IBIS Open Forum Minutes

Meeting Date: **August 22, 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 Consulting Group	Bob Ross*, Tom Dagostino, Scott McMorrow
Toshiba	Hiroyuki Ikegami, Toshihiro Tsujimura
Xilinx	Ravindra Gali
ZTE Corporation	(Shunlin Zhu)
Zuken	Michael Schaeder, Amir Wallrabenstein, Griff Derryberry Reinhard Remmert

OTHER PARTICIPANTS IN 2014

ADVLSI	Pierre Dermy, Juanna Gao
Carleton University	Ramachandra Achar
Continental Automotive	Catalin Negrea
CST	Stefan Paret
ECL Advantage	Thomas Iddings
Freescale	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
Pangeya	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
September 12, 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. Mike LaBonte took minutes.

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

Mike LaBonte called for comments regarding the minutes of the August 1, 2014 IBIS Open Forum teleconference. Bob Ross noted by email that the minutes missed listing the upcoming votes in the NEXT MEETING section. The minutes were approved with the noted correction.

ANNOUNCEMENTS

None.

CALL FOR ADDITIONAL AGENDA ITEMS

None.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we have received payment from Toshiba and we now have 21 members. Our account stands at $29,583. We made a payment to the IBISCHK parser developer, and more parser payments are expected. Michael Mirmak asked if the balance reflects a payment to MP Associates for DAC. Bob said it does not, because there are delays in that payment process.

WEB PAGE AND MAILING LIST ADMINISTRATION

Mike LaBonte reported that there has been no progress on web page enhancements. Michael Mirmak asked if people are able to find info on our email lists, an action item from the last meeting. Mike said a page exists for that and he would make sure it is easily found.

Mike said that an ongoing email server reputation problem persists, but currently this is affecting primarily Bob Ross, who is mostly not receiving list emails. Mike was able to change the whitelist for his own email server to accept our list emails, and few other users are affected.

Bob mentioned that freelists.org has had a policy change preventing list administrators from subscribing people to the lists. We use Freelists for our task group email lists. Michael Mirmak

explained the changes. People are now required to subscribe themselves by sending email. Mike will send an email to explain this.

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
The date of this has been shifted. It will be held at the Parkyard Hotel. This is on a Friday.

- Asian IBIS Summit Taipei – November 17, 2014
This is on the following Monday. It will be held at the Sherwood Hotel.

- Asian IBIS Summit Yokohama – November 20, 2014
This will be held on the following Thursday at the Pacifico.

We need to start the calls for papers to give people time. The first call will go out September 19, 2014. The Taipei event is still at the Sherwood Hotel despite a money transfer issue that has now been resolved. Bob said we have some sponsorship commitments for the events. Michael Mirmak encouraged people to submit presentations.

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 have continued work on the IBISCHK6 User Guide, which needs to have explanatory comments filled in for hundreds of checks. Mike said this work is not trivial because it involves investigating source code to understand the checks precisely. Additional help would be welcome. The work in progress can be reviewed at:

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

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. BIRD 147 and 128 discussions are on hold until Cadence makes changes regarding tap coefficients. Other agenda items such as double quote issues will be discussed.

Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported that the group discussed whether to prohibit universal grounds in IBIS-ISS sub-circuits. A proposal to prohibit this was defeated, allowing them to be used in sub-circuits. Material from Bob Ross and other details will be discussed next. Bob noted that if we prohibit universal grounds it will be an IBISCHK error. Radek Biernacki said IBIS-ISS does allow global nodes, and this was decided years ago.

Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES

None.

BIRD169: DLL DEPENDENCY CHECKING

Arpad Muranyi moved to not vote on the BIRD for inclusion in the next IBIS specification. Mike LaBonte seconded the motion. There were no objections. No vote was held. Bob Ross proposed scheduling a vote for the next meeting. Radek Biernacki said that this should be up to Arpad. No motion was made.

BIRD171.2: CLARIFY THAT EMPTY ROOT NAME IS NOT PERMITTED IN AMI FILES

Bob Ross introduced the BIRD changes. The term "branch" was changed to "branch name" and an example was added. Arpad Muranyi moved to make a clarification, changing "with" to "preceded by". Radek Biernacki seconded. Bob expressed approval. There were no objections. Arpad moved to vote on the BIRD for inclusion in the next IBIS specification. Radek seconded the motion. There were no objections. The vote passed with the following vote tally:

Altera – yes
Cadence – yes
Intel – yes
Keysight – yes
Mentor – yes
Qualcomm – yes
SiSoft – yes
Teraspeed – yes

8 – yes
0 – abstain
0 – no

This will be uploaded as 171.3. Arpad proposed changing "no name" to "no branch name". It was decided that the language is clear as is because it is introduced in the context of a branch.

BIRD172.1: EXTEND MULTILINGUAL PARAMETER AND CONVERTER PARAMETER RULES

Bob Ross introduced the BIRD changes. The major change is disallowing spaces in the reference following the file name. David Banas asked about parser changes. Bob said it relaxes a parser rule. Radek Biernacki said this is not a relaxation. Mike LaBonte suggested that existing parsers probably already handle the proposed syntax. Bob said we have a case in multi-lingual where having no space is the intent. Arpad Muranyi suggested a change, adding a colon. Bob noted that this was in the analysis section anyway, not affecting the specification.

