

IBIS Open Forum Minutes

Meeting Date: **August 28, 2009**

VOTING MEMBERS AND 2009 PARTICIPANTS

Actel	(Prabhu Mohan)
Agilent	Brian Andresen, Radek Biernacki, Saliou Dieye, Yutao Hu, Fangyi Rao
AMD	Nam Nguyen*
Ansoft Corporation	Steve Pytel
Apple Computer	(Matt Herndon)
Applied Simulation Technology	(Fred Balistreri)
ARM	V. Muniswara Reddy
Cadence Design Systems	Terry Jernberg*, Ambrish Varma
Cisco Systems	Luis Boluna, Tram Bui, Bill Chen, Syed Huq*, Mike LaBonte*, Pedo Miran, Huyen Pham, AbdulRahman (Abbey) Rafiq, Ashwin Vasudevan, Zhiping Yang
Ericsson	Anders Ekholm*
Green Streak Programs	Lynne Green
Hitachi ULSI Systems	(Kazuyoshi Shoji)
IBM	Adge Hawes
Infineon Technologies AG	(Christian Sporrer)
Intel Corporation	Myoung J. Choi, Michael Mirmak*, Vishram Pandit, Jon Powell, Sirisha Prayaga
IO Methodology	Li (Kathy) Chen, Lance Wang*, Zhi (Benny) Yan
LSI	Brian Burdick
Mentor Graphics	Weston Beal, Vladimir Dmitriev-Zdorov, Zhen Mu, Arpad Muranyi*
Micron Technology	Randy Wolff*
Nokia Siemens Networks GmbH	Eckhard Lenski*
Samtec	(Corey Kimble)
Signal Integrity Software	Barry Katz, Walter Katz*, Todd Westerhoff
Sigrity	Brad Brim, Sam Chitwood
Synopsys	Ted Mido
Teraspeed Consulting Group	Bob Ross*
Toshiba	(Yasumasa Kondo)
Xilinx	[David Banas]
ZTE	(Ying Xiong)
Zuken	Michael Schaeder, Ralf Bruening

OTHER PARTICIPANTS IN 2009

AET	Mikio Kiyono
Altera	Hui Fu
Apache	Yu Lin

ATE	Nob Tanak, Kenny Suga
Bayside Design	Stephen Coe, Elliot Nahas
Circuit Spectrum	Zaven Tashjian
CST	Antonio Ciccomancini, Martin Schauem
Curtiss-Wright Embedded Computing	J. Phillips
EM Integrity	Guy de Burgh
Exar	Helen Nguyen
Freescale	Jon Burnett, Om Mandhama
Huawei Technologies	Xiaoqing Dong, Chunxing Huang, Guan Tao*
ICT Solutions	Steven Wong
IdemWorks	Michelangelo Bandinu
Juniper	Kevin Ko
Kineret Design	Ricardo Teliuteuesh
Leventhal Design & Communications	Roy Leventhal
Maxim Integrated Products	Ron Olisar
Mindspeed Technologies	Bobby Alkay
NetLogic Microsystems	Eric Hsu
Politecnico di Torino	Igor Stievano
Sanmina SCI	Vladimir Drivanenko
Sedona International	Joe Socha
Siemens	Manfred Maurer
Signal Consulting Group	Timothy Coyle, Nicole Mitchell
Simberian	Yuriy Shlepnev
TechAmerica (GEIA)	(Chris Denham)
Texas Instruments	Pavani Jella
Xsigo Systems	Robert Badel
Independent	Ian Dodd

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
September 18, 2009	202 783 450	IBIS

For teleconference dial-in information, use the password at the following website:
<https://cisco.webex.com/cisco/j.php?J=202783450>

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, press 3 to attend the meeting, then 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

Bob Ross called for any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.0 or ICM 1.1 specifications. No patents were declared.

MEMBERSHIP UPDATE AND TREASURER'S REPORT

Bob Ross reported that we have 29 paid members now with a renewal from Ansoft. He is working on other renewals, so we may get a few more members. Nam Nguyen asked if there is a website that shows who is currently a paid member. Bob mentioned that the voting members section in the meeting minutes is an accurate list to check.

REVIEW OF MINUTES AND ARS

Bob Ross called for comments regarding the minutes of the July 28, 2009 DAC IBIS summit and the August 7, 2009 IBIS Open Forum teleconference. Randy Wolff noted that Zuken was dropped from the voting members list that is sent to TechAmerica and has been re-added. The minutes were approved with the noted change.

WEB PAGE UPDATES

Syed Huq reported that the new logo has been sent to TechAmerica for the website, but it has not shown up yet.

MAILING LIST ADMINISTRATION

Mike LaBonte noted that many non-member submissions come in each day, and most are spam. However, he has worked with some submitters to get them subscribed to the list. There are about 430 subscribers to the main IBIS list.

MODEL LIBRARY UPDATE

Anders Ekholm reported that he is getting up to date on the process and hopes to have some

updates completed for the next meeting.

