IBIS Open Forum Minutes

Meeting Date: September 9, 2022
Meeting Location: Teleconference

VOTING MEMBERS AND 2022 PARTICIPANTS

AMD (Xilinx)	(Bassam Mansour)
Analog Devices (Maxim Integrated)	Tushar Pandey, Jermaine Lim, Rolynd Aquino, Aprille Hernandez-Loyola, Janchris Espinoza, Francis Ian Calubag, Toni Rose Racelis, Thi Nhu Quynh Nguyen
ANSYS	Curtis Clark*
Applied Simulation Technology	(Fred Balistreri)
Broadcom	(Yunong Gan), Jim Antonellis
Cadence Design Systems	Zhen Mu^, Jared James, Ken Willis
Celestica	(Sophia Feng)
Cisco Systems	Stephen Scearce
Dassault Systemes	(Stefan Paret), Longfei Bai
Google	Hanfeng Wang , Jianmin Zhang
Huawei Technologies	(Hang (Paul) Yan)
Infineon Technologies AG	(Christian Sporrer)
Instituto de Telecomunicações	(Abdelgader Abdalla)
Intel Corporation	Hsinho Wu*, Michael Mirmak*, Jingbo Li, Liwei Zhao, Chi-te Chen, Kinger Cai*
Keysight Technologies	Ming Yan*, Fangyi Rao, Majid Ahadi Dolotsara, Pegah Alavi, Saish Sawant, [Radek Biernacki]
Luminous Computing	(David Banas)
Marvell	Steven Parker
MathWorks	Graham Kus*, Walter Katz*, [Mike LaBonte]
Micron Technology	Randy Wolff*, Aniello Viscardi, Justin Butterfield, Dragos Dimitriu
MST EMC Lab	Chulsoon Hwang, Hanyu Zhang, Haran Manoharan, Jiahuan Huang, Junho Joo, Reza Yazdani, Seunghun Ryu, Seungtaek Jeong, Xiangrui Su, Xu Wang, Yuanzhuo Liu, Zhekun Peng, Yifan Ding
SerDesDesign.com	John Baprawski
Siemens EDA	Arpad Muranyi*, Weston Beal*, Amin Maher, Scott Wedge, Steve Kaufer, Todd Westerhoff, Vladimir Dmitriev-Zdorov, Ken Cantrell
STMicroelectronics	(Olivier Bayet)^
Synopsys	Ted Mido*
Teraspeed Labs	Bob Ross*
Waymo	Zhiping Yang*
ZTE Corporation	(Shunlin Zhu)
Zuken	(Michael Schäder)
Zuken USA	Lance Wang*

OTHER PARTICIPANTS IN 2022

Altair	Junesang Lee
Amazon Lab126	Askar Hashemi
Ciena	Hugues Tournier, Kaisheng Hu
Cornelis Networks	Champion Kao
De Montfort University	Alistair Duffy
GE HealthCare	Balaji Sankarshanan, Sarah Salvador
IBM	Greg Edlund
Imperial College, UK	Cong Ling
Mercury Systems	Vincent Tam
National Central University, Taiwan	Chiu-Chih Chou, Liu Huang Fu, Bohong Chai, Remxiang Xu, Kuan Fa, Yanting Li
OVT	Sirius Tsang
Politecnico di Torino	Stefano Grivet Talocia, Tommaso Bradde, Marco De Stefano, Riccardo Trinchero, Alessandro Zanco, Antonio Carlucci
Rivos	Yansheng Wang
SAE ITC	José Godoy
SeriaLink Systems	Aleksey Tyshchenko, David Halupka
University of Colorado, Boulder, ECEE	Eric Bogatin
University of Illinois	José Schutt-Aine
University of L'Aquila	Fancesco De Paulis
Unaffiliated	Mike LaBonte

In the list above, attendees present at the meeting are indicated by "*." Those submitting an email ballot for their member organization for a scheduled vote 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 connection information for future IBIS teleconferences is as follows:

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

Join with a video conferencing device
106010980@teams.bjn.vc
Video Conference ID: 114 666 897 5
Alternate VTC dialing instructions

Or call in (audio only)
+1 267-768-8015,554664847#   United States, Philadelphia
Phone Conference ID: 554 664 847#
Find a local number | Reset PIN
Learn More | Meeting options

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

Graham Kus declared that a quorum had been reached with 11 attendees.

