Testing listed as the main upcoming topic in PragmaDev latest survey.

Paris - France - July 1st, 2014 - PragmaDev latest survey indicates testing and model simulation are the top upcoming topics. The survey also confirmed last year's results indicating a substantial decrease in UML usage forecast. For the first time in the study the effective usage of UML has been slightly decreasing from 71% in 2013 to 70% this year. The survey also confirms UML and SysML models are mainly used for documentation, where Matlab and SDL models are mainly used for simulation and code generation.

2014 modeling technologies and habits survey

This on-line survey took place between January and May 2014 and gathered 84 responses, most of them out of our existing contacts. The raw results are available here, and the following information is a summary of the survey. Feel free to use this information as long as you quote it is coming from PragmaDev.

Respondents profile

Respondant average profile is:
- **from Europe,**
- **working in a large telecom, automotive or avionic company,**
- **has indifferently between 0 and 30 years of experience,**
- **the target platform runs an operating system (short majority for Windows),**
- **the application is written in C or C++,**
- **it is based on Finite State Machines and is object oriented.**

Press release

Modeling technologies

The top four modeling technologies are UML, Matlab, SysML, and SDL. UML is the first modeling technology to be quoted, SysML has increased compared to last year.

Q11 Do you use one or several of the following modeling technologies ?

Technology	Percentage
SysML	39%
UML	70%
MARTE	4%
AADL	6%
SART	13%
SDL / SDL-RT	22%
ASN.1	12%
Matlab (SimuLink)	46%
LUSTRE (Scade)	13%
Modelica	13%
TTCN-3	9%
SystemC	9%
VHDL	22%
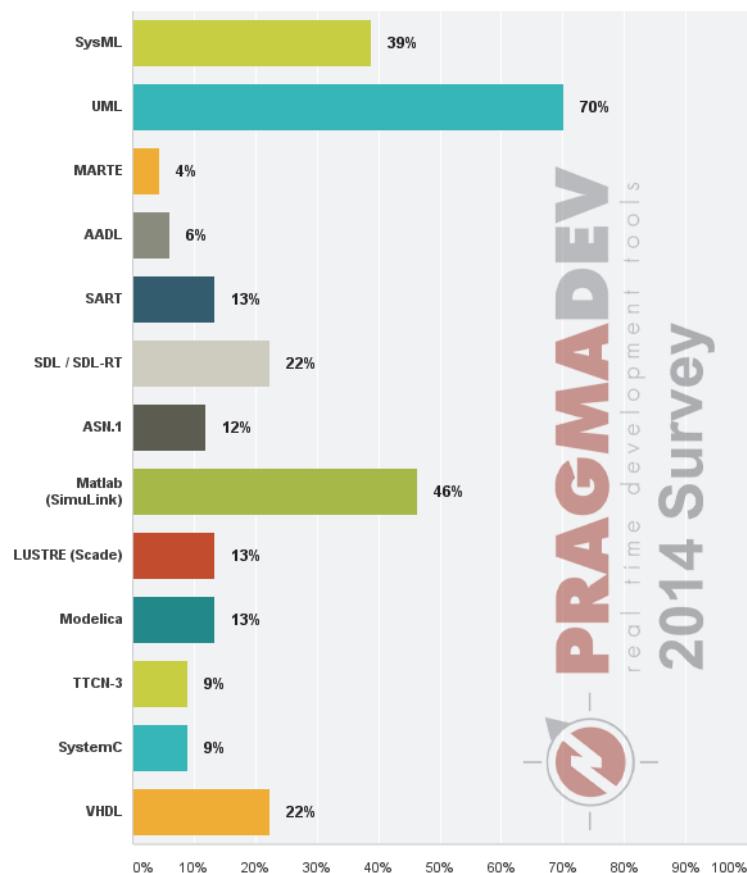
Out of the 13 diagrams in UML the top 4 are:
- **Class diagram,**
- **Sequence diagram,**
- **State chart,**
- **Use case diagram.**

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Modeling usage

The usage of each modeling technology confirms last year's results:
- **SysML and UML are mostly used for documentation,**
- **SDL and Matlab models are used for simulation and code generation.**

Q12 How far is modeling used in your activity ?

Legend:
- We do not have any formal models
- We use models for documentation
- We do simulation of our models
- We generate code out of our models
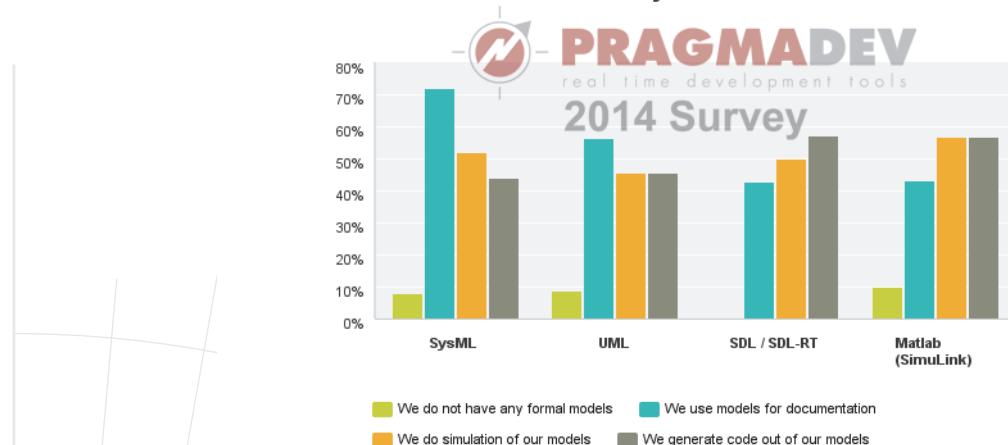
Upcoming technologies

