

# EIA IBIS Open Forum Minutes

Meeting Date: **June 27, 2008**

## GEIA STANDARDS BALLOT VOTING STATUS

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

## VOTING MEMBERS AND 2008 PARTICIPANTS

Agilent	Sanjeev Gupta, Radek Biernacki, Amolak Badesha Fangyi Rao, [Ian Dodd], Yutao Hu, Vuk Borich Nobutaka Arai, Ludwig Eichinger
AMD	Nam Nguyen
Ansoft Corporation	Steve Pytel, Ricardo Teliuteuesh, Dan Dvorscak
Apple Computer	(Bill Cornelius)
Applied Simulation Technology	(Fred Balistreri)
ARM	(Nirav Patel)
Cadence Design Systems	Terry Jernberg, Hemant Shah, Ambrish Varma [C. Kumar], Brad Griffin*, Zhen Mu
Cisco Systems	Syed Huq*, Mike LaBonte, AbdulRahman (Abbey) Rafiq Huyen Pham, Emily Yao, Susmita Mutsuddy John Fisher, Paul Ruddy, Jun Li, Jianmin Zhang Luis Boluna, Kelvin Qiu, Jane Lim, Ilyoung Park Rick Brooks, Chris Padilla, Ehsan Kabir
Ericsson	Anders Ekholm*
Green Streak Programs	Lynne Green
Hitachi ULSI Systems	Kazuyoshi Shoji
Huawei Technologies	Tao Guan*, Xiaoqing Dong
IBM	Adge Hawes*
Infineon Technologies AG	Christian Sporrer
Intel Corporation	Michael Mirmak*, Rich Mellitz, Wei-hsing Huang Vishram Pandit
LSI	[Frank Gasparik], Brian Burdick*, [Kim Helliwell]
Marvell Semiconductor	(Itzik Peleg)
Mentor Graphics	Arpad Muranyi*, John Angulo
Micron Technology	Randy Wolff
Nokia Siemens Networks GmbH	Eckhard Lenski*, Klaus Huebner, Katja Koller
Samtec	Jim Nadolny, Justin McCalister
Signal Integrity Software	Mike Steinberger, Walter Katz, Todd Westerhoff* Doug Burns, Mike Mayer, Barry Katz
Sigrity	Sam Chitwood*, Brad Brim, Ben Franklin Kristopher Stytt, Raymond Chen*
Synopsys	Ted Mido
Teraspeed Consulting Group	Bob Ross*, Tom Dagostino, Al Neves
Texas Instruments	Richard Ward

Toshiba  
Xilinx

ZTE

Yasumasa Kondo, Noriyasu Yoshikawa  
David Banas, Ajay Shah, Suzanne Yiu  
Mustansir Fanaswalla  
(Ying Xiong)

#### **OTHER PARTICIPANTS IN 2008**

Aeroflex Metelics  
Aica Kogyo  
Altera  
Avago Technologies  
Bayside Design  
Celestica  
ECL Advantage  
EFM  
Elma Bustronic  
Exar  
Flextronics  
Freescale  
GEIA  
Golden Bridge Networks  
ICT Solutions  
Interface Technologies  
IO Methodology  
JEITA  
Magma DA  
NEC  
NetLogic Microsystems  
North Carolina State University  
Nokia  
Nuova Systems  
Prentice Hall  
Physware  
Politecnio di Torino  
Qimonda AG  
Siemens AG  
Simberian  
SimLab Software GmbH  
Tektronix  
TietoEnator GmbH  
Tyco Electronics  
Vertical Circuits  
Xsigo Systems  
Zuken  
Independent

David Nguyen  
Akihiro Tanaka  
Ravindra Gali, Jing Wu, John Oh, Hui Fu  
Minh Quach, Sari Tocco  
Elliot Nahas, Kevin Roselle  
Ihsan Erdin  
Thomas Iddings  
Ekkehard Miersch  
Michael Munroe  
Helen Nguyen  
Hasnain Syed  
Jon Burnett  
(Chris Denham)  
Saman Sadigh  
Steven Wong  
Dan Waterloo  
Lance Wang\*, Zhi (Benny) Yan, Li (Kathy) Chen  
Atsushi Ishikawa  
Anand Ramalingam  
Takeshi Watanabe  
Eric Hsu  
Paul Franzon  
Ali Arsian  
Zhiping Yang  
Bernard Goodwin  
Marc Kowalski  
Igor Stievano  
Md Morshed Alam Heial, Suhas Jawale  
Manfred Maurer, Annika Woehner  
Yuriy Shlepnev  
Heiko Grubrich  
Steve Corey  
Heinz-Hartmut Ibowski  
Chad Morgan  
Mark Egbers  
Robert Bada  
Michael Schaedler, Ralf Bruening  
Guy de Burgh, Ardy Forouhar, Dave Galloi

Kazuhiko Kusunoki

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	Meeting ID
July 18, 2008	1-866-432-9903	121414960

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, press 1 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](http://www.cisco.com/web/about/doing_business/conferencing/index.html)

NOTE: "AR" = Action Required.