CALL FOR PATENTS

Randy Wolff called for declaration of any patents or pending patents related to the IBIS, IBIS-ISS, ICM, or Touchstone 2.0 specifications. No items were announced.

REVIEW OF MINUTES AND ARS

Randy Wolff called for comments on the minutes of the August 8 2022 IBIS Summit

Michael Mirmak motioned to approve, Curtis Clark seconded. There were no objections.

August 12 2022 IBIS Summit- Randy had one comment- the attendee list needs to be updated in the voting members section, and Bob Ross mentioned Zuken USA needs to be indented [AR]. Graham Kus takes an action to correct the minutes. Motion to approve with corrections noted by Bob, and Michael Mirmak seconded. There were no objections.

AR's from agenda were as follows:

- Randy to update approval date in BIRD219.1 before posting to IBIS website [AR]
    o This was completed.
- Randy to send vote solicitation email on TSIRD4.1 [AR]
    o This was completed.
- Michael to email Editorial task group with details of re-start of task group meetings [AR]
    o This was completed.
- Randy to send IBIS 7.1 known issues document to Editorial task group [AR]
    o This was completed.
- Steve Parker to add updated IBIS 7.1 known issues document to the website [AR]
    o This was completed.
- Bob to update classification of BUG227 [AR]
    o This was completed.

ANNOUNCEMENTS, CALL FOR ADDITIONAL AGENDA ITEMS

Bob Ross suggested a security question be added to Technical Workgroup as a new Technical Discussion topic. Michael Mirmak agreed but to wait until that portion of the agenda. No other new items were announced.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that there were 28 renewal members for 2022.

Based on a recent payment, STMicroelectronics has been moved back to Voting Status.

The following payments are expected for 2022:
- $313 for ibis.org website renewal
- $1,500 for ibischk7.1.1 parser development
- Approximately $6,000 for end of year SAE ITC assessment that the IBIS Committee pays to support staff and other activities.

No additional Summit payments are anticipated or planned for 2022.

$21,324 Balance for 2022
$24,674 Adjusted Balance for 2022

$450 Adjusted Balance for 2023

WEBSITE ADMINISTRATION

Randy Wolff said that Steven Parker was unable to attend this meeting but relayed that the events page had been updated. Randy would make a request Steven add in the China IBIS Summit [AR]. The last IEEE EMC-SIPI recording has been updated. Some documents need to be added to the ATM Task Group page. The website has been renewed for a year. Bob Ross sent the documentation to SAE ITC so they have the receipt and is tracking it, and waiting for SAE ITC or Steven to acknowledge payment was received [AR].

MAILING LIST ADMINISTRATION

Curtis Clark reported mailing list is going smoothly- from the ATM Task Group there was thought to be an AR issue due to the freelists.org, but it was a typo on a user's entry and case resolved.

LIBRARY UPDATE

Zhiping Yang reported he only received one request from Honeywell, some general questions and process with the library tool. He reported no other updates.

INTERNATIONAL/EXTERNAL ACTIVITIES

Conferences:

No new items announced.

Press Updates

Randy Wolff received a request from IEEE to write an article covering the IEEE EMC-SIPI symposium and the IBIS Summit. He will write up a summary about the summit and ask the experts panel [AR].

Related standards

Michael Mirmak reported last week September 1, 2022 the IEEE-DASC met, and there was some offline discussion on getting updates on LPB and to get JEITA to provide an update for the next DASC meeting on Thursday October 6, 2022. Email traffic supporting that is expected. In action there is interest in more updates to LPB as we get to IBIS7.2. Readers can go to dasc.org for more information.

IEEE IBIS Standardization

Randy reported they had a meeting with SAE ITC this week. They covered the topic of IBIS Standardization and a few other topics including upcoming work of SAE ITC as our parent organization. For example, SAE ITC has updated much of the website infrastructure, and they will eventually be tying in invoice systems for direct online payment. IBIS is slated to be incorporated in the 2023 timeframe, as we approach next year we will have some changes to how the website is hosted.

IEEE Standardization was the other topic, and we have a contact – Michael McNair at SAE ITC who is very familiar with the process and that he had taken AR's to get the steps IBIS would go through with IEEE and SAE ITC. There is precedence from this being done before, such as document pricing and copyrights. SAE ITC would come back once they have their research done and more details on the process.

