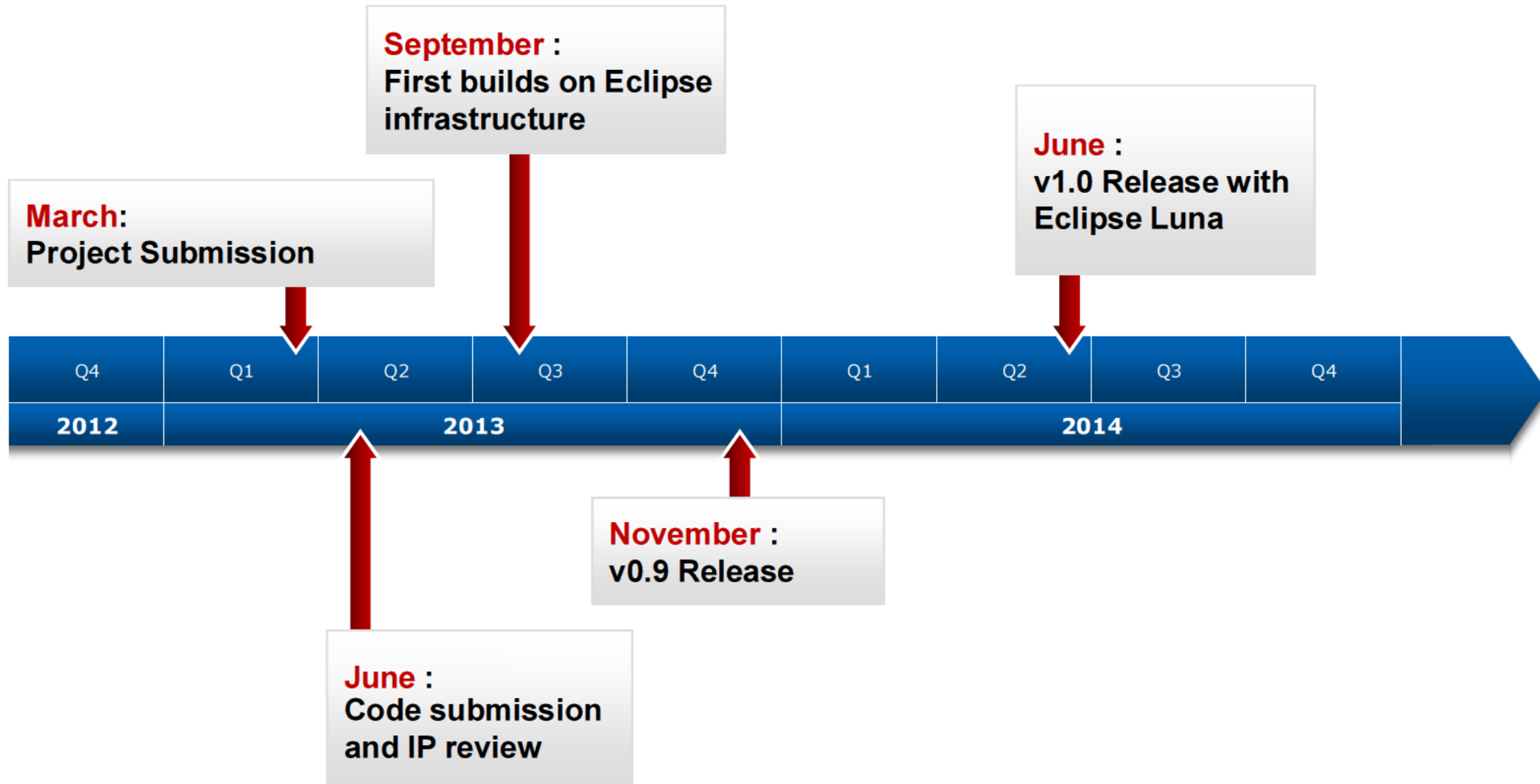


# Conclusion

# Three things to remember about Sirius

1. A full-featured environment to create custom modelers
2. Mature, many deployments
3. Official Eclipse project
  - around 10 full-time committers
  - v0.9 release soon, v1.0 will be in Luna

# Roadmap



# Thank You!



- Project Web Site
  - <http://www.eclipse.org/sirius>
- How to get started
  - [http://wiki.eclipse.org/Sirius/Getting\\_Started](http://wiki.eclipse.org/Sirius/Getting_Started)
- Forum
  - <http://www.eclipse.org/forums/eclipse.sirius>
- Don't forget to give feedback



*See you at the BOF tonight!*