

IBIS Open Forum Minutes

Meeting Date: **February 17, 2012**

Meeting Location: **Teleconference**

VOTING MEMBERS AND 2012 PARTICIPANTS

Agilent	Radek Biernacki*, Yoji Sekine, Fangyi Rao
Altera	David Banas, Hsinho Wu, Masashi Shimanouchi
AMD	(Nam Nguyen)
ANSYS (Ansoft)	(Steve Pytel)
Apple Computer	(Matt Herndon)
Applied Simulation Technology	Norio Matsui
Cadence Design Systems	Terry Jernberg, Jilin Tan, Dennis Nagle Ambrish Varma
Cisco Systems	David Siadat, Mike Sapozhnikov
Ericsson	Anders Ekholm*, Zilwan Mahmood, Mattias Lundquist
Foxconn Technology Group	(Sogo Hsu)
Freescale	(Jon Burnett)
Green Streak Programs	(Lynne Green)
Huawei Technologies	Xiaoqing Dong
IBM	Adge Hawes*, Greg Edlund
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak^, Udy Shrivastava, Stewart Gilbert Eddie Frie
IO Methodology	Lance Wang*
LSI	Brian Burdick*
Mentor Graphics	Arpad Muranyi*, Vladimir Dmitriev-Zdorov
Micron Technology	Randy Wolff*
Nokia Siemens Networks GmbH	Eckhard Lenski*
QLogic	(James Zhou)
Signal Integrity Software	Walter Katz*, Mike LaBonte*, Todd Westerhoff Akalu Lentiro
Sigrity	Raymond Chen, Yingxin Sun*, Sam Chitwood
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	(Yasumasa Kondo)
Xilinx	Harry Fu
ZTE	(Huang Min)
Zuken	Michael Schaefer

OTHER PARTICIPANTS IN 2012

Aruba Networks	Amir Motamedi
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Avago Technologies	Sanjeev Gupta, Amolak Badesha
Bayside Design	Elliot Nahas
Cavium	Johann Nittmann
Enterasys	Robert Haller
Exar Corporation	Helen Nguyen
Granite River Labs	Jiang Xu, Johnson Tan
Hewlett-Packard	Ting Zhu
High Speed Design Center	Ben Chia
KEI Systems	Shinichi Maeda
Luxshare-ICT	Alan Kinningham, Steven Wong
Maxim Integrated Products	Hassan Rafat, Mahbubul Bari
MK Resolutions	Olga Chervyakova
Nvidia	Eric Hsu
Research In Motion	Yi Cao
Sony	Kenji Yasoda
TechAmerica	(Chris Denham)
University of Illinois	Thomas Comberiate, Jose Schutt-Aine
Vitesse Semiconductor	Siris Tsang

In the list above, attendees at the meeting are indicated by *. Participants who submit votes by email but do not attend 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
March 9, 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

Michael Mirmak was unable to attend the meeting, so Mike LaBonte led the meeting in his absence.

CALL FOR PATENTS

Mike LaBonte 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 January 27, 2012 IBIS Open Forum teleconference and the February 2, 2012 IBIS Open Forum Summit at DesignCon. Both sets of minutes were approved without changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT

Bob Ross reported that we will keep 31 members through June until we audit the list for official 2012 membership.

WEB PAGE UPDATES

Mike LaBonte reported that he made minor changes to the events page related to the DesignCon and SPI conferences.

MAILING LIST ADMINISTRATION

Mike LaBonte reported that Michael Mirmak had trouble sending out the agenda for this meeting. Majordomo detects certain content in email headers and can reject emails. It is rejecting many emails from Michael. Mike contacted eda.org administrators for help, but he has received no response so far.

MODEL LIBRARY UPDATE

Anders Ekholm noted that he needs to do a check for broken links very soon.

MISCELLANY/ANNOUNCEMENTS

Mike LaBonte mentioned a reminder from Michael Mirmak that we are trying to close off the IBIS 5.1 specification technical changes by the first Open Forum meeting in March.

OPENS FOR NEW ISSUES

Bob Ross requested adequate time to discuss new changes to the ibischk parser and new BUGs coming in.

INTERNATIONAL/EXTERNAL ACTIVITIES

- IEEE DASC

No update. There will be an in-person DASC meeting at the DVCon conference in San Jose on February 29, 2012.