A discussion about how the IBIS draft standards, ratified standards, and legacy standards would be made available on a publicly available or paid basis.

Randy said we will wait on SAE ITC to discuss further.

IBIS Summits:

Asia IBIS Summit (China) November 4, 2022:

Randy reported that Lance Wang talked to some folks in China, and Friday November 4, 2022 would be ideal for a virtual Summit (Morning in China, evening in US overlap). He said by that schedule we are already overdue to make the first announcement [AR].

Asia IBIS Summit (Japan) November 11, 2022:

Randy reported this is scheduled for Friday November 11, 2022, again that would be a Morning in Japan and Evening in US. JEITA has put the notice out and is seeking solicitations from members. Randy will be sharing the announcement later today.

Randy reported he had some discussions with Suzanne Deffree. The DesignCon conference is scheduled at the Santa Clara, CA Convention Center, Tuesday January 31, 2023 through Thursday February 2, 2023. She confirmed there are no rooms available Friday, February 3, 2023 after DesignCon 2023. However, there would be rooms available on Monday, January 30, 2023.

The committee had a discussion about either holding the IBIS Summit on Monday, January 30, 2023, or to attempt to hold the IBIS Summit Friday, February 3, 2023 but offsite at nearby Member-company campus sites for example in San Jose, CA as a possible alternative.

QUALITY TASK GROUP

Bob Ross reported we are continuing to discuss power-aware checks for the IBIS quality checklist. His AR was to ask Michael Mirmak to ask about security checks but he suggested we might discuss the issue later.

Note: 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 we are meeting in our usually Tuesday Noon time slot. Discussion various power modelling and Power Integrity related subjects. Arpad said Kinger Cai is working on a BIRD draft for SPIM modelling. Also, Arpad said an email was received from Chulsoon Hwang on a BIRD relating to PSIJ for an upcoming meeting in the Tuesday time slot. Arpad invited anyone interested in the topic of Power Integrity to attend the Task Group meetings.

Note: Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported this Task Group is now suspended.

Note: Task group material can be found at:

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

EDITORIAL TASK GROUP

Michael Mirmak reports meetings have resumed as of this past Wednesday and that the Editorial Task Group looks to make progress on the IBIS7.2 draft and that they have a "version zero" draft as well as a checklist to operate as a working document to plan the adjustments to the document updates. Arpad Muranyi commented on the Interconnect Task Group: that while it is suspended, he and Randy Wolff have an AR to prepare a document separate Touchstone 1.0 and Touchstone 2.0 keywords and rules, and that in the background they are preparing that in advance [AR]. Randy shared on the Teams meeting viewer that there is a work in progress

directory for IBIS7.2. Bob Ross commented the file size is too large for email reflectors and to be sure to send or share as links, and not to attempt to use attachments.

Note: Task group material can be found at:

http://www.ibis.org/editorial_wip/

NEW ADMINISTRATIVE ISSUES

Randy Wolff reported we have TSIRD4.1 scheduled for a vote.

NEW AND REVISED *IRDS

None.

IRDS SCHEDULED FOR VOTE

TSIRD4.1: [END] KEYWORD CORRECTIONS AND OTHER EDITORIAL CHANGES

Randy Wolff reported this TSIRD is to deal with Touchstone 2.0. It catches a lot of editorial mistakes we are incorporating into the draft of Touchstone 3.0. Arpad Muranyi asked if there are any technical changes, or just editorial. Michael Mirmak confirmed there are explicitly no parser changes or technical changes- just making the examples actually-pass TSCHK2 parser and making some clarifications. Arpad moved to start the voting process. Michael seconded. There were no objections.

The votes were as follows:
- Ansys – Yes
- Cadence – Yes (by email)
- Intel – Yes
- Keysight – Yes
- MathWorks – Yes (by email)
- Micron – Yes
- Siemens EDA – Yes
- STMicroelectronics – Yes
- Synopsys – Yes
- Teraspeed Labs – Yes
- Waymo – Yes (by email)
- Zuken – Yes

Randy noted the Vote passed, with 0 Nos and 0 Abstains. Randy took an AR to update the approval date on TSIRD4.1 and to get to Steven Parker for posting on the website [AR].