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## **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 as of the latest update from GEIA (ITAA), we have 29 members paid. A small number of additional renewals are expected. The roster and membership listed in the minutes have been updated to reflect the current membership. We have not yet received an updated financials report, but revenues include the 29 membership payments and one IBISCHK4 parser payment.

## **REVIEW OF MINUTES AND ARS**

Michael Mirmak called for comments regarding the minutes of the June 6, 2008 IBIS Open Forum teleconference. The minutes were approved without changes. The Summit minutes from June 10 will be reviewed at the next meeting.

## **WEB PAGE UPDATES**

Syed Huq noted that the eigroup.org page was updated with a direct link to the IBIS Cookbook, per a request during the recent IBIS Summit.

## **MAILING LIST ADMINISTRATION**

Bob Ross reported that everything is working normally.

## **MODEL LIBRARY UPDATE**

Lance Wang reported no changes.

## **PRESS UPDATE**

No update.

## **MISCELLANY/ANNOUNCEMENTS**

No update.

## **OPENS FOR NEW ISSUES**

Michael Mirmak reviewed data on US IBIS Summit attendance, as compared with overall IBIS membership. The data indicates a consistently higher individual attendance at DesignCon summits than at DAC. Arpad Muranyi repeated a question he asked at the DAC IBIS Summit, namely whether elections should be held at the event most likely to attract the most members. Syed Huq and Bob Ross suggested that member organizations in attendance, and not just individual summit attendance, be shown in the spreadsheets. Bob Ross added that DAC tends to be directed more to marketing than to the technical discussions held at DesignCon. Todd Westerhoff agreed, noting that DesignCon is "much closer" to the IBIS target audience than DAC. Michael observed that the IBIS Charter may include specific language regarding holding the elections at DAC. This discussion topic will continue at future meetings. The membership and summit attendance spreadsheet will be posted to the website, after the updates are complete.

## **INTERNATIONAL/EXTERNAL PROGRESS**

### **- DASC**

Michael Mirmak noted that the DASC met one day earlier than the IBIS teleconference, and a detailed presentation on IEEE standards group policies and procedures was reviewed during the meeting. He suggested all those interested in IEEE standards operation view the slides. The DASC file and e-mail archive may be found at:

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

### **- P1735 Encryption**

Syed Huq noted that encryption e-mail reflector activity has been high in recent weeks. The IEEE DASC Study Group on Encryption web reflector archives may be found at:

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

## **IEC APPROVAL ACTIVITIES**

No update.

## **SUMMIT STATUS**

### **- DAC Review**

Michael Mirmak summarized the events at the DAC IBIS Summit. The event was held Tuesday, June 10. Overall, 26 people from 19 organization attended and the overall level of technical presentations and discussion was very high. Elections went smoothly and results were included in the Summit minutes. Michael thanked the co-sponsors, the IBIS Open Forum members and Mentor Graphics for their assistance.

### **- Asian Summits Planning**

Bob Ross noted that the Shanghai and Tokyo IBIS Summits have been tentatively scheduled for November 11 and November 14, respectively. The location for the Shanghai summit is still under discussion. A Taipei summit is still possible and, if finalized, would take place in the same timeframe.

Bob Ross added that the next DAC summit is scheduled for late July in San Francisco.

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**

Bob Ross and Anders Ekholm reported that the group has recently been discussing S-overshoot and S-undershoot. The Optional keyword is also under discussion, but without resolution.

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

[http://www.eda-stds.org/ibis/quality\\_wip/](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 continues to review the EMD proposal by Walter Katz,

with a focus on whether interconnects can be considered always LTI (linear and time-invariant).

Task group material can be found at:

[http://www.eda-stds.org/ibis/macromodel\\_wip/](http://www.eda-stds.org/ibis/macromodel_wip/)

### **AD HOC TASK GROUPS (INTERCONNECT)**

Michael Mirmak reported that the group continues to discuss mixed-mode support in Touchstone 2.0 and is nearly finished developing the informal rules for mixed-mode matrices. Once the informal rules are agreed, the formal syntax will be written into the draft specification.

