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Interactive System Level Debugging of Systems-on-Chip

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٠ Computation and communication events are represented by symbolic instructions and span potentially hundreds of clock cycles For a car communication application, we achieved an order of magnitude of simulation speed of

- Simulation granularity automatically adapts to the granularity of the application
- Instructions are executed as a whole if possible, they may be broken down into several transactions due to inter-task synchronization
- Fully implemented in C++, possibility to generate traces in VCD format
- Possibility to save and restore simulation states

Interaction of Frontend and Simulator



For further information: http://www.comelec.enst.fr/recherche/labsoc.en

Simulator Design



Billions of cycles/sec.

Millions cycles/sec.

A more fine grained model of an MPEG decoder led to a rate of