Radek moved to vote on the BIRD with changes for inclusion in the next IBIS specification. David seconded the motion. There were no objections. The vote passed with the following vote tally:

Altera – yes
Cadence – yes
Intel – yes
Keysight – yes
Mentor – yes
Qualcomm – yes
SiSoft – yes
Teraspeed – yes

8 – yes
0 – abstain
0 – no

The BIRD will be uploaded as 172.2. Bob noted that Micron had voted by email, but Michael Mirmak said the changes raise questions on the validity of the vote.

BIRD173.1: PACKAGE RLC MATRIX DIAGONALS

Arpad Muranyi introduced the BIRD changes. The Wikipedia citation was changed to an academic source. Arpad said that the rules in the BIRD made sure that the RLC matrices were passive and causal. Michael Mirmak said he saw nothing in the BIRD regarding causality. Radek Biernacki agreed and commented that causality depends on other relationships in the data at each frequency point, and Arpad agreed. Radek explained that "positive semi-definite" was the correct terminology to use in place of "semi-positive definite". Arpad said he would like to give people some time for review, although a vote at the next meeting would be acceptable. Bob Ross moved to vote on this in the next meeting. Arpad seconded. Radek asked if it would be BIRD 173.2, with suggested changes. Radek also noted that it would be even more appropriate to write "non-negative semi-definite". Bob moved to vote on 173.2 (with changes) in the next meeting. Arpad seconded. There were no objections.

BIRD128.1: ALLOW AMI_PARAMETERS_OUT TO PASS AMI_PARAMETERS_IN DATA ON CALLS TO AMI_GETWAVE

Ambrish Varma introduced the BIRD changes. AMI_parameters_in becomes AMI_parameters_inout. The type of the parameter remains unchanged. Radek Biernacki said this would defy our convention that there would always be a non-empty string. Ambrish said the tool will initialize the parameter to prepare for output.

Bob Ross suggested some editorial changes. Bob asked if this BIRD is independent of BIRD 147. Arpad Muranyi said BIRD 147 depends on this. Michael Mirmak said this BIRD does not depend on any another BIRD. Bob moved to vote on the BIRD with changes in the next meeting. Ambrish seconded. There were no objections.

IBIS RELEASE SCHEDULE: BIRD CUTOFF

Arpad Muranyi asked if there would be a deadline related to a regular specification release schedule. Michael Mirmak said we would already be past the cutoff for an annual schedule. He also said the cutoff date could be decided by vote. Arpad said he would like a list of candidate BIRDs, to help decide. Michael said he would put BIRD status on the agenda for the next meeting. He noted there have been four proposals regarding release policies. Bob noted that Randy Wolff had asked for packaging support in the next IBIS release.

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.

IBISCHK6 PARSER AND BUG STATUS

Bob Ross reported that no new bugs have been filed. He will be discussing specific code items and code structure with the parser developer. We only have a verbal agreement for further work; payment for this is a gray area. We will use our own version of the parser check spreadsheet because it has edits beyond the one maintained by the developer.

Mike LaBonte said they discovered in an IBIS Quality meeting that 6 or 7 checks are performed only when a –etc option is given, previously unknown. It is possible these checks should always be made, or maybe the –caution option could be used. This will be investigated. Bob said Jon Powell may have added those checks. Michael Mirmak will ask Jon for details about the intent.

NEW TECHNICAL ISSUES

None.

NEXT MEETING
The next IBIS Open Forum teleconference meeting will be held September 12, 2014. BIRDs 128.2 and 173.2 are scheduled for voting. The following IBIS Open Forum teleconference meeting will be held October 3, 2014.

Arpad Muranyi moved to adjourn. David Banas seconded the motion. There were no objections.

==
NOTES

IBIS CHAIR: Michael Mirmak (916) 356-4261, Fax (916) 377-3788
michael.mirmak@intel.com
Data Center Platform Applications Engineering
Intel Corporation
FM5-239
1900 Prairie City Rd.,
Folsom, CA 95630

VICE CHAIR: Lance Wang (978) 633-3388
lwang@iometh.com
President/CEO, IO Methodology, Inc.
PO Box 2099
Acton, MA 01720

SECRETARY: Randy Wolff (208) 363-1764, Fax: (208) 368-3475
rrwolff@micron.com
Principal Engineer, Modeling Group Lead, Micron Technology, Inc.
8000 S. Federal Way
Mail Stop: 01-711
Boise, ID 83707-0006

LIBRARIAN: Anders Ekholm (46) 10 714 27 58, Fax: (46) 8 757 23 40
ibis-librarian@eda.org
Digital Modules Design, PDU Base Stations, Ericsson AB
BU Network
Färögatan 6
164 80 Stockholm, Sweden

WEBMASTER: Mike LaBonte
mikelabonte@eda.org
IBIS-AMI Modeling Specialist, Signal Integrity Software
6 Clock Tower Place
Maynard, MA 01754

POSTMASTER: Mike LaBonte

mikelabonte@eda.org
IBIS-AMI Modeling Specialist, Signal Integrity Software
6 Clock Tower Place
Maynard, MA 01754

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

Other trademarks, brands and names are the property of their respective owners.

IBIS – SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status	June 20, 2014	July 11, 2014	August 1, 2014	August 22, 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	X	-	-	-
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 Consulting	General Interest	Active	X	X	X	X
Toshiba	Producer	Inactive	-	-	-	-
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.