IRDS ELIGIBLE FOR VOTE

TABLED IRDS: (NO DISCUSSION WITHOUT MOTION TO "UNTABLE")

None.

IBISCHK AND TSCHK PARSER AND BUG STATUS

Bob Ross reported the parser developer is working on the parser.

Bob reported on BUG235: that with respect with the C_comp parameter: if the required C_comp_model_mode parameter is missing, it is not checked. There was no error, and Bob classified this as medium-severe because it is a specification violation that should have been checked by the parser. Bob moved it be classified as "severe" severity and 'medium" priority. Arpad Muranyi seconded There were no objections [AR].

Bob reported on BUG236: he said it turns out for file format IBIS-ISS, there is no rule that requires the last terminal be a reference terminal. That rule exists for file TS (Touchstone). The test case has terminal-3 as the last terminal, and this was flagged as an error, but that is incorrect. Bob recommended it be classified as "severe" severity and 'medium" priority because it is a specification violation. We specifically allow reference terminals in any order. Arpad asked if this applied to TS (Touchstone) and Bob replied no- this is for IBIS-ISS. Bob moved this be classified "severe" severity and 'medium" priority. Michael Mirmak seconded.

Bob reported he would pre-emptively contact the parser developer about these two bugs, so we do not have to revise the contract.

Arpad reported that in BIRD204, we had Waves in plural as a keyword value. We decided that is incorrect. The correct way is for keyword "Times" as plural-tense, and keyword "Wave" is singular-tense.

Arpad reported that in BIRD209, we correct this keyword value to be "Wave" singular-tense. Michael asked if we check for "Waves" plural-tense in the Editorial Task Group or if it should be done, Bob agreed it was a good idea.

Walter Katz said the EDA tool has to act on this parameter value, and Arpad agreed it is important.

Bob said a new bug would have to be filed for "Waves" plural-tense being an illegal condition.

Bob reported on a new item, Michael sent out some security requirements for Parser code – IBISCHK and TSCHK that are needed. Bob tried to bring up documents and saw that there is a whole code process that we do not do. Clicking on any of the documents for the framework, they are tagged as withdrawn. Randy showed the document was superseded by a newer version.

Michael explained if you are writing source code, there are key items that should be adopted. There are secure scanning and secure printing functions in C. The old functions could allow buffer overflows and could allow undesired secondary impacts. There are best practices for avoiding escalation of privilege. Also to handle unexpected input types. Those are part of a secure development lifecycle, to actually implement from the first blank development environment. There are companies that provide surveys to determine if code is being developed by these processes for verification. The key point is we are being asked to contact suppliers and verify with them whether they have secure development practices in place. SAE ITC is just such a supplier, so Michael has to ask the question, do we have that in place. If the answer is No, he has to encourage we do. Arpad asked about .dll and .so. Michael said essentially yes, although those are more difficult to evaluate those files.

Walter asked if there was an organization that could provide this service. Michael responded he is already engaged in some scans that are required. However it cannot be an expectation we use the Membership Companies of the IBIS Committee- instead he would suggest it be posed as a question to the Developer. If they cannot, there are software services and contractors available, or even EDA vendor community would be familiar with SDL practices.

Randy shared that when this was first brought up in the ATM Task Group, we contacted EDA vendors about some of this as a topic. Mike LaBonte had found some free tool, or perhaps MathWorks, or perhaps Synopsys, but the upshot was that purchasing a tool that performs these checks would be expensive and beyond the IBIS Committee budget.

Bob shared he did not know about the Touchstone Parser, but the IBISCHK parser evolved from 1994 with legacy scanf and printf were inserted- so our software developer might have to run a procedure to update those as a separate project. Bob shared that Mike did an evaluation of some tools available and found different tools generate different error reports. But the certain old keyword practices in C were flagged as errors and not C++, so maybe writing it to C++ would be feasible.

Michael clarified that- rather than rewriting in new language- simply adding the SDL requirements or compliance- that one of the frameworks would be acceptable. Arpad asked if there was language dependency. Michael clarified the SDL are language agnostic- just that it becomes harder to parse in an automatic way, so it is best for a developer to start at square one with these practices.

NEW TECHNICAL ISSUES

Randy asked if there were any new technical issues. No new issues were discussed.

