

IBIS Open Forum Minutes

Meeting Date: **April 1, 2011**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2011 PARTICIPANTS

Agilent	Radek Biernacki*, Fangyi Rao
AMD	Nam Nguyen*
Ansys (Ansoft Corporation)	Samuel Martens
Apple Computer	(Matt Herndon)
Applied Simulation Technology	Norio Matsui
ARM	(Nirav Patel)
Cadence Design Systems	Terry Jernberg, Ambrish Varma, Dennis Nagle
Cisco Systems	Syed Huq*, Mike LaBonte, Luis Boluna, Ashwin Vasudevan, Zhiping Yang
Ericsson	Anders Ekholm*
Freescale	(Jon Burnett)
Green Streak Programs	Lynne Green
Hitachi ULSI Systems	(Kazuyoshi Shoji)
Huawei Technologies	Xiaoqing Dong
IBM	Adge Hawes*, Greg Edlund
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak*, Udy Shrivastava
IO Methodology	Lance Wang*
LSI	Brian Burdick
Mentor Graphics	Arpad Muranyi*, Ed Bartlett, Vladimir Dmitriev-Zdorov, Steve Kaufer, Chuck Ferry
Micron Technology	Randy Wolff*
Nokia Siemens Networks GmbH	Eckhard Lenski*
Signal Integrity Software	Walter Katz*, Todd Westerhoff, Mike Steinberger, Barry Katz
Sigrity	Raymond Chen, Kumar Keshavan
Synopsys	Andy Tai, Ted Mido, Scott Wedge
Teraspeed Consulting Group	Bob Ross*, Kellee Crisafulli, Tom Dagostino, Scott McMorrow
Texas Instruments	Casey Morrison, Alfred Chong
Toshiba	(Yasumasa Kondo)
Xilinx	(Raymond Anderson)
ZTE	(Huang Min)
Zuken	(Michael Schaefer)

OTHER PARTICIPANTS IN 2011

AET	Mikio Kiyono
Altera	Hui Fu, Zhuyuan Liu, Julia Nekrylova

Avago	Weiping He, Minh Quach, Sari Tocco
Bayside Design	Elliot Nahas
Broadcom	Mohammad Ali
Exar Corporation	Helen Nguyen
Granite River Labs	Johnson Tan, Mike Engbretson, Quintin Anderson
High Speed Design Center	Ben Chia
ICT-Lanto	Steven Wong
KEI Systems	Shinichi Maeda
Maxim Integrated Products	Hassan Rafat
National Semiconductor	Hsinho Wu, Pegah Alavi, John Goldie
Oracle	Gustav Blando
Pristine Signals	AbdulRahman (Abbey) Rafiq
Renesas Electronics	Takuji Komeda
Simberian	Yuriy Shlepnev
TechAmerica	(Chris Denham)
Vitesse Semiconductor	Sirius Tsang
Independent	Yoichi Niioka

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
April 22, 2011	209 500 337	IBIS

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

<https://cisco.webex.com/cisco/j.php?J=209500337>

All teleconference meetings are 8:00 AM to 9:55 AM 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

No new participants.

CALL FOR PATENTS

Michael Mirmak called for any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.0, Touchstone 2.0 or ICM 1.1 specifications. No patents were declared.

REVIEW OF MINUTES AND ARS

Randy Wolff called for comments regarding the minutes of the March 11, 2011 IBIS Open Forum teleconference. The minutes were approved with no changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Michael Mirmak noted that renewal notices for membership have been sent out. If you have not received a renewal notice, contact any member of the board. The DAC meeting will have a cleanup of the membership roster.

Bob Ross noted he has not received a report on renewals or financials from TechAmerica. Nam Nguyen asked if there is a website to check to see if the fee for membership has been paid. Bob confirmed that there is not a website available for this, but he will hopefully have an update on membership payments later in the month. The online credit card payment is no longer available this year. Credit card payments may be made by calling TechAmerica.

WEB PAGE UPDATES

Syed Huq reported that the events page was updated with conference changes. A merger of Atmel with Microsemi was updated on the roster. Bob Ross noted that he was not seeing the upcoming meeting page being updated, but Syed confirmed that this was updated for the meeting today.

MAILING LIST ADMINISTRATION

No update.

MODEL LIBRARY UPDATE

No update.

MISCELLANY/ANNOUNCEMENTS

None.

