

**IBIS Open Forum Minutes**

Meeting Date: **November 22, 2019**

Meeting Location: **Teleconference**

**VOTING MEMBERS AND 2019 PARTICIPANTS**

ANSYS Curtis Clark\*, Marko Marin, Miyo Kawata

 Toru Watanabe, Akira Ohta, Bailing Zhang, Xi Wu

 Xin Sun, Jack Wu, Gregory Liao, Frances Peng

 Joan Chen, Ruby Wu

Applied Simulation Technology (Fred Balistreri)

Broadcom (Yunong Gan)

Cadence Design Systems [Brad Brim], Ambrish Varma, Ken Willis

 Yingxin Sun, Zhen Mu\*, Jinsong Hu, Skipper Liang

 Zuli Qin, Haisan Wang, Hui Wang, Yaofei Wang

 Yitong Wen, Binyue (Kathy) Yang, Zhangmin Zhong

 George Zhu, Eric Lu, Frank Pai, Jessica Yeh

 Sylvia Kao, Nemo Hsu, Tric Chiang, Morihiro Nakazato

Cisco Systems Hannah Bian, Guobing (Robin) Han, Wei Li

 Zongyuan Liu, Sijie Mao, Jun (Gene) Zhang

Dassault Systemes (CST) Stefan Paret, Longfei Bai

Ericsson Anders Ekholm, Anders Vennergrund, Felix Mbairi

 Hui Zhou, Inmyung Song, Mattias Lundqvist

 Wenyan Xie, Zilwan Mahmod, Nan Hou, Amy Zhang

Google Zhiping Yang, Songping Wu

Huawei Technologies Antonio Ciccomancini, Haiping Cao, Peng Huang

 Hongxing Jiang, Chunhai Li, Shengli (Victory) Wang

 Zhengrong Xu, Hang (Paul) Yan, Chen (Jeff) Yu

 Zhengyi Zhu, Tianqi Fang

 Futurewei Technologies Albert Baek

IBM Michael Cohen\*, Greg Edlund

Infineon Technologies AG Anke Sauerbrey, Pietro Brenner, Francesco Settino

Instituto de Telecomunicações (Abdelgader Abdalla)

Intel Corporation Hsinho Wu\*, Michael Mirmak, Nhan Phan

 Kinger Cai, Eddie Frie, Wendem Beyene

 Yuanhong Zhao, Bruce Qin, Kai Yuan, Denis Chen

 Neo Hsiao

Keysight Technologies Radek Biernacki\*, Hee-Soo Lee, Stephen Slater

 Jian Yang, Ming Yan, Pegah Alavi, Jiarui Wu

 Jiajie Zhao, Nash Tu, Toshinori Kaeura

 Satoshi Nakamizo

Marvell (was GLOBALFOUNDRIES) Steve Parker\*

 Marvell (past non-voting status) Johann Nittmann, Jianping Kong, Banglong Qian

 Songjie (Jacky) Wang

Maxim Integrated Joe Engert, Yan Liang, Charles Ganal

Mentor, A Siemens Business Arpad Muranyi\*, Raj Raghuram, Weston Beal

 Vladimir Dmitriev-Zdorov, Mikael Stahlberg

 Todd Westerhoff, Ed Bartlett, Nitin Bhagwath

 Kunimoto Mashino

Micron Technology Randy Wolff\*, Justin Butterfield, Jingwei Cheng

 Zack Yang, Cheng Zhang

 Micron Memory Japan, G.K. Masayuki Honda, Mikio Sugawara

NXP (John Burnett)