NEXT MEETING

Randy Wolff stated that three weeks from now would be the next IBIS Open Forum Meeting on September 30, 2022. The following meeting date would be October 12, 2022. Motion to Adjourn by Arpad Muranyi. Bob Ross Seconded. The meeting was adjourned.

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NOTES

IBIS CHAIR: Randy Wolff (208) 363-1764
　　　　rrwolff@micron.com
　　　　Principal Engineer, Silicon SI Group, Micron Technology, Inc.
　　　　8000 S. Federal Way
　　　　P.O. Box 6, Mail Stop: 01-720
　　　　Boise, ID 83707-0006

VICE CHAIR: Lance Wang (978) 633-3388
　　　　lance.wang@ibis.org
　　　　Solutions Architect, Zuken USA
　　　　238 Littleton Road, Suite 100
　　　　Westford, MA 01886

SECRETARY: Graham Kus
　　　　graham.kus@ibis.org
　　　　Senior Engineer, The MathWorks, Inc.
　　　　3 Apple Hill Drive
　　　　Natick, MA 01760

TREASURER: Bob Ross (503) 246-8048
　　　　bob@teraspeedlabs.com
　　　　Engineer, Teraspeed Labs

10238 SW Lancaster Road
Portland, OR 97219

LIBRARIAN: Zhiping Yang (650) 214-0868
zhipingyang@google.com
Sr. Hardware Manager, Google LLC
1600 Amphitheatre Parkway
Mountain View, CA 94043

WEBMASTER: Steven Parker (845) 372-3294
sparker@marvell.com
Senior Staff Engineer, DSP, Marvell
2070 Route 52
Hopewell Junction, NY 12533-3507

POSTMASTER: Curtis Clark
curtis.clark@ansys.com
ANSYS, Inc.
150 Baker Ave Ext
Concord, MA 01742

This meeting was conducted in accordance with SAE ITC guidelines.

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 or unsubscribe from the official ibis@freelists.org and/or ibis-users@freelists.org email lists (formerly ibis@eda.org and ibis-users@eda.org):
    - https://www.freelists.org/list/ibis
    - https://www.freelists.org/list/ibis-users
- To subscribe to or unsubscribe from one of the task group email lists: ibis-macro@freelists.org, ibis-interconn@freelists.org, ibis-editorial@freelists.org, or ibis-quality@freelists.org:
    - https://www.freelists.org/list/ibis-macro
    - https://www.freelists.org/list/ibis-interconn
    - https://www.freelists.org/list/ibis-editorial
    - https://www.freelists.org/list/ibis-quality
- 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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SAE STANDARDS BALLOT VOTING STATUS (attendee X; absent -)

Organization	Interest Category	Standards Ballot Voting Status	July 22, 2022	August 5, 2022	August 12, 2022	Sept. 9, 2022
AMD (Xilinx)	Producer	Inactive	-	-	-	-
Analog Devices (Maxim Integrated)	Producer	Inactive	-	-	-	-
ANSYS	User	Active	X	-	X	X
Applied Simulation Technology	User	Inactive	-	-	-	-
Broadcom Ltd.	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	-	X	X	X
Celestica	User	Inactive	-	-	-	-
Cisco Systems	User	Inactive	-	X	-	-
Dassault Systemes	User	Inactive	-	-	-	-
Google	User	Inactive	-	X	-	-
Huawei Technologies	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Instituto de Telecomunicações	User	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	X	X	X
Keysight Technologies	User	Active	X	X	X	X
Luminous Computing	General Interest	Inactive	-	-	-	-
Marvell	Producer	Active	-	-	-	-
MathWorks	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	X	X	X
MST EMC Lab	User	Inactive	-	X	-	-
SerDesDesign.com	User	Inactive	-	-	-	-
Siemens EDA (Mentor)	User	Active	X	X	X	X
STMicroelectronics	Producer	Inactive	=	=	-	X
Synopsys	User	Active	X	X	-	X
Teraspeed Labs	General Interest	Active	X	X	X	X
Waymo	User	Active	X	X	X	X
ZTE Corp.	User	Inactive	-	-	-	-
Zuken	User	Active	X	X	-	X

= Temporarily not a voting member

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 (voting by email counts as attendance)

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.