

IBIS Open Forum Minutes

Meeting Date: **September 14, 2012**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2012 PARTICIPANTS

Agilent	Heidi Barnes, Radek Biernacki*, Yoji Sekine, Fangyi Rao
Altera	David Banas*, Hsinho Wu, Masashi Shimanouchi
ANSYS (Ansoft)	Flavio Calvano, Luis Armenta*, Dan Dvorscak
Applied Simulation Technology	Norio Matsui
ARM	(Nirav Patel)
Cadence Design Systems	Brad Griffin, Terry Jernberg, Jilin Tan, Dennis Nagle Ambrish Varma
Ericsson	Anders Ekholm, Zilwan Mahmod, Mattias Lundquist
Foxconn Technology Group	(Sogo Hsu)
Freescale	(Jon Burnett)
IBM	Adge Hawes*, Greg Edlund*
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak*, Subas Bastola, Udy Shrivastava, Stewart Gilbert, Eddie Frie
IO Methodology	Lance Wang*
LSI	Brian Burdick
Maxim Integrated Products	Hassan Rafat*, Mahbubul Bari
Mentor Graphics	Arpad Muranyi*, Vladimir Dmitriev-Zdorov
Micron Technology	Randy Wolff*, Aniello Viscardi, Francesco Madonna Antonio Prisco, Justin Butterfield
Nokia Siemens Networks GmbH	Eckhard Lenski, Evis Minga
Signal Integrity Software	Walter Katz*, Mike LaBonte*, Todd Westerhoff Akalu Lentiro
Sigrity	Raymond Chen, Yingxin Sun, Sam Chitwood Ben Franklin, Srdjen Djordjevic
Synopsys	Andy Tai, Scott Wedge, Hany Elhak, Ted Mido
Teraspeed Consulting Group	Bob Ross*, Tom Dagostino
Texas Instruments	Casey Morrison, Pegah Alavi, Valerie Chang Modesto Garcia, Karl Muth
Toshiba	Masatoshi Abe
Xilinx	Harry Fu
Zuken	Michael Schaefer

OTHER PARTICIPANTS IN 2012

AMD	(Nam Nguyen)
Apple Computer	(Matt Herndon)
Aruba Networks	Amir Motamedi
Avago Technologies	Sanjeev Gupta, Amolak Badesha

Bayside Design	Elliot Nahas
Cavium	Johann Nittmann
Ciena	Kaisheng (Klaus) Hu
Cisco Systems	David Siadat, Mike Sapozhnikov
Enterasys	Robert Haller
Exar Corporation	Helen Nguyen
Granite River Labs	Jiang Xu, Johnson Tan
Hewlett-Packard	Ting Zhu
High Speed Design Center	Ben Chia
Hitachi	Yutaka Uematsu
Huawei Technologies	Xiaoqing Dong
Instituto de Telecomunicações	Wael Dghais, Hugo Teixeira
JEITA	Atsushi Ishikawa
KEI Systems	Shinichi Maeda
Luxshare-ICT	Alan Kinningham, Steven Wong
MK Resolutions	Olga Chervyakova
Nvidia	Eric Hsu
Politecnico di Torino	Stefano Grivet-Talocia
QLogic	(James Zhou)
Research In Motion	Yi Cao
Sony	Kenji Yasoda
ST Microelectronics	Davide Pandini
TechAmerica	(Chris Denham)
Université de Brest	Mihai Telescu, Cherif Diouf
University of Illinois	Thomas Comberiate, José Schutt-Ainé
Vitesse Semiconductor	Sirius Tsang
ZTE	(Huang Min)

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 5, 2012	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 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 August 24, 2012 IBIS Open Forum teleconference. The minutes were approved without changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we have 29 paid members confirmed for the year. One Touchstone parser sale was completed recently.

WEB PAGE UPDATES

Mike LaBonte reported that changes were made to the BIRDS page with the upload of the new IBIS 5.1 BIRD template. He has been working on Mantis as well. The Summits page has also been updated with additional details.

MAILING LIST ADMINISTRATION

Mike LaBonte reported that he has made requests to the eda.org administrators for support with email issues, and he has received a lot of help. He asked that all names on the mailing list be 'white listed' so that their messages would be ignored by the spam filter. Walter Katz may still be having problems.

MODEL LIBRARY UPDATE

Michael Mirmak reported that Anders Ekholm was unable to attend and did not have an update.

MISCELLANY/ANNOUNCEMENTS

None.

CALL FOR NEW ISSUES

Arpad Muranyi asked for an update on the Touchstone parser code. Mentor has had trouble obtaining the code. Michael Mirmak confirmed that there has been some legal hold up with the license agreements at TechAmerica for unknown reasons. The issue is being worked on. There are many changes occurring at TechAmerica, but it is not clear yet how we will be affected as an organization.