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

SPISim Wei-hsing Huang\*

Synopsys Ted Mido\*, Adrien Auge, John Ellis, Sam Sim

 Scott Wedge, Claire (Wen) Cao, Kevin Li, Lan Ni

 Yu Wang, Jianguo Zhou, Xuefeng Chen

 Yuyang Wang, Jinhua Huang

Teraspeed Labs Bob Ross\*

Xilinx Ravindra Gali

ZTE Corporation Shunlin Zhu, Fengling Gao, Yuling Li, Dongdong Ye

Zuken Michael Schäder, Crab Chen, Yoshio Nakajima

 Deva Yang, Kevin Yang, Kiyohisa Hasegawa

 Kensuke Yoshijima, Takayuki Shiratori

 Zuken USA Lance Wang

**OTHER PARTICIPANTS IN 2019**

51Semicon Guorong Ao, Yan Huang

A&D Print Engineering Co. Ryu Murota

ADLINK Technology Rain Chen, Robert Hsu, Ned (Nanku) Lu

Advanced Micro Devices (AMD) Hellen Lo

Aisin Seiko Co. Kouji Kumagawa

AMD Japan Tadashi Arai

Amkor Technology Ian Yu

Apollo Giken Co. Satoshi Endo, Toshiki Tamura, Yuzo Morimasa

ASRock Rack Inc. Eric Chien

ASUSTek Computer KT Chen, Nick Chan, Eric Hsieh, Nick KH Huang

AVL Wolfgang Röhrner

Bitmain Technology Holding Co. Pan Jiang, Yuanyang Qing, Huichao (Whisper) Weng

Canon Syoji Matsumoto, Hiroaki Kitazawa, Shinichi Ohno

 Sou Hoshi, Keisuke Ikemiya, Yusuke Matsudo

Canon Components Takeshi Nagata

Carleton University Ram Achar

Celestica Sophia Feng, Bowen Shi, Jimmy Zhang

Chiptops Darcy Liu

Clarion Co. Takatsugu Yasui

Compal Electronics Cortex Chen, Arthur Hsu

Continental Stefanie Schatt

Cybernet Systems Co. Takayuki Tsuzura, Shiho Nagae

D-CLUE Technologies Co. Osamu Takeuchi

Design Methodology Lab Motoo Tanaka

Fujitsu Advanced Technologies Hideki Takauchi, Kumiko Teramae, Akiko Tsukada

 Masaki Tankaa, Takashi Kobayashi, Masaki Kirinaka

Furuno Electric Co. Naoaki Sasao

Gifu University Toshikazu Sekine

GIGABYTE Technology Eddie Lin

Global Unichip Japan Masafumi Mitsuishi

Hamamatsu Photonics K.K. Ryuji Yamamoto

Hewlett Packard Enterprise Corey Huang, Cucumber Lin, Edward Pan

Hirosaki University Toshiki Kanamoto

Hitachi Norio Chujo

Hitachi Automotive Systems Naomi Shiga

Hitachi Solutions Technology Sadahiro Nonoyama

Hoei Co. Tatsuya Chiba

Hoya Corporation Toshiaki Yamabe

HTC Corporation Andrew Huang

iITAC Computing Technology Ella Wang

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Institute for Information Industry Joseph Yang

Independent Tadashi Aoki

Inventec Peng Zhong

IO Methodology [Lance Wang]

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Japan Display Tetsuhisa Yamada

