

**IBIS Open Forum Minutes**

Meeting Date: **August 6, 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\*

MathWorks (SiSoft) Mike LaBonte\*, Walter Katz\*

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

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](https://nam10.safelinks.protection.outlook.com/ap/t-59584e83/?url=https%3A%2F%2Fteams.microsoft.com%2Fl%2Fmeetup-join%2F19%253ameeting_MmIwNzhhNmItNzA1NC00ZTg1LWE0MDMtNGFiYzg1NDQ3MmE5%2540thread.v2%2F0%3Fcontext%3D%257b%2522Tid%2522%253a%2522fcbfc6fa-e20b-4a1d-b629-1b8e17697dbc%2522%252c%2522Oid%2522%253a%25227735c7ad-2577-4290-9e27-bce52c296030%2522%257d&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277314270%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=zAeh7fCRElDR1NAQiiqHUfTwbTIg%2BkEQnkgGnEn65Kk%3D&reserved=0)

**Join with a video conferencing device**

[106010980@teams.bjn.vc](mailto:106010980@teams.bjn.vc)

Video Conference ID: 114 666 897 5

[Alternate VTC dialing instructions](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsupport.bluejeans.com%2Fknowledge%2Fvtc-dial-in-options-for-teams&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277324259%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=1kD4GmLd%2BbdzErQBSHS1UPBmh0y5G8PlDlZUtMSsxkQ%3D&reserved=0)

**Or call in (audio only)**

[+1 267-768-8015,554664847#](tel:+12677688015,,554664847%23)   United States, Philadelphia

Phone Conference ID: 554 664 847#

[Find a local number](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fdialin.teams.microsoft.com%2Fd1ae197a-e3fc-4c53-90b6-39fdeba65bc1%3Fid%3D554664847&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277324259%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=N5Ha2rFhHG%2FIXyLoSEfS%2B1XYjLP9c1I8%2B%2BKSMNVgqgM%3D&reserved=0) | [Reset PIN](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmysettings.lync.com%2Fpstnconferencing&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277334256%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=iKkTEbcyELtfgSacAxVtz%2BCU%2Fmsr5%2Bb04%2Bwg8PpOSH4%3D&reserved=0)

[Learn More](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Faka.ms%2FJoinTeamsMeeting&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277334256%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=2Udj6qD9gLjqoYgziYRQlGCwj7uJH4%2FQCDhrtMrFYdk%3D&reserved=0) | [Meeting options](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fteams.microsoft.com%2FmeetingOptions%2F%3ForganizerId%3D7735c7ad-2577-4290-9e27-bce52c296030%26tenantId%3Dfcbfc6fa-e20b-4a1d-b629-1b8e17697dbc%26threadId%3D19_meeting_MmIwNzhhNmItNzA1NC00ZTg1LWE0MDMtNGFiYzg1NDQ3MmE5%40thread.v2%26messageId%3D0%26language%3Den-US&data=04%7C01%7Ccurtis.clark%40ansys.com%7C31ef953a4d93460c286f08d90345d1fb%7C34c6ce6715b84eff80e952da8be89706%7C0%7C0%7C637544421277344253%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=C5t3AZlfs3uti2goGqd28L%2FvDdjsizM1qfsUE05mJS4%3D&reserved=0)

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, 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 July 16, 2021 IBIS Open Forum teleconference. Radek Biernacki moved to approve the minutes. Ted Mido seconded the motion. There were no objections.

Randy reviewed ARs from the previous meeting. There were no new ARs.

**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 by SAE ITC. A half-year membership payment was also in progress. A full payment of $17,500.00 for ibischk7 version 7.1.0 was expected in 2021.

Mike LaBonte said he and Walter Katz would be changing their primary affiliation from SiSoft to MathWorks. Randy Wolff said the logo on the home and poster pages should be changed to the MathWorks logo, if that could be arranged. Bob said the printed company name could be used if not.

[AR] Mike LaBonte to supply MathWorks logo for IBIS home page

**WEBSITE ADMINISTRATION**

Steven Parker said the website was up to date. He had corrected the officer roles of Mike LaBonte and Curtis Clark, who had swapped roles in the previous election. Anders Eckholm had been removed from the roster. Officer updates were made on two pages. Bob Ross said the previous China summit was held on November 20,2020, but the agenda page for that summit had November 13. Bob asked if the most recent minutes had been posted. They were. Randy Wolff asked when we would have pages that allow officers and task group chairs to post certain routine web updates. Steve said he did not have an ETA on that.

