



The Open Source AADL Tool Environment (OSATE)

OSATE Development Team

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OSATE

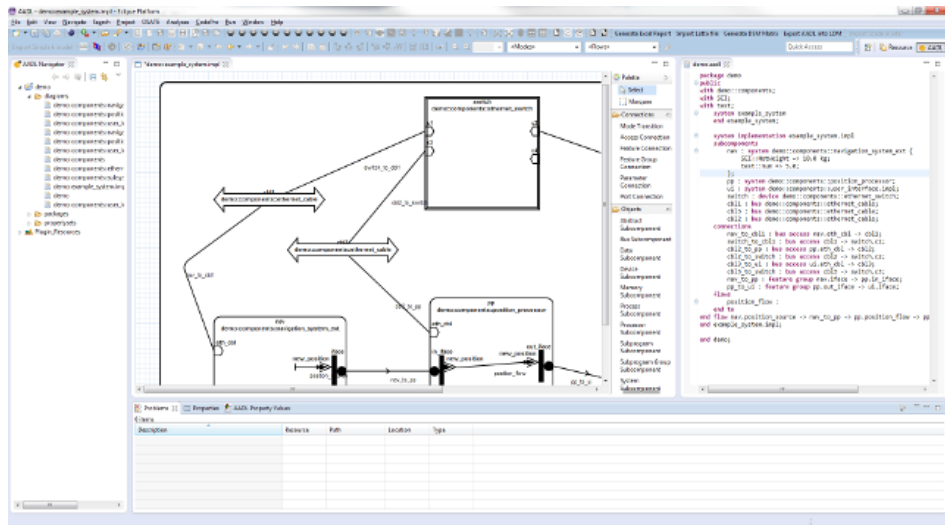
Open Source AADL Tool Environment

Developed and maintained by CMU/SEI

Reference implementation of AADLv2 and annexes

Dual use to serve AADL community

- Complete support of AADL
- Hosting third-party tools, extending capabilities
- Research prototyping platform



Distribution:

- No cost license under EPL license
- Download site: <https://osate.org>
- Issue tracking (public): <https://github.com/osate/osate2/issues>
- Release cycle: bi-monthly stable, nightly builds

OSATE Workbench Capabilities

OSATE is extensible using Eclipse plug-ins

Modeling Capabilities

AADLv2

EMV2

Behavior

Data Model

ARINC 653

Interoperability

FACE Import

Usability Capabilities

Syntax Sensitive Text Editor

Graphical Editor

Role specific workflow

Configuration Management

Analysis Capabilities

Resource Budget

Latency Analysis

Safety (FHA, FTA, FMEA) – ARP4754

RMA/EDF scheduling

Resource Allocation

ARINC653, MILS conformance

ALISA -- Automated Requirement Driven Verification

Examples of External Contributions

Assume/Guarantee contract modeling – Collins Aerospace

Ocarina Code Generation for RTOS and ARINC653

Scheduling Analysis – Cheddar by UBO

Scheduling Analysis – MAST by Adventium Labs

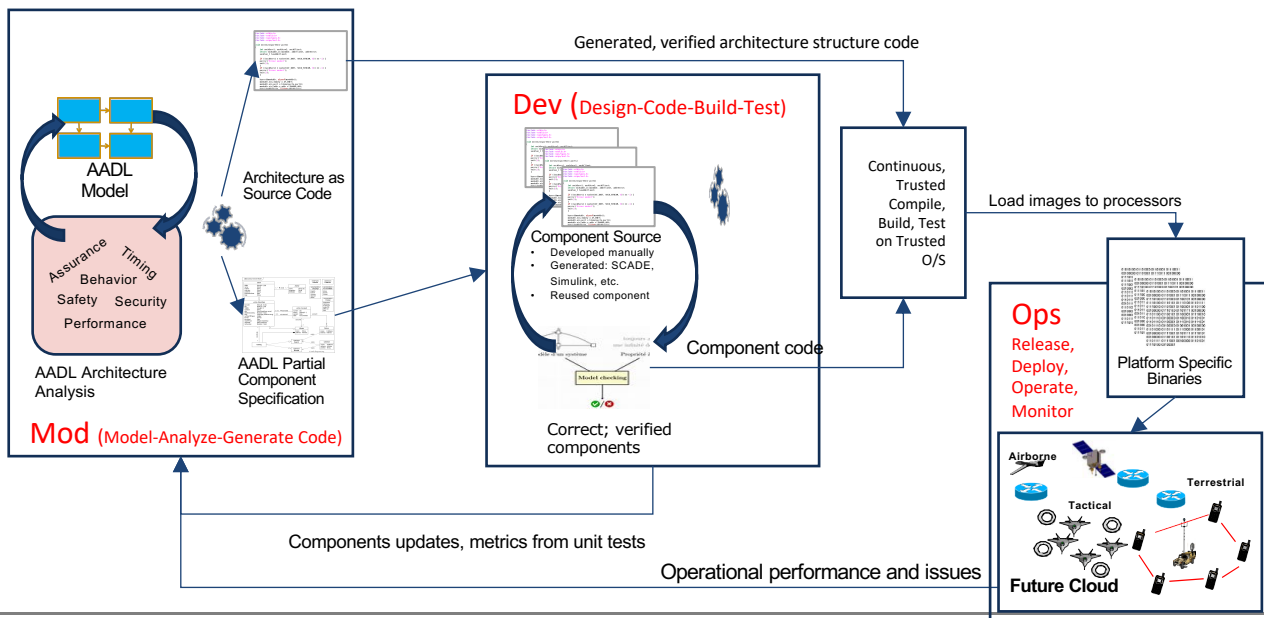
SPICA Scheduling FASTAR Global Timing

Embedded ModDevOps – leveraging AADL ecosystem

Predictive modeling as complement to DevOps and contribute to Digital Engineering vision

⇒ Capture architecture, perform early integration analysis and synthesize middleware, leverage trusted build and execution infrastructure

SEI
Research
with Demo
Started



Resources on OSATE and AADL

OSATE:

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AADL:

Collection of examples: <https://github.com/osate/examples>

SEI Technical reports and podcast: <https://resources.sei.cmu.edu/library/asset-view.cfm?assetid=453645>