Japan Radio Co. Takashi Sato

JEITA/EC Center Akihiko Kawasaki, Kyoji Yamazaki, Hisashi Saito

John Baprawski, Inc. John Baprawski

JVC Kenwood Corporation Hidetoshi Suzuki, Takuo Fujimura

Hamburg University of Technology Til Hillebrecht

KEI Systems Shinichi Maeda

Keyence Corporation Takanari Yasumura

Key-System Co. Shinichi Maeda

Kingston Technology Hardy Chang, CF Chen, Mars Ho

Kioxia Corporation Minori Yoshitomi, Yoshiaki Yoshihara, Yasuhiko Iguchi

 Ryuki Kubohara, Masato Kanie

Kioxia Systems Co. Yukio Tanoue, Jyunya Shibasaki, Tomomichi Takahashi

Kyocera Corporation Seisuke Noguchi, Ayaka Nishi

Lenovo Aje Chang, Alan Sun, John Liu

Macnica Hidemichi Tanaka

MD Systems Co. Hideaki Kouzu

Megachips Corporation Tomochika Kitamura

MiTAC Ivan (Weichen) Huang

Mitsubishi Electric Corporation Yusuke Suzuki, Akihito Kobayashi

Mitsumine-Denshi Co. Ryoichi Nakahigashi

Mobile Techno Corporation Makoto Kaise

Modech Yoichi Sakuraba

Molex Japan Hiroyuki Yajima, Syoji Somekawa

Murata Manufacturing Co. Shigeaki Hashimoto, Ryo Yokoyama

 Kazutaka Mukaiyama

Nanya Technology Corp. Hsing Chen, Taco (Changqun) Hsieh, Andre Huang

 Raphael Huang, Thomas Huang, George Lee

 Tom Lee, Benson Peng

NEC Platforms Tsuneo Kikuchi, Atsushi Kato

New H3C Group Zixiao Yang, Muwang Ye

Nikon Corporation Manabu Matsumoto

Nissan Motor Corporation Hidenari Nakashima

Novatek Josh Wu

Nvidia Corp. Norman Chang, David Chen, Chiayuan Hsieh

 Richie Lu, Chihwei (Jason) Tsai

Oji Holdings Corporation Yoshikazu Fujishiro

Oki Electric Industry Co. Atsushi Kitai

Olympus Digital System Design Ken Saito

 Corporation

OmniVision Sirius Tsang, Baohua Tu, Wenhui Shang, Bibo Ping

 Wei Li, Xuanjiang Shen

Panasonic Corporation Kenkichi Hirano, Atsushi Nakano

Politecnico di Torino Stefano Grivet-Talocia, Paolo Manfredi

 Alessandro Zanco

PWB Corporation Toru Ohhisa

Qualcomm Kevin Roselle

Quanta Computer Joseph Huang, Kyle Lin

Raytheon Joseph Aday

Renesas Genichi Tanaka

Renesas Electronics Corporation Kazuyuki Sakata, Genichi Tanaka

Ricoh Co. Kazuki Murata, Masahiko Banno, Koji Kurose

Rohm Co. Nobuya Sumiyoshi

Ryosan Co. Takahiro Sato, Kouji Tsutsui

SAE ITC (Jose Godoy)

SALE Yang Weng

SAXA Takayuki Ito

Seagate Alex Tain

Shinko Electric Industries Co. Manabu Nakamura

Shinewave (Xiangwei International) Nike Yang

Signal Metrics Ron Olisar

Silvaco Japan Co. Yoshiharu Furui

Socionext Megumi Ono, Motoaki Matsumura, Yuji Nakagawa

 Hajime Ohmi, Ide Yutaka, Yumiko Sugaya

 Megumi Usui, Fumiyo Kawafuji

Sohwa & Sophia Technologies Tomoki Yamada

Sony Global Manufacturing & Taku Masuko

 Operations Corporation

Sony LSI Design Toru Fujii, Satoshi Ishigami, Kazuki Murata

Sony Semiconductor Solutions Kunio Gosyo

 Corporation

STMicroelectronics Olivier Bayet, Aurora Sanna

Syswave Kazuo Ogasawara

Tamagawa Denki Co. Yasumitsu Matsuura, Yuki Sato

TDK Corporation Eriko Ajioka

Technopro Design Co. Shintaro Kaji, Mai Fukuoka

Teikyo Heisei University Kotaro Hachiya

Tektronix Co. Takafumi Watanabe

Tokyo Drawing Naoya Iisaka

Tokyo Rikosha Co. Toshio Umesawa

Tomen Devices Corporation Kinji Mitani

Toshiba Imi Hitoshi, Torigoshi Yasuki

 Toshiba Devices Corporation Kinji Mitani

 Toshiba Development & Nobuyuki Kasai

 Engineering Corp.

 Toshiba Electronic Device Satoshi Kameda

 Solutions Corp.

 Toshiba Electronic Devices & Atsushi Tomishima, Yasunobu Umemoto, Hitoshi Imi

 Storage Corp.

