

# Discussion Group 2: Executable UML

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# State of the Art/ State of the Practice

- Standards
  - UML 2.4/2.5
  - fUML 1.2, PSCS 1.0, PSSM (in progress)
  - Alf 1.0.1
- Tools
  - Legacy (not exhaustive)
    - BridgePoint/xtUML (Shlaer-Mellor)
    - Rhapsody (Harel)
    - RSA RTE (ROOM)
  - New (not exhaustive)
    - Papyrus/Moka
    - MagicDraw/Cameo Simulation Toolkit
    - Enterprise Architect/LieberLieber AMUSE

# Open Challenges

- Managing the suite of Executable UML specs
  - Number of inter-dependent Executable UML standards continues to grow
  - Need more examples and tutorial material, even for tool developers/researchers
- Achieving good conformance to standards
  - More focus on semantic conformance
  - Ability to validate conformance
- Achieving good tooling
  - Need to exchange best practices for tool implementation
  - Need tools that simplify the modeling process

# Future Directions

- Semantics for profiles of UML
  - Current semantics work is fragmented across communities
  - Need both semantics for profiles and semantics of (standard) profiles (like SysML, MARTE, etc.)
- UML profiles for simplified modeling/tooling
- Semantics of time modeling
- Semantics of non-functional/service-level modeling
- Smart model compilers
  - Leveraging the open-source community