INTERNATIONAL/EXTERNAL ACTIVITIES

- IEEE DASC

Michael Mirmak reported that there was a meeting September 4. No IBIS-related issues were on the agenda for that meeting.

- VHDL-AMS Table-Driven Models

Arpad Muranyi reported that the next meeting is September 23. He had no update on other progress.

More information can be found at:

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

- Conferences

- EPEPS (21st IEEE Conference on Electrical Performance of Electronic Packaging and Systems) will be held October 21-24, 2012 in Tempe, Arizona. This event occasionally includes IBIS-related content. More information can be found at:

<http://epeps.ece.illinois.edu/>

Official IBIS participation may/may not be planned for all of the events above, though individual papers and discussion on IBIS are encouraged. These are events with refereed submissions, with deadlines either pending or already passed.

- Press Update

Michael Mirmak noted a recent article from Arpad Muranyi detailing the history of IBIS and talking about IBIS-AMI. The article is found in Chip Design magazine at the following link:

<http://chipdesignmag.com/display.php?articleId=5160>

Arpad noted that timing was good since he was able to add a note about the IBIS 5.1 specification release before publication.

IEC APPROVAL ACTIVITIES

Randy Wolff reported that Victor Berman recently confirmed that TC91 will be the new task group dealing with IBIS standardization. The next TC91 meeting will be October 15-19 in Fukuoka-city, Japan. Victor said he would probably not be attending the meeting, but he would

check with people that are going and make sure we have a plan for addressing the issue of re-standardizing IBIS. He has not gotten back to Randy in the last week with any further information.

SUMMIT STATUS

Michael Mirmak thanked Bob Ross for his help in organizing the Summits. He noted that presentation deadlines are needed for these Summits to allow time to review the presentations as well as to meet printing deadlines for booklets.

-Asian IBIS Summit – Shanghai, November 9

Bob Ross noted that the presentation deadline is October 5. 7-8 are scheduled so far. The co-sponsors are Huawei Technologies (primary), Agilent Technologies, ANSYS, Cadence Design Systems, Intel Corporation, IO Methodology, Synopsys, and ZTE Corporation.

-Asian IBIS Summit – Hsinchu, November 13

Bob Ross noted that the presentation deadline is October 9. The co-sponsors so far for this summit are ANSYS (primary), Agilent Technologies, Cadence Design Systems, Intel Corporation, and IO Methodology.

-Asian IBIS Summit – Yokohama, November 16

Bob reported that the first announcement will go out later today.

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

QUALITY TASK GROUP

Mike LaBonte reported that the group is investigating correlation issues and IBIS-AMI checklist items. At the last meeting, Eckhard Lenski repeated a presentation he made at the SPI IBIS Summit in Sorrento about creating an IBIS-AMI checklist. There may be a presentation on correlation from Lance Wang at the next meeting next Tuesday at 8:00AM Pacific time. Michael Mirmak asked about the group maintaining the current meeting schedule. Mike confirmed that they are meeting every two weeks.

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 at the last meeting, the group decided to split out discussion topics into two meetings. The Interconnect task group, formerly meeting on Wednesdays, will be restarted and package, on-die interconnect and analog buffer modeling will be discussed there. The ATM group will begin discussing AMI BIRDs such as dependency tables, backchannel support and repeater modeling.

Task group material can be found at:

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

EDITORIAL TASK GROUP

Michael Mirmak reported that the group held its last meeting the week after the last teleconference. The group approved a new BIRD template that is linked to the BIRD page on the website. The group is shutting down, and the time slot will be used for the Interconnect task group.

The task group documents can be reviewed at:

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

MANTIS OVERVIEW AND DEMONSTRATION

Mike LaBonte showed a demonstration of the Mantis system. He entered many of the recent BIRDS into the system. He noted that many filters can be applied to the data tables, and the BIRDS can be searched for text strings. He copied the full BIRD text in the BIRD description to make it easily searchable. Documents could also be attached to the BIRDS. By logging in, he could then fill out a new BIRD. Mike noted that we need to come up with a policy of how we create accounts for people to enter in new BIRDS. 'Reporter' type accounts can be used for non-administrators. Mike showed the organization of the Mantis system for IBIS. There are two main groups: documents and tools. Michael Mirmak noted that Mantis gives us a way to track history and attach documents including presentations or examples to support BIRDS and BUGs. Mike noted that the attachment size is limited to 5MB. Radek Biernacki noted that the 5MB limit may become an issue. The Mantis system can be found at:

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

NEW ADMINISTRATIVE ISSUES

None.

NEW BIRD FORMAT

Michael Mirmak noted that the new BIRD template is available on the BIRDS web page. This template should be used for new BIRDS, and some recent BIRDS will need to be re-submitted using the new template.

