**A Coverage Driven Verification Environment for UML Models of Systems-on-Chip**

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**DIPLODOCUS: A 3-step Methodology Environment based on UML**

1. **Application Modelling**  
   - System is modeled in terms of communicating tasks (UML class diagram)  
   - Behavior modeling is focused on control part of the application (UML activity diagrams)

2. **Architecture Modelling**  
   - Hardware architecture is modeled using generic hardware components (CPUs, buses, hardware accelerators)

3. **Application mapped onto an architecture**

**Variable Application Coverage**

- Computation and communication operations are abstracted using symbolic instructions  
- Abstractions allow for fast simulation, transactions spanning hundreds of clock cycles are executed as a whole  
- Possibility to generate traces in VCD format, as Gantt Diagrams and as reachability graphs

For further information: http://labsoc.comelec.enst.fr/ttool/