IBIS Open Forum Minutes

Meeting Date: **June 25, 2021**
Meeting Location: **Teleconference**

VOTING MEMBERS AND 2021 PARTICIPANTS

ANSYS	Curtis Clark*, Wei-hsing Huang
Applied Simulation Technology	(Fred Balistreri)
Broadcom	(Yunong Gan)
Cadence Design Systems	Zhen Mu*
Celestica	(Sophia Feng)
Cisco Systems	(Stephen Scearce)
Dassault Systemes (CST)	Stefan Paret, David Duque, Longfei Bai
Ericsson	(Guohua Wang)
Google	Zhiping Yang*
Huawei Technologies	(Hang (Paul) Yan)
Infineon Technologies AG	(Christian Sporrer)
Instituto de Telecomunicações	(Abdelgader Abdalla)
Intel Corporation	Hsinho Wu*, Michael Mirmak*
Keysight Technologies	Radek Biernacki*, Fangyi Rao
Luminous Computing	David Banas*
Marvell	Steve Parker
Maxim Integrated	Tushar Pandey
Micron Technology	Randy Wolff*, Justin Butterfield, Aniello Viscardi
MST EMC Lab	(Chulsoon Hwang)
NXP	(John Burnett)
SerDesDesign.com	(John Baprawski)
Siemens EDA (Mentor)	Arpad Muranyi*, Weston Beal*
Siemens AG	Franz Pfleger, Sebastien Kollinger
SiSoft (MathWorks)	Mike LaBonte*, Walter Katz*
Synopsys	Ted Mido*, Andy Tai
Teraspeed Labs	Bob Ross*
Xilinx	(Romi Mayder)
ZTE Corporation	Bowen Shen, Changgang Yin, Dongdong Ye Liqiang Meng, Xiaoxuan Liu
Zuken	Michael Schäder
Zuken USA	Lance Wang*

OTHER PARTICIPANTS IN 2021

Achronix Semiconductor	Hansel Dsilva
AVL Software and Functions	Wolfgang Röhrner

Continental Automotive	Julnar Musmar, Stefanie Schatt
De Montfort University (IEEE EMC)	Alistair Duffy
IT-Beratung-Maurer	Manfred Maurer
Kandou Bus	Sherman Chen
KEI Systems	Shinichi Maeda
Microchip Norway	Lars Snith
Politecnico di Torino	Stefano Grivet-Talocia, Paolo Manfredi
	Alessandro Zanco, Felipe Treviso
	Marco Destefano, Riccardo Trinchero
	Tomasso Bradde
RTC	Ken Whigham
University of Illinois, Urbana	Jose Shutt-Ainé, Xinying Wang

In the list above, attendees 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

Mike LaBonte declared that a quorum was reached. Bob Ross confirmed that 7 constituted a quorum.

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 patents were declared.

REVIEW OF MINUTES AND ARS
Randy Wolff called for comments on the minutes of the June 4, 2021 IBIS Open Forum teleconference. Lance Wang moved to approve the minutes. Radek Biernacki seconded the motion. There were no objections.

Randy reviewed ARs from the previous meeting.

1. Steve Parker to remove IBM from roster page [AR]
   Randy reported this had been done.
2. Zhiping Yang to check on deadline for submission of article to the IEEE EMC magazine on IBIS Summit [AR]
   Zhiping said the deadline was in July.
3. Randy Wolff to write article for EMC magazine about IBIS Summit and also advertise the "Ask the IBIS Experts" event [AR]
   Randy said this was written and submitted.
4. Randy Wolff to send vote solicitation email for BIRD211.2 [AR]
   This had been cancelled due to ongoing BIRD work.

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

MEMBERSHIP STATUS AND TREASURER'S REPORT
Bob Ross reported that cash flow for 2021 was $26,725 and the total adjusted balance for 2021 was $30,075. These figures were unchanged from the previous meeting. Bob said he had previously reported we had 29 members, but one member's payment had been incorrectly acknowledged and recorded. We therefore had 28 members and the quorum for meetings was 7. The membership report would be updated when payment is received.

Bob had to submit SAE's articles of incorporation to establish a financial relationship with one company.

No new Summit expenses are anticipated. A full payment of $17,500.00 for ibischk7 version 7.1.0 is expected in 2021.

WEBSITE ADMINISTRATION
Randy Wolff noted the previous Open Forum minutes had not yet been posted, but the website

was mostly up to date.

MAILING LIST ADMINISTRATION
Curtis Clark reported everything was running smoothly.

LIBRARY UPDATE
Zhiping Yang reported no new updates to the model library. No one had contacted Zhiping about the library.

