AADL v3 Roadmap

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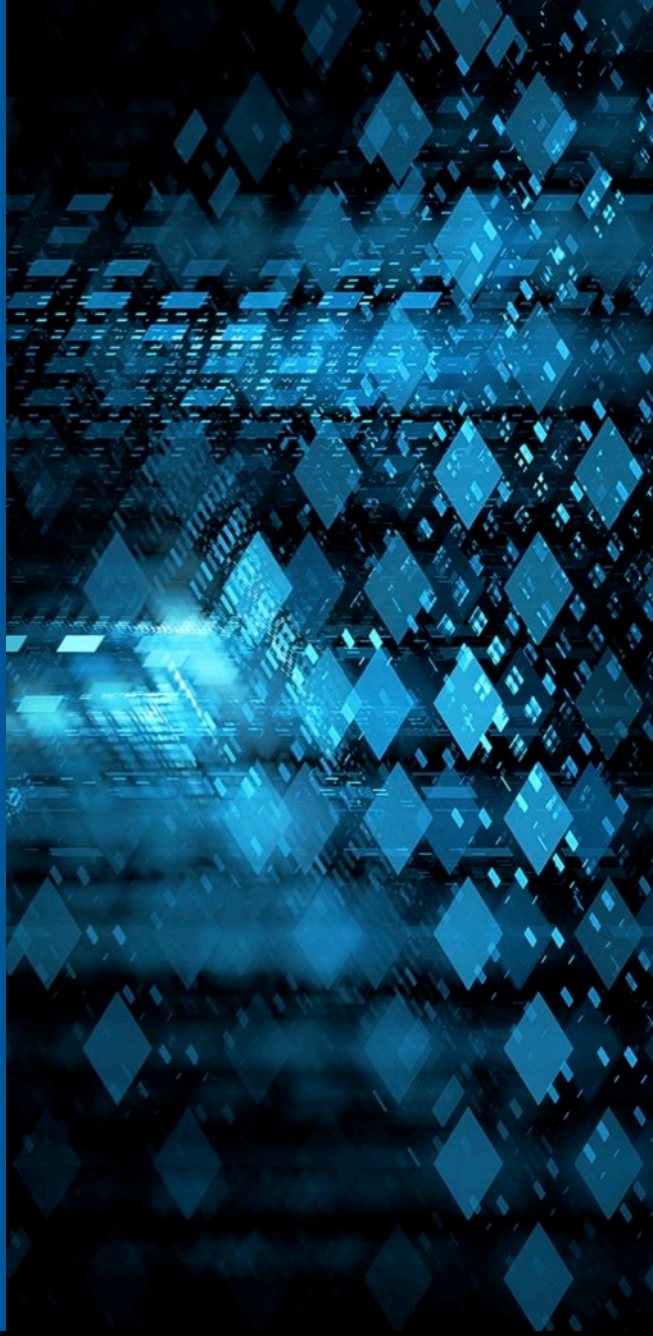

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Overall Strategy

AADL V2.2

- New AADL V2.2 errata: https://github.com/saeaadl/aadlv2.2
- OSATE issue reports: https://github.com/osate
- Long term support (LTS) for OSATE 2.x

AADL V3

- Working slides
  - https://github.com/saeaadl/aadlv3/tree/master/SAEAADLV3
  - Issues: https://github.com/saeaadl/aadlv3/issues
- New draft standard document
  - Document conversion into Restructured Text (RST) in progress
  - Document split into sections
  - Revision of packages, component interface, implementation, sucomponent, configuration
- Prototype implementation started
  - https://github.com/saeaadl/AadlV3Prototype

Migration Path to V3

Instance model representation with minimal changes

- Most analyses operate on instance model
- Documented API

Declarative model

- Translation from V2.2 to V3

Key V3 Changes

Packages and General Syntax

- Import of namespaces
- Property definitions in packages
- Private classifiers and property definitions
- Simpler syntax: no section keywords, no matching end identifier
- case sensitive

Composition of Component Interfaces aka. component type

- *Extends* of multiple interfaces
- Interface without category
- Eliminates need for feature group type

Configuration Specification

- Finalize design
- Configuration assignment of subcomponents with implementation, features with classifier/type (Replaces *refined to)*
- Assign final property values to any model element
- Annotate with bindings, annexes, flows
- Configurations are composable
- Parameterized configuration limits choice points (Replaces *V2 prototype)*

Key V3 Changes

Unified type system

- Single type system for properties and data types
- Records, lists, sets, maps, unions
- International System of Units

Properties

- Stereotypes to specify applicability
- Simplified property value assignment (default, final, override)

Explicit deployment binding concept

- Binding points and binding declarations
- Resource types associated with binding points

Virtual platform support

- Virtual memory
- Connectivity between virtual bus, processor, memory

Flows

- (virtual) platform flows
- Flow merge points

Nested component declarations

- Define nested components without explicit classifier

Key V3 Changes

Array support revision

- Exposure of index dimensions/sizes in interface

Connections

- Distinguish feature mappings
- Reach down of connection declarations
  - Into named interfaces (aka feature groups)
  - Into subcomponent hierarchy

No more category refinement

- Abstract component to other component
- Abstract feature to other features

Modes