IBIS Open Forum Minutes

Meeting Date: **January 9, 2015**
Meeting Location: **Teleconference**

VOTING MEMBERS AND 2015 PARTICIPANTS

Altera	David Banas*
ANSYS	(Steve Pytel)
Applied Simulation Technology	(Fred Balistreri)
Avago Technologies	(Xingdong Dai)
Cadence Design Systems	Brad Brim*
Ericsson	(Anders Ekholm)
Huawei Technologies	(Jinjun Li)
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Michael Mirmak*
IO Methodology	Lance Wang*
Keysight Technologies	Radek Biernacki*
Maxim Integrated Products	(Mahbubul Bari)
Mentor Graphics	Arpad Muranyi*
Micron Technology	Randy Wolff*
Qualcomm	Senthil Nagarathinam*
Signal Integrity Software	Mike LaBonte*, Walter Katz*
Synopsys	Ted Mido*
Teraspeed Labs	Bob Ross*
Toshiba	(Yasumasa Kondo)
Xilinx	(Raymond Anderson)
ZTE Corporation	(Min Huang)
Zuken	(Michael Schaeder)

OTHER PARTICIPANTS IN 2015

IBM	Adge Hawes*
SAE International	(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 30, 2015	IBIS Summit at DesignCon – no teleconference	
February 6, 2015	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 a.m. to 9:55 a.m. 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 declared that a quorum was reached and the meeting could begin.

CALL FOR PATENTS
Michael Mirmak called for any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.1, IBIS 6.0, Touchstone 2.0, IBIS-ISS 1.0 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 5, 2014 IBIS Open Forum teleconference. The minutes were approved without changes.

ANNOUNCEMENTS
None.

CALL FOR ADDITIONAL AGENDA ITEMS
None.

MEMBERSHIP STATUS AND TREASURER'S REPORT
Bob Ross reported no change in membership with 22 members as of the end of the year. Membership renewals should be sent out this month. Treasury remains the same at $41,185, but there is a Taipei meeting expense still outstanding. There are two IBISCHK6 parser payments pending as well.

WEB PAGE AND MAILING LIST ADMINISTRATION

Mike LaBonte reported that regarding email everything is going well. He just sent out an email reminding users of the use policy of the email services. The IBIS home page has a new banner related to the DesignCon IBIS Summit. We have a promotional code for a discount specific to IBIS. Clicking on the banner takes one to the DesignCon 2015 registration page and gives a 15% discount. Mike is also working on a document describing proposals for using social media.

Michael Mirmak noted email issues with emails bouncing at Micron if they originate from Micron. Mike confirmed this issue. A hack was done by freelists administrators to fix a similar issue with Yahoo email addresses. Mike will ask the freelists administrators about implementing a similar fix for Micron email addresses.

Michael noted that it is no longer possible for administrators to add people to the freelists email lists directly. People who want to join email lists must request directly. Mike is thinking about listing information on the task group web pages on joining the email lists.

LIBRARY UPDATE

No update.

INTERNATIONAL/EXTERNAL ACTIVITIES

- Conferences

The 19th IEEE Workshop on Signal and Power Integrity (SPI 2015) will be held in Berlin, Germany, from May 10-13, 2015. An IBIS Summit meeting is usually held in conjunction with this Workshop. The paper submission deadline is January 31, 2015. More information is available at:

http://www.spi2015.org/

- Press Update

None.

ORGANIZATIONAL ACTIVITIES

Michael Mirmak noted ongoing discussion of the current charter turning into an updated policies and procedures document. The intent is to have a draft version of the policies and procedures document to circulate at the DesignCon IBIS Summit meeting to be followed by an eventual vote by the IBIS Open Forum.

SUMMIT PLANNING AND STATUS

- DesignCon Planning

Michael Mirmak reported that an IBIS Summit is scheduled for Friday, January 30, 2015 on the final day of DesignCon 2015. The meeting will be in the Great America meeting room 2. The third call for participation has gone out. Additional sponsorship is requested. Michael noted the discounted registration available from the IBIS web page. There is a deadline of Friday,

January 24 for registration to get the free lunch. January 20 is the deadline to submit presentations. Bob Ross noted about 8 presentations so far, but there is room for more. Lance Wang reminded people planning to attend to send him an email. Michael noted he had received about 7 registrations by email that he would forward to Lance.

- DAC Summit and Poll
Bob noted we have voted to not hold a Summit meeting at DAC, and there were no objections.

- EPEPS Summit and Poll
Bob noted that there is interest in this meeting still, but it will depend on the ability to have enough officers attend to conduct the meeting. The location is convenient for many people. Michael asked how late we could hold off the decision. Bob thought we could wait until after February to decide, closer to mid year.

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.

QUALITY TASK GROUP
Mike LaBonte reported that the group is meeting on Tuesdays at 8:00 a.m. PT. The task to clean up the ibischk6 messages spreadsheet is completed, but some comments to explain the messages are still missing. Lance Wang helped with the section on EBD modeling.

The work in progress can be reviewed at:

   http://www.eda.org/ibis/ibischk6/ibischk_6.0.0_UserGuide_wip1.pdf

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 meeting regularly on Tuesdays at 12:00 p.m. PT. Meetings resumed after the holidays. Another presentation from SiSoft on the backchannel modeling capabilities was presented at the last meeting. He encouraged participation from those interested in this topic.

Task group material can be found at:

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

INTERCONNECT TASK GROUP
Michael Mirmak reported that the group resumed meetings this week. There were discussions on how legacy models are assumed to connect to pin, pad and buffer locations. The group is

meeting regularly on Wednesdays at 8:00 a.m. PT.

Task group material can be found at:

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

NEW ADMINISTRATIVE ISSUES
None.

