

IBIS Open Forum Minutes

Meeting Date: **August 3, 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
August 24, 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 July 13, 2012 IBIS Open Forum teleconference. The minutes were approved without changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we are at 26 members now. Since the last teleconference meeting, TechAmerica confirmed payment from IBM and Texas Instruments. Bob is projecting 3 more members by the end of the year with payments in progress. We may be at about the breakeven point on financials once a couple more companies complete payments.

WEB PAGE UPDATES

Mike LaBonte reported that the home page, poster and roster pages were modified to reflect membership status changes.

MAILING LIST ADMINISTRATION

Mike LaBonte reported that mail servers at certain companies have been rejecting emails, and he is working with people at those companies to resolve the issues.

He can't be sure if everyone is receiving emails. Eda.org administrators made some configuration changes over the weekend. Administrator notification emails decreased significantly, but people are not seeing their postings coming back from the list. He sent test emails to the list, saw them appear, but did not receive an email back from the list.

Walter Katz confirmed that he is not seeing emails from the list, and he was unable to send out a presentation. Mike is working with the admins to try to resolve the issue. Michael Mirmak sent a test email to the list to check for problems. The email to ibis@eda.org did come through.

Walter Katz replied to the message, but it did not make it through the system.

MODEL LIBRARY UPDATE

No update.

MISCELLANY/ANNOUNCEMENTS

None.

CALL FOR NEW ISSUES

Bob Ross asked for an update on the ICM reballoting.

INTERNATIONAL/EXTERNAL ACTIVITIES

- IEEE DASC

Michael Mirmak reported that there was a meeting scheduled for August 2, but it was cancelled. There is a meeting scheduled in September.

- VHDL-AMS Table-Driven Models

Arpad Muranyi reported that there has not been a meeting since the last IBIS teleconference. He emailed Paul Fernando's IBIS table extraction Perl script to Joachim Haase to help with ideas on how to parse the tables in IBIS files. 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

None.

IEC APPROVAL ACTIVITIES

Randy Wolff took an AR to check with Victor Berman on any status updates related to the merger between TC91 and TC93. He has not heard of any upcoming meetings.

Michael Mirmak suggested contacting our ANSI representative for more information.

SUMMIT STATUS

-Asian Summits Planning

Michael Mirmak noted that the Shanghai Summit is scheduled for November 9 at the Parkyard Hotel. The Taiwan Summit is scheduled for November 13 in Hsinchu at the Ambassador Hotel. The Japan Summit will be held November 16 in Yokohama.

Bob Ross noted that the first announcement for the Shanghai event will go out next week. We still need to determine the main local contacts. The Hsinchu Summit also needs local contacts. Bob will coordinate with Mike LaBonte to get all the information on the IBIS upcoming events webpage.

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 reviewed suspended projects in the last meeting. They talked about the [External Test] syntax and are considering a project combining the cookbook and the accuracy handbook. The next meeting is Tuesday at 8AM Pacific time.

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 discussing the package modeling topic recently. He encouraged participation in order to make package modeling useful for everyone in the next IBIS specification.

Task group material can be found at:

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

EDITORIAL TASK GROUP

Michael Mirmak reported that the group is resuming weekly meetings at 8AM Pacific time on Wednesdays. They are currently working on an IBIS BIRD template that makes BIRD submissions easier and in the IBIS 5.1 style. They are also reviewing comments on the IBIS 5.1 specification draft.

The task group documents can be reviewed at:

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

NEW ADMINISTRATIVE ISSUES

Michael Mirmak reported that he asked TechAmerica for official status of the ICM re-balloting. Only 10 members were current as of the ballot being issued, and 7 members voted in the affirmative. The vote therefore passed with more than 2/3 majority. Michael received an email on July 16 confirming that TechAmerica was moving forward with ANSI re-accreditation.

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

Arpad Muranyi noted that there have been no recent comments. He is prepared to update the BIRD to the IBIS 5.1 format if necessary. Walter Katz asked to defer any voting on this BIRD until the package modeling discussions were farther along. He wanted to discuss direct instantiation of Touchstone files in a similar fashion to how BIRD116.1 adds IBIS-ISS capabilities. Bob Ross agreed, as he wanted to make sure we only vote on BIRDS that are isolated with no possible dependencies on other BIRDS.

BIRD117.4: PARAMETERIZE A_TO_D AND D_TO_A CONVERTERS

Arpad Muranyi noted that he has had no questions or comments on the BIRD, and he is planning on reformatting the BIRD for the IBIS 5.1 format.