OPENS FOR NEW ISSUES

Bob Ross noted that BUG 128 is a new BUG that needs to be discussed.

INTERNATIONAL/EXTERNAL ACTIVITIES

- DASC

Michael Mirmak noted that the next meeting is Thursday of next week at 8AM PDT. They will be voting on policies and procedures similar to the charter IBIS operates under. He was not aware of any recent discussions related to IBIS. The DASC file and e-mail archive may be found at:

<http://www.dasc.org/>

- P1735 Encryption

Syed Huq reported that discussions continue on multiple keys in a key block, conditional rights, and key-block-specific versioning. There is a TWiki setup to try encryption schemes on models. Syed would like a participant from an IP provider to login and try it out. The IEEE Study Group on Encryption web reflector archives are found at:

<http://www.eda-stds.org/ip-encrypt/hm/>

-VHDL-AMS Table-Driven Models

Arpad Muranyi reported that there were no meetings since the last teleconference. The next meeting is next Monday, and he will try to attend. More information can be found at:

http://www.eda.org/twiki/bin/view.cgi/P10761/ProjectsArea#Table_driven_Modeling_Champion_J

-Conferences

The 2011 IEEE Workshop on Signal Propagation on Interconnects (SPI) will be held in Naples, Italy on May 8-11, 2011. The call for papers is out. More information can be found at:

<http://www.spi2011.unina.it/>

EMCCompo2011, the 8th International Workshop on Electromagnetic Compatibility of Integrated Circuits, will be held in Dubrovnik, Croatia, November 6-9, 2011. Organizers of the event have contacted the IBIS Open Forum to see if there is interest in having a tutorial session on IBIS. April 1 is the deadline for registration. More information can be found at:

<http://www.emccompo2011.org>

-Press Update

None.

IEC APPROVAL ACTIVITIES

Randy Wolff reported that he is still awaiting a report from Dennis Brophy following his meeting with his IEC counterparts in Japan at the end of January. Arpad Muranyi helped with contacting Dennis, however Dennis has yet to respond to any of Randy's emails. Michael Mirmak suggested trying to contact others on the committee. Randy noted that he may try calling Dennis directly.

TECHAMERICA UPDATE

Michael Mirmak reported on the KAVI system. When it was started, the roster used for IBIS was very old. He contacted Anne Mwai of TechAmerica who updated the roster to make it current. Randy Wolff updated the voting status of members as primary or secondary voting contacts on the roster. Bob Ross noted that there is no way to find out your login name if you forget it. However you can use your email to recover your account.

Randy added that he contacted Anne to inquire about the ability to track meeting attendance and voting status on KAVI. She responded that these capabilities are not currently in the system but will be available soon. Bob noted that the system would be useful for recording votes.

KAVI members' login is at:

<http://workspace.techamerica.org/apps/org/workgroup/ibis-members>

SUMMIT STATUS

-SPIE IBIS Summit

The 15th IEEE Workshop on Signal Propagation on Interconnects will be held in Naples, Italy, May 8-11, 2011. The IBIS Summit is scheduled for May 11. Antonio Girardi of Micron (formerly Numonyx) is local to Naples and was able to get a meeting room from 1:00pm to 6:00pm. The cost is minimal, but no sponsorship has been secured at this time. The first announcement has gone out. There are a few presentations planned so far. The meeting is mentioned on the SPI webpage.

-DAC IBIS Summit

The Design Automation Conference (DAC) is June 6-9, 2011 in San Diego, CA. The IBIS Summit will be held June 7. A conference room has been secured at the Omni Hotel. This meeting will include the annual election of officers. Contact the board if you are interested in running for an office. The first call for papers should go out mid April. Sponsorship opportunities are available.

Bob Ross noted that we need to start securing money and sponsorships for a summit in Taiwan.

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.

IBIS QUALITY TASK GROUP

Bob Ross reported that there were no meetings the last two weeks. The group is still working on a test load proposal. They are presuming that IBIS-ISS will be used to describe the test load. The group is meeting weekly on Tuesdays at 8AM PST.

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

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

IBIS MODEL REVIEW TASK GROUP

No update.

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is finishing up a BIRD draft with crosstalk for AMI modeling. He is hoping for a vote on it next week to advance it to the Open Forum. They are also working on fixing the table syntax for AMI. His goal is to complete the AMI fixes by DAC.

Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported that the group is discussing the IBIS-ISS draft. They are working through about 100 comments, mostly editorial and clarifications. The focus of the task group is to complete reviewing and fixing the IBIS-ISS draft. Arpad Muranyi asked if there is a target date to complete the document update, such as by DAC. Several other proposals are contingent on IBIS-ISS completion. Michael responded that he is setting a goal of having the list complete by DAC, but he does not guarantee a completed draft document at that time.

Task group material can be found at:

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

IBIS EDITORIAL UPDATE

Michael Mirmak reported that there is a mailing list for the editorial group. Join if you are interested in participating. The group has had a couple of meetings. The purpose of the project is to re-format IBIS 5.0 without making any technical changes to have a framework for updating future versions of IBIS. Bob Ross noted there are other questions about whether sections should be renumbered to conform to TechAmerica document standards, and whether this would then need to become a version 5.1. Arpad Muranyi noted that it will probably need to become IBIS 5.1 so that the two documents are distinguishable. This also affects BIRDs since they will need to refer to page numbers of a specific document. BIRDs currently pending for IBIS 5.1 may need to be reformatted to be part of IBIS 5.2.

New IBIS 5.0 documentation can be reviewed at:

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

NEW ADMINISTRATIVE ISSUES

None.

BIRD116: ADD IBIS-ISS TO [EXTERNAL MODEL] AND [EXTERNAL CIRCUIT] AS A SUPPORTED LANGUAGE

Arpad Muranyi reported that in the last ATM teleconference, a question was raised on whether we would discuss all the various BIRDs he has submitted. Arpad has given presentations on the BIRDs and is awaiting feedback. He encouraged people to review the BIRDs and submit comments.

Walter Katz discussed how BIRD122 came from BIRD119, the Opal analog AMI modeling BIRD. After significant discussion on BIRD122 in IBIS ATM, he re-wrote it and submitted it to the ATM as BIRD122.1. It integrates IBIS-ISS, package models, AMI and external models. This new BIRD he thinks is a response to Arpad's BIRDs and must be discussed. Radek Biernacki asked if BIRD122 is a competing BIRD to Arpad's BIRDs. Arpad said that depending on the content of the latest update to BIRD122, it might be a potential replacement. Walter would like discussion on BIRD122 tabled until the ATM committee has discussed it. Arpad does not know yet if this new BIRD will compete with any of his BIRDs.

BIRD117.3: PARAMETERIZE A_TO_D AND D_TO_A CONVERTERS

Arpad Muranyi reported that a change to BIRD117 and BIRD118 allows an AMI parameter reference to have a default value so if the AMI file is not available or if the name is not found, then a hard coded literal in the IBIS file could be used. Bob Ross stated that he doesn't like defaults, because he would rather an error come up in simulation than the simulation complete but not give a useful result. Further discussion was tabled.

BIRD118.2: ANALOG PARAMETER ASSIGNMENTS

See BIRD117.3 for related discussion.

BIRD120.1: IBIS-AMI FLOW CORRECTION

Arpad Muranyi reported that he submitted the revision, and it was a small change so multiple GetWave calls do not have to use the same block size. This came from discussion on the ATM reflector. Walter Katz moved to schedule a vote on the BIRD in the next Open Forum teleconference. There were no objections.

BIRD121: IBIS-AMI NEW RESERVED PARAMETERS FOR DATA MANAGEMENT

Walter Katz noted that he would like the ATM task group to discuss the BIRD and make recommendations to support it or not before scheduling a vote in this meeting.

BIRD122: IBIS-AMI NEW RESERVED PARAMETERS FOR ANALOG MODELING

Walter Katz reported that he has made significant changes to BIRD122 that require further discussion in the IBIS ATM call.

BIRD123.1: IBIS-AMI NEW RESERVED PARAMETERS FOR JITTER/NOISE

Walter Katz noted that the BIRD was changed to add Rx_Noise_Pad. He requested that the BIRD be discussed by the ATM task group before discussing further in the Open Forum. Michael Mirmak pointed out that the changes in BIRD123.1 are not obvious in the .txt document, so a PDF may need to be posted.

BIRD124: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

Discussion was tabled.

BIRD125: MAKE IBIS-ISS AVAILABLE FOR IBIS PACKAGE MODELING

Arpad Muranyi noted that there have been no comments since Walter Katz's comments in the last Summit. Changes may be necessary to the BIRD. Bob Ross noted that he needed to review the BIRD further and make comments.