PRESS UPDATE

Bob Ross reported finding the following two technical journal articles related to IBIS:

“Studying an Approach Solution of I/O Buffer Information Specification (IBIS) Model” by Wen-Tzeng Huang, Ching-Tung Chou, In-Shiuh Lin and Chin-Hsing Chen, Journal of the Chinese Institute of Engineers (February 2007). The paper can be downloaded from:

<http://ebdlab.en.ntut.edu.tw/ebdlab/paper/353-359-IBIS.pdf>

“Modelling Field Bus Communications in Mixed-Signal Embedded Systems” by Mohamad Alassir, Julien Denoulet, Olivier Romain, Abraham Suissa and Patrick Garda, EURASIP Journal on Embedded Systems (2008). The paper can be downloaded from:

<http://www.hindawi.com/journals/es/2008/134798.html>

MISCELLANY/ANNOUNCEMENTS

None.

OPENS FOR NEW ISSUES

Bob Ross requested time to discuss a recently discovered parser issue, not yet documented as a BUG report. This will be covered in the IBISCHK4 BUG STATUS discussion.

INTERNATIONAL/EXTERNAL ACTIVITIES

- DASC

Michael Mirmak reported that the last meeting was brief. DASC does have an awards program, and an award went to Peter Ashenden related to AMS technologies. The DASC file and e-mail archive may be found at:

<http://www.dasc.org/>

- P1735 Encryption

No update. The IEEE Study Group on Encryption web reflector archives are found at:

<http://www.eda-stds.org/ip-encrypt/hm/>

-Conferences

The Electrical Performance of Electronic Packaging and Systems (EPEPS 2009) is October 19-21, 2009 at the Embassy Suites in Portland, OR. This is a major meeting for SI people from universities and industry.

<http://www.epep.org/>

The 7th International Workshop on Electromagnetic Compatibility of Integrated Circuits (EMC COMPO 2009) is November 17-20, 2009 in Toulouse, France.

<http://www.emccompo.org>

TECHAMERICA STATUS

No update.

IEC APPROVAL ACTIVITIES

Randy Wolff reported that he filled out and sent back a Maintenance Cycle Report (MCR) form to Victor Berman. The MCR form will be circulated in the IEC committee for approval of the update to the IBIS specification. Randy has not heard back from Victor and will ask for an update to make sure the form is ready for the next IEC meeting in September.

SUMMIT STATUS

-China Summit Planning

Bob Ross noted that the meeting is scheduled for Wednesday, November 4 at the Four Points Hotel in the Pudong district. The second announcement has gone out. The meeting is fully sponsored and paid for at this point. Another announcement will be sent out next week. More presentations are needed. Co-sponsors include Huawei Technologies, Agilent Technologies, Ansoft, Cadence Design, Cybernet Systems, Intel, Mentor Graphics, SiSoft, Sigrity, Synopsys, ZTE Corporation and others to be determined.

-Japan Summit Planning

Bob Ross stated that the meeting is scheduled for Friday, November 6. This event will be held at the JEITA headquarters. Co-sponsors include Japan Electronics and Information Technology Industries Association (JEITA) and others to be determined. There is a possibility that the event will be a half day meeting, starting after lunch, unless more sponsors are found. Arpad Muranyi commented that it will not be as successful of a meeting if it is not a full day meeting.

-Other Events

Bob Ross noted that we will have a meeting at DesignCon in 2010.

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.

IBIS QUALITY TASK GROUP

Mike LaBonte reported that the group voted at the last meeting to forward the IBIS Quality 2.0 specification to the Open Forum for review and approval. The document can be downloaded from:

http://www.eda-stds.org/ibis/quality_wip/iq_ver_2_0.pdf

We will discuss the document during the next Open Forum meetings and vote for approval after three reviews. We will need to decide where to post the document eventually. New work in the committee will be to review the IBIS Accuracy handbook and submit new ibischk parser BUGs to get the parser to check models in more detail.

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

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

IBIS MODEL REVIEW TASK GROUP

No update.

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is focusing on IBIS-AMI specification improvements and corrections. They have found a few issues within the last year that are unclear and conflicting. They need to be cleaned up for the IBIS 5.1 specification. They are discussing simulation flows between DLL functions such as GetWave.

Task group material can be found at:

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

AD HOC TASK GROUPS (INTERCONNECT)

Michael Mirmak reported that the group is discussing sparse matrix treatment under Touchstone 2.X to reduce data that must be put in the file. This helps represent matrices that have lots of '0' entries. A rough draft of changes is expected for the next meeting.

Task group material can be found at:

<http://www.eda.org/ibis/adhoc/interconnect/>

IBIS URL

Bob Ross asked if we need our own IBIS URL. We might consider buying an address in the .org domain. Eventually the IBIS eigroup.org domain will be shut down, and we may need to buy it and have a forwarding link to a new site. We will pay TechAmerica for website services regardless of whether we use their services or not. We currently have the ibis-information.org address. Bob is thinking about reserving the ibis-eda.org domain. It may also be good to plan ahead in case we ever have issues with the eda.org domain, where we store most of our files.

