



IBIS Open Forum Minutes

Meeting Date: **September 12, 2014**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2014 PARTICIPANTS

Altera	David Banas, Kundan Chand, Hsinho Wu
ANSYS	(Steve Pytel)
Applied Simulation Technology	Fred Balistreri, Norio Matsui
Cadence Design Systems	Ambrish Varma*, Brad Brim, Joy Li, Kumar Keshavan, Ken Willis, Yingxin Sun, Joshua Luo, John Phillips
Ericsson	Anders Ekholm, Zilwan Mahmod
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak*, Jon Powell, Riaz Naseer Udy Shrivastava, Mustafa Yousuf, Jimmy Jackson Pietro Brenner, Todd Bermensolo
IO Methodology	Lance Wang*, Michelle Coombs
Keysight Technologies (Agilent)	Radek Biernacki*, Nilesh Kamdar, Colin Warwick, Graham Riley, Pegah Alavi, Fangyi Rao, Heidi Barnes, Dimitrios Drogoudis
LSI (Avago)	Xingdong Dai, Min Huang, Anaam Ansari, Brian Burdick Venkatesh Avula
Maxim Integrated Products	Hassan Rafat
Mentor Graphics	Arpad Muranyi*, John Angulo, Fadi Deek, Chuck Ferry Thomas Groebli
Micron Technology	Randy Wolff*
Qualcomm	Jaimeen Shah, Srinivasa Rao*, Senthil Nagarathinam*
Signal Integrity Software	Mike LaBonte*, Walter Katz, Todd Westerhoff, Michael Steinberger
Synopsys	Ted Mido, Scott Wedge, Kevin Cameron, Rita Horner
Teraspeed Labs (Teraspeed Consulting Group)	Bob Ross*, Tom Dagostino, Scott McMorrow
Toshiba	Hiroyuki Ikegami, Toshihiro Tsujimura, Hideo Oie*
Xilinx	Ravindra Gali
ZTE Corporation	(Shunlin Zhu)
Zuken	Michael Schaefer, Amir Wallrabenstein, Griff Derryberry Reinhard Remmert

OTHER PARTICIPANTS IN 2014

ADVLSI	Pierre Dermey, Juanna Gao
Carleton University	Ramachandra Achar
Continental Automotive	Catalin Negrea
CST	Stefan Paret
ECL Advantage	Thomas Iddings

Freescall	Asher Berkovitz
Fujitsu	Shogo Fujimori
Hewlett Packard	Ting Zhu
Hong Kong University	Lijun Jiang
Huawei Technologies	Jinjun Li, Xiaoqing Dong, Zanglin Yuan, Han Li
IBM	Adge Hawes
Instituto de Telecomunicações	Wael Dghais
KEI Systems	Shinichi Maeda
Lattice Semiconductor	Xu Jiang
Mediatek	Alice Lin
Mellanok Technologies	Piers Dawe
Microsemi	Nizar Abdallah, Ann Lau
Nanium	Abel Janeiro
Oracle	Stephan Mueller
Pangya	Edgar Aguirre
Proficient Design	Kishor Patel
Renesas	Genichi Tanaka
SAE International	Chris Denham
Tabula	Ben Zhou
Technische Universität Hamburg	Torsten Reuschel
University of Illinois	José Schutt-Ainé
Vitesse	Siris Tsang

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
October 3, 2014	205 475 958	IBIS

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

<https://ciscosales.webex.com/ciscosales/j.php?J=205475958>

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. When calling into the meeting, follow the prompts to enter the meeting ID. For new, local international dial-in numbers, please reference the bridge numbers provided by Cisco Systems at the following link:

http://www.cisco.com/web/about/doing_business/conferencing/index.html

NOTE: "AR" = Action Required.

INTRODUCTIONS AND MEETING QUORUM

Michael Mirmak declared that a quorum was reached and the meeting could begin.

Hideo Oie from Toshiba America Electronic Components (a subsidiary of Toshiba group) introduced himself. He previously worked at Intel. He is currently working on ASIC chip development. His company is working on high speed SerDes development, so he is joining to follow AMI modeling development.

Bob Ross noted that Teraspeed Consulting Group has split. He is part of Teraspeed Labs now, the official IBIS member. Teraspeed Consulting Group was purchased by Samtec.

CALL FOR PATENTS

Michael Mirmak called for any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.1, IBIS 6.0, Touchstone 2.0, IBIS-ISS 1.0 or ICM 1.1 specifications. No patents were declared.