INTERNATIONAL/EXTERNAL ACTIVITIES
- Conferences
IEEE EMC + SIPI Symposium 2021 (virtual from July 27-August 13, 2021):

> https://www.emc2021.emcss.org

DesignCon 2021 (August 16-18, 2021, San Jose, CA):

> https://www.designcon.com/

- Press Update
Randy Wolff said he would have SAE ITC issue a press release for the DesignCon summit, required by our agreement with Informa Markets. He was not sure if there was a deadline for that.

- Related standards
Michael Mirmak reported an IEEE DASC meeting would be coming up, and he could report on that later.

SUMMIT PLANNING AND STATUS
Randy Wolff said there would be announcements every week for the two upcoming summits, EMC+SIPI and DesignCon. Lance Wang said we had 4 registered for DesignCon and 2 for EMC+SIPI.

- IEEE EMC+SIPI (July 27-August 13, 2021 virtual)
The summit would be held August 12, 8:00am-12:00pm PDT. Zhiping Yang said people had been asking if overlapping presentations could be submitted. Randy said we were hoping for new content, but some overlap was possible. Zhiping said he was inviting an MST student to present a machine learning topic. Bob Ross suggested that IBIS 7.1 changes could be a possible topic. Randy said he planned an overview of IBIS 7.1 changes. Bob said detailed technical presentations about the changes would be a good addition. Bob said he might invite Alistair Duffy to present, possibly about Feature Selective Validation (FSV). Bob would be contacting people about presenting. Randy said we had not yet chosen a web conference platform yet.

Zhiping described an EMC+SIPI conference power integrity topic, involving decoupling capacitors, that could be presented again at the summit. He said it was not directly related to IBIS. Mike LaBonte suggested that such topics might suggest new directions for IBIS. Bob said some presentations in Europe were often not directly related to IBIS. Bob said some conference presentations could be adapted for a second presentation at our summit. Zhiping had to check on corporate authorization for such a presentation.

- DesignCon 2021 (August 16-18, 2021 virtual)
Randy said a morning time had been chosen to overlap with Europe. The summit would be held August 19, 8:00am-12:00pm PDT. Randy had sent the first announcement.

QUALITY TASK GROUP
Mike LaBonte reported that the group meets on Tuesdays at 9:00 a.m. PT. The group continues to plan for the next ibischk release, ibischk7.1.0. He said tschk2.0.1 was in beta test, and a few testers found that it seemed to work well. Two Linux versions had been built, for Debian 10 and for Red Hat Enterprise Linux 7. Some people had trouble running the Debian 10 version because it was compiled with a newer kernel than the systems they were running on, but RHEL7 worked for everyone who tried it.

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

https://www.ibis.org/quality_wip/

ADVANCED TECHNOLOGY MODELING TASK GROUP
Arpad Muranyi reported that the group meets on Tuesdays at 12:00 p.m. PT. The group continued to discuss improvements to the AMI flow for redrivers, especially BIRD211.2. Also, the group had addressed questions from the parser developer.

Task group material can be found at:

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

INTERCONNECT TASK GROUP
Michael Mirmak reported that the Interconnect task group remains suspended. Its former time slot is being used by the Editorial task group.

Task group material can be found at:

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

EDITORIAL TASK GROUP
Michael Mirmak reported that the group now meets at 8:00 a.m. PT on Wednesdays. The focus has been on tables of defaults for AMI parameters. They were down to the last two tables. The

group had addressed questions about BCI_Training_Mode. Arpad Muranyi asked if that had been answered. Michael felt the questions had been covered. Bob Ross said one question was about the meaning of "Both", which he said meant running both "GetWave" and "Impulse" mode analyses.

Weston Beal asked if that would change the flow. If so, a BIRD would be needed. Walter Katz said "Both" would mean performing two separate optimizations. Arpad Muranyi asked how one would choose between the two results. Radek Biernacki said that had been discussed and resolved. Curtis Clark agreed. Randy Wolff said a clarifying sentence might be discussed in the Editorial group. Arpad said such an editorial change would be OK if it was the original intent of the BIRD. Radek said we had postponed voting, but we could go back and review the minutes to see the previously decided resolution. Michael asked if this topic would be discussed in the ATM group. Arpad said if the questions were all answered there would be no need. Michael said if a clarification were in a draft that they had not reviewed, that could solve a lot of problems.

Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES
- Annual Election of Officers Update
Radek Biernacki reported that in the previous Open Forum meeting we were in the voting period, which then ended June 15. There were 14 "yes" votes for each candidate, no "no" votes, and no abstains. The elected officers were:
- Chair: Randy Wolff
- Vice-Chair: Lance Wang
- Treasurer: Bob Ross
- Secretary: Mike LaBonte
- Webmaster: Steve Parker
- Librarian: Zhiping Yang
- Postmaster: Curtis Clark

Radek congratulated all who were elected. Randy thanked the officers for their past service and their willingness to continue. He said there would be discussions about modernizing the officer roles to distribute the workload better. Arpad Muranyi asked if Mike LaBonte would be taking minutes for the ATM group, since he was replacing Curtis Clark as Secretary. Curtis said he would continue taking those minutes.

BIRD211.2: NEW REDRIVER FLOW
Walter Katz said they were in the process of refining the language. Arpad said he hoped to have it ready for a vote soon. He noted there a tentative vote had been scheduled, but it was cancelled.

BIRD213: EXTENDING IBIS-AMI FOR PAMn ANALYSIS
Randy Wolff noted that this had been introduced in the previous meeting. Walter Katz said

discussion of this BIRD would resume after the redriver discussion subsided. He felt we were going in the direction of supporting PAMn so that future additions could be avoided. Arpad Muranyi asked at what level PAM signaling would become analog. Walter felt that in practice it would stop at PAM5. Walter suggested there could be an IBIS 7.2 with just PAMn and the redriver BIRD, and it might be completed quickly. Arpad said there would be discussion in the ATM group.

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

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

BIRD190: CLARIFICATION FOR REDRIVER FLOW
Discussion was tabled.

BIRD210: NEW REDRIVER AMI FLOW
Discussion was tabled.

IBISCHK AND TSCHK PARSER AND BUG STATUS
Bob Ross asked when we would vote on IBIS 7.1 content. The parser developer had asked several questions. He said work on BIRD211.2 features would be delayed until last because the BIRD was not yet passed. The work should be completed in September, although Bob noted the actual delivery was often somewhat later than expected.

One developer question was about relative clocks for BIRD208. Bob said there might be an editorial extension related to that. No new bugs had been reported. Bob said some of the developer's findings might become bug reports.

Bob said we might officially release tschk2.0.1 as the new parser soon.

NEW TECHNICAL ISSUES
- Randy Wolff called for discussion of BIRD content for IBIS 7.1. Arpad Muranyi said the ATM had voted to recommend withholding BIRD211.2 from IBIS 7.1. Randy said we had been holding up IBIS 7.1 for that BIRD.

Michael Mirmak showed a presentation giving the Editorial group proposal for the BIRD content to be included in IBIS 7.1. The list included most newly accepted BIRDs, but it did not include BIRD211.2 or BIRD213. Michael read the presentation as a formal motion. Walter Katz seconded the motion. Without objection the motion passed. Randy said he would schedule a vote to be held in the next Open Forum meeting. Michael Mirmak asked how the motion text

would be handled. Randy said he would use the exact text from the presentation, and the presentation document would be posted and linked in the minutes:

https://ibis.org/minutes/min2021/m062521_docs/IBIS_7p1_Motion.pdf

Randy said if the vote passed, the Editorial group would make the appropriate adjustments in a subsequent IBIS 7.1 draft document.

NEXT MEETING
The next IBIS Open Forum teleconference meeting will be held on July 16, 2021. The following teleconference meeting is tentatively scheduled for August 6, 2021. With two summits there will be 4 August meetings.

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 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 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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SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status	May 12, 2021	May 14, 2021	June 04, 2021	June 25, 2021
ANSYS	User	Active	X	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	-	-	-	-
Dassault Systemes	User	Inactive	X	-	-	-
Ericsson	Producer	Inactive	-	-	-	-
Google	User	Active	-	X	X	X
Huawei Technologies	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Instituto de Telecomunicações	User	Inactive	-	-	-	-
Intel Corp.	Producer	Active	-	X	X	X
Keysight Technologies	User	Active	-	X	X	X
Luminous Computing	General Interest	Active	-	X	-	X
Marvell	Producer	Active	-	X	X	-
Maxim Integrated	Producer	Inactive	-	X	-	-
Micron Technology	Producer	Active	X	X	X	X
MST EMC Lab	User	Inactive	-	-	-	-
NXP	Producer	Inactive	-	-	-	-
SerDesDesign.com	User	Inactive	-	-	-	-
Siemens EDA (Mentor)	User	Active	X	X	X	X
SiSoft	User	Active	X	X	X	X
Synopsys	User	Active	-	X	X	X
Teraspeed Labs	General Interest	Active	X	X	X	X
Xilinx	Producer	Inactive	-	-	-	-
ZTE Corp.	User	Inactive	X	-	-	-
Zuken	User	Active	X	-	X	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.