OSATE overview & community updates

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Overview of OSATE2

Eclipse-based AADL editor

- Support for AADLv2.1, up to date with latest standard revisions
- Textual (Xtext-based) and Graphical (Graphiti-based) edition capabilities

Support for quantitative analysis

- SEI-based plug-ins (latency, performance, etc.)
- Third-party plug-ins (code generation, scheduling analysis)

OSS development model

- Public SCM and bugtrack, open to external contribution
- Licensed under EPL license
Statistics update

Code base
- More than 6M lines of code
- Mostly generated

Community
- 1900+ commits over a year!
- More than 20 contributors with ~5 active

Software Quality
- Integrated test suite
- Test Analysis and Model Instantiation

See. https://www.openhub.net/p/osate
Integration of AGREE and RESOLUTE

Collaboration within the AADL/OSATE community

- Hosted on shared github repository (https://github.com/smacm/smacm)
- Integrated in the OSATE testing version

Improvements of RESOLUTE

- Support of list and not set for values
- Better casting operations

Integrate RESOLUTE for model validation

- System Requirements (i.e. security, safety)
- Model consistency before invoking other tools (i.e. code generation)
Use of pre-defined RESOLUTE theorems
Improvement of Graphical Editor

Current Improvements

• Processor and Internal Feature Support
• Array Support (e.g. creation, editing dimensions)
• Nested View
• Visualization of Bindings (i.e. processors, memories, etc.)

Planned Improvements

• Improved automatic layout
• Editing Call Sequences
Improvement of Graphical Editor - example
Ocarina Bridge

Connect OSATE with Ocarina

Need to download Ocarina (cf. http://www.openaadl.org)

Invoke Ocarina with OSATE models

Bring code generation capabilities

Currently work for DeOS
Maintenance and Bugfixes

Integration of quick fixes
  Correct mistyped models
  Suggest replacement
  Better user experience

Improvement of Property Editor
  Support of list of list
  Support of ranges
Public Model Repository

Core examples
   Demonstrate main language capabilities
   Modeling patterns & model samples for beginners

Error-Model examples
   EMV2 model constructs
   Demonstration of tools

Case-Studies
   AIR6110
   Public version of existing projects

https://github.com/osate/examples/
Getting Support

Github
- Public bugreport
- Source code changes tracking

Wiki
- Maintain research doc.
- Populate with documentation
- Ease community involvement

Mailing-List

Branch to track

View code revision

Bugtrack
Community update – ACVI workshop

AADL dedicated Workshop
   Replace the AADL user days
   Engage with other communities

Organization of 2015 edition
   2014 edition at MoDELS – quite a success
   Need to find a location for the 2015 edition

Need suggestion/contributions
   Stick with MoDELS? Use another venue?
   Please contact us if you are willing to help!
Conclusion

Integration of new capabilities
- RESOLUTE & AGREE
- Ocarina bridge for code generation

New release to come
- Integration of all new features
- Include many fixes and a better user experience

AADL community open to contribution
- Open Development Model (OSS tools & license)
- New discussions support (mailing-list, blog, remote meetings)
Links and other useful information

OSATE-related tools

- Wiki: https://wiki.sei.cmu.edu/aadl/index.php/Osate_2
- Github: https://github.com/osate/
- Ohloh: https://www.openhub.net/p/osate

General AADL discussions

- Main AADL website: http://www.aadl.info
- SEI blog: http://blog.sei.cmu.edu/
- AADL mailing-lists https://wiki.sei.cmu.edu/aadl/index.php/Mailing_List
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