



Tectosages

Model-driven Engineering company



topPROCESS

Making the complicated simple



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Model-driven Engineering company



Hello !

*We are the members of the
Volques-Tectosages, an hold tribe of 2 200 years.*

*A very interesting story, but probably too long...
So, we present :*

topPROCESS

in 5 mn ...



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Model-driven Engineering company



*We are dedicated in Model-driven Engineering.
« Industrialization of software »*

We model to verify, simulate or test the product.

*We apply these technologies in
process improvement ...*

to help IT Managers.



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Model-driven Engineering company

System for continuous improvement of IT processes



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For more than 15 years we have been managing projects for our customers and improving their processes.

« *But why a new way of working ?* »

To propose an effective response and industrial issues such as these :



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System for continuous improvement of IT processes



"We do not really know who makes what!"

"Our projects do not improve!"

*"We have excellent know-how but
they are not spread!"*

*"And what about the know-how
of our seniors?"*

*Because it is no more a question of
making an audit, a snapshot of business, ...*

but of supplying to you

*the technical and
organizational means to master your processes and
improve them for your
production.*



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*"We do not really know who makes what!"
"Our projects do not improve!"
"We have excellent know-how but
they are not spread!"
"And what about the know-how
of our seniors?"*

*"I want a clear and global vision of the things!"
"We have to industrialize our processes!"
"Let us have simple and effective means to
be more innovative!"
"Let us formalize our strategy and let
us communicate!"*

Because solving these problems is not only a wish but is mandatory,

it is required to put a strong impulse to your strategy and to implement the means of being successful.

« We want to give a **global efficiency** to our processes »



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"I want a clear and global vision of the things!"

"We have to industrialize our processes!"

*"Let us have simple and effective means to
be more innovative!"*

*Formalize our strategy and let
us communicate!"*

The description
which follows will be illustrated by a case study of
the Aeronautical, Space and Automotive domain that
was realized as part of a big project of the pole of
competitiveness Aerospace Valley.

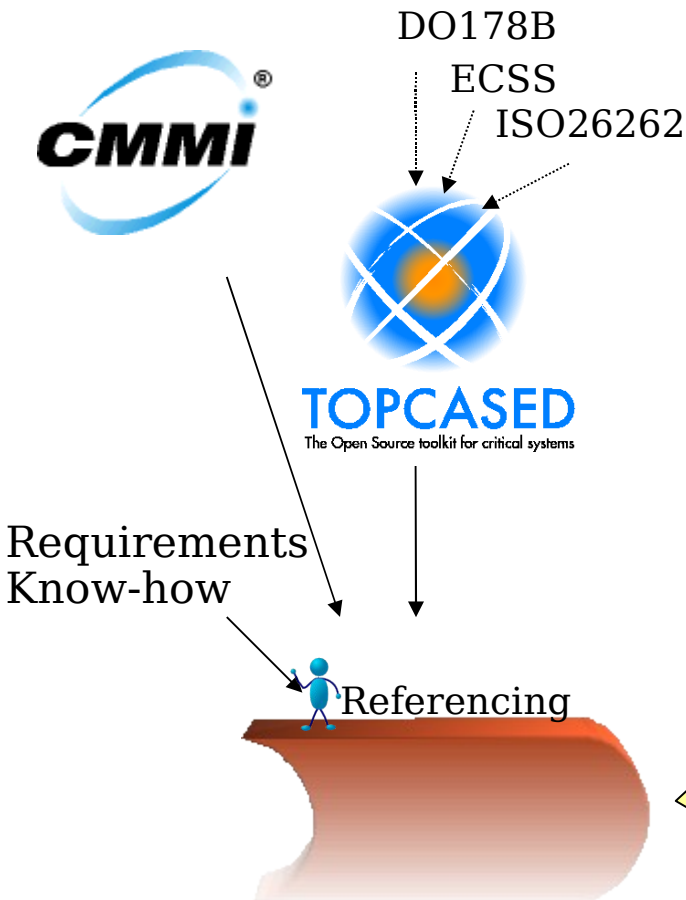
Our approach is based on three major disciplines





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1st discipline : referencing



It consists in transforming the paper documents and the knowledge into several structured computer models:

- The repository of the domain. For example Capability Maturity Model Integration which is a standard in software development may be translated in process components. It thus becomes the benchmark model for the design;
- Repository of the profession, as Topcased Quality Process which is the process of the Topcased toolkit. It respects the Aeronautics, Space and Automotive standards. It consists in the global process of integration on the one hand and in the process that all contributors of the Topcased toolkit should respect on the other hand;
- The requirements issued by the various disciplines which contribute to the global process like quality requirements or management requirements. These requirements constitutes another repository that the processes will have to respect too;
- The know-how as for example a new technique. It represents the more detailed level of the description.

