IBIS Open Forum Minutes

Meeting Date: **January 27, 2012**
Meeting Location: **Teleconference**

VOTING MEMBERS AND 2012 PARTICIPANTS

Agilent	Radek Biernacki*
Altera	David Banas*
AMD	(Nam Nguyen)
ANSYS (Ansoft)	(Steve Pytel)
Apple Computer	(Matt Herndon)
Applied Simulation Technology	(Fred Balistreri)
Cadence Design Systems	Terry Jernberg*
Cisco Systems	(Tony Penaloza)
Ericsson	(Anders Ekholm)
Foxconn Technology Group	(Sogo Hsu)
Freescale	(Jon Burnett)
Green Streak Programs	(Lynne Green)
Huawei Technologies	(Jinjun Li)
IBM	Adge Hawes*
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*
QLogic	(James Zhou)
Signal Integrity Software	Walter Katz*, Mike LaBonte*
Sigrity	(Raymond Chen)
Synopsys	(Andy Tai)
Teraspeed Consulting Group	Bob Ross*
Texas Instruments	(Pavani Jella)
Toshiba	(Yasumasa Kondo)
Xilinx	(Raymond Anderson)
ZTE	(Huang Min)
Zuken	(Michael Schaeder)

OTHER PARTICIPANTS IN 2012

TechAmerica	(Chris Denham)

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
February 2, 2012	IBIS Summit at DesignCon – no telephone bridge	
February 17, 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 January 6, 2012 IBIS Open Forum teleconference. The minutes were approved without changes.

MEMBERSHIP STATUS AND TREASURER'S REPORT
Bob Ross reported that we still have 31 members. Membership invoices went out. There has been no updated financial report from TechAmerica.

WEB PAGE UPDATES

Mike LaBonte reported that the events page was updated with DesignCon Summit information. There was an update on the roster page as well. He recently submitted an ibischk5 BUG report using the regular form instead of the new Mantis, and this made him realize we need to get Mantis fully working. He has made configuration changes to Mantis pages, but only a couple of prototype reports for the Quality group were submitted and tested. There is nothing setup for IBIS BUGs yet. Mike suggested that he needs a small temporary group to try out the system and suggest improvements. Bob Ross volunteered to help. Bob added that he would like to see both systems run in parallel until all the bugs are worked out of the Mantis system. Michael Mirmak also volunteered. The Mantis page is found at:

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

MAILING LIST ADMINISTRATION
Mike LaBonte reported that everything is running normally. Michael Mirmak noted that BUG reports tend to have in-line text and not attachments. Is this still the policy that BUGs should not have attachments? Mike responded that ibis-bug is a reflector, although it could have just been setup as an email alias since it only goes to a few administrators. Emails do go through the same filtering on majordomo as the regular reflectors. Majordomo does not restrict attachments, but it does look for certain character patterns in the email and attachments to flag spam. This has tagged many of Michael's emails as spam. Mike noted that only about one in 10,000 emails is not spam on the bug and other lists. His request for support remains unanswered.

MODEL LIBRARY UPDATE
No update.

MISCELLANY/ANNOUNCEMENTS
None.

OPENS FOR NEW ISSUES
BUG131 will be discussed in the ibischk5 BUG status discussion.

INTERNATIONAL/EXTERNAL ACTIVITIES
- IEEE DASC
Michael Mirmak noted that the last DASC meeting was yesterday. One item of discussion was that the IBIS related P1832 working group was officially rejected by IEEE NESCOM. There will be an in-person DASC meeting at the DVCon conference in San Jose on February 29, 2012.

- VHDL-AMS Table-Driven Models
Arpad Muranyi noted that the next meeting is Monday but he will not be able to attend. 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. 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

Randy Wolff reported that Victor Berman emailed us on Wednesday asking for more history on the original IEC approval of IBIS 3.2. He noted that we either need to form a working group under TC93 or find one that is willing and appropriate for doing the work. Victor was also interested in any further updates from IEEE on the project rejection. Michael Mirmak responded in email noting that TC93 originally handled the IEC process for IBIS 3.2. Randy will be the main contact going forwards. Victor plans to convene a meeting of the US TAG later this year to discuss and approve the project and recommend that it be accepted by TC93. In-person attendance by an IBIS representative may be required.