NEW ISSUES

None.

IBISCHK5 PARSER STATUS

Michael Mirmak reported that we have been in constant contact with the parser developer. Most issues have been settled with treatment of new keywords. The main stumbling block to finishing the parse is related to checking of AMI related keywords. Due to ambiguities in the specification, parsing of all AMI rules at this time is not possible, so the parser will parse the AMI file to check for parenthesis matching and spelling checks but not the complicated data structures. The specification will need to be clarified before the parser can be made more robust. Beta code is close to being issued as final code.

Bob Ross and Walter Katz clarified that the spelling checks will be of reserved parameter names including terms such as 'Type' and 'Usage' for example. Walter noted that 'Format' is the only issue up for discussion. If Format is given, you could check that a specific format is specified and followed by the proper number of values. You could not check combinations of Format and Default and which specific Formats are allowed. Michael noted it might make sense to talk with the developer about which rules make the most sense to parse at this time. Arpad Muranyi asked if everything associated with AMI except Format and Default could be checked. Michael responded that from a technical perspective, yes. As Bob mentioned, we have a dilemma. If we aren't parsing certain rules, we establish a hierarchy of importance to rules. Arpad felt you could issue a note that certain rules aren't checked due to inconsistencies in the specification. Michael wondered if this satisfied the requirements of the parser, and do you know if a model works or not after using the parser. You'll see tool specific solutions until IBIS 5.1 cleans it up. Mike LaBonte is ok with a partial check on AMI files. Walter noted that it is ok for a model to have either Format or Default to assign values.

Bob would like to see a solution that is useful for industry. Arpad proposed formulating a BIRD before the next ATM meeting to clarify the language and have the parser follow the BIRD. Bob felt that this process would be too slow. He added that we need to commit to a development path. We can do something now. He favors implementing what we have as checks and relaxing some checks, treating Default and Format as optional at this point. Arpad felt this would be implementing a hidden specification. Walter proposed a vote in the ATM meeting to have all agreed that you could have Default and/or Format, but not neither in the model. Bob decided that the parser review committee will make a decision on this and close it out. Walter plans to submit a BIRD for informational purposes to the parser review and ATM committees.

IBISCHK4 BUG STATUS

Bob Ross reported that several open BUGs are pending for future work. There is a possibility that he will submit a BUG related to S_overshoot_high and S_overshoot_low. Their use within [Model Spec] for 3-state or Output models reports an error, and this is not correct.

The BUG report list is available at the link below:

<http://www.eda.org/ibis/bugs/ibischk/>

ICMCHK1 BUG STATUS

All BUGs have been closed. No new BUGs have been filed.

TOUCHSTONE 2.0 STATUS

Bob Ross reported that the tschk parser developer has been selected, but the final contract has not been signed yet. Legal departments are reviewing the final documentation. Hopefully work will be in progress by the next meeting.

NEW ISSUES

None.

NEXT MEETING

The next IBIS Open Forum teleconference will be held September 18, 2009 from 8:00 to 10:00 AM US Pacific Standard Time.

NOTES

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This meeting was conducted in accordance with the GEIA Legal Guides and GEIA 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 EIA-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. The BUG Report Form resides along with reported BUGs at:

<http://www.eda.org/ibis/bugs/ibischk/>

<http://www.eda.org/ibis/bugs/ibischk/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.eigroup.org/ibis/ibis.htm>

Check the IBIS file directory on eda.org for more information on previous discussions and results:

<http://www.eda.org/ibis/directory.html>

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IBIS CURRENT MEMBER VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	July 17, 2009	July 28, 2009	August 7, 2009	August 28, 2009
Actel	Producer	Inactive				
Advanced Micro Devices	Producer	Inactive				√
Agilent Technologies	User	Inactive		√		
Ansoft	User	Inactive				
Apple Computer	User	Inactive				
Applied Simulation Technology	User	Inactive				
ARM	Producer	Inactive				
Cadence Design Systems	User	Inactive				√
Cisco Systems	User	Active	√	√	√	√
Ericsson	Producer	Active		√	√	√
Green Streak Programs	General Interest	Inactive		√		
Hitachi ULSI Systems	Producer	Inactive				
IBM	Producer	Inactive			√	
Infineon Technologies AG	Producer	Inactive				
Intel Corp.	Producer	Active	√	√		√
IO Methodology	User	Active	√	√	√	√
LSI	Producer	Active	√		√	
Mentor Graphics	User	Active	√	√	√	√
Micron Technology	Producer	Active			√	√
Nokia Siemens Networks	Producer	Active	√		√	√
Samtec	Producer	Inactive				
Signal Integrity Software	User	Active	√	√	√	√
Sigrity	User	Inactive		√		
Synopsys	User	Inactive				
Teraspeed Consulting	General Interest	Active	√	√	√	√
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 GEIA BALLOT VOTING ARE:

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- 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.