Towa Electronics Co. Yoshikazu Suzuki

Unisoc Technologies Richard Ren, Yoona Wang, Xuhai Guo

Université de Bretagne Occidentale Mihai Telescu

University of Cassino Antonio Maffucci

University of Toronto Fadime Bekmambetova

University of Zagreb Adrijan Baric

U-PKG Jiancai San

Xpeedic Cunhui Gui

Yamaha Corporation Tetsuya Kakimoto

Yazaki Parts Co. Kenichi Fujisawa

Zhaoxin (Shanghai Zhaoxin Zhen (Caffrey) Fu, Chuanyu (Liam) Li

 Semiconductor)

Zuiki Kon Kou

In the list above, attendees at the meeting 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 bridge numbers for future IBIS teleconferences are as follows:

Date Meeting Number Meeting Password

December 13, 2019 624 227 121 IBISfriday11

For teleconference dial-in information, use the password at the following website:

 http://tinyurl.com/IBISfriday

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**

Curtis Clark declared that a quorum was 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 October 18, 2019 IBIS Open Forum teleconference. Bob Ross moved to approve the minutes. Mike LaBonte seconded the motion. There were no objections.

Randy reviewed ARs from the previous meeting.

1. Randy Wolff to find out what organizations were involved in creating JEP30 and who would make use of it [AR].

Randy noted that he had found a contact at Micron with more information, but he had not yet received it. He said this was in progress and should remain an active [AR].

1. Michael Mirmak to check on the cost of making IEEE 2401 available via the IEEE Get Program [AR].

Michael was unable to join the meeting. Randy suggested this be left open until Michael could attend and present an update himself. This is in progress and should remain an active [AR].

1. Steve Parker to update the site map to include the ibischk7 page [AR].
Steve reported that this had been done.
2. Bob Ross to create a modified version of the BIRD197.5 draft for review in ATM [AR].
Bob reported that this was done. His draft of a potential BIRD197.6 had been reviewed in the previous ATM meeting and discussion was ongoing.
3. Randy to send an announcement notice of the ibischk7 parser release [AR].
Randy reported that this had been done.
4. Bob Ross to ask SAE-ITC to release the payment to the parser developer [AR].
Bob reported that this had been done.

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

None.

**MEMBERSHIP STATUS AND TREASURER'S REPORT**

Bob Ross reported that we have 26 members. Bob noted that the unit of GLOBALFOUNDARIES with Steve Parker as its active IBIS representative is now part of Marvell. Per our Policies and Procedures, Marvell becomes a voting member of IBIS.

We have $27,656 cash flow for 2019 and a $30,406 adjusted balance for 2019. The $600 increase relative to the previous report is the result of two summit sponsorships, one new parser license purchase, and the payout of $8,000 to the ibischk7 parser developer. We have eight fully signed agreements, and these organizations will receive the parser code:

ANSYS

Cadence Design Systems

Keysight Technologies

Intel

Julin (Shanghai) Microelectronics

Mentor, A Siemens Business

Synopsys

Zuken

So far, we have received five full parser payments for $15,000 total, with $9,000 more expected for the remaining three agreements and $3000 for an expected agreement that is not yet finalized. We are also expecting a $4,000 summit sponsorship payment. Some of these payments may not be received until 2020. Any 2019 sponsorship payments we receive in 2020 will be reflected in the 2019 adjusted balance. We expect to compensate Randy Wolff for Asian IBIS Summit credit card expenses of $9,425.

**WEBSITE ADMINISTRATION**

Steve Parker noted that the website was up to date with respect to BIRDs, minutes, summit information, etc. Minutes for the Shanghai and Taipei summits had been posted. The Asia Summits had all been moved from the Upcoming Events page to the Past Summits page.

Bob Ross asked Steve to add the Asia Summits for November of 2020 to the Upcoming Events page’s Unscheduled Recurring IBIS Meetings section [AR]. Bob noted that it is helpful to keep these recurring yearly events showing, and that some members include sponsorship payments for that year’s upcoming summits along with their dues. Bob asked Steve to add the summit booklet .pdfs to the pages for the 2018 Shanghai and Taipei summits, as Steve had done for the 2019 summits [AR]. Randy Wolff asked Steve to add an announcement of the new ibischk7 release at the top of the home page [AR].

