



How Verilog-A Standard Compact Models Could Help ADI

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ADI Proprietary Models

Our proprietary models: e.g.,

- BJT with self-heating (long before VBIC, Mextram)
- Enhanced BSIM3 with stripes, pocket implant, gate leakage

... need to run in other special-purpose simulators

- RF simulators
- Fast SPICE simulators

Standard Models

- Verilog-A implementation means we do the compiler once, get all models easily
 - Which BJT model? VBIC, Mextram, HiCUM, ...

Enhancing Standard Models

- Verilog-A makes it easy to add features to standard models
 - Better modeling of analog-specific device characteristics
 - Easy addition of new features of advanced processes

Creating New Models

- Verilog-A handles derivatives, etc.
 - Means burden of implementation of new model in our simulator is dramatically reduced
- Model will run everywhere (in other simulators)
- BUT: compiler must be reliable!