This referencing and its use as a set of software components is about to considerably modify the ability of designing processes.



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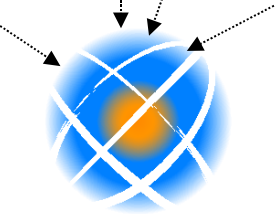
2^d discipline : Modeling



DO178B

ECSS

ISO26262



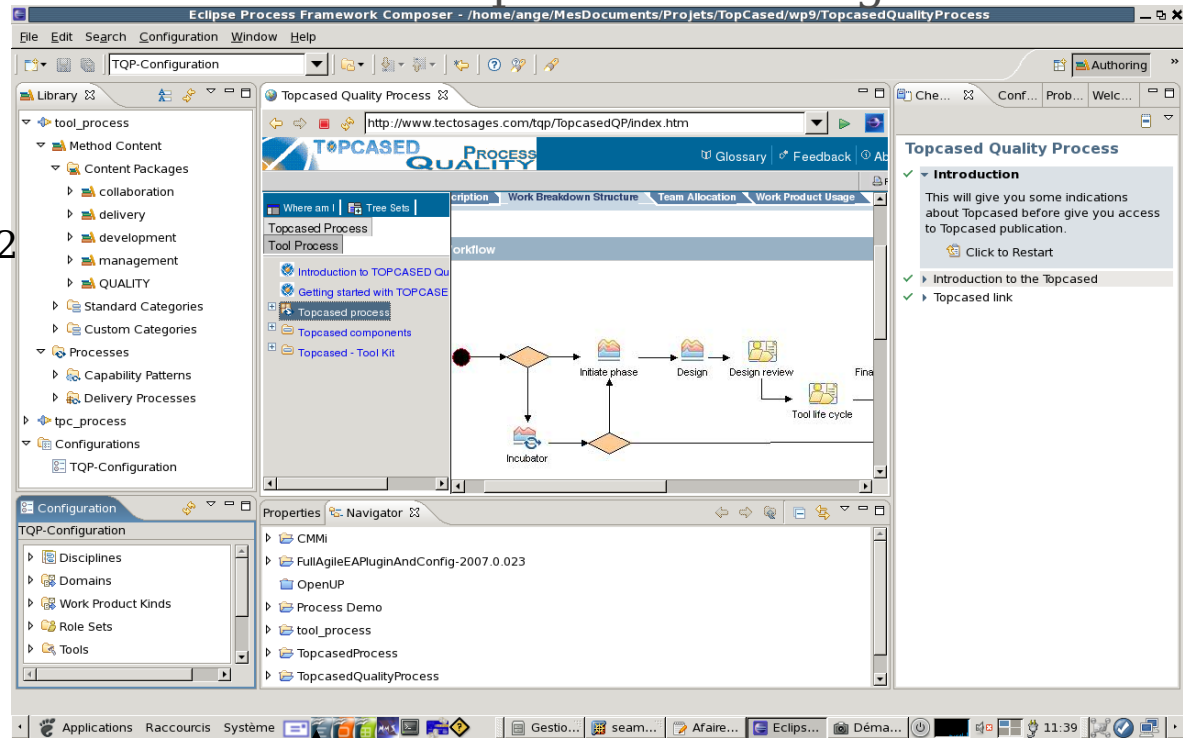
TOPCASED
The Open Source toolkit for critical systems

Requirements
Know-how

Referencing



Modeling



Modelling consists in using the components already available in libraries. It is then possible to focus on the processes themselves : reference processes, processes of domains or specific professions, processes for project kind. So it is possible to design processes that are built from a common base of standardized process components without having to deal with any method.