Task group material can be found at:

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

### **NEW ISSUES**

None.

### **BIRD110: FIXING ALGORITHMIC MODELING API IMPULSE\_MATRIX NOMENCLATURE**

Bob Ross introduced the BIRD. It is a simple correction to the original IBIS AMI text, to actually define the acronym 'AMI' in the title of the relevant specification section. This does not change any technical content of any AMI BIRD; it is only an editorial change. Michael Mirmak suggested a spacing correction to the BIRD text, involving a closing parenthesis. Bob accepted the suggested change. A vote on the BIRD will be scheduled for the next meeting.

### **IBIS 5.0 DRAFT REVIEW**

Michel Mirmak issued a call for comments regarding the draft document. Bob Ross noted that all current BIRDS are slated for inclusion in IBIS 5.0, including BIRD110 if approved. An IBIS 5.0 draft, revision C, is available on-line and a revision D will be prepared with additional corrections plus the contents of BIRD110, assuming that it will be approved. Based on the current schedule, calls for comments on revision D, if no other changes are added, would enable a final vote on IBIS 5.0 on August 29. Michael Mirmak asked about preparing a non-ASCII version of the specification, updating the drawings. Bob Ross agreed, clarifying that such a version could not make any changes to the document other than to bring the overall format into line with other national and international standards and to put the drawings into a more readable format. This effort will proceed in parallel with IBIS 5.0 development and should not slow down the approval process.

The text of the draft specifications is available at the following link:

[http://www.eda.org/pub/ibis/ver5.0\\_wip/](http://www.eda.org/pub/ibis/ver5.0_wip/)

## **IBISCHK4 BUG STATUS**

No update.

The BUG report list is available at the link below:

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

## **ICMCHK1 BUG STATUS**

Michael Mirmak noted that no new ICM BUG reports have been filed, but that the most recent report, regarding problems reading S-parameter files with extensions of the form '.snp', where n is an integer greater than 10, has been raised repeatedly in recent Task Group meetings. The BUG has previously been deferred until more IIRDs were approved. However, due to the increased interest, Michael will check the source code to see if a fix can be issued more quickly.

## **NEW TECHNICAL ISSUES**

None.

## **NEXT MEETING**

The next IBIS Open Forum teleconference will be held July 18, 2008 from 8:00 AM to 10:00 AM US Pacific Time. A vote is scheduled for BIRD110. A vote on IBIS 5.0 will tentatively be held on August 29.

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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.org](mailto: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](mailto:ibis-request@eda.org)

To join, change, or drop from either or both:

IBIS Open Forum Reflector ([ibis@eda.org](mailto:ibis@eda.org))

IBIS Users' Group Reflector ([ibis-users@eda.org](mailto:ibis-users@eda.org))

State your request.

[ibis-info@eda.org](mailto: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](mailto: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](mailto: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](mailto: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](mailto: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/)  
[http://www.eda.org/ibis/icm\\_bugs/icm\\_bugform.txt](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>

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.

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## GEIA STANDARDS BALLOT VOTING STATUS

### I/O Buffer Information Specification Committee (IBIS)

Organization	Interest Category	Standards Ballot Voting Status	May 16, 2008	June 6, 2008	June 10, 2008	June 27, 2008
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	Active		√		√
Cisco Systems	User	Active		√	√	√
Ericsson	Producer	Active	√	√		√
Green Streak Programs	General Interest	Inactive			√	
Hitachi ULSI Systems	Producer	Inactive			√	
Huawei	User	Inactive	√			√
IBM	Producer	Active	√	√		√
Infineon Technologies AG	Producer	Inactive				
Intel Corp.	Producer	Active	√	√	√	√
LSI	Producer	Active	√	√		√
Marvell Semiconductor	Producer	Inactive				
Mentor Graphics	User	Active	√	√	√	√
Micron Technology	Producer	Inactive	√			
Nokia Siemens Networks	Producer	Active		√		√
Samtec	Producer	Inactive				
Signal Integrity Software	User	Active	√		√	√
Sigrity	User	Active			√	√
Synopsys	User	Inactive				
Teraspeed Consulting	General Interest	Active	√	√	√	√
Texas Instruments	Producer	Inactive			√	
Toshiba	Producer	Inactive			√	
Xilinx	Producer	Active		√	√	
ZTE	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.