



IBIS Open Forum Minutes

Meeting Date: **January 8, 2016**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2016 PARTICIPANTS

ANSYS	Curtis Clark*
Applied Simulation Technology	(Fred Balistreri)
Avago Technologies	(Cathy Liu)
Cadence Design Systems	(Brad Brim)
Cisco Systems	(Bidyut Sen)
CST	(Leonardo Sassi)
Ericsson	(Anders Ekholm)
GLOBALFOUNDRIES	Adge Hawes*
Huawei Technologies	(Jinjun Li)
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Hsinho Wu*
IO Methodology	Lance Wang*
Keysight Technologies	Radek Biernacki*
Maxim Integrated Products	Yan Liang*
Mentor Graphics	Arpad Muranyi*
Micron Technology	Randy Wolff*
Signal Integrity Software	Mike LaBonte*, Walter Katz*
Synopsys	(Ted Mido)
Teraspeed Labs	Bob Ross*
Toshiba	(Yasumasa Kondo)
Xilinx	(Raymond Anderson)
ZTE Corporation	(Shunlin Zhu)
Zuken	(Michael Schaefer)

OTHER PARTICIPANTS IN 2016

SAE International	(Logen Johnson)
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In the list above, attendees at the meeting are indicated by *. Principal members or other active members who have not attended are in parentheses. Participants who no longer are in the organization are in square brackets.

UPCOMING MEETINGS

The bridge numbers for future IBIS teleconferences are as follows:

Date	Meeting Number	Meeting Password
January 22, 2016	IBIS Summit at DesignCon – no teleconference	
February 5, 2016	205 475 958	IBIS

For teleconference dial-in information, use the password at the following website:

<https://ciscosales.webex.com/ciscosales/j.php?J=205475958>

All teleconference meetings are 8:00 a.m. to 9:55 a.m. US Pacific Time. Meeting agendas are typically distributed seven days before each Open Forum. Minutes are typically distributed within seven days of the corresponding meeting. When calling into the meeting, follow the prompts to enter the meeting ID. For new, local international dial-in numbers, please reference the bridge numbers provided by Cisco Systems at the following link:

http://www.cisco.com/web/about/doing_business/conferencing/index.html

NOTE: "AR" = Action Required.

INTRODUCTIONS AND MEETING QUORUM

Randy Wolff declared that a quorum was reached and the meeting could begin.

CALL FOR PATENTS

Mike LaBonte called for declaration of any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.1, IBIS 6.1, Touchstone 2.0, IBIS-ISS 1.0 or ICM 1.1 specifications. No patents were declared.

REVIEW OF MINUTES AND ARS

Randy Wolff called for comments regarding the minutes of the December 18, 2015 IBIS Open Forum teleconference. Bob Ross moved to approve the minutes. Curtis Clark seconded the motion. There were no objections.

Randy reviewed ARs from the previous meeting.

1. Mike LaBonte will create an example Wiki page for some content on our webpage to review [AR].
Mike reported that this is done and he will show an example of this in the meeting.
2. Mike LaBonte will change the status of BIRD179 online [AR].
Done.
3. Bob Ross will update the status of all IBISCHK6 bugs on the webpage [AR].
Done.

ANNOUNCEMENTS, CALL FOR ADDITIONAL AGENDA ITEMS

None.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that the treasury stands at \$63,465 including another sponsorship payment. He made an adjustment in his spreadsheet for a 2014 expense on the SAE books against IBIS for some minor things like mailings and wire transfer fees. Upcoming financial transactions include payment to the Parkyard Hotel for the Shanghai Summit, prepayment for the European IBIS Summit, membership renewal incomes, and a DesignCon IBIS Summit payment. We are now at 23 members due to the Altera/Intel merger. IBM membership is transferring to GLOBALFOUNDRIES. Adge Hawes is now representing GLOBALFOUNDRIES.

Mike LaBonte reported that some membership invoices have been sent out from SAE in the last week.

