



## IBIS Open Forum Minutes

Meeting Date: **July 16, 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 Searce)
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 Pflieger, 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 Trincherro 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](tel: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#](tel:+12677688015554664847) 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.

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## INTRODUCTIONS AND MEETING QUORUM

Mike LaBonte declared that a quorum was reached, confirming 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 25, 2021 IBIS Open Forum teleconference. Curtis Clark moved to approve the minutes. Lance Wang seconded the motion. There were no objections.

Randy reviewed ARs from the previous meeting.

1. Randy Wolff to have SAE ITC issue a press release for the DesignCon summit [AR]  
Randy reported that a press release from SAE ITC would be released July 20. He had not yet seen the draft.
2. Randy Wolff to schedule a vote on IBIS 7.1 content to be held in the next Open Forum meeting [AR]  
This had been done.

### **ANNOUNCEMENTS, CALL FOR ADDITIONAL AGENDA ITEMS**

None.

### **MEMBERSHIP STATUS AND TREASURER'S REPORT**

Bob Ross reported that there had been no change from the previous report. Cash flow for 2021 was \$26,725 and the total adjusted balance for 2021 was \$30,075. Membership stood at 28, with a voting quorum of 7. We had 26 members paid this year and 2 paid in the prior year. Bob was still tracking down a payment not yet recognized. A half-year payment was also in progress.

No new Summit expenses were anticipated. A full payment of \$17,500.00 for ibischk7 version 7.1.0 was expected in 2021. Arpad Muranyi asked for clarification on what "adjusted" meant. Bob said it included payments made both this year and in the prior year, to be applied this year.

### **WEBSITE ADMINISTRATION**

Randy Wolff reported that Steven Parker had emailed the updates he had made. Randy asked if any website changes were needed. There were no requests.

### **MAILING LIST ADMINISTRATION**

Curtis Clark reported everything was running smoothly. A gmail subscriber had not yet replied to a validation query to be approved.

## LIBRARY UPDATE

No report.

## 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

Bob Ross said announcements for the IEEE EMC+SIPI conference had been mentioning IBIS. Randy Wolff said the SAE ITC press release was still in the works, as noted in ARs.

- Related standards

No report.

## SUMMIT PLANNING AND STATUS

- IEEE EMC+SIPI (July 27-August 13, 2021 virtual)

The summit would be held August 12, 8:00am-12:00pm PDT. Bob Ross said Alistair Duffy would not be able to give his FSV presentation, due to a conflict. Yuriy Shlepnev, Mike LaBonte, and IEEE EMC+SIPI presenters would be presenting. One presenter from China would provide a prerecorded video. Bob said we might repeat presentations across the conferences. Three of the presentations could be given in the upcoming Asian summits.

Randy Wolff had set up a Zoom meeting for the summit. He would do likewise for the DesignCon summit. Bob noted that IEEE had offered to set up the online meeting service. Randy said that it would be easier to have control over the meeting recording using his own Zoom account. Lance Wang said we had 11 registered. Randy said he would check if IEEE had any additional registrations.

- DesignCon 2021 (August 16-18, 2021 virtual)

The summit would be held August 19, 8:00am-12:00pm PDT. Randy Wolff spotted a typo in the conference title on the events web page. Lance Wang said we had 10 registered. He asked people to email him to register, if they would be attending either summit.

Lance asked what time the summit would start. Randy said it would start at 8:00 AM PT. Lance was concerned that some people physically at the conference would be travelling to leave at that time, unable to join. Arpad Muranyi said that unlike physical IBIS summit meetings, it might be harder to get approval to stay an extra day to attend, adding that there was WiFi service on airplanes, and some might attend that way.

Bob said we had 6 to 8 presentations, including the FSV presentation by Alistair Duffy and a presentation drawing a comparison to one by Yuriy Shlepnev. Bob might invite MST EMC Lab experts to present if there were still slots to be filled. There was a video presentation that could be added also.

### **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. Michael Mirmak had found there was a small error message change suggested in one bug report that had not been implemented. The group would be considering that change in the next meeting. Mike thanked all who had tested the new parser. Bob Ross said we would be able to release it soon, limited mostly by the logistics of producing another build and updating the draft web page.

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

[http://www.ibis.org/quality\\_wip/](http://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. He said the redriver BIRD was done, a final draft would be reviewed Tuesday. It would be submitted after that. The PAMn BIRD would be discussed next. Arpad invited all who are interested to join the meetings.