REVIEW OF MINUTES AND ARS

Randy Wolff called for comments regarding the minutes of the August 22, 2014 IBIS Open Forum teleconference. Randy noted that Radek Biernacki asked by email for two corrections to the minutes. The first is to change a sentence in the BIRD172.1 discussion from "Radek Biernacki said this is not a relaxation" to "Radek Biernacki said this is not a relaxation to the specification." The second change is in the BIRD173.1 discussion. The minutes read "Radek also noted that it would be even more appropriate to write "non-negative semi-definite"". Radek did not remember saying this, so the sentence should be removed or more likely say "positive semi-definite." The minutes were approved with the noted changes.

ANNOUNCEMENTS

None.

CALL FOR ADDITIONAL AGENDA ITEMS

None.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we have 21 members with one still pending payment. Our account balance stands at \$32,083. A parser payment came in July that was not noted in previous minutes. We have additional income waiting to come in for sponsorships and parser payments. The DAC Summit payment is not recorded in these numbers since it has not been confirmed.

WEB PAGE AND MAILING LIST ADMINISTRATION

Mike LaBonte reported that he is continuing to have some issues related to email. One email was sent to the list and would not go through. It turned out to be an attachment that was too large. He has updated a note to read that while small attachments will go through there is a 200,000 character limit. Attachments need to be less than about 150k in size.

For the freelists mail lists used by IBIS, Mike is trying to resolve some questions before sending an email out to all the list members describing the lists including instructions for unsubscribing. Mike questioned if the ibis-serdes-backchan list was needed at all, since it is not actively used.

Bob Ross commented that he'd prefer not to allow attachments. Mike noted that the lists are setup to allow attachments, but the size limit is enforced for eda.org. Mike added that freelists.org allows attachments but discourages them because their server load is very high. We could try to discourage attachments. Arpad Muranyi asked how screen shots included in an email are handled. Mike noted that these images can be large and might run into the size limit.

Mike also reported that he has been updating the events page with information about the Asian IBIS Summits.

LIBRARY UPDATE

No update.

INTERNATIONAL/EXTERNAL ACTIVITIES

- Conferences

The 23rd Conference on Electrical Performance of Electronic Packaging (EPEPS) will be held October 26-29, 2014 in Portland, Oregon. There is usually some IBIS and/or signal integrity related material. More information is available at:

<http://epeps.org>

- Press Update

None.

SUMMIT PLANNING AND STATUS

- Asian IBIS Summit Shanghai – November 14, 2014

This event will be held at the Parkyard Hotel.

- Asian IBIS Summit Taipei – November 17, 2014

This event will be held at the Sherwood Hotel.

- Asian IBIS Summit Yokohama – November 20, 2014

This event will be held at the Pacifico Hotel.

Michael Mirmak reported that the first call for papers for Shanghai will go out September 19,

2014. We will work with local people in Shanghai and Taipei to help distribute the invitation. Bob Ross noted sponsors for Shanghai include Huawei Technologies, IO Methodology, Synopsys, ZTE Corporation and others to be determined. Sponsors for Taipei include Cadence Design Systems, IO Methodology, Synopsys and others to be determined. Sponsors for Yokohama include JEITA, the IBIS Open Forum and others to be determined. Michael encouraged members to forward the invitations to colleagues that are not on the IBIS distribution lists. He encouraged additional sponsorships for the Summits.

Sponsorship opportunities for all upcoming IBIS summits are available, with sponsors receiving free mentions in the minutes, agenda, and other announcements. Contact the IBIS Board for further details.

QUALITY TASK GROUP

Mike LaBonte reported that the group is meeting on Tuesdays at 8:00 a.m. PT. They recently analyzed BUG157. They are also working on updating comments in the IBISCHK6 User Guide. The work in progress can be reviewed at:

http://www.eda.org/ibis/ibischk6/ibischk_6.0.0_UserGuide_wip1.pdf

They are also looking into the –etc option of ibischk to understand what the option is used for. Michael Mirmak noted that he talked with Jon Powell, a previous parser developer. Jon did not remember anything about that option. Mike noted that these checks are essentially unused, so they could be set as new checks if they are useful. Michael asked if the IBIS bug reporting email address could be added to ibischk so that it would be printed out to inform parser users on how to report bugs. Mike thought filing a bug report for this would be appropriate.

The Quality Task Group checklist and other documentation can be found at:

http://www.eda.org/ibis/quality_wip/

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is meeting regularly on Tuesdays at 12:00 p.m. PT. The group has reached a dead end with BIRD147 discussions, as it does not look like the BIRD can be developed further to address concerns of all parties involved. Some final comments from Bob Ross will be addressed in the BIRD before it is finalized for submittal for vote. Bob suggested that the BIRD be put up for a vote in the ATM task group to get a sense of overall support for it. Arpad noted that the BIRD was started three years ago, so there has been some “feature creep” in that time. A critique of the BIRD is that it will not adequately support some new or upcoming technologies. Another BIRD may be written, in which case there will be debate over whether both BIRDs could coexist in the specification.