BIRD174: QUOTE CHARACTER CLARIFICATIONS
Michael Mirmak asked if an updated BIRD174.1 was submitted. Arpad Muranyi responded that he thought changes were completed but will resubmit.

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

BIRD128.2: ALLOW AMI_PARAMETERS_OUT TO PASS AMI_PARAMETERS_IN DATA ON CALLS TO AMI_GETWAVE
Discussion was tabled.

BIRD145.3: CASCADING IBIS I/O BUFFERS WITH [EXTERNAL CIRCUIT]S USING THE [MODEL CALL] KEYWORD
Discussion was tabled.

BIRD147: BACK-CHANNEL SUPPORT
Discussion was tabled.

BIRD157: PARAMETERIZE [DRIVER SCHEDULE]
Discussion was tabled.

BIRD158.3: AMI TOUCHSTONE ANALOG BUFFER MODELS
Discussion was tabled.

BIRD161.1: SUPPORTING INCOMPLETE AND BUFFER-ONLY [COMPONENT] DESCRIPTIONS
Discussion was tabled.

BIRD163: INSTANTIATING AND CONNECTING [EXTERNAL CIRCUIT] PACKAGE MODELS WITH [CIRCUIT CALL]
Discussion was tabled.

BIRD164: ALLOWING PACKAGE MODELS TO BE DEFINED IN [EXTERNAL CIRCUIT]
Discussion was tabled.

BIRD165: PARAMETER PASSING IMPROVEMENTS FOR [EXTERNAL CIRCUIT]S
Discussion was tabled.

BIRD166: RESOLVING PROBLEMS WITH REDRIVER INIT FLOW
Discussion was tabled.

IBISCHK6 PARSER AND BUG STATUS
Bob Ross reported no update. We might post an updated ibischk6 parser executable for Redhat Linux 32 and 64 bit. Existing versions were compiled under Ubuntu, but there are subtle difference between Ubuntu and Redhat. Mike LaBonte asked if anyone had suggestions for the best ways to compile the code to ensure the best compatibility across multiple platforms. David Banas asked if Mike had used options to compile with static options. Mike responded that he compiled the code using an older compiler to bypass issues with using the latest compiler. Bob noted that the readme file could get updated to mention differences from 32 to 64 bit compilations. There was only one difference in outcome between the versions on one model out of about 8000 test cases. Mike thought that we might not even need to publish a 64 bit version.

Michael Mirmak noted that he has received feedback about people expecting to see a windows installer instead of a final DOS executable program. Mike questioned whether this is something we should do ourselves or have the parser writer do. Bob took an AR to ask the parser developer about this later.

David asked about changing from an error to a warning the message about checking the difference between expected and actual values for the V-t waveform endpoints compared to a load line calculation from the I-V curves. He would like to see all messages change to warnings. Michael suggested filing a BUG so the request could be tracked. He also said this type of information about error percentages should be in a parser document. Mike suggested that there should not be an error since the specification does not mention specific limits.

NEW TECHNICAL ISSUES
None.

6

NEXT MEETING

The DesignCon IBIS Summit will be held January 30, 2015. No teleconference will be available for the Summit meeting. The next IBIS Open Forum teleconference meeting will be held February 6, 2015. The following IBIS Open Forum teleconference meeting will be held February 27, 2015.

David Banas moved to adjourn. Mike LaBonte seconded the motion. There were no objections.

==
NOTES

IBIS CHAIR: Michael Mirmak (916) 356-4261, Fax (916) 377-3788
michael.mirmak@intel.com
Data Center Platform Applications Engineering
Intel Corporation
FM5-239
1900 Prairie City Rd.,
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
Principal Engineer, Silicon SI Group Lead, 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: Mike LaBonte
mikelabonte@eda.org
IBIS-AMI Modeling Specialist, Signal Integrity Software
6 Clock Tower Place
Maynard, MA 01754

POSTMASTER: Mike LaBonte
mikelabonte@eda.org

IBIS-AMI Modeling Specialist, Signal Integrity Software
6 Clock Tower Place
Maynard, MA 01754

This meeting was conducted in accordance with ANSI guidance.

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

Other trademarks, brands and names are the property of their respective owners.

IBIS – SAE STANDARDS BALLOT VOTING STATUS

Organization	Interest Category	Standards Ballot Voting Status	November 17, 2014	November 20, 2014	December 5, 2014	January 9, 2015
Altera	Producer	Inactive	-	-	-	X
ANSYS	User	Active	X	X	X	-
Applied Simulation Technology	User	Inactive	-	-	-	-
Avago Technologies	Producer	Inactive	-	-	-	-
Cadence Design Systems	User	Active	X	X	X	X
Ericsson	Producer	Inactive	X	X	-	-
Huawei Technologies	Producer	Inactive	-	-	-	-
Infineon Technologies AG	Producer	Inactive	-	-	-	-
Intel Corp.	Producer	Active	X	-	X	X
IO Methodology	User	Active	X	X	X	X
Keysight Technologies	User	Active	-	-	X	X
Maxim Integrated Products	Producer	Inactive	-	-	-	-
Mentor Graphics	User	Active	-	X	X	X
Micron Technology	Producer	Active	-	X	X	X
Qualcomm	Producer	Inactive	-	-	-	X
Signal Integrity Software	User	Active	-	-	X	X
Synopsys	User	Active	-	-	X	X
Teraspeed Labs	General Interest	Active	-	-	X	X
Toshiba	Producer	Active	-	X	X	-
Xilinx	Producer	Inactive	-	-	-	-
ZTE	User	Inactive	-	-	-	-
Zuken	User	Inactive	-	X	-	-

I/O Buffer Information Specification Committee (IBIS)

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 SAE 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.