IBIS Open Forum Minutes

Meeting Date: December 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*, Satoshi Endo
Applied Simulation Technology	(Fred Balistreri)
Aurora System	Dian Yang, Hiroshi Ishikawa, Hiroshi Matsuda
Broadcom	(Yunong Gan), Jim Antonellis
Cadence Design Systems	Zhen Mu, Jared James, Ken Willis, Kyle Lake Tadaaki Yoshimura, Hideyoshi Sugaya, Masahiro Nakahara, Takuya Moriya
Celestica	(Sophia Feng)
Cisco Systems	Stephen Scearce
Dassault Systemes	(Stefan Paret), Longfei Bai
Google	Hanfeng Wang, Jianmin Zhang
Huawei Technologies	(Hang (Paul) Yan), Su Li, Yiran Lei, Zixin Song
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, Chuanyu Li
Keysight Technologies	Ming Yan, Fangyi Rao, Majid Ahadi Dolotsara, Pegah Alavi, Saish Sawant, [Radek Biernacki], Toshinori Kageura, Hayato Ogawa, Satoshi Nakamizo
Luminous Computing	(David Banas)
Marvell	Steven Parker*
MathWorks	Graham Kus, Walter Katz, [Mike LaBonte]
Micron Technology	Randy Wolff*, Aniello Viscardi, Justin Butterfield, Dragos Dimitriu, Cheng Zhang, Chunqiang Weng, Hongyan Li, Tree Li
Micron Memory Japan, K.K.	Masayuki Honda, Mikio Sugawara
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
Siemens EDA Japan, K.K.	Kunimoto Mashino
STMicroelectronics	Olivier Bayet

Synopsys	Ted Mido*, Xuefeng Chen, Yuyang Wang, Jinghua Huang
Teraspeed Labs	Bob Ross*
Waymo	Zhiping Yang
ZTE Corporation	(Shunlin Zhu), Jian Huang, Ming Zheng, Changgang Yin, Dongdong Ye, Zhongmin Wei
Zuken	(Michael Schäder)
Zuken USA	Lance Wang*
Zuken Japan	Kensuke Hyoshijima, Hirohiko Matsuzawa

OTHER PARTICIPANTS IN 2022

A&D Print Engineering Co., Ltd.	Ryu Murota, Minoru Hasegawa
Advantest Corporation	Hiroaki Takeuchi, Takahiro Tasaki, Tsutomu Yuasa
Altair	Junesang Lee
Amazon Lab126	Askar Hashemi
AMD Japan	Tadashi Arai
Apollo Giken Co., Ltd.	Yoshito Usui
ASUSTek Computer	Hank Lin, Daniel Yeh, Shih-Yao Lin, Hayden Huang, Will Chan, Alfred Hu, Andries Deroo, Bobson Su, Bojyun Chen, Harrison Su, Jenyung Li, Jimmy Kao, Matthew Lu, Nick Chen, David Chou, Stephen Lee, Henry Tsai, John Lin, Steven Tsai, Vincent Lu, William Shih, Asher Lin, Jerry Bai, Anthony Tan
Blue Ocean Smart System	Junyong Deng, Nikki Xie
Canon Inc.	Syoji Matsumoto, Satoru Ishikawa, Shinichi Ohno
Casio Computer Co., Ltd.	Yasuhisa Hayashi
Ciena	Hugues Tournier, Kaisheng Hu
CMK Corporation	Masaki Abe, Motoshi Nakamura
Cornelis Networks	Champion Kao
Cybernet Systems Co., Ltd.	Takayuki Tsuzura, Akio Yanagi, Shiho Nagae
De Montfort University	Alistair Duffy
Faurecia Clarion Electronics Co., Ltd.	Takatsugu Yasui
FICT Limited	Syunsuke Fujisawa, Toru Inoguchi, Toru Kuraishi, Masaki Kirinaka, Manabu Fukuzawa
Fujitsu Limited	Kumiko Teramae, Hideki Takauchi, Makoto Yoshino, Kazuhiro Kamegawa, Akira Ueda, Hirokazu Hidaka, Takashi Kobayashi
Furukawa Electric Co., Ltd.	Takumi Ohuchi
GE HealthCare	Balaji Sankarshanan, Sarah Salvador
Global Unichip Japan	Masafumi Mitsuishi
Hagiwara Solutions Co., Ltd.	Osamu Takeuchi
Hamamatsu Photonics K.K.	Akihiro Inoguchi
Hitachi Solutions Technology, Ltd.	Sadahiro Nonoyama
HOEI Co., Ltd.	Tatsuya Chiba
Honeywell	Bavish Vazhayil
Hoya Corporation	Masayuki Hagiwara
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Imperial College, UK	Cong Ling
Japan Radio Co., Ltd.	Hiroto Katakura