WEBSITE ADMINISTRATION

Mike LaBonte reported that he used MediaWiki to create an example of the IBIS website main page in a wiki format. He showed how each page can have a discussion forum. You can also view the revision history of each page. Once logged in, he showed how to edit a page. He also demonstrated the search function. He created a page called Reference Node Clarifications to demonstrate a task tracking type of page. Arpad Muranyi asked if this page would allow for many people to add content like most wiki sites. Mike confirmed that this would be possible. Mike also showed how changes could be easily undone if someone messes up a page too much.

Randy Wolff noted that the membership poster needs to be updated.

MAILING LIST ADMINISTRATION

Curtis Clark reported that things are running smoothly. There was only one drop from the mailing list. Mike LaBonte requested that Logen Johnson of SAE be added to the mailing list and Chris Denham of SAE be dropped.

Mike noted that the amount of spam coming into the info@ibis.org email is too high, so he is not ready to start using this as the address to email IBIS officers for information. We'll continue using the ibis-info@freelists.org email address for now.

LIBRARY UPDATE

No update.

INTERNATIONAL/EXTERNAL ACTIVITIES

- Conferences

None.

- Press Update

None.

SUMMIT PLANNING AND STATUS

- DesignCon 2016 IBIS Summit

DesignCon will be held January 19-21, 2016. Friday, January 22, 2016 is scheduled for the Summit meeting. Mike LaBonte is working with UBM to get the IBIS Summit meeting mentioned in one of the UBM email announcements for DesignCon. Another announcement will go out today. Bob Ross shared the preliminary agenda. There are 12 presentations scheduled. Mike noted this is the day after DesignCon ends. Lance Wang noted there are 31 signups so far. Mike reported that the meeting is in the Bayshore Room of the Hyatt. Mike will bring paper copies of the agenda. Sponsors are Keysight Technologies, Mentor Graphics Corporation and Synopsys.

- European IBIS Summit at SPI 2016

An IBIS Summit will be co-hosted with the IEEE Workshop on Signal and Power Integrity (SPI). The Summit will take place on May 11, 2016 in Turin, Italy. Bob noted that we are waiting for the invoice for payment for the room. We found an SAE address in Europe with a VAT ID number. We may or may not get a VAT exemption.

Sponsorship opportunities for all upcoming IBIS summits are available, with sponsors receiving free mentions in the minutes, agenda, and other announcements. Contact the IBIS Board for further details.

QUALITY TASK GROUP

Mike LaBonte reported that the group is meeting on Tuesdays at 8:00 a.m. PT. The main agenda topic has been the release of the IBISCHK6 parser and testing bugs.

The ibischk6 user guide work in progress can be reviewed at:

http://www.ibis.org/ibischk6/old_v601/ibischk_6.0.1_UserGuide_wip2.pdf

The Quality Task Group checklist and other documentation can be found at:

http://www.ibis.org/quality_wip/

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is meeting regularly on Tuesdays at 12:00 p.m. PT. There will be no meeting during the DesignCon week. The group is working on cleanup of the ground reference language in the IBIS specification. They are also waiting for some updates on the re-driver and backchannel proposals.

Task group material can be found at:

http://www.ibis.org/macromodel_wip/

INTERCONNECT TASK GROUP

Bob Ross reported that the group is meeting on Wednesdays at 8:00 a.m. PT. Discussions continue on the Interconnect BIRD document. A presentation will be made at the DesignCon IBIS Summit meeting.

Task group material can be found at:

http://www.ibis.org/interconnect_wip/

NEW ADMINISTRATIVE ISSUES

- Second revision of IBIS Policies and Procedures

Mike LaBonte noted that the draft Policies and Procedures update is on the website for review. Questions have been coming up such as can a person represent a member company if they do not work for that company. These questions may lead to further changes in the document. The document can be found at:

<http://www.ibis.org/policies/>

Mike stated that he is considering making a note in the agenda under tabled BIRDs as to which committees may be responsible for them. Bob Ross commented that he didn't think this was necessary. Radek Biernacki agreed and added that some BIRDs do not start in any committees.

BIRD125.1: MAKE IBIS-ISS AVAILABLE FOR IBIS PACKAGE MODELING

Discussion was tabled.