**MAILING LIST ADMINISTRATION**

Mike LaBonte noted that mailing lists were operating normally. He had addressed a few minor issues with delivery to a few subscribers.

**LIBRARY UPDATE**

No update.

**INTERNATIONAL/EXTERNAL ACTIVITIES**

- Conferences

Nothing new was reported.

- Press Update

Nothing new was reported. Randy Wolff noted that he had provided UBM with a quote regarding the value of DesignCon. He expected that this might appear in a DesignCon press release in the future.

- Related standards

IEC 63055/IEEE 2401, JEITA “LPB”

Randy Wolff noted that Michael Mirmak can report on this when he is able to attend.

**SUMMIT PLANNING AND STATUS**

- Asia Summits 2019 Review

Shanghai (November 1, 2019):

Bob Ross and Randy Wolff thanked the sponsors. Huawei was the primary sponsor, and ANSYS, Cadence Design Systems, Keysight Technologies, Synopsys, and ZTE were also sponsors. Randy noted that 82 people representing 25 organizations had attended. He noted that presentations went well, there was a nice sponsored dinner for speakers afterward, and the hotel had even provided Halloween themed food and decorations outside the meeting room. Randy noted that minutes from the summit had been posted.

Randy noted that Kevin Li of Synopsys had asked about possibly forming an ATM-like group in Asia that could meet a more convenient time for members in Asia. Randy said he thought this was a great idea, and we could see if someone wanted to serve as chair, provide periodic reports and possibly attend the ATM meetings occasionally. Randy planned to follow up with Kevin to see if he would be interested in leading it [AR].

Randy noted that the separate vendor-specific presentation portion had gone well. He noted that most attendees stayed for that portion as well, and that it may have helped attendance overall. Randy noted that Lance Wang could provide more feedback at the next meeting, as he had been the moderator of the vendor-specific presentations.

Taipei (November 4, 2019):

Bob and Randy thanked the sponsors. ANSYS, Cadence Design Systems, and Synopsys were sponsors. Randy noted that 67 people representing 27 organizations had attended. He noted that presentations went well, and there was a small speaker dinner afterward attended by Randy, Lance Wang, Anders Ekholm, and several presenters. Randy noted that minutes from the summit had been posted.

Randy noted that he had gotten some feedback from people who asked if we could consider changing the location to Hsinchu instead of Taipei. He said it was something we could consider. Randy suggested that it might make sense to sponsor a bus to transport people from Hsinchu to Taipei instead of moving the meeting.

Tokyo (November 8, 2019):

Bob and Randy thanked the sponsors. JEITA, ANSYS, Apollo Giken Co., Ltd., Keysight Technologies Japan K.K., Ricoh, Toshiba, and Zuken were sponsors. Randy noted that 134 people representing 85 organizations had attended.

Randy noted that organization by JEITA was excellent. The meeting occurred in a large room and was still quite full. The Friday morning session had many speakers discussing new IBIS 7.0 features. Randy had spoken with the authors of BIRD198, primarily at the speaker dinner, and we expect more feedback from them shortly in response to the latest emails from ATM.

Bob noted that we had created an online booklet for the summit for the first time. JEITA had decided not to print physical booklets. Bob noted that the online booklet is uploaded to the Tokyo Summit page. It had been put online prior to the summit so people could follow along real time or print it out ahead of time. Randy noted that many people had been looking at the booklet on their laptops, and no one seemed to have missed the printed booklets. Randy suggested we could consider an online-only booklet at Shanghai and Taipei next year as well.

Randy noted that interest in IBIS was high at all the Asia summits, and that he had encouraged further participation from Asia and was glad there was so much interest. Randy noted that he planned to follow up and send thank you notes to all the speakers and authors [AR]. Randy closed the discussion of the 2019 Asia summits by thanking Bob and noting that he does a tremendous amount of work to handle the logistics, gather and review the presentations, produce the booklets, and make the summits happen. Bob thanked Randy for handling the minutes and attendee lists for all three summits, which he noted is a lot of work, in addition to his other duties.

