SUMMARY OF BIRDS PROPOSED FOR IBIS 4.0 AND THEIR RELATIONSHIP TO BIRD 75

MEAUSUREMENT SPECIFICATION ENHANCEMENTS/CHANGES

BIRD62.6 Enhanced Specification of Receiver Thresholds
- doesn't effect model behavior
- used for automated report generation of buffer spec violations
- may be relatively easy to implement in tools(?)
- JEDEC specifically asked for it (DDR)
- may be superceded by full receiver modeling in AMS languages (BIRD75)
- KEEP IT

BIRD66 [Model Spec] Vref Addition
- doesn't effect model behavior
- used for automated flight time measurements
- only one additional subparameter to implement
- may be relatively easy to implement in tools
- BIRD75 doesn't address this
- KEEP IT

BIRD71 Timing Test Loads in [Model Spec] to Support PCI & PCI-X
- doesn't effect model behavior
- tool automation feature for timing measurements
- this is more of a user interface feature
- may be somewhat difficult to implement in tools (complicated)
- BIRD75 doesn't address this
- KEEP IT

TEXT ONLY CLARIFICATIONS/ENHANCEMENTS

BIRD67.1 Increase V-T Table 100 Point Limit
- makes existing models more accurate without algorithm changes
- this is just an IBIS specification change
- may be relatively easy to implement in tools
- AMS language models can be still more accurate (BIRD75), but not really relevant to BIRD75
- KEEP IT

BIRD68.1 Correlation of Rising and Falling Waveforms
- this is just an IBIS specification clarification change
- not relevant to BIRD75
- KEEP IT

BIRD72.3 Accommodating PMOS and NMOS//PMOS Series FET Models
- doesn't effect model behavior(?)
- interpretation change of IBIS model data to expand usage
- may require some algorithm changes in tools
- AMS language models can do a much better job (BIRD75)
- KEEP IT

NON-SIMULATION MODEL RELATED ADDITIONS

BIRD64.4 Alternate Package Models
- doesn't effect model behavior
- used for automatically switching package models (GUI feature)
- may be relatively easy to implement in tools
- BIRD75 doesn't address this
- may be superceded by the more accurate package models of the new IBIS interconnect specification, eliminating the need for multiple SLM models to describe even, odd, etc. modes
- KEEP IT

BIRD70.5 Golden Waveforms
- doesn't effect model behavior
- used for (automatic) validation of IBIS models through simulations
- this is more of a user interface feature
- may be relatively easy to implement in tools
- BIRD75 doesn't address this
- KEEP IT

SIMULATION MODEL RELATED ENHANCEMENTS

BIRD65.2 C_comp Refinements
- does effect model behavior
- frequency domain analysis requires more extensions to C_comp (see Luca's presentations on this subject)
- may be relatively easy to implement in tools
- AMS language models can do a better job (BIRD75)
- HSPICE B-element has it implemented already
- useful especially if BIRD75 implementation is slow in tools
- KEEP IT(?)

BIRD73.4 Fall Back Submodel
- does effect model behavior
- used for AVC technology drivers
- not applicable for de-emphasis/pre-emphasis buffers
- may be relatively difficult to implement in tools
- AMS language models can do a much better job (BIRD75)
- complexity vs. need issue... is it needed soon, or can we wait for BIRD75 to be implemented in tools?
- CANDITATE FOR REMOVAL, DEPENDING ON COMPLEXITY VS. IMMEDIATE NEED