**MAILING LIST ADMINISTRATION**

Mike LaBonte said he was working with Curtis Clark on list subscription changes for himself. Bob Ross asked if the sisoft.com domain would remain active. Mike said it would be in use for some time.

**LIBRARY UPDATE**

Zhiping Yang said he and Professor Hwang from MST were working on a proposal to develop an open-sourced IBIS library for research and other uses. There would be follow-up on that after the summits to be held this month.

**INTERNATIONAL/EXTERNAL ACTIVITIES**

- Conferences

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

[https://www.emc2021.emcss.org](https://www.emc2021.emcss.org/)

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

<https://www.designcon.com/>

Mike LaBonte noted that EDI CON was still holding summits. IBIS had previously conducted a summit at EDI CON, but there had not been very much interest shown for IBIS.

- Press Update

Randy Wolff showed the press release from SAE ITC about the DesignCon summit. It could be viewed at https://www.sae.org/news/press-room/2021/07/virtual-ibis-summit-to-take-place-at-designcon-2021.  
[Virtual IBIS Summit to Take Place at DesignCon 2021 (sae.org)](https://www.sae.org/news/press-room/2021/07/virtual-ibis-summit-to-take-place-at-designcon-2021)

- 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 PT. Lance Wang, Bob Ross, Randy Wolff, and Wei-Hsing Huang participated in an Ask The Experts Panel for the conference itself. The summit will be a Zoom meeting. The info would be sent next week, and it would also be on the EMC SI/PI website. Bob said we had 8 presentations. There were 18 known to be registered so far. Arpad Muranyi asked if there would be a problem with company policies using Zoom. Randy said there had been security issues early on, but he believed those were resolved. We had used Zoom for the previous summit.

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

The summit would be held August 19, 8:00am-12:00pm PT. Bob said the agenda was full. We could drop a presentation or extend the summit to 12:30 PT. Mike said his presentation could be dropped. Bob said another presentation from Randy and Arpad would better fit the amount time that needed to be cut. Walter Katz felt extending the meeting should not be a problem. We agreed to do that. Arpad suggested announcing the time extension in the next announcement email. Bob noted that several presentations would be repeated across the two summits.

Randy said he had been in discussion with JEITA about the Tokyo summit, which would be virtual, on November 12. The China summit might be held on November 19, also virtual. Bob said the JEITA date seemed final, but the China date was not yet final. Bob said he would like to fill the China summit with local participants. He said some MST students were in that area. He said they might participate in Tokyo too, but not at the expense of JEITA presenters.

**QUALITY TASK GROUP**

Mike LaBonte reported that the group meets on Tuesdays at 9:00 a.m. PT. The group continues to oversee the next ibischk release, ibischk7.1.0. He said tschk2.0.1 was almost ready to release, but he was struggling to compile it for Windows 32. Randy Wolff said it should be ready for the summits, so that people could try it after Mike’s presentation about tschk2.0.1.

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 meets on Tuesdays at 12:00 p.m. PT. He hoped the redriver BIRD was finally done, a final draft would be reviewed Tuesday. It should be submitted after that. The PAMn BIRD had more changes made by Walter Katz, and progress was being made on it.

Task group material can be found at:

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

**INTERCONNECT TASK GROUP**

Randy Wolff 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/>

**EDITORIAL TASK GROUP**

Randy Wolff said they were deep into the backchannel section, with changes from BIRD201. They were making progress. There were just a few remaining checklist items. Arpad Muranyi said the extensive changes might call for a new BIRD to document them. He asked if such a BIRD would need to be approved before IBIS 7.1 ratification. Randy said that could be worked on in parallel, and fast-tracked. Bob Ross said it was a complete rewrite of section 10.9. Arpad said the flow descriptions were rewritten without changing the original intent. Walter Katz suggested voting on the BIRD before IBIS 7.1 ratification. Randy agreed with that. Bob said we had room in the meeting cycle to approve it.

Task group material can be found at:

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

**NEW ADMINISTRATIVE ISSUES**

- None

**BIRD211.2: NEW REDRIVER FLOW**

Randy Wolff asked when BIRD211.3 might be submitted. Arpad Muranyi hoped it would be Tuesday.

