EclipseCon France 2017
Squaring the Capella circle: Open Source, Agile, Traditional

CAPELLA OSS
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Squaring the Capella circle

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Introduction

Welcome to Toulouse

- City of space and aero spatial

Welcome to eclipsecon

- eclipse

- Sirius

Eclipse Working Groups
Fostering open industry collaboration to
develop new industry platforms

- Capella

- Kitalpha

- Arcadia
What is Capella: Model Based System Engineering tool

Software Engineering… (UML)

(UML Designer @Eclipse.org)
What is Capella: Model Based System Engineering tool

Similar needs for System Engineering
What is Capella: Model Based System Engineering tool

- Helps engineers to describe systems

- Customer
- Architect Design
- Engineers
- Product line manager
- SW/HW Designers
- Safety
- Performance
- Requirement manager
- IVVQ
- Functional & Non Functional Need
- Logical Architecture
- Physical Architecture

- Engineering Method (=How to?)
- ARCADIA
- Dedicated Modeling Tool

Capella
What is Capella: Model Based System Engineering tool
How is Capella used

About 1,600 received formations on Capella

- ~70,000 employees
- ~5,000 system engineers
- ~1,000 Capella users
How is Capella used

- Modelling
- V&V Validation / Verification
- Documentation generation
- Requirements
- Change Management (Jira)

Thales Workbench

- Two releases per year
- Support reactivity is essential
- Several maintenance branches
Technical overview of Capella

- Viewpoints:
  - Safety
  - IVVQ
  - Real Time Analysis

- Advanced Add-ons:
  - Teamworking
  - PLE
  - Model maintenance

Focus on Expertise, Know-how, Core business

Share
- Co-develop
- Contribute
- Use
Thales as an important open source contributor

Open Source Roadmap

- EGF (2012)
- Sirius (2013)
- Capella (2015)
Challenges: Technical view: Open source

Major Infrastructures changes (CI, SCM, BT)

- **2012**
  - EGF
  - Git
  - Bugzilla
  - Eclipse
  - At Thales
  - Proprietary

- **2013**
  - Sirius
  - Git
  - JIRA
  - Eclipse
  - At Obeo
  - Proprietary

- **2015**
  - Capella
  - Kitalpha
  - Clearcase
  - Clearquest
  - Thales
  - Eclipse
  - At Thales
  - Proprietary
  - At PolarSys
  - Bugzilla / JIRA
  - EPL

- Thales Workbench Connector
  - Clearcase - Clearquest

- Capella
  - Clearcase - Clearquest

- Kitalpha
  - SVN - Clearquest

- Team 4 Capella
  - Clearcase - Clearquest

- Sirius
  - Git - Jira

- Team 4 Sirius
  - Git - Jira
## Challenges: Technical view

<table>
<thead>
<tr>
<th>Smiling</th>
<th>Sad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-developed and OS of <strong>Sirius</strong> with <strong>OBEO</strong></td>
<td>Thales network constraints (securities, proxy)</td>
</tr>
<tr>
<td>Sirius used in several other projects other than Capella</td>
<td>&gt; Leading to duplicated infrastructure for Thales internal builds</td>
</tr>
<tr>
<td>More up-to-date technologies (git vs clearcase, jira vs clearquest)</td>
<td>Build complexity increased</td>
</tr>
<tr>
<td>Code Review improves quality</td>
<td>Polarsys Infrastructure</td>
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<tr>
<td></td>
<td>Loss of control in case of service disruption</td>
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<tr>
<td></td>
<td>Multiple bug-trackers to be synchronized (internal / external, confidentiality concerns)</td>
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Challenges: Squaring the circle

Thales need capture

Thales MBSE Community

Companion components

Open Source

Open Source Community

Shared repositories

Partnerships

Thales

Open Source

Thales Global Services
Challenges: Capture Need

Thales need capture

Thales MBSE Community

Partnerships

Open Source Community

Forum, Wiki

Ordered backlog
Challenges: Agile

- Process
- Technical Coaching
- Iterative Deliveries
- Operational Support

Agile... in a constrained context

- Roadmap defined at the beginning of the year
- Operational support
- Quality process
Challenges: Coordination

- Shared Roadmap
- Scrum of Scrum started
- Integration of distant contributions
- Obeo synchronization meeting
- **PolarSys** Release Train (TBA)
Challenges: Outside Thales: Partners

### Users / Interested stakeholders

- Continental
- Thales
- Airbus
- Thales Global Services
- Concordia University
- Altran
- Areva
- Artal Technologies
- ALL4TEC
- PRFC
- Université de Rennes 1
- Inria
- Bombardier
- Airbus Safran Launchers

### Currents Contributors

- **OBEO** (Sirius)
- Intel (Git & SVN / Diffmerge integration)
- Inquery (Patchs, Requesting tools)
- Pure Systems (PLE)
- Independants: F. Dorner, D. Ryzhov, J. Martinez
### Challenges: Squaring the circle

<table>
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<tr>
<th>Positive Aspects</th>
<th>Negative Aspects</th>
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<td>Partnership, collaboration</td>
<td>Difficulties to get users on demo-meetings due to operational priorities</td>
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<td>Shared knowledge on wikis</td>
<td>Delay from Sprint Deliveries to product deployment quite long</td>
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<td>Shared Forge and component repository</td>
<td>Two forums, two wikis, two bug-trackers</td>
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<td>Evolutions covering better user needs</td>
<td>Can't fulfill all needs, but don't hesitate to contribute!</td>
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<td>Small enhancement with strong-added-value are more easily identified</td>
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<td>Iterative User feedback</td>
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**Partnership, collaboration**

**Shared knowledge on wikis**

**Shared Forge and component repository**

**Evolutions covering better user needs**

**Small enhancement with strong-added-value are more easily identified**

**Top-valued features are delivered first**

**Iterative User feedback**

**Difficulties to get users on demo-meetings due to operational priorities**

**Delay from Sprint Deliveries to product deployment quite long**

**Two forums, two wikis, two bug-trackers**

**Can't fulfill all needs, but don't hesitate to contribute!**
Thank You! Questions? (@see you at Capella stand)

Visit Toulouse
toulouse-tourisme.com

Use Capella
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