

EIA IBIS Open Forum Minutes

Meeting Date: **May 11, 2007**

GEIA STANDARDS BALLOT VOTING STATUS

See last page of the minutes for the voting status of all member companies.

VOTING MEMBERS AND 2007 PARTICIPANTS

Actel	(Prabhu Mohan)
Agere	(Nirav Patel)
Agilent	Radek Biernacki, Saliou Dieye, Riccardo Giacometti
AMD	Nam Nguyen*, Tadashi Arai
Ansoft Corporation	(Michael Brenneman)
Apache Design Solutions	(Ji Zheng)
Applied Simulation Technology	(Fred Balistreri)
Apple Computer	(Bill Cornelius)
Cadence Design Systems	[Lance Wang], C. Kumar, Hemant Shah, Patrick dos Santos
Cisco Systems	Syed Huq*, Tram Bui, AbdulRahman Rafiq, Huyen Pham, Darja Padilla, Mike LaBonte*, Paul Ruddy, Gurpreet Hundal, Luis Boluna, Ehsan Kabir, Jehyoung Lee, Susmita Mutsuddy, Eddie Wu
Ericsson	Anders Ekholm*, Ole Segtum
Fluent	(Chetan Desai)
Freescale	Jon Burnett
Green Streak Programs	Lynne Green
Hitachi ULSI Systems	Kazuyoshi Shoji
Huawei Technologies	ChunXing Huang, Bob He
Integrated Circuit Systems (ICS)	(Dan Clementi)
Intel Corporation	Michael Mirmak*, Arpad Muranyi*
LSI Logic	Frank Gasparik, Kim Helliwell, Dinh Tran, Praveen Soora
Mentor Graphics	John Angulo*, [Ian Dodd], Eric Rongere, Stephane Rousseau
Micron Technology	Randy Wolff*, Pavani Jella
NEC Electronics Corporation	Hock Seow, Huy Tran
Nokia Siemens Networks GmbH[1]	Eckhard Lenski*, Flavio Maggioni, Roberto Preatoni, Umberto Gatti, Massimo Ceppi
Panasonic	(Atsuji Ito)
Samtec	(Corey Kimble)
Siemens AG [1]	[Eckhard Lenski], Manfred Maurer
Signal Integrity Software	Barry Katz, Douglas Burns, Mike Steinberger, Walter Katz, Todd Westerhoff

Sigrity	Sam Chitwood, Sandy Dung
Silego	(Joe Froniewski)
STMicroelectronics	Antonio Girardi*, Giacomo Bernardi*, Roberto Izzi*
Synopsys	Ted Mido
Teraspeed Consulting Group	Bob Ross*, Tom Dagostino
Texas Instruments	Otis Gorley, Richard Ward, Bonnie Baker
Toshiba	(Yasumasa Kondo)
Xilinx	Bruce Bandeli, David Banas
ZTE	(Shunlin Zhu)
Zuken	Michael Schaefer, Ralf Bruening

[1] Nokia Siemens Networks is a new company formed by the merger with a former group at Siemens active with the IBIS Committee. Both companies are temporarily carried as voting members until the official membership and voting status is resolved.

OTHER PARTICIPANTS IN 2007

74ze Engineering	Linc Jepson
Altera	Hui Liu, Zhe Lin, Ravindra Gali, Salman Jiva
Applied Telisis, Inc. (ATI)	Vladimar Mandrusov
Cavium Networks	Johann Nittmann
ChipX	Jay Hidy, Oren Dvir
Cybernet Systems	Kazuhiki Kusunoki
EFM	Ekkehard Miersch
Enterasys	Robert Haller
Extreme Networks	Kevin Ko
Force10 Networks	Robert Badal
GEIA	(Chris Denham)
Hewlett Packard	Shafiq Rahman
IBM	Michael Sorna, Adge Hawes
Infineon	Christian Sporrer
Leventhal Design	Roy Leventhal
Lynguent	Andrew Levy
National Institute of Applied Science (INSA)	Etienne Sicard
National Instruments	Lee Maixman
Netlogic	Eric Hsu
NESA	Edward Sayre
Nuova Systems	Zhiping Yang, Lin Shen
NXP	H N Sudarshan
Optimal Corporation	Marc Kowalski
Politecnico di Torino	Igor Stievano, Michelangelo Bandinu
Renesas Technology	Takuji Komeda
Samsung	Sang-Soo Park
Sedona International	Joe Socha
Sun Microelectronics	Leon Yang