BIRD118.3: ANALOG PARAMETER ASSIGNMENTS

No update.

BIRD129: ADD "POLARITY" ARGUMENT TO D_TO_A CONVERTERS

Arpad Muranyi noted that Bob Ross raised some issues on the reflector recently that still need further discussion. He asked Bob to finish up his research on the issues. Radek Biernacki noted that he previously raised the issue of how to add additional columns. Radek noted that we will need to state specific rules for how to include the extra column.

BIRD153: PARAMETER TREE KEYWORD

Bob Ross asked if the parameter tree is position dependent. Arpad Muranyi noted that it is not position dependent - as stated in the BIRD. Bob wondered if it should be. It is currently scoped at the same level as the [Component] keyword. Michael Mirmak suggested that it might make the IBIS file more readable if more rules for scoping were defined.

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

Bob Ross noted that this BIRD would be a good candidate for reformatting in the IBIS 5.1 format. Walter Katz said that he would update the BIRD once the IBIS 5.1 BIRD template is complete.

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 an editorial group document at this URL appearing in the agenda:

http://www.eda.org/ibis/editorial_wip/ibis-version-change-strategy-v2p2.pdf

This document tracks the status of recent BIRDS and the version of IBIS they are planned for.

Michael noted that BIRDS 145.2, 131, and 117.4 may only need minor edits to fit in with the IBIS 5.1 format.

IBISCHK5 BUG STATUS

Bob Ross reported that he should have a draft version for review within the next few days. He is not sure which BIRDS and BUG fixes will be in this draft version. He expects a complete parser will be available by the end of the year. BUGs 124 – 128 should be fixed in the code. Some recent BUGs may not be fixed.

IBIS 5.1 SPECIFICATION

Michael Mirmak issued the third call for comments on the IBIS 5.1 specification. Radek Biernacki found that the AMI_Version parameter is typed as a string; however the parameter is described as requiring a value of 5.1 or greater. The word “greater” has no meaning as a string literal. Michael Mirmak noted that options include changing the type to a float or, as Bob suggested, keep the type as a string and define better the contents of the string. Michael suggested specifying valid entries for the parameter with each new version of the specification. Radek suggested changing the word “greater” to “later”. Bob noted that the parameter will always have to be one of the approved enumerated values. The parser will check for correctness of this parameter.

Walter Katz asked about interactions between versions such as an IBIS 5.1 model supporting an IBIS 6.0 AMI model. This will need to be discussed further.

Michael noted that all comments received so far on the IBIS 5.1 draft specification are being addressed, and an updated draft will be posted to the reflector by August 10 for vote consideration at the next teleconference.

The IBIS 5.1 specification document and the comments list can be viewed at:

http://www.eda.org/ibis/ver5.1_wip/

NEW TECHNICAL ISSUES

Michel Mirmak noted that on the Touchstone parser there is no line number error reporting. There is an open bug related to this issue. Mike LaBonte noted that these files can get very long, so it is really necessary to identify the line numbers. Radek Biernacki added that if the binary format is allowed, this could cause problems.

Michael noted that our charter lists 1993 as our year of formation, so next year will be our 20th anniversary. He wondered if we should do anything special. Walter Katz suggested at least having a cake at our DesignCon IBIS summit.

NEXT MEETING

The next IBIS Open Forum teleconference will be held August 24, 2012 from 8:00 to 10:00 AM

US Pacific Time. A vote is scheduled for the IBIS 5.1 specification.

Arpad Muranyi moved to adjourn. David Banas 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/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 – TECHAMERICA STANDARDS BALLOT VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	June 5, 2012	June 22, 2012	July 13, 2012	August 3, 2012
Agilent Technologies	User	Active	X	-	X	X
Altera	Producer	Active	X	X	-	X
ANSYS	User	Active	X	X	X	X
Applied Simulation Technology	User	Inactive	-	-	-	-
ARM	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	X	X	X
Ericsson	Producer	Inactive	-	-	-	-
Foxconn Technology Group	Producer	Inactive	-	-	-	-
Freescale	Producer	Inactive	-	-	-	-
IBM	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	X	X	X
IO Methodology	User	Active	-	X	X	X
LSI	Producer	Inactive	-	-	-	X
Maxim Integrated Products	Producer	Inactive	-	-	-	-
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	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
Texas Instruments	Producer	Inactive	-	-	-	-
Toshiba	Producer	Inactive	X	-	-	-
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

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.