



Applying AADL with the EDICT Tool Suite

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U.S. Army Aviation and Missile Research, Development, and Engineering Center
provides increased responsiveness to the nation's Warfighters through
aviation and missile capabilities and life cycle engineering solutions.



Outline

- WW Technology Group
- EDICT Tool Suite
- EDICT AADL Demonstration
- EDICT AADL Support Summary
- EDICT MBSE Benefits Summary



WW Technology Group

- Established in 1994
- World-class model-based engineering tools, design, analysis, and consulting services that enable DoD and commercial users to deploy time- and mission-critical systems on schedule and with superior performance and dependability
- Leading edge fault-tolerant architecture and model-based engineering technologies
 - Virginia Class ship control system and Ohio Class upgrade X-by-wire fault-tolerant architecture



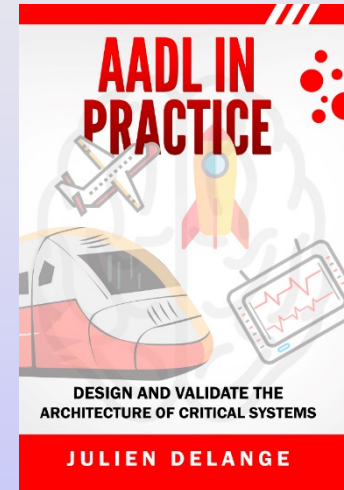
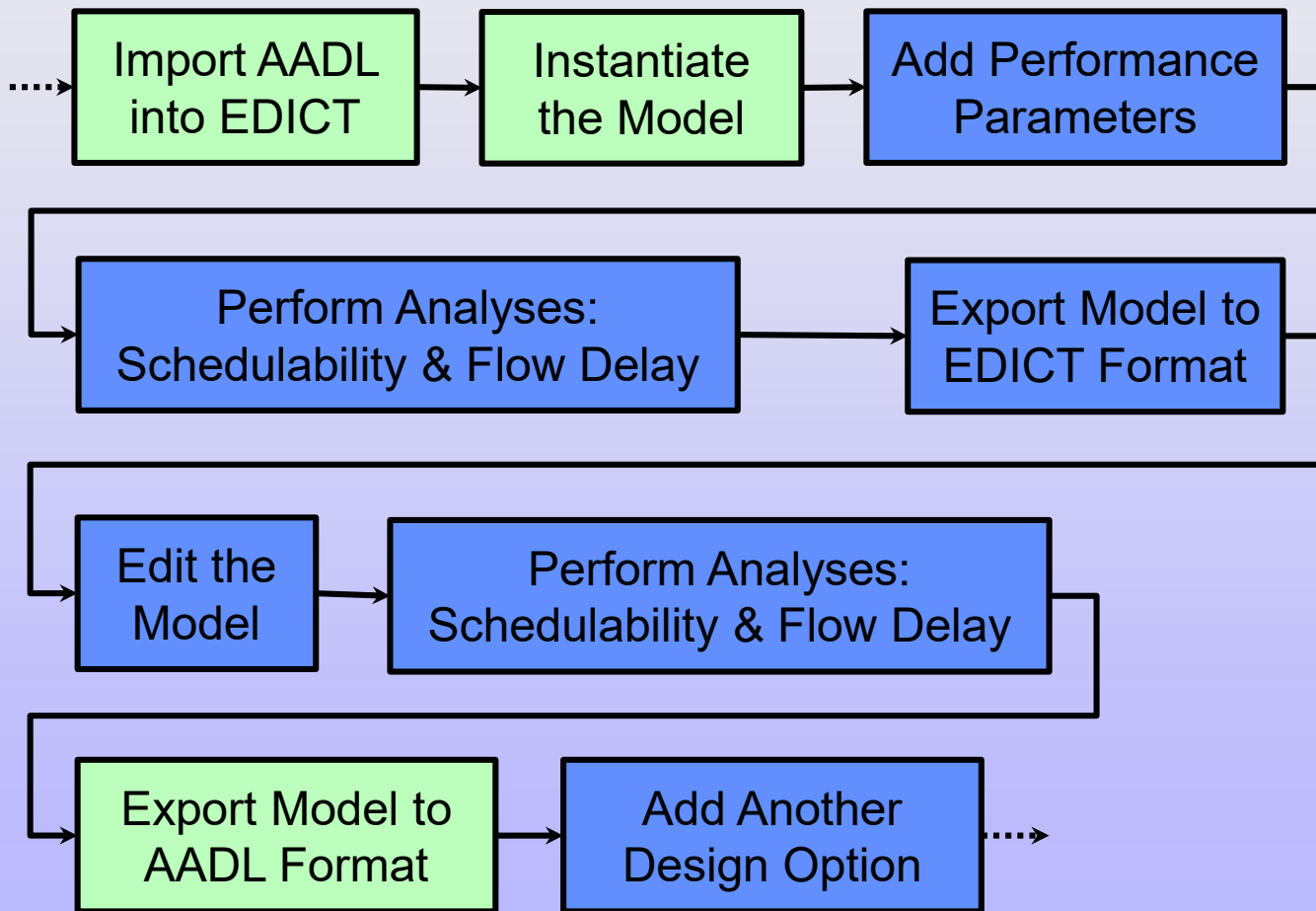