Tiburon Design Automation
White Electronics Designs
Xyratex

Patirick Challacn
John Perez
Paul Levin, Joseph Chan

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	Telephone Number	Bridge #	Passcode
June 1, 2007	1-916-356-2663	3	731-4803
June 5, 2007	IBIS Summit, San Diego, CA - no phone bridge		

All 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, provide the bridge number and passcode at the automated prompts. If asked by an operator, please request to join the IBIS Open Forum hosted by Michael Mirmak. For international dial-in numbers, please contact Michael Mirmak.

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 Version 3.2, 4.0, 4.1, 4.2, or ICM 1.1 specifications. No patents were declared.

MEMBERSHIP UPDATE AND TREASURER'S REPORT

Michael Mirmak reported that there are no significant changes for 2007 to report. He received an update for the end of 2006 from GEIA, and we came in under budget. The extra revenue disappeared at the end of the year due to GEIA rules. It looks like we are on budget for this year. Bob Ross expressed concern that 2006 ended with so much extra income, so he asked that the financials be looked at in more detail.

REVIEW OF MINUTES AND ARS

Michael Mirmak reviewed the minutes of the April 19, 2007 IBIS Open Forum summit at DATE and the April 20, 2007 IBIS Open Forum teleconference. Randy Wolff explained that the April 20 minutes were uploaded with the incorrect attendance list, but this was fixed right away on the

website. The minutes were approved with no changes.

WEB PAGE UPDATES

Syed Huq reported that the events page was updated recently.

MAILING LIST ADMINISTRATION

Bob Ross reported that the list is running normally. Michael Mirmak mentioned that he had seen many signups recently. Bob said the list holds steady around 400 members.

NEW MODELS AVAILABLE, LIBRARY UPDATE

No update.

PRESS UPDATE

None.

MISCELLANY/ANNOUNCEMENTS

None.

OPENS FOR NEW ISSUES

Syed Huq asked that there be a brief discussion about encryption during the technical discussion. Bob Ross asked that we discuss any update related to Siemens versus Nokia Siemens memberships.

INTERNATIONAL/EXTERNAL PROGRESS

Several upcoming conferences of interest to IBIS members include:

SSP, the IEEE Statistical Signal Processing Workshop held August 26-29, 2007 in Madison, WI. The deadline for paper submissions has passed. More information can be found at:

<http://ssp07.org/>

SPI, the IEEE Workshop on Signal Propagation on Interconnects held May 13-16, 2007 in Genoa, Italy. The deadline for paper submissions has passed. More information can be found at:

<http://www.spi.uni-hannover.de/>

IMS 2007, the IEEE MTT-S International Microwave Symposium held June 3-7, 2007 in Honolulu, Hawaii. The paper deadline has passed. More information can be found at:

<http://www.ims2007.org/>

EMC 2007, the IEEE International Symposium on Electromagnetic Compatibility held July 8-13, 2007 in Honolulu, Hawaii. More information can be found at:

<http://www.emc2007.org/index.htm>

IEC APPROVAL ACTIVITIES

Randy Wolff mentioned that he needs to contact GEIA to find out if they have any information on how to submit the ANSI/EIA-656-B standard for IEC approval. Michael Mirmak said that the US representative to the IEC is Alex Zamfirescu, and he will talk with him at another meeting soon.

SUMMITS

- DAC

DAC is being held June 4-8, 2007 in San Diego, California. Tuesday, June 5 is scheduled for the summit. There will be an all-day summit. John Angulo has a confirmed room, Gallery A/B. John said that we may not have to pay anything for the room. Michael Mirmak mentioned that the officers' elections will take place at the DAC summit. If anyone is interested, please email the IBIS officers. Syed Huq is the contact for signing up for the meeting.