BIRD116.1: ADD IBIS-ISS TO [EXTERNAL MODEL] AND [EXTERNAL CIRCUIT] AS A SUPPORTED LANGUAGE

Walter Katz moved to table the discussion for BIRDS 116.1, 117.4, 118.3, 129 and 153. Bob Ross seconded. There were no objections.

BIRD117.4: PARAMETERIZE A_TO_D AND D_TO_A CONVERTERS

Discussion was tabled.

BIRD118.3: ANALOG PARAMETER ASSIGNMENTS

Discussion was tabled.

BIRD129: ADD “POLARITY” ARGUMENT TO D_TO_A CONVERTERS

Discussion was tabled.

BIRD153: PARAMETER TREE KEYWORD

Discussion was tabled.

BIRD121.1: IBIS-AMI NEW RESERVED PARAMETERS FOR DATA MANAGEMENT

Discussion was tabled.

BIRD122: IBIS-AMI NEW RESERVED PARAMETERS FOR ANALOG MODELING

Discussion was tabled.

BIRD123.3: IBIS-AMI NEW RESERVED PARAMETERS FOR JITTER/NOISE

Discussion was tabled.

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

Discussion was tabled.

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

Discussion was tabled.

BIRD 131: IBIS-AMI REPEATERS

Discussion was tabled.

BIRD144.3: ADD TOUCHSTONE TO [EXTERNAL MODEL] AND [EXTERNAL CIRCUIT] AS A SUPPORTED LANGUAGE

Discussion was tabled.

BIRD145.2: CASCADING IBIS I/O BUFFERS WITH [EXTERNAL CIRCUIT]S USING THE [MODEL CALL] KEYWORD

Discussion was tabled.

BIRD147: BACK-CHANNEL SUPPORT

Discussion was tabled.

BIRD150: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

Discussion was tabled.

IBIS SPECIFICATION CHANGE STATUS

Michael Mirmak showed the BIRD list. The list was updated to show BIRDS pending for IBIS 6.0, only one of which has been accepted. All but one would require parser changes.

<http://www.eda.org/ibis/docs/ibis-version-change-strategy-v2p3.pdf>

IBISCHK5 PARSER STATUS AND BUG STATUS

Bob Ross reported that he has a new BUG report to file. BUG134 describes how a Caution test on an Open_sink or I/O_open_sink gives the wrong dV value of 0. The same models work fine for Model_type Open_drain and I/O_open_drain. The bug will be fixed in the new ibischk parser. The bug was classified as moderate severity, medium priority and open status.

Bob noted that all of the open bugs will be closed in the new parser. The new parser will be very robust, especially related to IBIS-AMI checking. Bob added that any additional parser work will require a new round of funding, as the contract with the current developer will be closed out with the release of the new parser.

NEW TECHNICAL ISSUES

Walter Katz requested help from IC vendors to review proposals for package modeling and contribute to the requirements for on-die modeling. The IBIS Interconnect task group will be discussing these issues beginning next week.

NEXT MEETING

The next IBIS Open Forum teleconference will be held October 5, 2012 from 8:00 to 10:00 AM US Pacific Time, and then on October 26, 2012.

Arpad Muranyi moved to adjourn. Lance Wang seconded. There were no objections.

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NOTES

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This meeting was conducted in accordance with the TechAmerica Legal Guides and TechAmerica 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 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>

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

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

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IBIS – TECHAMERICA STANDARDS BALLOT VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	July 13, 2012	August 3, 2012	August 24, 2012	September 14, 2012
Agilent Technologies	User	Active	X	X	X	X
Altera	Producer	Active	-	X	X	X
ANSYS	User	Active	X	X	-	X
Applied Simulation Technology	User	Inactive	-	-	-	-
ARM	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Inactive	X	X	-	-
Ericsson	Producer	Inactive	-	-	-	-
Foxconn Technology Group	Producer	Inactive	-	-	-	-
Freescale	Producer	Inactive	-	-	-	-
IBM	Producer	Active	-	-	X	X
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	X	X	X
IO Methodology	User	Active	X	X	-	X
LSI	Producer	Active	-	X	X	-
Maxim Integrated Products	Producer	Inactive	-	-	-	X
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	X	-	X
Nokia Siemens Networks	Producer	Active	X	-	X	-
Signal Integrity Software	User	Active	X	X	X	X
Sigrity	User	Inactive	-	-	-	-
Synopsys	User	Inactive	-	-	-	-
Teraspeed Consulting	General Interest	Active	X	X	X	X
Texas Instruments	Producer	Inactive	-	-	-	-
Toshiba	Producer	Inactive	-	-	-	-
Xilinx	Producer	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

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