This is probably one of the most interesting result we get out of this survey, and that gives an idea of the current trends on the modeling market.
- **The key information is that the positive trends are soft with a maximum of 4% for MARTE and SDL,**
- **UML keeps a substantial forthcoming decrease of 18% for the fourth year in a row,**
- **SysML trend is flat.**

Trends: upcoming vs declared

SysML 1, UML -18, MARTE 4, AADL 3, SART -6, SDL / SDL-RT 4, ASN.1 -1, Matlab -5, Scade -7, Modelica -3, TTCN-3 0, SystemC -1, VHDL -2, Other -4

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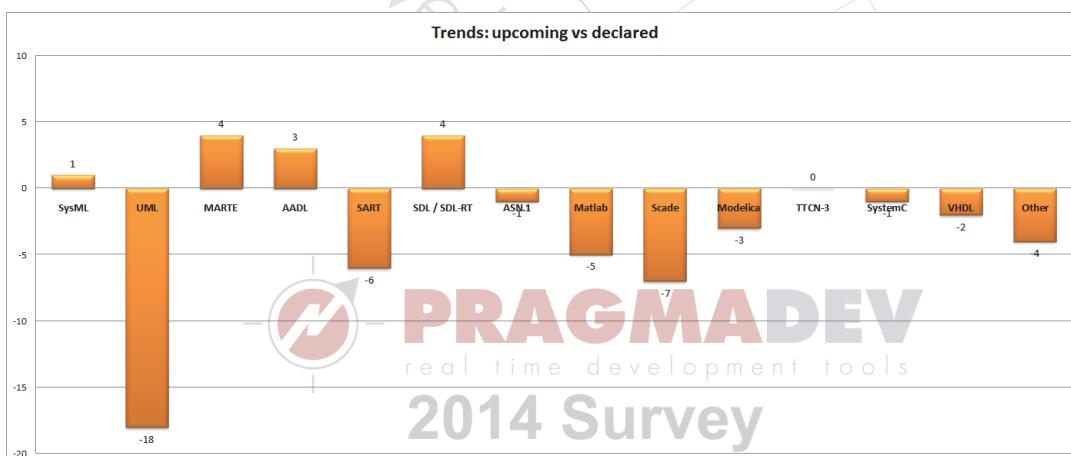
Upcoming hot topics

Last question of the survey was about which topic will get the focus in the coming year. Top two answers are:
- **Testing,**
- **Model simulation.**

Q21 **In the coming year do you plan to improve one of the following aspect ?**

Topic	Value
Documentation	50%
Traceability	45%
System modeling	52%
Software modeling	44%
Model simulation	53%
Model checking	38%
Testing	55%
Test generation	29%
Code coverage	27%
Quality	21%
CMMI level	14%
Certification	15%
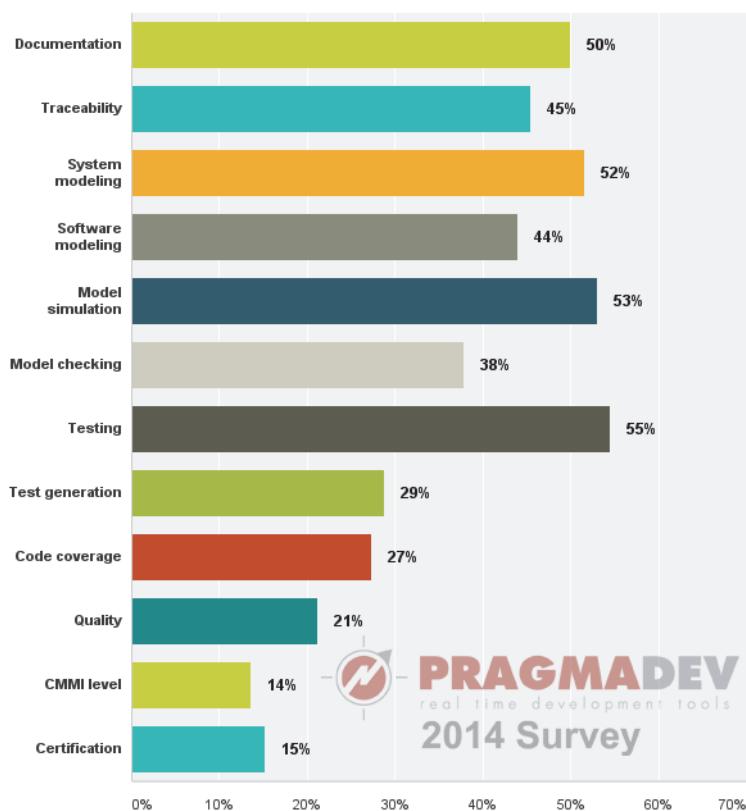
2014 Survey

About PragmaDev

PragmaDev is a privately held company based in Paris France that provides a set of modeling and testing tools for the development of real time and embedded software: "Real Time Developer Studio" and "PragmaDev Tracer". Real Time Developer Studio targets all development teams working on communicating systems with a unique combination of standard languages. The PragmaDev Tracer is a free on-line or off-line tracing tool on which properties can be verified.

Real Time Developer Studio provides three levels of modeling: informal, semi-formal, and fully formal modeling. While informal modeling is mainly used for documentation, the most advanced level of modeling allows simulation, prototyping, verification, full code generation, debug on target, and test of the model.

PragmaDev has established partnership with key players in the real time domain. Customers include Airbus, Renault, Alcatel-Lucent, the French Army, the European Space Agency, Toshiba, Korean Telecom, and LG Electronics.

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