COMPLEX Eclipse Framework

http://complex.offis.de

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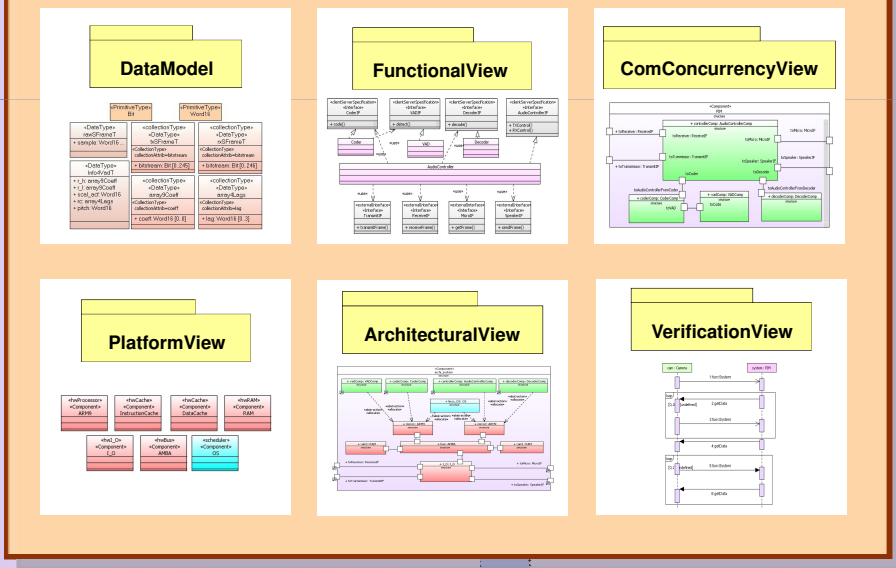
- ✓ Graphical (UML, MARTE)
- ✓ Based on Standards
- ✓ Separation of functional and non-functional concerns
- ✓ Following Model Driving Architecture paradigms
- ✓ Component-Based
- ✓ Synthetic
- ✓ Allows system specification
  - Application SW
  - HW Platform
- ✓ Support to Verification Environment definition
- ✓ Support to DSE
  - Specification of Design Space (DSE parameters and set of architectural mappings)
  - DSE constraints and Rules
- ✓ Fully integrated with Eclipse
- ✓ Model Checkers:
  - Verification of compliance with component model
  - User support
- ✓ Generators:
  - Automatic generation of text-based system representation
  - Easily customizable
- ✓ Scalable and configurable
- ✓ Text-based representations in standard formats
- ✓ SystemC Executable model for functional verification
- ✓ Performance model for DSE
  - Fast (Native) simulation
  - Output: Application and system performance metrics
  - No recompilation required for DSE iterations
- ✓ XML interface for Exploration Tools

UML MARTE

Embedded Application
HW/SW Platform
Architectural Mapping
Design Space Exploration
Verification Environment



Model Checkers

Generators

COMPLEX Toolset

Stimuli Environ.

Platform Independent Functional code

C/C++ & CFAM

Makefiles

System, Design Space, DSE rules

XML

HW Platform Arch.

IP-XACT

Executable Model

Performance Executable Model

DSE