Task group material can be found at:

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

INTERCONNECT TASK GROUP

Arpad Muranyi reported that the last meeting was short. They reviewed the latest draft after Arpad provided many comments on the draft 9 of the Interconnect modeling BIRD. This became draft 10 with visible changes from draft 9. Draft 11 was also created with the changes accepted but the comments still visible.

Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES

None.

BIRD128.2: ALLOW AMI_PARAMETERS_OUT TO PASS AMI_PARAMETERS_IN DATA ON CALLS TO AMI_GETWAVE

Michael Mirmak noted that Radek Biernacki commented by email that he had additional concerns on the BIRD. Radek joined the meeting late and commented that some rules need to be established for the parameters. He thought the mechanism is fine, but we don't want to be in conflict with any other statements in the specification. Arpad Muranyi requested that Radek meet with Walter Katz and Ambrish Varma offline before bringing suggestions for changes to the ATM task group.

Arpad moved to vote to postpone the BIRD vote. Bob Ross seconded the motion. There were no objections.

Bob moved to schedule the BIRD for a vote at the next Open Forum teleconference. Arpad seconded the motion. There were no objections.

BIRD173.2: PACKAGE RLC MATRIX DIAGONALS

Randy Wolff introduced the BIRD changes. Arpad Muranyi planned to get comments from Vladimir Dmitriev-Zdorov on the use of "positive" to indicate that "0" is included. Radek Biernacki joined the meeting late and commented that the statement "positive semi-definite" is the proper terminology and can include "0". He was not opposed to adding in parentheses "(including zero)". A BIRD173.3 may be filed in the next week.

Bob Ross moved to postpone the BIRD vote. Arpad seconded the motion. There were no objections.

Bob moved to schedule the BIRD for a vote at the next Open Forum teleconference. Arpad seconded the motion. There were no objections.

BIRD169.1: DLL DEPENDENCY CHECKING

Arpad Muranyi noted that this BIRD was updated and submitted on August 22, 2014; however, the BIRD was not posted right away. He made a minor change and feels it is ready for a vote.

Mike LaBonte moved to schedule the BIRD for a vote at the next Open Forum teleconference. Arpad seconded the motion. There were no objections.

BIRD125.1: MAKE IBIS-ISS AVAILABLE FOR IBIS PACKAGE MODELING

Discussion was tabled.

BIRD145.3: CASCADING IBIS I/O BUFFERS WITH [EXTERNAL CIRCUIT]S USING THE [MODEL CALL] KEYWORD

Discussion was tabled.

BIRD147: BACK-CHANNEL SUPPORT

Discussion was tabled.

BIRD157: PARAMETERIZE [DRIVER SCHEDULE]

Discussion was tabled.

BIRD158.3: AMI TOUCHSTONE ANALOG BUFFER MODELS

Discussion was tabled.

BIRD161.1: SUPPORTING INCOMPLETE AND BUFFER-ONLY [COMPONENT] DESCRIPTIONS

Discussion was tabled.

BIRD163: INSTANTIATING AND CONNECTING [EXTERNAL CIRCUIT] PACKAGE MODELS WITH [CIRCUIT CALL]

Discussion was tabled.

BIRD164: ALLOWING PACKAGE MODELS TO BE DEFINED IN [EXTERNAL CIRCUIT]

Discussion was tabled.

BIRD165: PARAMETER PASSING IMPROVEMENTS FOR [EXTERNAL CIRCUIT]S

Discussion was tabled.

BIRD166: RESOLVING PROBLEMS WITH REDRIVER INIT FLOW

Discussion was tabled.

BIRD CLOSURE DATE FOR NEXT SPECIFICATION REVISION

Michael Mirmak noted that 5 BIRDs are approved currently, 3 are close to approval, and 10 BIRDs are tabled. Ambrish Varma commented that Cadence would like to see backchannel support in the next version of IBIS. Randy Wolff commented that he'd like to see package modeling updates being worked on by the Interconnect task group in the next version of IBIS. Michael noted that several BIRDs will require a parser change, so we can't make a "minor" release to IBIS without doing parser updates typically associated with a "major" release.

Michael questioned if we could even release a new version before next August. Arpad Muranyi and Bob Ross didn't see the packaging BIRD being done before about January. Michael suggested that we need to set a date for cutoff of BIRDs and stick with it to ease planning of releases. He asked if any of the older BIRDs would be voted down with introduction of new BIRDs. Arpad noted that a new packaging BIRD would override BIRD163 and BIRD164. Michael encouraged consideration of a cutoff date for BIRD approvals for the next release.