- DesignCon 2020 Summit (January 31, 2020)

Randy noted that he had nothing new to report in the planning with UBM. He noted that he was still waiting to hear back about the possibility of moving to a larger room. He mentioned that he had provided a quote on the usefulness and value of DesignCon that UBM will use in some marketing materials. Randy asked when the first notice should be sent out by us. Bob noted that it should go out the Friday after this meeting.

Bob noted that he will need to begin soliciting sponsors for this summit. He said we don’t have special offerings like the vendor-specific presentations in Taipei and Shanghai, and those might be redundant at DesignCon anyway. He wondered if the board should consider setting up sponsorship levels, for example, setting a $1000 minimum sponsorship. Mike LaBonte said that if the first announcement has to go out in a week then we probably need to maintain the same informal process we’ve used for DesignCon in past years. We could consider changes to the DesignCon process next year. Randy agreed. Bob noted that he wants to get potential sponsors some idea of what to plan for in their budgeting for next year.

Arpad Muranyi asked for a summary of how the vendor-specific presentations had worked out in Taipei and Shanghai. Randy said Lance Wang could provide more information at a future meeting, as he had moderated those portions. Randy noted that he had not attended the vendor-specific presentations to avoid any appearance of official endorsement. Randy noted that almost everyone had stayed for the vendor-specific presentations, and that feedback from vendors was positive. Randy said we will definitely continue that next year. Bob noted that participating vendors in Shanghai had liked it, and other vendors had seen what was happening and planned to participate next year. Bob said we might end up with so many vendor-specific presentations that we run out of time slots or risk cutting into the official summit’s time. Bob noted that when vendors present they tend to encourage their customers to attend as well, and it really improves summit attendance.

- IEEE SPI Summit 2020

Randy noted that Thomas Kühler, of the University of Siegen, a co-chair of the 24th IEEE SPI Workshop, had emailed us asking if IBIS would like to participate again this year. Randy noted that we will have to schedule a vote on whether to participate. The workshop will occur from May 17th through May 20th in Cologne, Germany, and we would plan an afternoon summit on Wednesday, May 20th.

**QUALITY TASK GROUP**

Mike LaBonte reported that the group is meeting on Tuesdays at 8:00 a.m. PT. The group continues to focus on ibischk 7.0 and is currently focused on dispersing the source code to purchasers. Mike noted that several recent meetings have been cancelled because he was unavailable.

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. The group had recently been discussing a variety of topics including the DC\_Offset BIRD, which is undergoing minor editorial tweaks to create a BIRD197.6, and proposals for enhancing the AMI back channel interface (BCI) to work in statistical mode.

Task group material can be found at:

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

**INTERCONNECT TASK GROUP**

Michael Mirmak was not able to join the meeting. Randy Wolff reported that the group meets at 8:00 a.m. PT on Wednesdays. Bob Ross noted that the group continues to discuss the pending EMD BIRD. There will be no meeting on November 27, 2019, and meetings will resume the following week.

Task group material can be found at:

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

**EDITORIAL TASK GROUP**

Randy Wolff reported the task group remains suspended.

Task group material can be found at:

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

**NEW ADMINISTRATIVE ISSUES**

- Membership dues for 2020

Randy Wolff noted that we had not formally motioned at the last meeting to schedule this vote. However, he had sent out an email notice for the vote sufficiently in advance of this meeting. Bob Ross noted that he had already been contacted by one member organization about the dues for 2020, so he wanted the formal vote to settle the issue. Bob moved to maintain IBIS membership dues at $900 for the year 2020. Curtis Clark seconded. There were no objections.

The roll call vote tally was:

ANSYS – yes

Cadence – yes

Infineon – yes (by email)

Intel – yes

Keysight – yes

Marvell – yes

Mentor – yes

Micron – yes

SiSoft – yes

SPISim – yes

Synopsys – yes

Teraspeed Labs – yes

The roll call vote concluded with a vote tally of Yes – 12, No – 0, Abstain – 0. The vote passed.

