

EIA IBIS Open Forum Minutes

Meeting Date: **June 1, 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
IO Methodology	Lance Wang*
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
Tiburon Design Automation
White Electronics Designs
Xyratex

Leon Yang
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 5, 2007	IBIS Summit, San Diego, CA - no phone bridge		
June 22, 2007	1-916-356-2663	3	673-0535

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 GEIA has sent updates recently. There is no significant change to membership or treasurer reports from the last meeting. Membership is trending as expected. Michael reminded people to contact him for membership questions and renewal information. He also reminded participants that after the DAC meetings, non-renewed members will be dropped from the membership rolls and be considered an "other participant" until their membership is renewed.

REVIEW OF MINUTES AND ARS

Michael Mirmak reviewed the minutes of the May 11, 2007 IBIS Open Forum teleconference.

The minutes were approved with no changes.

WEB PAGE UPDATES

No report.

MAILING LIST ADMINISTRATION

Bob Ross reported that the list is running normally, but he is checking into an issue with majordomo bouncing messages right now.

NEW MODELS AVAILABLE, LIBRARY UPDATE

Lance Wang recently checked into links, and updates will be posted shortly. He is also in the process of checking that all company names are correctly listed.

PRESS UPDATE

None.

MISCELLANY/ANNOUNCEMENTS

None.

OPENS FOR NEW ISSUES

Syed Huq requested a discussion on encryption. Bob Ross requested a discussion of BUG96 and BUG97.

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/>

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 had no update. Michael Mirmak dropped a note to Alex Zamfirescu about IEC approval, but he has not gotten a response yet. Michael noted that there is a conflict of the DASC committee meeting and the IBIS meeting at DAC. Bob Ross suggested we try to have lunch with some of the DASC members.

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. The agenda has been published. There is a full slate of presentations. The meeting starts at 8:30am. There will be elections of officers at the meeting as well. John Angulo mentioned he will bring a projector. John confirmed that we have a room reservation.

- 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. 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. The official sponsor of the Japan summit is JEITA with others to be determined. Michael Mirmak mentioned that the first call for papers for the China Summit will go out next week. Agilent Technologies has been added as a co-sponsor of the China Summit. Other official sponsors so far of the China summit are Huawei Technologies, Ansoft, Cadence, Intel, Mentor Graphics, Sigrity, SiSoft, Synopsys and ZTE Corporation. Bob mentioned that deadlines for the China meeting are about a month earlier than for the Japan meeting.

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 in the process of reviewing the checks within the 1.1 version of the Quality specification. At the last meeting, they discussed [Receiver Thresholds]. The group is meeting on a weekly basis, and they will have a detailed summary of progress at the DAC meeting.

The link to the quality task group checklist is at:

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

IBIS MODEL REVIEW TASK GROUP

Lynne reported that she hasn't had any models for review recently. Michael Mirmak said that

he would advertise this service at the DAC meeting.

ADVANCED TECHNOLOGY MODELING TASK GROUP

Michael Mirmak reported that the group is reviewing the algorithmic modeling proposal including a draft BIRD. Todd Westerhoff will give a presentation of recent progress at the DAC meeting.

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. A draft of the Touchstone2 document will be distributed at DAC. He would like to start the formal document review at the next IBIS Open Forum teleconference.

Task group material including the Touchstone2 draft specification can be found at:

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

NEW ISSUES

None.

BIRD98.1: GATE MODULATION EFFECT (TABLE MODEL)

Roberto Izzi had no update. He is waiting for some editorial changes from Bob Ross before submitting BIRD98.2 for review. Bob Ross mentioned that he has some work to do to convert the data tables to VDD-relative format.

IBISCHK4 BUG STATUS

Bob Ross submitted BUG96 and BUG97. BUG96 relates to an issue with the ibischk4.2.1 not issuing line numbers related to non-monotonicities in the I-V tables. BUG97 relates to ibischk4.2.1 not issuing as many combined notes and warnings as were previously issued as warnings in older versions of the parser. BUG96 was classified as moderate severity, low priority, and open. Mike LaBonte mentioned that it would be nice to see voltage points or voltage ranges related to non-monotonicities in combined I-V tables. Bob described the complexity of this when combining as many as 5 tables together. BUG97 was classified as annoying severity, low priority, and open. Bob mentioned that Atul Agarwal has agreed to fix these BUGs in a 4.2.2 release of the parser in about one week.

Michael reported receiving a one page document from Agilent detailing issues with integrating the parser into other executable code. Michael plans to post the page and use this as recommendations for future parser development. Lance Wang agreed with many of Agilent's

conclusions and felt that more documentation such as this is very useful. Lynne Green also mentioned that users of the parser code (command line usage) should be considered, because they may have different needs than those who are integrating the parser into larger software suites.

ICMCHK1 BUG STATUS

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

NEW TECHNICAL ISSUES

Syed Huq asked for an update on progress with encryption. Arpad Muranyi said that the digital parts of the VHDL and Verilog languages are where encryption will be made available, but the AMS working groups do not know when a release supporting encryption will happen. John Angulo said that SI software tools get their AMS engines from the groups writing code for IC tools, so there is a definite time lag in waiting for the IC tool groups to integrate encryption. John said that on a case-by-case basis, one may have to use a proprietary encryption workaround until the specifications are finalized and implemented. Arpad expressed concern that our impact on affecting these specifications is minimal, and we may need to establish a larger presence in the working groups. Michael Mirmak said that he has attended a meeting before, and he suggested that he attend more meetings to make an official presentation of IBIS needs from the AMS working groups. Bob Ross suggested that we looking into more companies joining these working groups to have voting status and have some control over these issues. Michael said he will look into meeting with some folks from DASC group in person at the IBIS meeting to chat about needs, and long term, look into joining these groups.

OPEN ISSUES

None.

NEXT MEETING

The next Open Forum Summit meeting at DAC will be held June 5, 2007. The next IBIS Open Forum teleconference will be held June 22, 2007 from 8:00am to 10:00am US Pacific Time.

NOTES

IBIS CHAIR: Michael Mirmak (916) 356-4261, Fax: (916) 377-3788

michael.mirmak@intel.com

Server Platform Technical Marketing Engineer, Intel Corporation

FM5-239

1900 Prairie City Rd.

Folsom, CA 95630

VICE CHAIR: Syed Huq (408) 525-3399, Fax: (408) 526-5504

shuq@cisco.com

Manager, Hardware Engineering, Cisco Systems
170 West Tasman Drive
San Jose, CA 95134-1706

SECRETARY: Randy Wolff (208) 363-1764, Fax: (208) 368-3475

rrwolff@micron.com

SI Modeling Manager, Micron Technology, Inc.
8000 S. Federal Way
Mail Stop: 01-711
Boise, ID 83707-0006

LIBRARIAN: Lance Wang (978) 633-3388

lwang@iometh.com

President / CEO, IO Methodology, Inc.
PO Box 2099
Acton, MA 01720

WEBMASTER: Syed Huq (408) 525-3399, Fax: (408) 526-5504

shuq@cisco.com

Manager, Hardware Engineering, Cisco Systems
170 West Tasman Drive
San Jose, CA 95134-1706

POSTMASTER: Bob Ross (503) 246-8048, Fax : (503) 239-4400

bob@teraspeed.com

Staff Scientist, Teraspeed Consulting Group
10238 SW Lancaster Road
Portland, OR 97219

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	April 19, 2007	April 20, 2007	May 11, 2007	June 1, 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.