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JEITA	Hisashi Saito
Jujube LLC	Taiji Hosaka
JVC Kenwood Corporation	Yasutoshi Ojima, Hidetoshi Suzuki, Takuo Fujimura
Keyence Corporation	Tomoh Uchida
Kioxia Corporation	Noriaki Dobashi, Monori Yoshitomi, Masato Kanie
Kioxia Systems Co., Ltd.	Jyunya Shibasaki, Tomomichi Takahashi, Yukio Tanoue
Kyocera Corporation	Aki Tanaka
MD Systems Co., Ltd.	Hidetoshi Ogawa
Meiko Electronics Co., Ltd.	Kiyoshi Baba
Mercury Systems	Vincent Tam
MIRISE Technologies	Hirokazu Sugimoto
Mitsuba Corporation	Dai Yanagisawa
Mitsubishi Electric Corporation	Yusuke Suzuki, Masaki Watanabe
Mitsubishi Electric Engineering Co., Ltd.	Toshiki Yasumura
Mitsumine-Denshi Co., Ltd.	Ryouichi Nakahigashi
Modech Inc.	Masanori Shimasue
Murata Manufacturing Co., Ltd.	Shigeaki Hashimoto, Hideki Miyazawa
National Central University, Taiwan	Chiu-Chih Chou, Liu Huang Fu, Bohong Chai, Remxiang Xu, Kuan Fa, Yanting Li
New H3C Technologies Co.	Zixiao Yang
Oki Electric Industry Co., Ltd.	Atsushi Kitai, Kenichi Saito
OVT	Sirius Tsang
Panasonic Automotive Systems Co., Ltd.	Atsushi Nakano, Naoyuki Aoki, Ryusei Yoshida
Panasonic Connect Co., Ltd.	Shinichi Tanimoto
Persol Technology Staff Co., Ltd.	Osamu Nishiyama
Politecnico di Torino	Stefano Grivet Talocia, Tommaso Bradde, Marco De Stefano, Riccardo Trinchero, Alessandro Zanco, Antonio Carlucci
PWB Corporation	Toru Ohisa
Renesas Electronics Corporation	Billy Chen, Masato Suzuki, Kazunori Yamada, Koji Takayanagi, Kazuyuki Sakata
Ricoh Company, Ltd.	Miyoko Goto, Toshihiko Makino
Rivos	Yansheng Wang
Rohm Co., Ltd.	Nobuya Sumiyoshi
Ryosan Company	Takahiro Sato
SAE ITC	José Godoy
SAXA, Inc.	Takayuki Ito, Takayuki Sato
Seiko Epson Corporation	Ryoichi Okada, Masaaki Ito
SeriaLink Systems	Aleksey Tyshchenko, David Halupka
Shimadzu Corporation	Kazuo Nakajima
Silvaco Japan Co., Ltd	Yoshihiko Yamamoto
Socionext Inc.	Shizue Kato, Hajime Ohmi, Yoshito Uchihashi, Ayako Kitamoto, Megumi Ohno, Motoaki Matsumura
Sohwa & Sophia Technologies	Tomoki Yamada
Sony Global Manufacturing & Operations Corporation	Hayato Takeuchi, Yuichi Ikeya, Atsushi Yoshimoto
Sony Semiconductor Solutions Corp.	Toru Fujii, Kazuki Murata, Ryoga Kitajima

Technopro Design Company	Mai Fukuoka
Tektronix Company	Takafumi Watanabe
TEQ Consulting Ltd.	Tadashi Aoki
Tokyo Drawing Ltd.	Naoya Iisaka, Masahiko Nakamura
Toshiba Corporation	Yasuki Torigoshi
Toshiba Development & Engineering Corporation	Nobuyuki Kasai, Kohei Imamura
Toshiba TEC Corporation	Yoshihiro Takayama, Masanao Shigemura
University of Colorado, Boulder, ECEE	Eric Bogatin
University of Illinois	José Schutt-Aine
University of L'Aquila	Fancesco De Paulis
Unaffiliated	Mike LaBonte
WADOW Corporation	Kazuhiko Kusunoki
Xpeedic	Wei He, Zachary Su, Jianfeng Xia, Yan Ma, Yufeng Dan, Zhangmin Zhong, Lihua (Lily) Liu
Yamaha Corporation	Hiroyuki Kai, Yasuhito Kanamori
Yazaki Corporation	Syunsuke Ito
Yazaki Parts Co., Ltd.	Kenichi Fujisawa
Yokogawa Electric Corporation	Daisuke Kamezawa

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
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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
Curtis Clark declared that a quorum had been reached.