**BIRD197.5: NEW AMI RESERVED PARAMETERS DC\_OFFSET**

Bob Ross noted that his proposed draft of a BIRD197.6, which contained editorial changes, was reviewed in ATM and still needs more work there.

**BIRD166.4: RESOLVING PROBLEMS WITH REDRIVER INIT FLOW**

Discussion was tabled.

**BIRD181.1: I-V TABLE CLARIFICATIONS**

Mike LaBonte again noted that he had created a draft BIRD181.2, but there had been no new discussion since the last meeting, and he needed to get the proposal into ATM for review. Mike said it might be awhile, so we should probably table this BIRD. Bob Ross moved to table it. Radek Biernacki seconded. There were no objections.

**BIRD190: CLARIFICATION FOR REDRIVER FLOW**

Discussion was tabled.

**BIRD198: KEYWORD ADDITIONS FOR ON DIE PDN (POWER DISTRIBUTION NETWORK) MODELING**

Discussion was tabled. Randy Wolff noted that he had some discussions with the authors at the Tokyo summit. He said we expect some feedback from the authors in the next few weeks in response to the most recent email he had sent after ATM discussed the BIRD.

**IBISCHK PARSER AND BUG STATUS**

Bob Ross reported that we had paid the parser developer the $8000 for the ibischk7 parser. Bob noted that there are now two open bugs, but he was not yet ready to discuss and classify them:

1. BUG207 – submitted by Randy Wolff and reviewed briefly at an earlier meeting.
2. BUG208 – submitted by Arpad Muranyi and pending an official BUG report. This involves a hang in the Interconnect Model parsing.

Mike LaBonte noted that he had drafted an official BUG208 report that included a simple test case. However, it wasn’t ready in time for review in this meeting. Bob said it could be reviewed in the next Quality task group meeting, and that he might pre-emptively let the parser developer know as soon as BUG208 is posted. This may be a fairly serious bug and may require a new parser release. Randy noted that he could attend a Quality meeting to help with discussion of BUG207.

Bob noted that for parser source code license payments he was seeing more and more companies that paid 45 to 60 days after receiving the final invoice with a purchase order. He asked members to keep this in mind when it comes time to pay annual dues. Per our bylaws, we enforce a rule that if payment for dues is not received by June 1st, then membership is suspended, and that organization can’t vote until payment is received.

**NEW TECHNICAL ISSUES**

None.

**NEXT MEETING**

The next IBIS Open Forum teleconference meeting will be held on December 13, 2019. The following teleconference meeting is tentatively scheduled for January 10, 2020.

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

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

**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](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>

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**SAE STANDARDS BALLOT VOTING STATUS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Organization** | **Interest Category** | **Standards Ballot Voting Status** | **November 1, 2019** | **November 4, 2019** | **November 8, 2019** | **November 22, 2019** |
| 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 |
| Cisco Systems | User | Inactive | X | - | - | - |
| Dassault Systemes | User | Inactive | - | - | - | - |
| Ericsson | Producer | Active | X | X | X | - |
| Google | User | Inactive | - | - | - | - |
| Huawei Technologies | Producer | Inactive | X | - | - | - |
| Infineon Technologies AG | Producer | Inactive | - | - | - | X |
| Instituto de Telecomunicações | User | Inactive | - | - | - | - |
| IBM | Producer | Inactive | - | - | - | X |
| Intel Corp. | Producer | Active | X | X | - | X |
| Keysight Technologies | User | Active | X | X | X | X |
| Marvell (GLOBALFOUNDRIES) | Producer | Inactive | - | - | - | X |
| Maxim Integrated | Producer | Inactive | - | - | - | - |
| Mentor, A Siemens Business | User | Active | - | - | X | X |
| Micron Technology | Producer | Active | X | X | X | X |
| NXP | Producer | Inactive | - | - | - | - |
| SiSoft  | User | Inactive | - | - | - | X |
| SPISim | User | Inactive | - | - | - | X |
| Synopsys | User | Active | X | - | X | X |
| Teraspeed Labs | General Interest | Inactive | - | - | - | 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.