BIRD128.2: ALLOW AMI_PARAMETERS_OUT TO PASS AMI_PARAMETERS_IN DATA ON CALLS TO AMI_GETWAVE

Discussion was tabled.

BIRD145.3: CASCADING IBIS I/O BUFFERS WITH [EXTERNAL CIRCUIT]S USING THE [MODEL CALL] KEYWORD

Discussion was tabled.

BIRD147: BACK-CHANNEL SUPPORT

Discussion was tabled.

BIRD158.3: AMI TOUCHSTONE ANALOG BUFFER MODELS

Discussion was tabled.

BIRD161.1: SUPPORTING INCOMPLETE AND BUFFER-ONLY [COMPONENT]

DESCRIPTIONS

Discussion was tabled.

BIRD163: INSTANTIATING AND CONNECTING [EXTERNAL CIRCUIT] PACKAGE MODELS WITH [CIRCUIT CALL]

Discussion was tabled.

BIRD164: ALLOWING PACKAGE MODELS TO BE DEFINED IN [EXTERNAL CIRCUIT]

Discussion was tabled.

BIRD165: PARAMETER PASSING IMPROVEMENTS FOR [EXTERNAL CIRCUIT]S

Discussion was tabled.

BIRD166: RESOLVING PROBLEMS WITH REDRIVER INIT FLOW

Discussion was tabled.

IBISCHK6 PARSER AND BUG STATUS

Bob Ross reported that he has received the IBISCHK 6.1.1 parser code, including fixes for a couple new bugs beyond the previously received (but unreleased) 6.1.1 code. Source code licensees will get the new release. New executables should be released next week. 8 bug reports will be closed out. It is not confirmed if BUG170 is fixed. Bob is waiting for Michael Schaefer of Zuken to verify this bug fix.

Bob moved to close out BUG163 – BUG169 and BUG171. Radek Biernacki seconded the motion. There were no objections.

Bob will update the IBISCHK parser BUGs webpage [AR].

Bob moved to close out BUG170 once it is confirmed as fixed. Mike LaBonte seconded the motion. There were no objections.

Bob reported that the IBISCHK6 User Guide needs a few updates for the new release. Mike plans to work on this with Bob and get the User Guide posted on the website [AR].

Bob introduced BUG172. Error messages are incorrectly reported for legal bus_label connections. Some of the warnings were also legitimate but unfixable. These warnings may be moved to Cautions. Curtis Clark reported that the parser was looking to see if a bus_label was connected to a POWER or GND pin as required by the specification. However, it was only looking for a GND pin for a bus_label under pulldown_ref or gnd_clamp_ref columns in [Pin Mapping] and similarly only looking for a POWER pin for a bus_label under pullup_ref or power_clamp_ref columns.

Radek Biernacki asked if this bug has been in previous parsers. Bob confirmed that this has been in parsers at least back to IBIS 3.0. [Pin Mapping] was introduced in IBIS 2.1. Radek questioned if some restrictions in [Pin Mapping] make sense and need further investigation. Curtis noted that even if we accept some restrictions, the parser messages need to be updated.

Bob noted that ECL model types and others using non-zero, negative pulldown_ref bus_labels would be affected by this bug. We could introduce additional logic depending on the model type to issue Warnings instead of Cautions, but he preferred only issuing Cautions. Mike LaBonte agreed with this.

Bob moved to classify BUG172 as Severe severity, Medium priority and Open status, to be fixed in the next release. Curtis seconded the motion. There were no objections.

NEW TECHNICAL ISSUES

None.

NEXT MEETING

The IBIS Summit at DesignCon will be held January 22, 2016. No teleconference will be available for the Summit meeting. The next IBIS Open Forum teleconference meeting will be held February 5, 2016. The following IBIS Open Forum teleconference meeting will be held February 26, 2016.

Radek Biernacki moved to adjourn. Curtis Clark seconded the motion.

NOTES

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This meeting was conducted in accordance with ANSI guidance.

