

IBIS Open Forum Minutes

Meeting Date: **January 7, 2011**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2011 PARTICIPANTS

Agilent	Radek Biernacki*
AMD	(Nam Nguyen)
Ansys (Ansoft Corporation)	(Steve Pytel)
Apple Computer	(Matt Herndon)
Applied Simulation Technology	(Fred Balistreri)
ARM	(Nirav Patel)
Cadence Design Systems	(Terry Jernberg)
Cisco Systems	(Syed Huq), Mike LaBonte*
Ericsson	Anders Ekholm*
Freescale	(Jon Burnett)
Green Streak Programs	(Lynne Green)
Hitachi ULSI Systems	(Kazuyoshi Shoji)
Huawei Technologies	(Jinjun Li)
IBM	Adge Hawes*, Greg Edlund*
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak*
IO Methodology	Lance Wang*
LSI	Brian Burdick*
Mentor Graphics	Arpad Muranyi*
Micron Technology	Randy Wolff*
Nokia Siemens Networks GmbH	Eckhard Lenski*
Samtec	(Corey Kimble)
Signal Integrity Software	Walter Katz*
Sigrity	(Raymond Chen)
Synopsys	(Andy Tai)
Teraspeed Consulting Group	Bob Ross*
Texas Instruments	Casey Morrison*
Toshiba	(Yasumasa Kondo)
Xilinx	(Raymond Anderson)
ZTE	(Huang Min)
Zuken	(Michael Schaefer)

OTHER PARTICIPANTS IN 2011

TechAmerica	(Chris Denham)
-------------	----------------

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
January 28, 2011	205 882 629	IBIS

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

<https://cisco.webex.com/cisco/j.php?J=205882629>

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 December 10, 2010 IBIS Open Forum teleconference. The minutes were approved with no changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Michael Mirmak reported that renewal notices for 2011 membership have been sent out. If you have not received a renewal notice, contact any member of the board.

Bob Ross did not have any update on financials, but he needed to follow-up with TechAmerica to make sure checks have gone out to prepay DesignCon expenses. Bob wasn't sure what the last day is to take care of paying expenses for 2010.

WEB PAGE UPDATES

No report.

MAILING LIST ADMINISTRATION

Mike LaBonte reported that everything is fine. There have been some joins and drops. He is still looking into the task of organizing the archives by year. He plans to consult with the previous mailing list administrator, John Angulo.

MODEL LIBRARY UPDATE

Anders Ekholm reported that he sent out a new web page to fix some broken links a few days ago. The page should be online now.

MISCELLANY/ANNOUNCEMENTS

None.

OPENS FOR NEW ISSUES

Bob Ross requested time to process BUGs 123, 124 and 125. Casey Morrison requested time to make a presentation related to BIRD 120.

Walter Katz said he would like a new email reflector for backchannel SerDes modeling be created. He would like to see how far discussions can go by email and then see if this leads to discussions in one of the IBIS working groups. Mike LaBonte wondered if this should be setup as a freelists reflector and how people would find out about this, i.e. would we advertise it on the IBIS website. Bob liked the idea of the reflector and thought it should be administered by the IBIS administrator. Bob moved to establish the list. Walter seconded the motion. Walter and Mike will discuss the matter further offline.

INTERNATIONAL/EXTERNAL ACTIVITIES

- DASC

Michael Mirmak reported that the last meeting was January 6. There were no discussions related to IBIS. The DASC file and e-mail archive may be found at:

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

- P1735 Encryption

No report. 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 the next meeting is January 10. 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 first call for papers went 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. More information can be found at:

<http://www.emccompo2011.org>

Bob Ross wondered if we want to hold a European IBIS Summit meeting in conjunction with either SPI or EMCCompo. He has asked for feedback from Anders Ekholm and Ralf Bruening.

-Press Update

None.

TECHAMERICA STATUS

Michael Mirmak reported that he has no update on when the new voting system will be in place.

CHARTER DISCUSSION

No discussion.

IEC APPROVAL ACTIVITIES

Randy Wolff reported that Dennis Brophy wrote him back in mid December. Dennis is the chair of the TC93 working group. Dennis said he plans to meet with his IEC counterparts in Japan at the end of January. He is putting together items to discuss and will include IBIS in that. Dennis also mentioned the possibility of Randy joining the U.S. National Committee, as this may help him usher IBIS through the IEC approval process for standardization. He may just be able to join some teleconferences as necessary though.

