



## 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 Cicomancini, 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 Ganai
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
Iluvatar	Luping Liu
Inspur Technologies Co.	Steven Ho, Rock Wang
Institute for Information Industry	Joseph Yang
Independent	Tadashi Aoki
Inventec	Peng Zhong
IO Methodology	[Lance Wang]
ITEC	Hiroshi Ishikawa
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 Corporation	Ken Saito
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 & Operations Corporation	Taku Masuko
Sony LSI Design	Toru Fujii, Satoshi Ishigami, Kazuki Murata
Sony Semiconductor Solutions Corporation	Kunio Gosyo
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 & Engineering Corp.	Nobuyuki Kasai
Toshiba Electronic Device Solutions Corp.	Satoshi Kameda
Toshiba Electronic Devices & Storage Corp.	Atsushi Tomishima, Yasunobu Umemoto, Hitoshi Imi
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 Semiconductor)	Zhen (Caffrey) Fu, Chuanyu (Liam) Li
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].
2. 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].
3. Steve Parker to update the site map to include the ibischk7 page [AR].  
Steve reported that this had been done.

4. 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.
5. Randy to send an announcement notice of the ibischk7 parser release [AR]. Randy reported that this had been done.
6. 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 GLOBALFOUNDRIES 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 24<sup>th</sup> 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 17<sup>th</sup> through May 20<sup>th</sup> in Cologne, Germany, and we would plan an afternoon summit on Wednesday, May 20<sup>th</sup>.

### **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/](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/](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/](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/](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 1<sup>st</sup>, 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.

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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/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](http://www.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	November	November	November
			1, 2019	4, 2019	8, 2019	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.