IBISCHK6 PARSER AND BUG STATUS

Mike LaBonte reported a new bug, BUG157. A check for multiple repeater pins is not being checked once per Model, but instead once for each executable call in the Model or if there are multiple executable model calls in the file from multiple Models.

The BUG was classified as Severe severity, High priority and Open status.

Bob Ross noted that the parser developer should address BUG157. It would be nice if he addressed BUG155 as well. Closing BUG151 requires additional non-contracted work, so we should wait for a new specification release to fix this parser bug as it will require additional payment.

NEW TECHNICAL ISSUES

None.

NEXT MEETING

The next IBIS Open Forum teleconference meeting will be held October 3, 2014. Votes on BIRD128.2, BIRD173.2 and BIRD169.1 are scheduled. The following IBIS Open Forum teleconference meeting will be held October 24, 2014.

Arpad Muranyi moved to adjourn. Mike LaBonte seconded the motion. There were no objections.

NOTES

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This meeting was conducted in accordance with ANSI guidance.

The following e-mail addresses are used:

majordomo@eda.org

In the body, for the IBIS Open Forum Reflector:
subscribe ibis <your e-mail address>

In the body, for the IBIS Users' Group Reflector:
subscribe ibis-users <your e-mail address>

Help and other commands:
help

ibis-request@eda.org

To join, change, or drop from either or both:
IBIS Open Forum Reflector (ibis@eda.org)
IBIS Users' Group Reflector (ibis-users@eda.org)
State your request.

ibis-info@eda.org

To obtain general information about IBIS, to ask specific questions for individual response, and to inquire about joining the IBIS Open Forum as a full Member.

ibis@eda.org

To send a message to the general IBIS Open Forum Reflector. This is used mostly for IBIS Standardization business and future IBIS technical enhancements. Job posting information is not permitted.

ibis-users@eda.org

To send a message to the IBIS Users' Group Reflector. This is used mostly for IBIS clarification, current modeling issues, and general user concerns. Job posting information is not permitted.

ibis-bug@eda.org

To report ibischk parser BUGs as well as tschk2 parser BUGs. The BUG Report Form for ibischk resides along with reported BUGs at:

<http://www.eda.org/ibis/bugs/ibischk/>
<http://www.eda.org/ibis/bugs/ibischk/bugform.txt>

The BUG Report Form for tschk2 resides along with reported BUGs at:

http://www.eda.org/ibis/tschk_bugs/
http://www.eda.org/ibis/tschk_bugs/bugform.txt

icm-bug@eda.org

To report icmchk1 parser BUGs. The BUG Report Form resides along with reported BUGs at:

http://www.eda.org/ibis/icm_bugs/
http://www.eda.org/ibis/icm_bugs/icm_bugform.txt

To report s2ibis, s2ibis2 and s2iplt bugs, use the Bug Report Forms which reside at:

<http://www.eda.org/ibis/bugs/s2ibis/bugs2i.txt>

<http://www.eda.org/ibis/bugs/s2ibis2/bugs2i2.txt>

<http://www.eda.org/ibis/bugs/s2iplt/bugsplt.txt>

Information on IBIS technical contents, IBIS participants and actual IBIS models are available on the IBIS Home page:

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

Check the IBIS file directory on eda.org for more information on previous discussions and results:

<http://www.eda.org/ibis/directory.html>

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IBIS – SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status				
			July 11, 2014	August 1, 2014	August 22, 2014	September 12, 2014
Altera	Producer	Inactive	-	-	X	-
ANSYS	User	Inactive	-	-	-	-
Applied Simulation Technology	User	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	X	X	X
Ericsson	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	-	X	X
IO Methodology	User	Inactive	-	-	-	X
Keysight Technologies (Agilent)	User	Active	X	X	X	X
LSI (Avago)	Producer	Inactive	-	-	-	-
Maxim Integrated Products	Producer	Inactive	-	-	-	-
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	X	-	X
Qualcomm	Producer	Active	X	-	X	X
Signal Integrity Software	User	Active	X	X	X	X
Synopsys	User	Inactive	-	-	-	-
Teraspeed Labs	General Interest	Active	X	X	X	X
Toshiba	Producer	Inactive	-	-	-	X
Xilinx	Producer	Inactive	-	-	-	-
ZTE	User	Inactive	-	-	-	-
Zuken	User	Inactive	-	-	-	-

I/O Buffer Information Specification Committee (IBIS)

CRITERIA FOR 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 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.