Progress and Issues in IBIS-X

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Current Status

- IBIS Macro Language Specification is now at revision 0.6
  - Basic syntax, language rules and circuit elements are defined and documented.
  - Added support for describing controlled sources using equations.
  - T-lines syntax & usage are now formally documented (matrixes are being documented by the connector committee).
  - Focus now is on describing IBIS 3.2 buffer in IBIS-ML, “complex” buffers and BIRDS for 4.0 (see issues list for details)
- The IBIS-ML parser prototyping activity is on hold (no developer)
- Based on current progress, expect to see revision 1.0 of the IBIS-ML specification end of this year.

Current Issues

- Support for [Model Spec] type keywords
  - Does model itself contain the code that checks for signal violations as documented by the [Model spec] type keywords?
  - If it does, what language support is required? Do we approach it with complex circuit elements (sample-holds, triggers, etc.) or do we create a full blown programming language (if-then-else, while loops, variables, etc.)
- Is ‘driver’ element good enough for the first release?
  - The ‘driver’ element is a black box containing a vendors IBIS 3.2 algorithm… has inputs for I/V and V/T tables.
  - Advantage: shortcut to 1.0, quick adoption by industry
  - Disadvantage: not expandable, still need to do basic work to insure that approach/definition is powerful enough to model differential, etc. buffers.
- Still need method for adding package models into component

Plans & activities (short and mid term)

- Describe IBIS 3.2 in IBIS-ML without using ‘driver’ element
- Describe complex I/O in IBIS-ML
  - Differential drivers and receivers
  - Drivers w/pre-emphasis (SCSI, 3GIO, etc.)
  - Drivers with fallback
- Describe proposed IBIS 4.0 birds.