IBIS Open Forum Minutes

Meeting Date: **January 26, 2018**
Meeting Location: **Teleconference**

VOTING MEMBERS AND 2018 PARTICIPANTS

ANSYS	Curtis Clark*
Applied Simulation Technology	(Fred Balistreri)
Broadcom	(Yunong Gan)
Cadence Design Systems	Brad Brim*
Cisco Systems	(Bidyut Sen)
CST	(Leonardo Sassi)
Ericsson	(Anders Ekholm)
GLOBALFOUNDRIES	Steve Parker*
Huawei Technologies	(Hang (Paul) Yan)
IBM	(Luis Armenta)
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Hsinho Wu*, Michael Mirmak*
IO Methodology	Lance Wang*
Keysight Technologies	Radek Biernacki*
Maxim Integrated	(Mahbubul Bari)
Mentor, A Siemens Business	Arpad Muranyi
Micron Technology	Randy Wolff, Justin Butterfield*
NXP	(John Burnett)
Qualcomm	(Senthil Nagarathinam)
Raytheon	(Joseph Aday)
SiSoft	Mike LaBonte*, Walter Katz*
Synopsys	Ted Mido, Adrien Auge*
Teraspeed Labs	Bob Ross*
Xilinx	(Raymond Anderson)
ZTE Corporation	(Shunlin Zhu)
Zuken	(Michael Schaeder)

OTHER PARTICIPANTS IN 2018

SAE-ITC	(Jose Godoy)

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
February 2, 2018	IBIS Summit at DesignCon – no teleconference	
February 16, 2018	624 227 121	IBISfriday11

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

http://tinyurl.com/y7yt7buz

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.

NOTE: "AR" = Action Required.

INTRODUCTIONS AND MEETING QUORUM

Adrien Auge from Synopsys introduced himself. He stated that he is working on IBIS-AMI modeling. He noted Ted Mido and Kevin Li have moved out of the U.S., and he is joining in their place.

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

Justin Butterfield took meeting minutes in the absence of Randy Wolff.

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

Mike LaBonte called for comments on the minutes of the January 5, 2018 IBIS Open Forum teleconference. Bob Ross moved to approve the minutes. Brad Brim seconded the motion. There were no objections.

Mike reviewed ARs from the previous meeting.

1. Mike to find out where the original IBIS 6.1 Figure 29 is at [AR].
   Mike reported this as done, and he has sent this to Arpad Muranyi.

ANNOUNCEMENTS, **CALL FOR ADDITIONAL AGENDA ITEMS**
None.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we are at 26 members and 3 membership payments have come in for 2018. Actual cash flow of $4,450 has been collected in 2018. Bob noted he does not yet have final numbers for 2017 yet, but he will report these at a future meeting.

WEBSITE ADMINISTRATION

Mike LaBonte reported there were some standard updates to the upcoming events page. He also extended the copyright notices to 2018.

MAILING LIST ADMINISTRATION

Curtis Clark reported that there was one subscriber who is not getting all messages, but this is being looked into and is believed to be an issue on the subscriber's mail server.

LIBRARY UPDATE

No update.

INTERNATIONAL/EXTERNAL ACTIVITIES

- Conferences
None.

- Press Update
None.

- Related standards
Mike LaBonte noted that IEEE 2401 (JEITA LPB) is a standard that we are tracking.

SUMMIT PLANNING AND STATUS

- DesignCon 2018
DesignCon will be held in Santa Clara, CA on January 30 through February 1, 2018. An IBIS Summit will be held on Friday, February 2, 2018 from 8:00 a.m. to 5:00 p.m. in room 209 of the Santa Clara Convention Center. Mike LaBonte stated that Lance Wang has been taking registrations, and lunch will be provided for those who are registered. Bob Ross reported that we are targeting about 50 people and 11 presentations. Mike noted the agenda will be sent out soon. Cadence Design Systems, Keysight Technologies, Mentor, a Siemens Business and Synopsys are sponsors.

- European IBIS Summit at SPI 2018
SPI 2018 will be held in Brest, France on May 22 through May 25, 2018. An IBIS Summit will be held the afternoon of Friday, May 25, 2018. Bob commented that IBIS is expected to be a sponsor. Mike stated that we are working on the agenda and soliciting presentations and looking for sponsors. Bob noted that announcements will go out in March.

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 group has been working on the IBIS 7 parser in advance of the specification being released. In addition, there are some IBISCHK6 bugs that are still being worked on and other bugs that have yet to be filed.

The IBISCHK6 user guide work in progress can be reviewed at:

> http://www.ibis.org/ibischk6/ibischk_6.1.4_UserGuide_wip1.pdf

The Quality task group checklist and other documentation can be found at:

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

ADVANCED TECHNOLOGY MODELING TASK GROUP

Mike LaBonte reported that the group is meeting regularly on Tuesdays at 12:00 p.m. PT.   The focus has been to help with BIRD189.5.

Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported that the group is meeting at 8:00 a.m. PT on Wednesdays. He stated that they had hoped to finalize BIRD189.5 before the DesignCon Summit, but there are still some remaining editorial issues to be resolved. He hopes for the group to vote on BIRD189.5 soon and submit it to the Open Forum.

Task group material can be found at:

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

EDITORIAL TASK GROUP

Michael Mirmak reported that this group remains suspended. Should there be any official document to review such as IBIS 7.0, the task group will resume meetings on Fridays when there is no Open Forum teleconference.

Task group material can be found at:

NEW ADMINISTRATIVE ISSUES

- Meetings with SAE ITC.

Bob Ross reported that there have been meetings with SAE ITC on financial matters. We have not heard back on the final assessment on the IBIS committee, and we have another meeting after DesignCon to discuss the details of the charges from SAE.

BIRD193: FIGURE 29 CORRECTIONS

Mike LaBonte reported that BIRD193 has been submitted by Arpad Muranyi. Mike introduced the BIRD in Arpad's absence. The BIRD defines changes related to Figure 29. For example, the existing figure has the Analog Buffer Control connecting to the package pin, while the new figure connects this point to the die pad.

Michael Mirmak asked about the interaction between BIRD193 and BIRD189. Mike replied that BIRD189 has further eliminated the possibility for connecting multiple buffers to the same pin, and BIRD193 removes these cases from Figure 29. Curtis Clark noted that BIRD193 is fully compatible with BIRD189 without mentioning BIRD189. Bob Ross commented that BIRD193 cleans up and removes forward looking entries from Figure 29.

Michael asked what version of IBIS BIRD193 is targeted for. Mike said there was general agreement to include it in IBIS Version 7.0, but there was no final decision, as it has not been voted on. Curtis commented that there was discussion in the ATM Task Group that BIRD193 should go in the same version as BIRD189.

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

Discussion was tabled.

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

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.

BIRD166.4: RESOLVING PROBLEMS WITH REDRIVER INIT FLOW
Discussion was tabled.

BIRD181.1: I-V TABLE CLARIFICATIONS
Discussion was tabled.

BIRD189.4: INTERCONNECT MODELING USING IBIS-ISS AND TOUCHSTONE
Discussion was tabled.

BIRD190: CLARIFICATION FOR REDRIVER FLOW
Discussion was tabled.

IBISCHK6 PARSER AND BUG STATUS
Bob Ross reported there was further investigation into BUG195, which relates to missing the [End Node Declarations] keyword not giving an error. Bob also confirmed that the [End Circuit Call] and [End External Circuit] keywords also do not give an error when they are missing. An error message was reported for a missing [End External Model] keyword. Bob stated that the bug report now deals with all three cases at once.

NEW TECHNICAL ISSUES
None.

NEXT MEETING
The DesignCon IBIS Summit is scheduled on February 2, 2018. No teleconference will be available. The next IBIS Open Forum teleconference meeting will be held February 16, 2018. The following IBIS Open Forum teleconference meeting is tentatively scheduled on March 9, 2018.

Bob Ross moved to adjourn. Curtis Clark seconded the motion. The meeting adjourned.

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NOTES

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This meeting was conducted in accordance with ANSI guidance.

All inquiries may be sent to info@ibis.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

Other trademarks, brands and names are the property of their respective owners.

SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status	December 1, 2017	December 15, 2017	January 5, 2018	January 26, 2018
ANSYS	User	Active	X	X	-	X
Applied Simulation Technology	User	Inactive	-	-	-	-
Broadcom Ltd.	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	-	X	-	X
Cisco Systems	User	Inactive	-	-	-	-
CST	User	Inactive	-	-	-	-
Ericsson	Producer	Inactive	-	-	-	-
GLOBALFOUNDRIES	Producer	Inactive	X	-	-	X
Huawei Technologies	Producer	Inactive	-	-	-	-
IBM	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	X	-	-
Intel Corp.	Producer	Active	X	X	X	X
IO Methodology	User	Active	X	-	X	X
Keysight Technologies	User	Active	-	-	X	X
Maxim Integrated	Producer	Inactive	-	-	-	-
Mentor, A Siemens Business	User	Active	X	X	X	-
Micron Technology	Producer	Active	X	X	X	X
NXP	Producer	Inactive	-	-	-	-
Qualcomm	Producer	Inactive	-	-	-	-
Raytheon	User	Inactive	-	-	-	-
SiSoft	User	Active	X	X	X	X
Synopsys	User	Active	X	X	X	X
Teraspeed Labs	General Interest	Active	X	X	X	X
Xilinx	Producer	Inactive	-	-	-	-
ZTE Corp.	User	Inactive	-	X	-	-
Zuken	User	Inactive	-	X	-	-

Criteria for SAE 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 standards 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.