- Asia Events

Two events are planned for Tokyo and Beijing in September. Tuesday, September 11 will be the China meeting in Beijing. The Park Plaza Science Park hotel is reserved. Friday, September 14 will be the Tokyo meeting at JEITA headquarters. Michael Mirmak mentioned the needs to send out an additional announcement. The planners also need to discuss other logistics such as a projector. Bob Ross is the main contact for signing up for the Japan meeting, and Bob and Lance Wang are contacts for signing up for the China summit. Official sponsors so far of the China summit are Huawei Technologies, Ansoft, Cadence, Intel, Mentor Graphics, Sigrity, SiSoft, Synopsys and ZTE Corporation. The official sponsor of the Japan summit is JEITA with others to be determined.

Sponsorship opportunities for the DAC and Asian 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 is reviewing and updating the specification. They are dealing with checks on differential pins lately and also discussing [Receiver Thresholds]. Michael Mirmak mentioned that he received a question from a member company about the difficulty of integrating the parser (ibischk) into EDA tools. Michael asked if the quality committee would like to discuss this. Mike LaBonte felt this would be better discussed in the Open Forum teleconference. Michael confirmed that he was more interested in having a repository for questions and suggestions related to the parser, and Mike LaBonte felt that the

Quality committee site might be good for that.

The link to the quality task group checklist is at:

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

IBIS MODEL REVIEW TASK GROUP

No report.

ADVANCED TECHNOLOGY MODELING TASK GROUP

Arpad Muranyi reported that the group is working on the first draft of a proposal. The text of the BIRD has been posted to the website. Arpad and Bob Ross detailed some of the parameter definitions in the BIRD and how these relate to C coding. Also, it was mentioned that the BIRD text would be incorporated into a new section after the data derivation section in the IBIS specification.

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 going over the Touchstone 2 document and how changes from IIRD9 will change referencing of S-parameter files. The work on Touchstone 2 is nearly done and will be submitted soon to the Open Forum. The group will tackle linking of IBIS and ICM after other work on Touchstone 2 and IIRD9 is completed.

Task group material can be found at:

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

NEW ISSUES

Bob Ross asked if Eckhard Lenski had an update on Siemens and Nokia Siemens membership status. Eckhard said that he would like to become a member, but he will not be able to approach this subject with management until later in the summer.

Michael Mirmak discussed the need to work on a charter, and we may have a discussion in an upcoming Open Forum teleconference.

Arpad Muranyi mentioned that he was thinking about using a VOIP setup to reduce costs for overseas phone calls for some members. This may be a way to attract more attendance as well. Michael requested Arpad to check into the details and poll overseas members for interest.

IBISCHK4 BUG STATUS

Bob Ross reported that ibischk4.2.1 was released. They are still issuing executables. Michael Mirmak mentioned that we have a late version Red Hat version from Syed Huq, but we may need an early version. Bob mentioned that we have seen some BUGs. BUG95 is being issued, because the parser is now issuing warning messages related to correct differential configurations. Also, the parser lost some information of line numbers in the notes related to non-monotonic warnings in I-V tables. Bob Ross thinks we need to do a 4.2.2 parser quickly. Bob will need to write a BUG96 related to the line-numbering issue. These issues can be resolved by the developer under the current contract. BUG95 was classified as moderate severity, high priority, and open, to be fixed.

ICMCHK1 BUG STATUS

Michael Mirmak mentioned that BUG4 is pending with no timeline for fixing it.

BIRD98.1: GATE MODULATION EFFECT (TABLE MODEL)

Arpad Muranyi said that he was wondering if it needs to be reorganized so that some text of usage rules will not go into the specification. Bob Ross summarized the comments he made during the last meeting concerning pullup table related data being shown as VDD relative. Michael Mirmak was concerned about referencing in the tables and whether they relate to a solid reference or a reference that could be noisy, such as in measurements. Bob said that it is purely a formatting issue, and one must assume that the data is taken in steady state conditions. Michael asked that BIRD98.2 be worked on and submitted soon for consideration and voting.