SUMMIT STATUS

-DesignCon 2011 Planning

DesignCon is January 31 – February 3, 2011 in Santa Clara, CA. The Summit is scheduled for February 3. Michael Mirmak reported that the contract has been signed. An offer is available for a 20% discount to IBIS members. This is posted on the IBIS website. An agenda will be posted one week before the event. Lance Wang noted 9 attendees signed up so far. Mike LaBonte noted the banner on the IBIS website doesn't appear to show the correct IBIS discount code.

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

Mike LaBonte reported that most discussion has been on a BIRD proposal from Anders Ekholm about Golden Waveforms – allowing them to be in external files and use IBIS-ISS for defining the test fixtures. Meetings have moved back to every week, Tuesdays at 8AM PST.

Mike LaBonte reported that there have been no meetings since the last IBIS teleconference meeting. The most recent discussion has been on a BIRD proposal from Anders Ekholm about Golden Waveforms. The next meeting is January 11 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 continuing work on clarification and correction BIRDs for AMI. They are also discussing BIRDs 116-118 for analog modeling updates to AMI.

Task group material can be found at:

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

INTERCONNECT TASK GROUP

Michael Mirmak reported that the group met January 5. They discussed IBIS-ISS Revision 0.8. There is one technical item to be addressed as well as more editorial work. Revision 0.9 is in progress. Arpad Muranyi wondered if a final version could be ready for DesignCon. Michael thought he could at least print out a version for review by attendees. Walter Katz suggested it be submitted to the Open Forum before DesignCon to start the approval process. Arpad asked how this will be handled. Michael responded that it will be voted on like Touchstone 2.0 or ICM, a separate specification from IBIS. Then discussion of a parser can begin once approved.

Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES

Michael Mirmak reported that a technical writer from TechAmerica is working on updating the

IBIS 5.0 specification to a new format. There are now some Visio figures to review. Comments are welcome. Arpad Muranyi wondered if this is actual work towards updating the specification or just samples of work to be done. Michael thinks that most of the work to update the figures will be applied to a final edit. Arpad would like to make some comments to affect the final look of the specification changes. Michael suggested an editorial committee be established and potentially an email reflector. Walter Katz noted that he would like to join any editorial committee that is established. Michael will remain the main contact for editorial comments. Arpad and Bob Ross also asked to be part of the committee. New IBIS 5.0 documentation can be reviewed at:

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

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

Arpad Muranyi reported that further discussions on BIRDS 116-118 are occurring in the IBIS ATM subcommittee.

BIRD117.2: PARAMETERIZE A_TO_D AND D_TO_A CONVERTERS

No discussion.

BIRD118.1: ANALOG PARAMETER ASSIGNMENTS

No discussion.

BIRD119: IBIS-AMI NEW RESERVED PARAMETERS

No discussion. BIRD119 is replaced by BIRDS 121-124.

BIRD120: IBIS-AMI FLOW CORRECTION

Casey Morrison shared a presentation 'Discussion Points on "Flow Correction" BIRD.' He noted that BIRD 120 addresses three issues in the current AMI standard. He had some concerns with the BIRD120 approach, including the requirement for de-convolution in certain circumstances. He was worried about the possibility of 'double counting' in the models. He proposed having the AMI_Init functions return two modified impulse responses: a statistical modified input response and a time domain modified impulse response. Walter Katz noted that there are techniques to keep the impulse responses in the DLL memory, and this wouldn't require official passing of the impulse response. Walter also clarified that Casey's flow shows an output from the RX AMI_Init into the GetWave flow, and this has been removed by BIRD120. Arpad Muranyi questioned how to handle these comments related to BIRD120. Walter suggested these comments be applied to a new BIRD write-up, led by TI. Walter moved to delay a vote on BIRD120 and table it for the time being. Bob Ross seconded the motion. The motion passed without objection.

BIRD121: IBIS-AMI NEW RESERVED PARAMETERS FOR DATA MANAGEMENT

Discussion on BIRDS 121-124 is tabled until a later time.

BIRD122: IBIS-AMI NEW RESERVED PARAMETERS FOR ANALOG MODELING

No discussion.

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

No discussion.

BIRD124: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

No discussion.

BIRD125: MAKE IBIS-ISS AVAILABLE FOR IBIS PACKAGE MODELING

No discussion.