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 November 18, 2022, IBIS Open Forum teleconference. Curtis Clark moved to approve the minutes. Lance Wang seconded the motion. There were no objections.

Randy noted that the minutes for Japan IBIS Summit had not yet been completed. We expect to publish the minutes once we receive the English translations of the Q&A sessions from JEITA.

The Minutes are available at the following link:
https://ibis.org/minutes/

Randy reviewed ARs from the previous meeting.
1. Steve Parker to follow up with Bob Ross for payment of website domain name renewal [AR]
   Steve said he had contacted bluehost directly. As in years past, renewal of the domain name is included with our hosting fee. He simply had to check out and "pay" the $0.00 separate invoice for the domain name renewal.
2. Graham Kus to get specifics on DesignCon IBIS Summit meeting room for A/V and catering vendors [AR]
   Randy reported that Graham had reached out to Mission Towers for more information on the approved vendor list and A/V services in the room. No response had been received yet, and they plan to follow up.
3. Randy Wolff to send vote solicitation email for BIRD221 [AR]
   Randy reported that this was done.
4. Randy Wolff to send vote solicitation email for BIRD222 [AR]
   Randy reported that this was done.
5. Quality task group to discuss adding "supported parser version" column to IBISCHK BUGs page [AR]
   Randy said this was done. In fact, Steve had already updated the web page to add the additional column. More discussion is in the Website Administration report.
6. Randy Wolff to announce new IBISCHK 7.1.1 release by email once the webpage is ready [AR]
   Randy reported that this was done. Steve had completed the webpage update, and Randy had sent an announcement email.

ANNOUNCEMENTS, CALL FOR ADDITIONAL AGENDA ITEMS
Randy Wolff asked for any announcements. There were none.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that cash flow for 2022 was $19,961 and the total adjusted balance for 2022 was $23,311. We had 29 members, with a voting quorum of 8. We have had some new membership and parser source code license inquiries. One academic institution had paid the full membership fee for 2022 instead of the half-price academic membership fee. That overpayment had already been credited to 2023. The parser developer had been paid $1500 for ibischk7.1.1. We expect an adjustment to occur in late February for an assessment for services from SAE ITC of about $6000. Renewal invoices for 2023 should be sent to existing members sometime after December 16th, 2022.

WEBSITE ADMINISTRATION

Steven Parker reported that a new banner link to ibischk7.1.1 had been added to the main page. He had also fixed broken links to previous ibischk versions 7.10, 7.0.2, and 7.0.1. He had updated the BIRD template to the recently approved revision 1.4. The .docx version of the minutes from the November 4th meeting had added. All task group minutes were up to date.

Steve said he had added a link on the home page to a new membership FAQ. Randy Wolff reported that he, Lance Wang, and Bob Ross had created the FAQ. It contains information from the policies and procedures that was gathered into a convenient form to be shared with new members.

Steve said that he had updated the ibischk BUGs page to add the new column listing the first version that supported the fix for each bug, per the [AR] from the Quality task group. He said that a perl script parses the bug reports to fill out the webpage, and it now parses out the "version fixed" field in the BUG reports. Randy noted that in some of the older BUG reports the format of version information was not uniform. Bob to work on cleaning up the old BUG reports so they're more consistent [AR]. Arpad suggested that we should report the first released version that contains the fix and not worry about any granularity finer than that.

Bob noted that the Japan IBIS Summit page did not contain the links to the individual .mp4 files for the presentations. Steve said the individual recordings had not been available when the page was last updated. Steve to update the presentation links on the Japan IBIS Summit page [AR].

MAILING LIST ADMINISTRATION

Curtis Clark reported that the freelists system was operating normally. He said there had been two new subscribers this period, and both were from existing member organizations.

LIBRARY UPDATE

Randy Wolff reported for Zhiping Yang and said there were no new updates.

INTERNATIONAL/EXTERNAL ACTIVITIES

Conferences:

Randy Wolff reported that DesignCon in January 2023 is already in our plans.

Randy noted that the call for papers had just come out for the IEEE SPI 2023.

Lance Wang noted that IEEE EMC+SIPI had been announced for July 31st through August 4th, 2023, in Grand Rapids, Michigan.

Press Updates

Randy Wolff reported that he had yet to see any announcements about the IEEE EMC magazine for Q3. When it arrives, he will share the link to the information about IBIS's participation in the IEEE EMC+SIPI event.

