Discussion Group 2: Executable UML

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Reported by Ed Seidewitz
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