- VHDL-AMS Table-Driven Models

No report. More information can be found at:

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

- Conferences

SPI2012 (18th IEEE Workshop on Signal and Power Integrity) will be held May 13-16, 2012 in Sorrento, Italy. We are offered a free room on Wednesday afternoon for hosting an IBIS Summit meeting. There may be some technical papers related to IBIS. More information can be found at:

<http://www.spi2012.org>

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

No update.

SUMMIT STATUS

- DesignCon 2012 Summit Review

The IBIS Summit was held Thursday, February 2, 2012. Bob Ross noted that there were good discussions and 69 people attended.

- European IBIS Summit 2012

The meeting will take place May 16, 2012 after the SPI conference in Sorrento, Italy. A room has been donated by the SPI conference for Wednesday afternoon. Three sponsors so far include Micron, Nokia Siemens Networks and Zuken.

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 has continued to look at potential enhancements to ibischk and the list of messages in the code to detect places for improvements. The group is meeting every two weeks. The next meeting is on Tuesday, February 21 at 8:00AM Pacific time.

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

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

MODEL REVIEW TASK GROUP

No update.

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is working on new BIRDs related to analog modeling proposals. There will be no meeting this coming Tuesday.

Task group material can be found at:

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

EDITORIAL TASK GROUP

Bob Ross reported that the group is meeting regularly. Michael Mirmak updated a reformatted draft that includes most of the new IBIS-AMI BIRDs and all other BIRDs. The group is waiting for resolution at this meeting on one last BIRD before finalizing the document. Then, they need to look at reorganization in the AMI section. Mike LaBonte noted that technical changes should be finished by the first Open Forum meeting in March, but then the target for release of the edited 5.1 is early May to start the official review process.

The IBIS reformatting documentation can be reviewed at:

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

NEW ADMINISTRATIVE ISSUES

None.

BIRD149.1: USAGE OUT SYNTAX CORRECTION

Arpad Muranyi noted he hasn't seen any new comments since the last meeting. The BIRD149.1 update added only two words, "at least", in the last sentence of the BIRD. He also added a note to make BIRD132 consistent with the change in BIRD149.1.

Arpad moved to vote on the BIRD. Bob Ross seconded. There were no objections. The vote passed with the following vote tally:

Agilent – yes
Ericsson – yes
IBM – yes
Intel – yes, by email
IO Methodology – yes
LSI – yes
Mentor – yes
Micron – yes
Nokia Siemens Networks – yes
SiSoft – yes
Sigrity – yes
Teraspeed – yes

BIRD144.2: ADD TOUCHSTONE TO [EXTERNAL MODEL] AND [EXTERNAL CIRCUIT] AS A SUPPORTED LANGUAGE

Arpad Muranyi noted that changes included separating out user defined corner definitions. Some other technical changes were related to clarifying questions on terminations of Touchstone files.

Bob Ross moved to table discussion of the BIRD and move discussion back to the ATM task group. Radek Biernacki seconded. There were no objections.

BIRD150: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

Walter Katz introduced the BIRD. This is a rewrite of BIRD124, changing the dependency table to use table syntax since Format Table has been clarified for IBIS 5.1. A method for string parameter substitution was added by request from Adge Hawes. Walter added that Adge gave a presentation related to this BIRD at the DesignCon Summit meeting.

Walter Katz moved to table discussion of the BIRD. Arpad Muranyi seconded. There were no objections.

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

Discussion was tabled.

BIRD117.3: PARAMETERIZE A_TO_D AND D_TO_A CONVERTERS

Discussion was tabled.

BIRD118.2: ANALOG PARAMETER ASSIGNMENTS

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.

BIRD123.2: IBIS-AMI NEW RESERVED PARAMETERS FOR JITTER/NOISE

Bob Ross moved to un-table the BIRD for discussion. Arpad Muranyi seconded. There were no objections.

Bob stated that the ATM task group released the BIRD. It isn't targeted to IBIS 5.1. He noted that we can wait to bring it up for a vote at the next meeting or wait longer to see how IBIS 5.1 settles out. In IBIS 5.1, List, Increment and Steps are not included in any existing parameters. Bob is concerned whether we still need all of those or should consider them with a retroactive change in IBIS 5.1 to include them. Arpad Muranyi noted that this is a good catch, but he thinks it would require a minor editorial BIRD that would need to be done very quickly. Bob agreed that this change is a technical change and would require a BIRD. Walter Katz volunteered to write up a BIRD with help from Bob and submit it for discussion at the next Open Forum meeting.

Walter moved to schedule BIRD123.2 for a vote at the next meeting. Arpad seconded. There were questions as noted below and the second and motion were withdrawn.