Related Standards

Michael Mirmak said there were no new updates to report.

IEEE IBIS Standardization

Randy Wolff reported that he had emailed our parent organization, SAE ITC, about this again. He still had received no response, and he said he would ping them again [AR].

IBIS Summits:

DesignCon 2023 IBIS Summit (Santa Clara, CA):

Randy Wolff reported that MathWorks had reserved a room in Mission Towers I in Santa Clara. He said it is just down the road from the Convention Center, and it is walkable or a very short drive. It is also close to hotels. Graham Kus had reached out to Mission Towers for approved vendor information, and we are waiting to hear back. The summit will be a hybrid with online and in-person attendees.

Randy reported that we had finalized the barter agreement with Informa Markets. We are waiting for a new banner from them, and Randy had used a generic banner in the first announcement. We expect a new banner from them, which will go on our website to advertise as part of the barter agreement. IBIS receives 5 all access passes to DesignCon as part of the agreement. Some are typically used by IBIS officers, but reach out to Randy if you need one.

Lance Wang reported that Keysight had signed up as a sponsor. Steven Parker to add Keysight to the sponsors list on the DesignCon Summit page [AR]. Bob Ross noted that we are open to additional sponsors. He said the sponsorship funds typically fund catering. Randy said this meeting should be less expensive than in past years because we won't have the significant A/V costs associated with using a room in the Convention Center. Bob noted that Lance had agreed to serve as the primary contact for registrations and papers for the summit.

QUALITY TASK GROUP

Bob Ross reported that the new "supporting version" column had been added to the ibischk BUGs page, per a request from Michael Mirmak and Randy Wolff. Payment had been made to the parser developer for ibischk7.1.1. Bob said that Weston Beal is leading a project to make power-aware additions to the Quality specification.

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 that the group has been focused on reviewing Kinger Cai's SPIM (standard power integrity modeling) and PSIJ Sensitivity BIRD proposals. He asked that everyone review them and provide feedback before the December 20th meeting. He noted that these are large documents, and it will take time to review them thoroughly.

Note: Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported this task group is still suspended due to activity in Editorial Task Group.

Note: Task group material can be found at:

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

EDITORIAL TASK GROUP

Michael Mirmak reported that the group had prepared a draft of IBIS 7.2 in anticipation of the pending votes on BIRD221 and BIRD222 later in today's meeting. Randy Wolff thanked Michael Mirmak for once again serving as editor-in-chief.

Note: Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES

Randy Wolff asked if there were any new issues. None were raised.

Roll call: Curtis Clark reported a mid-meeting count of 10 in attendance.

NEW AND REVISED *IRDS

None.

IRDS SCHEDULED FOR VOTE

BIRD221: AMI parameters_in Clarification

Michael Mirmak moved to vote for acceptance of BIRD221 and for incorporating it into IBIS 7.2. Curtis Clark seconded. Without objection, Randy Wolff conducted a roll call vote. The motion passed with 8 Yes votes, 0 No votes, and 0 abstentions. Randy and Steve Parker to update the status of BIRD221 on the website [AR].

ANSYS	Yes
Intel Corporation	Yes
Marvell	Yes
Micron Technology	Yes
Siemens EDA	Yes
Synopsys	Yes
Teraspeed Labs	Yes
Zuken USA	Yes

BIRD222: Clock Times Clarifications

Arpad Muranyi moved to vote for acceptance of BIRD222 and for incorporating it into IBIS 7.2. Curtis Clark seconded. Without objection, Randy Wolff conducted a roll call vote. The motion passed with 8 Yes votes, 0 No votes, and 0 abstentions. Randy and Steve Parker to update the status of BIRD222 on the website [AR].

ANSYS	Yes
Intel Corporation	Yes
Marvell	Yes
Micron Technology	Yes
Siemens EDA	Yes
Synopsys	Yes
Teraspeed Labs	Yes
Zuken USA	Yes

IRDS ELIGIBLE FOR VOTE

BIRD220: Pre-driver PSIJ Sensitivity Keyword

Randy Wolff again noted that we are not ready for voting on this because there is another PSIJ BIRD in development. Arpad Muranyi said there had been no recent discussions of this BIRD in the ATM task group, as they had been working on the other proposal from Kinger Cai. Randy said they are two different methods of modeling PSIJ, and we will want to consider the issue holistically and decide whether to support either or both of the proposals. Bob Ross noted that

there is no urgency in voting on these PSIJ BIRDs, as they are both targeted for release after IBIS 7.2.

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

None.