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3^d discipline : Product

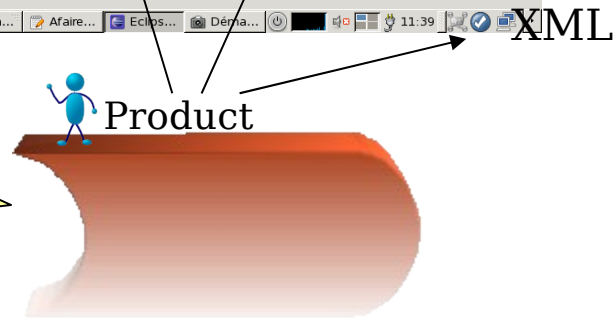
The screenshot shows the Eclipse Process Framework Composer (EPF) interface. The main window displays the 'Topcased Quality Process' configuration. The workflow diagram shows a sequence of tasks: 'Introduction to TOPCASED Quality Process', 'Getting started with TOPCASED Quality Process', 'Topcased process', 'Topcased components', and 'Topcased - Tool Kit'. The 'Properties' panel shows the 'FullAgileEPluginAndConfig-2007.0.023' configuration. The 'Task List' table shows the following data:

Nom de la tâche	Travail	Durée	Début	Fin
Technical Committee	0		Ven 25/05/07	Ven 25/05/07
Tool life cycle	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07
Initialization	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07
Writing of the plans	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07
Write Software Configuration Manager	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07
Technical Committee	0		Ven 25/05/07	Ven 25/05/07
Committee	0		Ven 25/05/07	Ven 25/05/07
Analyst	0		Ven 25/05/07	Ven 25/05/07
Quality manager	0		Ven 25/05/07	Ven 25/05/07
Write Software Development Plan	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07
Technical Committee	0		Ven 25/05/07	Ven 25/05/07
Committee	0		Ven 25/05/07	Ven 25/05/07
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Technical Committee	0		Ven 25/05/07	Ven 25/05/07
Committee	0		Ven 25/05/07	Ven 25/05/07
Analyst	0		Ven 25/05/07	Ven 25/05/07
Quality manager	0		Ven 25/05/07	Ven 25/05/07
Organization of the project	0 hr	1 jour	Ven 25/05/07	Ven 25/05/07

Producing consists in transforming the previous models into tools that assist the development of the systems:

- Tool to assist the teams by providing means to communicate on the process itself : discipline, profession, phase, standards, ...
By integrating these processes so that they are to of the concerned people, as for example in Topcased where the process is present at the heart of the development toolkit;

- Finally the production takes all its sense here: the process becomes a tool to help in the piloting of the projects by supplying the project managers with plans, as MS-Project in this example.





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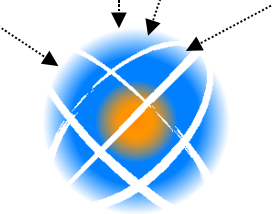
L'ingénierie des modèles



DO178B

ECSS

ISO26262



TOPCASED
The Open Source toolkit for critical systems

Requirements
Know-how

Referencing

Modeling

Product

Library

- tool_process
 - Method Content
 - Content Packages
 - collaboration
 - delivery
 - development
 - management
 - QUALITY
 - Standard Categories
 - Custom Categories
 - Processes
 - Capability Patterns
 - Delivery Processes
 - tpc_process
 - Configurations
 - TQP-Configuration

Configuration

- TQP-Configuration
 - Disciplines
 - Domains
 - Work Product Kinds
 - Role Sets
 - Tools

Properties

- CMMI
- FullAgileEPluginAndConfig-2007.0.023
- OpenUP
- Process Demo
- tool_process
- TopcasedProcess
- TopcasedQualityProcess

Workflow Diagram

```

    graph LR
      Start(( )) --> Incubator[Incubator]
      Incubator --> InitPhase{Initiate phase}
      InitPhase --> Decision1{ }
      Decision1 --> Design[Design]
      Design --> DesignReview[Design review]
      DesignReview --> ToolLifeCycle[Tool life cycle]
  
```

Task Table

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XML



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Design process

Import plugin
tool_process

Reusable
content

Manage content: standard or
custom categories

The screenshot displays the Eclipse Process Framework Composer interface. The main workspace shows a workflow diagram with nodes like 'Incubator', 'Initiate phase', 'Design', 'Design review', and 'Tool life cycle'. The left sidebar contains a 'Library' tree with categories such as 'Method Content', 'Content Packages', 'Standard Categories', and 'Processes'. The right sidebar shows a 'Topcased Quality Process' overview with an 'Introduction' section. The bottom panels show 'Configuration' and 'Navigator' views.

Cheat sheet
integrated in
the IDE

Models of
processes

Delivery
processes

Configuration
of the
production

Choose a
library



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A complete solution : training --> --> Support



topPROCESS® EPF Pro

« Professional solution based on EPF »

Training	Support
Design & improvement of processes	
	Doc.



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More details, a demonstration,...

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Software Product Line

Reengineering

Concurrent Engineering

ALM Design



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Thank you