NEW TECHNICAL ISSUES

Syed Huq began a discussion about encryption. Cisco is working with five major vendors to get VHDL and Verilog-AMS models. The vendors are sending them compiled code, but they asked about any methods of encryption. Michael Mirmak said that in the Verilog and VHDL digital languages, there is an encryption scheme that is under consideration for putting in the specifications. However this is only related to the digital versions currently. Michael will be attending a meeting next week where he can raise the encryption issue. Bob favored endorsing whatever concept is in the Verilog and VHDL working groups. Arpad confirmed that we need to encourage the AMS working groups to adopt the work of the digital working groups. Michael and Arpad took the AR to contact the AMS working groups. Michael suggested that Syed contact the tool vendors in the short term to see what they can support. Bob stressed the importance of having a standard so that encryption is supported the same way in all tools for compatibility.

OPEN ISSUES

None.

NEXT MEETING

The next IBIS Open Forum teleconference will be held June 1, 2007 from 8:00am to 10:00am

US Pacific Time. The next Open Forum Summit meeting at DAC will be held June 5, 2007.

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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-stds.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-stds.org

To join, change, or drop from either or both:
IBIS Open Forum Reflector (ibis@eda-stds.org)
IBIS Users' Group Reflector (ibis-users@eda-stds.org)
State your request.

ibis-info@eda-stds.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-stds.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-stds.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-stds.org

To report ibischk parser BUGs. The BUG Report Form resides along with reported BUGs at:

<http://www.eda-stds.org/ibis/bugs/ibischk/>
<http://www.eda-stds.org/ibis/bugs/ibischk/bugform.txt>

icm-bug@eda-stds.org

To report icmchk1 parser BUGs. The BUG Report Form resides along with reported BUGs at:

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

http://www.eda-stds.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-stds.org/ibis/bugs/s2ibis/bugs2i.txt>

<http://www.eda-stds.org/ibis/bugs/s2ibis2/bugs2i2.txt>

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

All eda.org documents can be accessed using a mirror:

<http://www.ibis-information.org>

Note that the "/ibis" text should be removed from directory names when this URL mirror is used.

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

GEIA STANDARDS BALLOT VOTING STATUS

I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	March 30, 2007	April 19, 2007	April 20, 2007	May 11, 2007
Advanced Micro Devices	Producer	Active	√		√	√
Agere Systems	User	Inactive				
Agilent Technologies	User	Inactive		√		
Ansoft	User	Inactive				
Apache Design Solutions	User	Inactive				
Apple Computer	User	Inactive				
Applied Simulation Technology	User	Inactive				
Cadence Design Systems	User	Inactive	√	√		
Cisco Systems	User	Active	√		√	√
Ericsson	Producer	Active	√	√	√	√
Fluent	Producer	Inactive		√		
Freescale Semiconductor	Producer	Inactive				
Green Streak Programs	General Interest	Inactive				
Hitachi ULSI Systems	Producer	Inactive		√		
Huawei Technologies	User	Inactive				
Integrated Circuit Systems	Producer	Inactive				
Intel Corp.	Producer	Active	√		√	√
LSI Logic	Producer	Inactive				
Mentor Graphics	User	Active	√	√	√	√
Micron Technology	Producer	Active	√		√	√
NEC Electronics Corp.	Producer	Inactive				
Nokia Siemens Networks	Producer	Active		√	√	√
Panasonic	Producer	Inactive				
Samtec	Producer	Inactive				
Siemens AG	Producer	Inactive	√	√		
Signal Integrity Software	User	Inactive				
Sigrity	User	Inactive				
Silego	Producer	Inactive				
STMicroelectronics	Producer	Active	√	√	√	√
Synopsys	User	Inactive				
Teraspeed Consulting	General Interest	Active	√		√	√
Texas Instruments	Producer	Inactive				
Toshiba	Producer	Inactive				
Xilinx	Producer	Inactive				
ZTE	User	Inactive				
Zuken GmbH	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:

- 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.