All inquiries may be sent to ibis-info@freelists.org. Examples of inquiries are:

- To obtain general information about IBIS.
- To ask specific questions for individual response.
- To subscribe to the official ibis@freelists.org and/or ibis-users@freelists.org email lists (formerly ibis@eda.org and ibis-users@eda.org).
- To subscribe to one of the task group email lists: ibis-macro@freelists.org, ibis-interconn@freelists.org, or ibis-quality@freelists.org.
- To inquire about joining the IBIS Open Forum as a voting Member.
- To purchase a license for the IBIS parser source code.
- To report bugs or request enhancements to the free software tools: ibischk6, tschk2, icmchk1, s2ibis, s2ibis2 and s2iplt.

The BUG Report Form for ibischk resides along with reported BUGs at:

<http://www.ibis.org/bugs/ibischk/>
<http://www.ibis.org/bugs/ibischk/bugform.txt>

The BUG Report Form for tschk2 resides along with reported BUGs at:

<http://www.ibis.org/bugs/tschk/>
<http://www.ibis.org/bugs/tschk/bugform.txt>

The BUG Report Form for icmchk resides along with reported BUGs at:

<http://www.ibis.org/bugs/icmchk/>
http://www.ibis.org/bugs/icmchk/icm_bugform.txt

To report s2ibis, s2ibis2 and s2iplt bugs, use the Bug Report Forms which reside at:

<http://www.ibis.org/bugs/s2ibis/bugs2i.txt>
<http://www.ibis.org/bugs/s2ibis2/bugs2i2.txt>
<http://www.ibis.org/bugs/s2iplt/bugsplt.txt>

Information on IBIS technical contents, IBIS participants and actual IBIS models are available on the IBIS Home page:

<http://www.ibis.org/>

Check the IBIS file directory on ibis.org for more information on previous discussions and results:

<http://www.ibis.org/directory.html>

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IBIS – SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status	November 16, 2015	November 20, 2015	December 18, 2015	January 8, 2016
ANSYS	User	Active	X	X	X	X
Applied Simulation Technology	User	Inactive	-	-	-	-
Avago Technologies	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	X	X	-
Cisco Systems	User	Inactive	-	-	-	-
CST	User	Inactive	-	-	-	-
Ericsson	Producer	Inactive	X	-	-	-
GLOBALFOUNDRIES	Producer	Active	-	X	X	X
Huawei Technologies	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	-	-	X	X
IO Methodology	User	Active	X	X	X	X
Keysight Technologies	User	Active	X	X	X	X
Maxim Integrated Products	Producer	Inactive	-	X	-	X
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	X	X	X
Signal Integrity Software	User	Active	X	X	X	X
Synopsys	User	Inactive	-	X	-	-
Teraspeed Labs	General Interest	Active	-	X	X	X
Toshiba	Producer	Inactive	X	-	-	-
Xilinx	Producer	Inactive	-	-	-	-
ZTE	User	Inactive	-	-	-	-
Zuken	User	Inactive	X	-	-	-

I/O Buffer Information Specification Committee (IBIS)

CRITERIA FOR MEMBER IN GOOD STANDING:

- MUST ATTEND TWO CONSECUTIVE MEETINGS TO ESTABLISH VOTING MEMBERSHIP
- MEMBERSHIP DUES CURRENT
- MUST NOT MISS TWO CONSECUTIVE MEETINGS

INTEREST CATEGORIES ASSOCIATED WITH SAE BALLOT VOTING ARE:

- USERS - MEMBERS THAT UTILIZE ELECTRONIC EQUIPMENT TO PROVIDE SERVICES TO AN END USER.
- PRODUCERS - MEMBERS THAT SUPPLY ELECTRONIC EQUIPMENT.
- GENERAL INTEREST - MEMBERS ARE NEITHER PRODUCERS NOR USERS. THIS CATEGORY INCLUDES, BUT IS NOT LIMITED TO, GOVERNMENT, REGULATORY AGENCIES (STATE AND FEDERAL), RESEARCHERS, OTHER ORGANIZATIONS AND ASSOCIATIONS, AND/OR CONSUMERS.