Task group material can be found at:

[http://www.ibis.org/macromodel\\_wip/](http://www.ibis.org/macromodel_wip/)

### **INTERCONNECT TASK GROUP**

Michael Mirmak reported that the Interconnect task group remained suspended. Its former time slot was being used by the Editorial task group.

Task group material can be found at:

[http://www.ibis.org/interconnect\\_wip/](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. They had deviated from reviewing summary tables to consider protocol parameters. Section 10 should be wrapped up soon. The candidate IBIS 7.1 draft should be ready ahead of the DesignCon summit. Two Open Forum meetings would then be required for review, once the motion to schedule ratification was made.

Task group material can be found at:

[http://www.ibis.org/editorial\\_wip/](http://www.ibis.org/editorial_wip/)

## **NEW ADMINISTRATIVE ISSUES**

- None

### **BIRD211.2: NEW REDRIVER FLOW**

Arpad Muranyi said the BIRD could potentially be submitted and up for a vote next time, but the ATM group probably needed more time to finalize the 211.3 version.

### **BIRD213: EXTENDING IBIS-AMI FOR PAM<sub>n</sub> ANALYSIS**

Randy Wolff said this would also be discussed in ATM. Walter Katz said it was just an extension of PAM4, he anticipated no issues.

### **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 said there were no new bugs. The ibischk developer had asked for clarification on at least 4 BIRDS plus the bug report calling for checking of the linkages to Touchstone files. The developer was actively working on EMD. Some of the questions were tough, but Bob believed they had been answered effectively. It had been discovered that [Designator Pin List] did not allow "NC" but [EMD Pin List] did. Bob said all designator pin signals had to be unique, so mapping all of them to NC would not work. An open-circuit terminator could be used in place of NC where necessary.

Bob felt an ibischk7.1.0 release in September to October was likely. Randy Wolff said IBIS 7.1 might be approved at about that time.

Bob said there probably would be one more tschk2.0.1 build. The beta test version would be superseded.

## **NEW TECHNICAL ISSUES**

Randy Wolff said the solicitation for a vote on BIRD content for IBIS 7.1 had been sent. Randy showed the proposed resolution shown in the previous meeting and used for the solicitation. Michael Mirmak read and moved to approve the resolution as shown. Radek Biernacki seconded.

Arpad Muranyi asked if the motion should be amended to note that clarification BIRDS might have some technical impact. Michael noted that the motion had that in the last line. Bob Ross said we might supersede BIRD201.1 with a clarified update, and that might have some technical changes. Arpad expected any changes to that would not change the intent, the changes would be about consistency. Randy said the main purpose of the motion was to say there would be no other new technical BIRDS included in IBIS 7.1. Radek Biernacki felt the last sentence captured the matter well. Bob agreed.

Randy conducted a roll call vote. The motion passed with 11 Yes votes, no No votes, and no abstentions.

ANSYS	Yes
Cadence Design Systems	Yes
Google	Yes (by email)
Intel Corporation	Yes
Keysight Technologies	Yes
Luminous Computing	Yes
Micron Technology	Yes
Siemens EDA	Yes
SiSoft	Yes
Teraspeed Labs	Yes
Zuken USA	Yes

**NEXT MEETING**

The next IBIS Open Forum teleconference meeting would be held on August 6, 2021. The following teleconference meeting was tentatively scheduled for August 27, 2021.

Curtis Clark moved to adjourn. Arpad Muranyi 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](mailto: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](mailto:ibis@freelists.org) and/or [ibis-users@freelists.org](mailto:ibis-users@freelists.org) email lists (formerly [ibis@eda.org](mailto:ibis@eda.org) and [ibis-users@eda.org](mailto:ibis-users@eda.org)).
- To subscribe to one of the task group email lists: [ibis-macro@freelists.org](mailto:ibis-macro@freelists.org), [ibis-interconn@freelists.org](mailto:ibis-interconn@freelists.org), or [ibis-quality@freelists.org](mailto: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](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/bugspl.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	Standards Ballot Voting Status			
			May 14, 2021	June 04, 2021	June 25, 2021	July 16, 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	X
Celestica	User	Inactive	-	-	-	-
Cisco Systems	User	Inactive	-	-	-	-
Dassault Systemes	User	Inactive	-	-	-	-
Ericsson	Producer	Inactive	-	-	-	-
Google	User	Active	X	X	X	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	Active	X	-	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	-	-	-	-
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 (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.