COMPLEX Eclipse Framework

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- Based on Standards
- Graphical (UML/MARTE)
- Separation of functional and non-functional concerns
- Model-Driven Engineering approach
- Component-Based approach
- Allows system specification
  - Application SW
  - HW&SW Platform
- Support to Verification act.
- Support to DSE
  - Specification of Design Space (DSE parameters and set of architectural mappings)
  - DSE constraints and Rules
  - Objective functions
- Fully integrated with Eclipse
- Model Checkers:
  - Verification of compliance with component model
  - Designer support
- Transformation engines:
  - Automatic model-to-text transformation
- Scalable and configurable
- Extension features for new analysis/generators
- Text-based representations in standard formats
- SystemC Executable model for functional verification
- Performance model for DSE
  - Fast (Native) simulation
  - Output: software and system performance metrics
  - No recompilation required for DSE iterations
- XML interface for design exploration Tools

Application modelling
- HW/SW Platform
- Architecture modelling
- Design Space Exploration
- Verification Environment

Toolset

- Stimuli Environ.
- Platform Independent Functional code
- Makefile Support files
- System, Design Space, DSE rules
- HW Platform Arch.

Executable Model

Performance Executable Model

PlatformView

DataModel

ArchitecturalView

FunctionalView

VerificationView

Model
Checkers

ComConcurrentView

Generators

PIM

PDM

PSM

SystemC Executable model for functional verification

Executable (Native) simulation
Output: software and system performance metrics
No recompilation required for DSE iterations
XML interface for design exploration Tools