**BIRD213: EXTENDING IBIS-AMI FOR PAMn ANALYSIS**

Randy Wolff said this was also being discussed in ATM meetings. Walter Katz said there were 2 parts: how to describe “N” and the associated thresholds, and also the voltage level mappings to symbol streams. Mapping was complex, but EDA tools were already doing it. Therefore, mapping had been removed from the BIRD. He invited those interested to join ATM meetings to discuss that. Arpad Muranyi asked how users would know what the encoding should be. Walter said model documentation should have that. Randy asked if model makers would have to ask EDA vendors to support encoding. Walter said they were described in standards, which were public. Walter said EDA tools had been doing that for years.

**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**

Randy Wolff showed IBISCHK BUG217, reported by Curtis Clark. Bob Ross described the bug, which involved subdirectories in references to .ami files. He believed the parser developer was already fixing it. Arpad Muranyi asked why ibischk seemed to find the .ami file in one place but not the other. Mike LaBonte said those were probably two different areas in the code, with one working and one not. Randy said the issue was related to AMI\_Version. IBISCHK found no errors for AMI\_Version 7.0, but setting to 6.0 found the errors. Bob said only 10 messages were reported, but there should have been 12, based on examination of the testcase.

Bob moved to classify BUG217 as severe severity and high priority. Arpad Muranyi seconded. Without objection the classification was approved.

[AR] Bob Ross to post finalized classification for BUG217

Bob showed a section of code that was found to be in error. A clause that should be “else if” was just “if”. That could cause some IBIS files to be incorrectly considered to be IBIS 6.1 files. The developer had also caught the error. That was BUG218, with proposed severe severity and high priority. It would be fixed in the release currently under development.

Bob moved to classify BUG218 as severe severity and high priority. Arpad Muranyi seconded. Without objection the classification was approved.

[AR] Bob Ross to post finalized classification for BUG218

Bob said the developer had been asking many questions from reading the BIRDs. Some questions would be considered for clarification by the Editorial Task Group. Currently the checking of linkages to IBIS-ISS and Touchstone files were being worked on. This would be done in [Interconnect Model], EMD, and other places such as Ts4File in AMI.

We might receive a preliminary release for review. Bob was considering asking current source code purchasers if they would wish to review that.

Bob said we may release tschk2.0.1 executables soon, and he would distribute the source code to purchasers.

[AR] Mike LaBonte to finalize tschk2.0.1 and post

**NEW TECHNICAL ISSUES**

None

**NEXT MEETING**

The next IBIS Open Forum teleconference meeting would be held on August 27, 2021. The following teleconference meeting was tentatively scheduled for September 17, 2021. The IEEE EMC+SIPI summit would be held August 12, 2021. The DesignCon summit would be held August 19, 2021.

Mike LaBonte moved to adjourn. Arpad Muranyi seconded the motion. The meeting adjourned.

========================================================================

**NOTES**

IBIS CHAIR: Randy Wolff (208) 363-1764

[rrwolff@micron.com](mailto: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](mailto:lance.wang@ibis.org)

Solutions Architect, Zuken USA

238 Littleton Road, Suite 100

Westford, MA 01886

SECRETARY: Mike LaBonte

[mlabonte@](mailto:mikelabonte@eda.org)mathworks.com

Senior Engineer

1 Lakeside Campus Drive

Natick, MA 01760

TREASURER: Bob Ross (503) 246-8048

[bob@teraspeedlabs.com](mailto:bob@teraspeedlabs.com)

Engineer, Teraspeed Labs

10238 SW Lancaster Road

Portland, OR 97219

LIBRARIAN: Zhiping Yang (650) 214-0868

[zhipingyang@google.com](mailto:zhipingyang@google.com)

Sr. Hardware Manager, Google LLC

1600 Amphitheatre Parkway

Mountain View, CA 94043

WEBMASTER: Steven Parker (845) 372-3294

[sparker@marvell.com](mailto:sparker@marvell.com)

Senior Staff Engineer, DSP, Marvell

2070 Route 52

Hopewell Junction, NY 12533-3507

POSTMASTER: Curtis Clark

[curtis.clark@ansys.com](mailto: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](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](http://www.ibis.org/%20bugs/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** | **June 04, 2021** | **June 25, 2021** | **July 16, 2021** | **August 6, 2021** |
| ANSYS | User | Active | 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 | - |
| Marvell | Producer | Active | X | - | - | X |
| MathWorks (SiSoft) | User | Active | X | X | X | X |
| Maxim Integrated | Producer | Inactive | - | - | - | - |
| 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 |
| 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.