Radek Biernacki asked if the existing tables in IBIS 5.0 were being replaced by these tables, since they are incomplete. Bob and Walter noted that this BIRD is an adjustment to IBIS 5.1 and there is a reorganization of the tables in IBIS 5.1. This proposal is written against the old IBIS 5.0 format. If we vote on this BIRD, then the changes to the tables will be editorial. If we hold off a vote until IBIS 5.1 is done, then we can re-issue BIRD123.2 with a new format.

Arpad wondered about the scheduling of the new BIRD that Walter will be writing. It was noted that we can plan to vote on the BIRD at the next meeting assuming it is introduced by email two weeks before the next meeting.

BIRD124: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

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.

BIRD129: ADD "POLARITY" ARGUMENT TO D_TO_A CONVERTERS

Discussion was tabled.

BIRD 131: IBIS-AMI REPEATERS

Discussion was tabled.

BIRD145.1: CASCADING IBIS I/O BUFFERS WITH [EXTERNAL CIRCUIT]S USING THE [MODEL CALL] KEYWORD

Discussion was tabled.

BIRD147: BACK-CHANNEL SUPPORT

Discussion was tabled.

IBISCHK5 BUG STATUS

Bob Ross noted that he had some questions/clarifications from the parser developer. One question was what model types BIRD113.3 applies to. He thinks it is ok for all model types except Series, Series-Switch and Terminator.

Relating to BUG124, the fix is that "|" is a comment character and should be treated as white-space. That way the parameter syntax in a *.ami file can wrap to the next line without any unexpected concatenation of names and violation of other syntax rules. Bob also noted a related problem. Within quotes the "|" is also treated as a comment character, eliminating the text to the end of the line. With quotes, the "|" should be treated as a legal character with the string and not as a comment character. Bob will add a comment to the BUG report to mention this. Mike LaBonte suggested emailing Curtis Clark, the original submitter of the BUG report to let him know of the change.

Other questions related to IBIS AMI. Bob noted that Use_Init_Output is deprecated in IBIS 5.1. If AMI Version is missing, then it is an IBIS AMI 5.0 model. Parsing of IBIS AMI 5.0 models will follow IBIS 5.1 rules.

Bob is also investigating a BUG related to BUG25 (which was fixed in 1998), but where [Model Selector] within the [Notes] section is crashing the parser in an *ebd file.

NEW TECHNICAL ISSUES

Bob Ross reported that there is a tschk2 BUG being discussed between Eckhard Lenski, Mike LaBonte and Bob related to Linux. Mike added that he tried to upload a test case and BUG to Mantis, but the 20MB test case file was rejected as being too large. A smaller file is needed for

a test case.

Walter Katz introduced a new BIRD he had written during the meeting (as mentioned in the BIRD123.2 discussion). The BIRD looks good upon first review, and Walter will submit it for consideration at the next meeting. Walter added that he plans to ask Michael Mirmak to schedule the BIRD for a vote at the next meeting.

NEXT MEETING

The next IBIS Open Forum teleconference will be held March 9, 2012 from 8:00 to 10:00 AM US Pacific Time. A vote on the tentative BIRD151 is planned.

Bob Ross moved to adjourn. Radek Biernacki seconded. There were no objections.

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 CURRENT MEMBER VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	January 6, 2012	January 27, 2012	February 2, 2012	February 17, 2012
Advanced Micro Devices	Producer	Inactive	-	-	-	-
Agilent Technologies	User	Active	X	X	X	X
Altera	Producer	Active	X	X	X	-
ANSYS	User	Inactive	-	-	-	-
Apple Computer	User	Inactive	-	-	-	-
Applied Simulation Technology	User	Inactive	-	-	X	-
Cadence Design Systems	User	Active	X	X	X	-
Cisco Systems	User	Inactive	-	-	X	-
Ericsson	Producer	Active	-	-	X	X
Foxconn Technology Group	Producer	Inactive	-	-	-	-
Freescale	Producer	Inactive	-	-	-	-
Green Streak Programs	General Interest	Inactive	-	-	-	-
Huawei Technologies	Producer	Inactive	-	-	X	-
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	Inactive	X	-	-	X
Mentor Graphics	User	Active	X	X	X	X
Micron Technology	Producer	Active	X	X	X	X
Nokia Siemens Networks	Producer	Active	X	X	-	X
QLogic	Producer	Inactive	-	-	-	-
Signal Integrity Software	User	Active	X	X	X	X
Sigrity	User	Active	-	-	X	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	-	-	X	-
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.