IBIS 7.1 Known Issues

The following is a list of known issues found in the IBIS Specification Version 7.1 document. These are editorial issues deemed to have no functional impact on the specification. Functional issues are resolved through the IBIS BIRDs page at <https://ibis.org/birds/>.

This document also contains a separate list of functional issues discussed by the Editorial task group while preparing the IBIS 7.1 document but deferred to a later version of IBIS.

All page numbers refer to the Adobe PDF version <https://ibis.org/ver7.1/ver7_1.pdf>.

1. (from Arpad Muranyi, Siemens EDA)

The statement “If present under File\_IBIS-ISS, Terminal\_type A\_gnd may be used any number of times on any of the terminal lines.” is found in the Interconnect Model and EMD Model Terminal line rules (pages 339 and 379, respectively). It can be read as saying that "A\_gnd" could be repeated multiple times on a terminal line. This would violate Terminal line syntax rules. The statement should be rewritten.

1. (from Bob Ross, Teraspeed Labs)

Page 297 has two bulleted statements mentioning “Tx\_Impulse\_Input”. This AMI parameter is found in BIRD211.3, which is planned for approval in IBIS Version 7.2. The statements were introduced incorrectly as part of BIRD215. Statements should be evaluated for correctness when BIRD211.3 is incorporated in IBIS 7.2.

1. (from Arpad Muranyi, Siemens EDA)

On pg. 392 there are two occurrences of “Example X” which were “place holders” for a real example number.

A screenshot of a computer

Description automatically generated with medium confidence

Randy Wolff noticed vii. is incorrect. Pin U3.W1 is the register input pin for A07. The correct pin for BA07 is U3.B11. Then U4.M8, U5.M8, etc. share the same signal\_name BA07. The following changes are suggested:

vi. Net connections are indicated by identical signal\_name entries available from the [EMD Pin List] and/or [Designator Pin List] entries. In Example 1, Pin\_I/O pin\_name 211 and Pin\_I/O pin\_name U3.W1 are considered connected through the IBIS-ISS subcircuit because they both share the same signal\_name, A07

vii. The logical and electrical connections can span several interfaces. In Example 1, Pin\_I/O pin\_name U3.B11, Pin\_I/O pin\_name U4.M8, etc. share the same signal\_name BA07 and are therefore in the same net

1. (from Arpad Muranyi, Siemens EDA)

The following sentence appears on pg. 339 and pg. 379 in the IBIS v7.1 specification:

“If present under File\_IBIS-ISS, Terminal\_type A\_gnd may be used any number of times on any of the terminal lines.”

As written, this sentence can give the incorrect impression to the reader that a single terminal line may contain multiple “A\_gnd” Terminal\_type-s. The intent of this statement was to indicate that under File\_IBIS-ISS, multiple terminal lines may contain the Terminal\_type “A\_gnd”.

Arpad proposed the following change in wording:

“If present under File\_IBIS-ISS, Terminal\_type A\_gnd may be used on any number of terminal lines.”

1. (from Curtis Clark, ANSYS)

On page 2, the TOC entry for 10.1.2 says "DefinItions".

1. (from Arpad Muranyi, Siemens EDA)

On page 273, the text highlighted below has extra “\_” characters. The parameter names should be PAM4\_UpperThreshold, PAM4\_CenterThreshold, and PAM4\_LowerThreshold.

Text

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1. (from Michael Mirmak, Intel)

Example 1 in Section 13.5.2 (page 387) is missing Terminal 16. Terminals 17, 18, and 19 should be renumbered as 16, 17, and 18 respectively. The Number\_of\_terminals parameter should be changed from 19 to 18.

Additionally, Examples 1, 2, and 3 in Sections 13.5.2, 13.5.3, and 13.5.4 are missing the required [Manufacturer] keyword. This keyword should be added (including a fake company name) after the [Begin EMD] keyword in each example.

1. (from Michael Mirmak, Intel)

The [Manufacturer] keyword on page 33 includes a reference to “Texas Instruments”. This should be removed and replaced with the suggested “NoName Corp.” Other [Manufacturer] keywords should be checked for consistency, and the full document should be reviewed to remove any references to real companies.

1. (from Curtis Clark, ANSYS)

The paragraph below is from item 2 of Section 3.2, SYNTAX RULES:

These words can be used elsewhere in a case-sensitive manner when they comply with other rules. For example, these rules can be used as pin\_names (except for CIRCUITCALL, which exceeds the maximum number of characters allowed under the first column of the [Pin] keyword) and signal\_names under the [Pin] keyword (described later in Section 5).

The highlighted word “rules” should be “words”.

1. (from Ted Mido, Synopsys)

On page 248, the Usage Rules of Ignore\_Bits states “The value in this field tells the EDA tool how many bits of the AMI\_GetWave output should be ignored.” This statement should use “UI” instead of “bits” for consistency with previous changes made by BIRD214.

1. (from Weston Beal, Siemens EDA)

In the [Composite Current] section on page 108, the 3rd paragraph begins with “Figure 18”. This reference should be to “Figure 19”, the figure following that paragraph on page 109.

Functional Issues List

1. (from Arpad Muranyi, Siemens EDA)

The [EMD Pin List] does not allow a pin\_name to include any characters that are not “alphanumeric”. However, a corresponding pin\_name from a Component [Pin] list does not have that restriction. The [Pin] keyword does not include the “alphanumeric” restriction, although this is common in industry data books.

The [Pin] keyword should be modified (with a BIRD) to include the “alphanumeric” restriction, and the term “alphanumeric” needs to be defined in Section 3.2 Syntax Rules.

1. (from Arpad Muranyi, Siemens EDA)

This issue was discussed in the November 3, 2021, Editorial task group meeting. The EMD [Designator Pin List] does not allow signal\_type to be ‘NC’ and it requires all pin\_names from referenced IBIS Components to be listed. It is desired to relax these rules to allow only [Designator Pin List] pins needed for the EMD Models in the EMD file and to allow signal\_type of ‘NC’. A BIRD will be needed to resolve this issue.

Revision History

1.6: July 12, 2022

- Changed by Randy Wolff

- Added main list item 11.

1.5: April 19, 2022

- Changed by Randy Wolff

- Added main list item 10.

1.4: April 1, 2022

- Changed by Randy Wolff

- Added main list items 7, 8, and 9.

1.3: March 10, 2022

- Changed by Randy Wolff

- Added main list item 6.

1.2: February 16, 2022

- Changed by Randy Wolff

- Added main list item 5.

1.1: January 11, 2022

- Changed by Randy Wolff

- Added main list items 2, 3, and 4.

1.0: November 18, 2021

- Created by Randy Wolff