IBISCHK AND TSCHK PARSER AND BUG STATUS

Bob Ross reported that no new BUGs had been generated, but there were several under consideration and BUG reports might soon be filed. He reported that the ibischk7.1.1 parser code had been distributed to the 13 parser source code license owners. Pre-built executables are included in the source distribution and have been uploaded to the ibischk7 page. Bob noted that executables for Mac OS for Intel and Apple chipsets are not yet ready and are listed as "to be generated later" on the website. The archive containing all executables is also still being created. Bob will check the previous release's full archive to see whether the parser usage license must be included with each executable or one for the entire archive is sufficient. Bob noted that the parser license has been updated slightly with a new SAE ITC signatory. The error spreadsheet for ibischk7.1.1 has been uploaded, but the user guide hasn't been generated yet.

Randy Wolff said we will have to start work on drafting a parser contract for IBIS 7.2. Bob said we need to get a quote from the parser developer and draft a contract for SAE ITC to review. Arpad noted that we have recently gotten better about having a parser release almost coincident with the approval of the new version of the specification. Bob said they will work to expedite the parser but can't guarantee it will be delivered by the time IBIS 7.2 is approved. Bob said he expects that we will have plenty of money available to fund the parser development, even with the pending SAE ITC assessment for services.

NEW TECHNICAL ISSUES

Randy Wolff reported that, in anticipation of BIRD221 and BIRD222 being accepted, the Editorial task group had already prepared an initial draft of IBIS 7.2. Michael Mirmak noted that the draft had recently been voted out of the Editorial task group as ready-to-present to the Open Forum. Arpad Muranyi suggested we maintain the draft number (draft5) on the version submitted to the Open Forum for review, so we can track any additional changes in a new draft. Bob Ross agreed.

The group reviewed the list of BIRDs approved for IBIS 7.2. Arpad mentioned that significant technical updates are found in BIRD211, which contains AMI flow corrections primarily for redriver simulations, and BIRD213.1, which provides PAMn support. Randy briefly reviewed the IBIS 7.1 known issues document and said that separate BIRDs had been created for two functional issues it contained.

Randy noted one other editorial change that might have gone into the known issues list, but it had been taken up directly in the Editorial task group. Arpad said that he had periodically seen user confusion about the location of Series models relative to pin package parasitics. Users were not always aware that Series models are implemented on the die side of the package. Arpad said he broken one sentence into two sentences to clarify the distinction between package parasitics, which are defined by the package keywords for the pins, and additional parasitic elements that might be part of the Series model itself. Arpad noted that this non-technical change had been captured in Michael Mirmak's spreadsheet of IBIS 7.2 changes, so there is a record of the change.

Randy to send an email announcement about the availability of the IBIS 7.2 draft [AR]. Arpad encouraged everyone to read it. Randy asked whether we should consider putting the IBIS logo on the front page of the specification. The group agreed it was a good idea. The IBIS 7.2 draft(s) may be found here:

> https://ibis.org/ver7.2_wip/

NEXT MEETING
Randy Wolff stated that the next IBIS Open Forum meeting date would be January 06, 2023. The following IBIS Open Forum meeting is scheduled for January 27, 2023.

Michael Mirmak motioned to adjourn. Arpad Muranyi seconded. The meeting was 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 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	Nov. 4, 2022	Nov. 11, 2022	Nov. 18, 2022	Dec. 9, 2022
AMD (Xilinx)	Producer	Inactive	-	-	-	-
Analog Devices (Maxim Integrated)	Producer	Inactive	-	-	-	-
ANSYS	User	Active	-	X	X	X
Applied Simulation Technology	User	Inactive	-	-	-	-
Aurora System	User	Inactive	-	X	-	-
Broadcom Ltd.	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Inactive	-	X	-	-
Celestica	User	Inactive	-	-	-	-
Cisco Systems	User	Inactive	-	-	-	-
Dassault Systemes	User	Inactive	-	-	-	-
Google	User	Inactive	-	-	-	-
Huawei Technologies	Producer	Inactive	X	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Instituto de Telecomunicações	User	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	X	X	X
Keysight Technologies	User	Inactive	-	X	-	-
Luminous Computing	General Interest	Inactive	-	-	-	-
Marvell	Producer	Active	-	-	X	X
MathWorks	User	Active	-	-	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
STMicroelectronics	Producer	Inactive	-	-	-	-
Synopsys	User	Active	X	X	X	X
Teraspeed Labs	General Interest	Active	X	X	X	X
Waymo	User	Inactive	-	-	-	-
ZTE Corp.	User	Inactive	X	-	-	-
Zuken	User	Active	X	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.