SUMMIT STATUS

- DesignCon 2012

The IBIS Summit is scheduled for Thursday, February 2, 2012. It will be in the Great America Ballroom 1. The third call for participation went out as well as the agenda. Michael Mirmak thanked Lance Wang and Bob Ross for helping with logistics and the board for reviewing presentations. Michael plans to make copies of the presentations. Michael and Bob will both bring projectors. Lance asked Michael if he would be bringing sign-in sheets. Michael will bring them.

- European IBIS Summit 2012

Bob Ross reported that he did some preliminary planning for the European IBIS Summit. 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. One presentation proposal is already submitted. 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 there is no official DesignCon report from the task group, but Greg

Edlund's presentation relates to the IBIS-AMI Quality checklist the group has been discussing. The group is discussing the status of the ibischk parser with relation to AMI features. They are looking at all the things that need to be checked for AMI and looking at low hanging fruit of what could be included in the ibischk parser. The group is meeting every two weeks. The next meeting is on Tuesday, February 7 at 8:00AM Pacific time.

Bob Ross commented that the QUAIL process would be a good prototype for the Mantis system. Mike added that the two prototypes in the Mantis system are the two QUAILs from the Quality task group.

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 has been meeting regularly every week. There will be no meeting next week due to DesignCon. They have finished everything related to corrections and clarifications of IBIS-AMI. The group's focus is now on analog modeling proposals. There will be several presentations related to this at the DesignCon Summit.

Task group material can be found at:

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

EDITORIAL TASK GROUP
Michael Mirmak reported that the group met this week. They received an updated document from the TechAmerica technical writer with the original reformatted document plus sections 6C and 10. Not all new BIRDs are in there yet. The TechAmerica technical writer is not available until March, so the group is doing its own work of adding in new BIRDs for IBIS 5.1 right now.

The IBIS reformatting documentation can be reviewed at:

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

NEW ADMINISTRATIVE ISSUES
None.

BIRD123.2: IBIS-AMI NEW RESERVED PARAMETERS FOR JITTER/NOISE
Walter Katz summarized that the update is essentially BIRD123.1 with clarifications and new

parameters to describe deterministic jitter (Dj). The ATM committee has discussed it fully and there is a lot of support from EDA vendors. Arpad Muranyi noted that everyone in the ATM group is agreeing to the content in it and thinks it is ready for a vote. Bob Ross thinks we should wait for further discussion until after DesignCon. Arpad moved to schedule the BIRD for a vote, but the motion did not receive a second.

Arpad noted that we haven't needed to worry about formatting BIRDs before and he wondered what has changed. Michael Mirmak responded that because of format, new technical information may need to be conveyed. Usually formatting changes have not been necessary, but in this case we are approving the BIRD in one format but adding it to the specification in another format. Michael suggested the BIRD authors look at the new format to make sure additional comments don't need to be included in the current BIRDs. Once BIRDs start to be written in the new format, this process will get easier.

BIRD149: USAGE OUT SYNTAX CORRECTION

Arpad Muranyi introduced the BIRD. This should be the last clarification BIRD for IBIS-AMI. This BIRD clarifies questions related to Format and Corner for Usage Out parameters. Bob Ross asked where you use Default. Arpad noted that Default is a synonym of Value, but they are mutually exclusive. In a list, Default can define any value from the list as a default value. Bob added that Default seems like redundant syntax. Arpad noted that there are cases where Default may be different than what would normally be picked as the default value. Bob thought that you could always re-order values to force the proper default. He noted that having a default value that isn't just the typical value requires a lot of additional checking by a parser. Arpad noted that default is in IBIS 5.0. Bob said the ibischk5 parser does not include any of these checks. Michael Mirmak added that this was due to too much ambiguity in the IBIS 5.0 specification. Walter noted that Default was added three years ago for the purpose of when you have a list that you want to be logical, weak to strong for example. You want default to be a value in the list that isn't the first one. He felt that having Default for this purpose was useful.