EDICT Tool Suite

- Extensible MBSE tool
- Modeling
- AADL Support
- Analyses
 - Performance
 - Safety
 - Error Handling
 - Security
 - Dependability
- Integrated Standards
 - Architecture Analysis and Design Language (AADL)
 - ARINC 653 (Avionics Application Standard Software Interface)
- Platform
 - Eclipse
 - OSATE



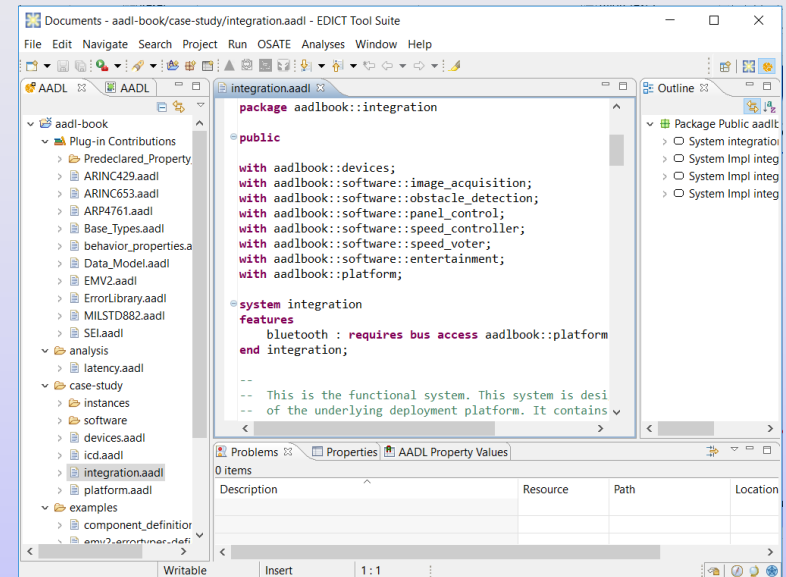
Demonstration: Self-Driving Car





EDICT AADL Support Summary

- OSATE integration
- Full standard compliance
 - AADL Core
 - Behavior Annex
- Import AADL
- Textual editing
- Graphical editing
- Export AADL





EDICT MBSE Benefits Summary

- Efficiency
 - Easy learning curve
 - Multi-platform deployment
 - Version control for team collaboration
- Quality
 - Requirements traceability
 - Safety, dependability, security, information assurance (IA) and data and error propagation analyses
- Extensibility
 - Third-party tool integration via Eclipse

