



IBIS Specification Direction

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IBIS Status

- **Many approved BIRDs are pending incorporation into the IBIS specification**
- **A few of these require significant parser changes**
- **Several WIP BIRDs may need alteration depending on the version of the specification in which they will be introduced**
 - **e.g., IBIS-ICM links**
- **Key decisions include**
 - **Which features should be included in which spec. versions?**
 - **Which versions should be standardized?**
 - **Which versions require new parser development?**



IBIS BIRD Status

- **Specification Changes Approved**
 - BIRD99.1 – AMS Language Versions
 - BIRD96 – [Model Spec] and [Receiver Thresholds] Ordering
 - **BIRD95.6 – Power Integrity Analysis using IBIS**
 - BIRD94.2 – Clarifications on [Diff Pin] parameters
 - **BIRD93.1 – Model and Signal Name Limit Extension**
 - BIRD92.1 – Model Termination and Series Elements under [Model]
 - BIRD91.3 – Multi-lingual Logic States Clarification
 - BIRD90.2 – Multiple A_to_D Subparameters Clarification*
 - BIRD89.1 – Keyword Hierarchy Tree
 - **BIRD88.3 – Driver Schedule Initialization**
 - BIRD87 – Series Pin Mapping Clarifications
 - **BIRD74.6 – EMI Parameters**
- **Specification Changes Under Discussion**
 - **BIRD100: Allow Analog-Only *-AMS Model Terminals**
 - **BIRD97.2/98 - Gate Modulation Effect**
 - **ICM-IBIS Linking**
 - **[External Model] under [Circuit Call]**
 - **User-Defined Measurements**

Parser change required



Specification Release Options

1. **IBIS 4.2 then IBIS 5.0**
 - IBIS 4.2 is “cleanup” featuring clarification BIRDs only
 - IBIS 5.0 includes all BIRDs where parser changes required
 - IBIS 5.0 delayed to include BIRDs still under discussion
2. **IBIS 4.2, IBIS 4.x... IBIS 5.0**
 - IBIS 4.2-4.x are incremental additions of BIRDs
 - BIRD93 and BIRD95 are included in incremental 4.x
 - Standardize on IBIS 4.x; new parsers needed for some 4.x
 - BIRDs still under discussion delayed until IBIS 5.0
3. **IBIS 5.0 immediately**
 - IBIS 5.0 contains ALL pending BIRDs
 - Hold 5.0 release until all BIRDs under discussion completed
 - Standardize on 5.0 or even 5.x

Pros and Cons

1. IBIS 4.2 then IBIS 5.0

- **Pro:** Quick release and standardization on IBIS 4.2
- **Pro:** Parser development paid with new 5.0 licenses
- **Con:** IBIS 5.0 development will take significant time
 - Delay of new keywords, features
 - Do we consider re-architecting IBIS in 5.0?

2. IBIS 4.2, IBIS 4.x... IBIS 5.0

- **Pro:** High-priority changes can be included quickly
 - For example, BIRD95.6
- **Con:** No money to support new parser before 5.0

3. IBIS 5.0 immediately

- **Pro:** Parser funds become available quickly
- **Con:** IBIS 5.0 development will take significant time
- **Con:** Standardization “stuck” on 3.2 before 5.0
 - No standard for AMS+IBIS for the next 2+ years



Futures Group Recommendation

- **Prepare and Release IBIS 4.2 then IBIS 5.0**
 - Implement IBIS 4.2 immediately, with “cleanup” BIRDs only
 - Standardize IBIS 4.2 immediately on approval
 - Include BIRD74, BIRD88, BIRD93, BIRD95 in IBIS 5.0
- **Key Questions Remaining**
 - Delay IBIS 5.0 for BIRD97/98? (recommend yes)
 - Delay IBIS 5.0 for ICM-IBIS Linking? (recommend yes)
 - One-to-one links in short term **ONLY**
 - More complex links in 5.x
 - Delay IBIS 5.0 for [Ext. Model]/[CC]? (recommend yes)
 - Delay IBIS 5.0 for Verilog-A? (recommending yes)
 - BIRD100 addresses this
 - Delay IBIS 5.0 for user-defined measures? (recommend **no**)
- **All 5.0 features above should be relatively easily closed**