

1394 Queue-Based Modeling

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Why?

- Functional Verification
 - Various arbitration enhancements
 - PHY to PHY interactions
 - PHY to Link interactions
 - Hardware requirements
- Performance Verification
 - Various topology
 - Mixed data packets
 - Various transport protocol

Event-Based Simulation Tools

- Tools evaluated
 - BONEs by Cadence
 - SES Workbench
 - Extend by Imagine That!
- Extend
 - Custom blocks allowed
 - C code based
 - Source code available for ALL library blocks
 - Code profiling

Event-Based Simulation Tools

- Extend (Continued)
 - PC & Mac based
 - Good visual display
 - Inexpensive

1394a Arbitration Modeling

- Custom blocks
 - 1394a PHY
 - Simplified Link
 - Cable
- Simplifications
 - Tree id and self id phases not implemented
 - Can ignore some cases
 - such as RX_REQUEST_CANCEL
 - Eliminate PHY packets

1394a Arbitration Modeling

- Types of packets
 - Arbitration signals, such as TX_REQUEST, RX_GRANT, etc.
 - Data
 - Ack
- Transaction protocol
 - SBP-2

Task Group?

- Task group for queue-based modeling
 - Existing modeling group
- Share code on the custom blocks
- Contact info
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