BIRD127: IBIS-AMI TYPOGRAPHICAL CORRECTIONS

Arpad Muranyi noted that he has not received any recent comments. Bob Ross added that he expected some minor changes to the BIRD based on discussions in the ATM task group.

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

Walter Katz reported that there have been no changes to BIRD128. There have been a lot of discussions on backchannel modeling, with Gennum, Sigrity, and SiSoft agreeing on the mechanism in the BIRD. Radek Biernacki noted that it was requested at the last Open Forum call to discuss this BIRD further in the ATM committee. Arpad Muranyi added that he needs to add this to the ATM call agenda.

BIRD129: ADD "POLARITY" ARGUMENT TO D_TO_A CONVERTERS

Arpad Muranyi introduced the BIRD. It is a simple BIRD designed to allow the usage of inverted D_to_A converters when an [External Model] (or [External Circuit]) contains a differential model so that the model would not have to implement the inverter for the stimulus.

TSCHK2 BUG STATUS

No new BUGs to report. This item will be removed from future agendas until any BUGs are submitted.

IBISCHK5 BUG STATUS

BUG127 was introduced by Bob Ross. He found an instance where some illegal text within an AMI file causes a fatal error crashing the parser. The BUG was classified as Severe severity, High priority and Open status.

Bob also summarized BUG128. This BUG documents the case where a Reserved_Parameters and Model_Specific section was repeated in the AMI file and the parser did not flag an error. The BUG was classified as Annoying severity, Medium priority and Open status.

IBISCHK5 UPDATE STATUS

Michael Mirmak reported that IBISCHK5 version 5.0.6 has been officially released. Bob Ross noted that Release 5.0.5 was never released due to finding BUGs in it.

IBIS-ISS SPECIFICATION DRAFT

Michael Mirmak reported that current comments are being reviewed in the Interconnect task group. The draft is open for further comments.

The draft 1 revision can be reviewed at:

http://www.eda.org/pub/ibis/ibis-iss_wip/IBIS_ISS_review_draft_1.pdf

NEW TECHNICAL ISSUES

None.

NEXT MEETING

The next IBIS Open Forum teleconference will be held April 22, 2011 from 8:00 to 10:00 AM US Pacific Standard Time. BIRD120.1 is scheduled for a vote at this meeting. The next IBIS Summit will be held at SPI in Naples, Italy on May 11, 2011. No teleconference bridge will be provided. The following Open Forum teleconference will be held May 13, 2011.

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NOTES

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This meeting was conducted in accordance with the GEIA Legal Guides and GEIA Manual of Organization and Procedure.

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 EIA-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/bugspl.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>

To create an account on the TechAmerica KAVI workspace, check out:

<http://workspace.techamerica.org/kwspub/join/>

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IBIS CURRENT MEMBER VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	February 3, 2011	February 18, 2011	March 11, 2011	April 1, 2011
Advanced Micro Devices	Producer	Inactive	-	-	-	X
Agilent Technologies	User	Active	X	X	X	X
Ansys	User	Inactive	X	-	-	-
Apple Computer	User	Inactive	-	-	-	-
Applied Simulation Technology	User	Inactive	X	-	-	-
ARM	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	-	X	-
Cisco Systems	User	Active	X	X	X	X
Ericsson	Producer	Active	X	-	X	X
Freescale	Producer	Inactive	-	-	-	-
Green Streak Programs	General Interest	Inactive	X	-	-	-
Huawei Technologies	Producer	Inactive	X	-	-	-
Hitachi ULSI Systems	Producer	Inactive	-	-	-	-
IBM	Producer	Active	X	X	X	X
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	X	X	X
IO Methodology	User	Active	X	X	X	X
LSI	Producer	Active	-	X	X	-
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	-	X	X	X
Nokia Siemens Networks	Producer	Active	X	-	X	X
Signal Integrity Software	User	Active	X	X	X	X
Sigrity	User	Inactive	X	-	-	-
Synopsys	User	Inactive	X	-	-	-
Teraspeed Consulting	General Interest	Active	X	X	X	X
Texas Instruments	Producer	Inactive	X	-	-	-
Toshiba	Producer	Inactive	-	-	-	-
Xilinx	Producer	Inactive	-	-	-	-
ZTE	User	Inactive	-	-	-	-
Zuken	User	Inactive	-	-	-	-

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 TECHAMERICA 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.