BIRD126: IBIS-AMI NEW RESERVED PARAMETER AMI_VERSION

Walter Katz briefly introduced the BIRD. Arpad Muranyi noted that this BIRD has been discussed in the ATM group, and many technical issues were worked out before submitting this to the Open Forum. Bob Ross noted that there was a unanimous vote of approval on this BIRD by the ATM task group December 14, 2010.

Radek Biernacki noted a formatting issue that needs to be corrected. Michael Mirmak plans to correct this.

TSCHK2 BUG STATUS

No new BUGs to report.

IBISCHK5 BUG STATUS

BUG123 reported that the parser was incorrectly calculating falling [Ramp] dV values and showing false cautions. The BUG was classified as Moderate severity, Medium priority and Open status.

BUG124 noted a difference in behavior in the parser between when a comment character in an .ami file is preceded by a white space or not preceded by a white space. The BUG was classified as Moderate severity, Medium priority and Open status.

BUG125 noted that some basic .ami file rules are not checked by the parser. Arpad Muranyi noted that we may need to address an ambiguity in the specification. The BUG was classified as Moderate severity, High priority and Open status.

IBISCHK5 UPDATE STATUS

Bob Ross noted that the parser developer is working to fix BUG123 currently.

IBIS-ISS STATUS

The revision 0.8 draft is under review.

The work in progress document can be found in the following directory:

http://www.eda.org/ibis/ibis-iss_wip/

C_COMP AND CORNER DISCUSSION

Not discussed due to time limitations.

NEW TECHNICAL ISSUES

None.

NEXT MEETING

The next IBIS Open Forum teleconference will be held January 28, 2011 from 8:00 to 10:00 AM US Pacific Standard Time. The next Open Forum summit will be held February 3, 2011 at DesignCon. No phone bridge will be available. The following Open Forum teleconference will be held February 18, 2011.

NOTES

IBIS CHAIR: Michael Mirmak (916) 356-4261, Fax (916) 377-3788

michael.mirmak@intel.com

Platform Applications Engineer, Intel Corporation

1900 Prairie City Rd.,

FM5-239

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

SI Modeling Manager, 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: Syed Huq (408) 525-3399, Fax: (408) 526-5504

hugs@cisco.com

Manager, Hardware Engineering, Cisco Systems
170 West Tasman Drive
San Jose, CA 95134-1706

POSTMASTER: Mike LaBonte (978) 936-2147

milabont@cisco.com

Signal Integrity Engineer, Cisco Systems
Mail Stop BXB01/1/
1414 Massachusetts Ave
Boxborough, MA 01719

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.eigroup.org/ibis/ibis.htm>

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 CURRENT MEMBER VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	November 15, 2010	November 19, 2010	December 10, 2010	January 7, 2011
Advanced Micro Devices	Producer	Inactive	X	-	-	-
Agilent Technologies	User	Active	-	X	-	X
Ansys	User	Inactive	-	-	-	-
Apple Computer	User	Inactive	-	-	-	-
Applied Simulation Technology	User	Inactive	-	-	-	-
ARM	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Inactive	X	X	-	-
Cisco Systems	User	Active	-	X	X	X
Ericsson	Producer	Active	X	-	X	X
Freescale	Producer	Inactive	-	-	-	-
Green Streak Programs	General Interest	Inactive	-	-	-	-
Huawei Technologies	Producer	Inactive	-	-	-	-
Hitachi ULSI Systems	Producer	Inactive	X	-	-	-
IBM	Producer	Active	-	X	X	X
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	-	X	-	X
IO Methodology	User	Active	-	X	X	X
LSI	Producer	Active	-	X	X	X
Mentor Graphics	User	Active	-	X	X	X
Micron Technology	Producer	Active	-	X	X	X
Nokia Siemens Networks	Producer	Inactive	-	X	-	X
Samtec	Producer	Inactive	-	-	-	-
Signal Integrity Software	User	Active	-	X	X	X
Sigrity	User	Inactive	-	-	-	-
Synopsys	User	Inactive	-	-	-	-
Teraspeed Consulting	General Interest	Active	X	X	X	X
Texas Instruments	Producer	Inactive	-	X	-	X
Toshiba	Producer	Inactive	X	-	-	-
Xilinx	Producer	Inactive	-	-	-	-
ZTE	User	Inactive	-	-	-	-
Zuken	User	Inactive	X	-	-	-

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.