Michael noted that this BIRD mentions other BIRDs. He asked if it matches the other recently approved BIRDs.   Arpad noted that he thinks this is updated properly to mention BIRD127.4. Bob added that he doesn't think it has been cross-checked against all the other AMI BIRDs yet.

Radek Biernacki asked about the wording of the last paragraph. Is it consistent with the requirements for Table? Arpad responded that BIRD132 clarifies the Table parameter. He could change the BIRD to say "at least a one-row Table is required". Arpad found that BIRD132's text is consistent with BIRD149. Walter suggested that the text be worded to enforce a specific parser behavior. Bob agreed with wording the sentence with "at least a one-row" in BIRD149 and fixing the text in BIRD132.

Walter moved to table discussion. Arpad seconded. There were objections by Radek and Bob. Walter withdrew the motion.

Bob moved to vote on a BIRD149.1 (with modifications discussed today) at the next teleconference meeting. Radek seconded the motion. 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.

BIRD124: IBIS-AMI NEW RESERVED PARAMETERS FOR DEPENDENCY TABLES

Walter reported that BIRD150 will be submitted as a new BIRD instead of BIRD124. He noted that Adge Hawes will be presenting at the DesignCon Summit related to using dependency tables in an IBIS-AMI model. Arpad Muranyi noted that changes were large enough to warrant a new BIRD. At some point, a vote will be planned to reject BIRD124.

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.

BIRD144.1: ADD TOUCHSTONE TO [EXTERNAL MODEL] AND [EXTERNAL CIRCUIT] AS A SUPPORTED LANGUAGE

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

BUG131 was introduced by Mike LaBonte. An error for Rx_Clock_PDF in a table is issued saying "ERROR – Parameter Format is Mandatory for Rx_Clock_PDF". There is no way to suppress the error in the supplied example. Arpad Muranyi thought there might be an ordering issue of leafs. David Banas thought this ordering was called out specifically in IBIS 5.0 in an example. Walter Katz added that there was never intent for a specific ordering. Bob Ross felt this was definitely a BUG. The BUG was classified as Moderate severity, Medium priority and Open status and will be fixed in the IBIS 5.1 parser.

NEW TECHNICAL ISSUES

None.

NEXT MEETING

The next Open Forum Summit will be held February 2, 2012 at DesignCon. No phone bridge will be available. The next IBIS Open Forum teleconference will be held February 17, 2012 from 8:00 to 10:00 AM US Pacific Time. A vote on BIRD149.1 is scheduled.

Mike LaBonte 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/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 CURRENT MEMBER VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	November 21, 2011	December 9, 2011	January 6, 2012	January 27, 2012
Advanced Micro Devices	Producer	Inactive	-	-	-	-
Agilent Technologies	User	Active	-	X	X	X
Altera	Producer	Active	-	-	X	X
ANSYS	User	Inactive	X	-	-	-
Apple Computer	User	Inactive	-	-	-	-
Applied Simulation Technology	User	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	X	X	X
Cisco Systems	User	Inactive	-	-	-	-
Ericsson	Producer	Inactive	X	X	-	-
Foxconn Technology Group	Producer	Inactive	X	-	-	-
Freescale	Producer	Inactive	-	-	-	-
Green Streak Programs	General Interest	Inactive	-	-	-	-
Huawei Technologies	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
Micron Technology	Producer	Active	-	X	X	X
Nokia Siemens Networks	Producer	Active	-	X	X	X
QLogic	Producer	Inactive	-	-	-	-
Signal Integrity Software	User	Active	-	X	X	X
Sigrity	User	Inactive	X	X	-	-
Synopsys	User	Inactive	-	-	-	-
Teraspeed Consulting	General Interest	Active	X	X	X	X
Texas Instruments	Producer	Inactive	-	-	-	-
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.