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IBIS Activity Report

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Overview of Current Activities

- IBIS version 4.0 is ready for review
 - Draft copy is on IBIS website, http://www.eda.org/pub/ibis/ver4.0_wip/
- IBIS Connector spec has expanded to include general purpose interconnect
 - Expect revision 1.0 of the .icm specification to be available for review by June of this year.
- New proposal from Mentor Graphics to extend IBIS modeling capabilities
 - This proposal supercedes IBIS-X and the macro language work that was being done by the futures committee
- Much work on extending IBIS into the EMC/EMI world
 - Both Innoveda and INSA are pursuing proposals
- Model Quality Group has formed
 - Barry Katz of SiSoft is chair

IBIS Version 4.0 – 10 more birds

- BIRD62.6 - Receiver Threshold spec extensions
 - [Receiver Thresholds] -Vinh/I_ac/dc and differential thresholds offsets from Vth, Tslew, sensitivities
 - [External Reference] - External voltage reference
- BIRD64.4 - [Alternate Package Models]
- BIRD65.2 - C_comp split to any four voltage references
- BIRD66, BIRD71 [Model Spec] additions
 - 11 Timing test load subparameter extensions, PCI, PCI-X support (separate rising, falling loads)
- BIRD67 - 1000 V-T lines

IBIS 4.0 Birds (cont.)

- BIRD68.1 - Clarify V-T table rising and falling edges aligned
- BIRD70.5 - Golden Waveforms
 - [Test Data], [Test Load], and other keywords and subparameters to define golden waveforms (near, far, single-ended, differential, typ/min/max) and general test load circuit
- BIRD72.3 - PMOS/NMOS series switch models
 - Extends definition of series MOSFET to PMOS, NMOS and combinations - no syntax change
- BIRD73.4 - Fall Back submodel
 - Adds the Fall_back submodel for AVC technology
 - Clarification and corrections to Bus_hold submodel

IBIS 4.0 Ratification Plan

- Review copy uploaded under “Ver 4.0 Work In Progress” link of IBIS home page
- Committee review/vote on Version 4.0 to stabilize syntax and resolve any interaction issues
- Start ibischk4 parser project - another review and possible clarification BIRDs
- Committee review/vote Version 4.1
- Package and submit for EIA letter ballot
 - 3 months review
 - Respond formally to comments
- If successful, ratify as ANSI/EIA-656-B

IBIS Connector & Futures Groups

- Connector spec has undergone extensive review
 - Keywords simplified, syntax made to conform to IBIS “standards”
 - .icm now supports frequency dependent matrixes, loss and S-parameter matrixes (Touchstone® format)
 - Two keywords are being added to support general purpose interconnect (package models)
 - Expect to see revision 1.0 in June of this year
- Futures Committee has archived work on IBIS-X and IBIS-ML (macro language)
 - Concentrating now on reviewing & vetting Mentor’s “multi-lingual modeling proposal”.

Other Initiatives

- EMI/EMC work continuing
 - ICEM specification is now available, see today's presentation.
 - Guy Deburg (Innoveda) is working on a proposal for EMI parameters to be added to IBIS. See Jan. '02 summit presentation for details.
- Model Quality Group Formed
 - Several presentations (SiQual and others) at the Jan. '02 summit highlighted model quality issues.
 - Official working group under Barry Katz formed to address issue
 - *Provide methods to generate accurate models*
 - *Create metrics to quantify model quality*
 - *One possible result is an agreed standard*