

# IBIS Open Forum Minutes

Meeting Date: **February 19, 2010**

Meeting Location: **Teleconference**

## VOTING MEMBERS AND 2010 PARTICIPANTS

|                               |  |
|-------------------------------|--|
| Actel                         | (Prabhu Mohan)   |
| Agilent                       | Radek Biernacki, Ming Yan, Fangyi Rao  |
| AMD                           | Nam Nguyen   |
| Ansoft Corporation            | (Steve Pytel)  |
| Apple Computer                | (Matt Herndon)   |
| Applied Simulation Technology | (Fred Balistreri)  |
| ARM                           | (Nirav Patel)  |
| Cadence Design Systems        | Terry Jernberg*, Wenliang Dai, Ambrish Varma   |
| Cisco Systems                 | Syed Huq*, Mike LaBonte, Tony Penaloza, Huyen Pham, Bill Chen, Ravindra Gali, Zhiping Yang |
| Ericsson                      | Anders Ekholm*, Pete Tomaszewski   |
| Freescale                     | Jon Burnett, Om Mandhana   |
| Green Streak Programs         | Lynne Green  |
| Hitachi ULSI Systems          | (Kazuyoshi Shoji)  |
| Huawei Technologies           | (Jinjun Li)  |
| IBM                           | Adge Hawes*  |
| Infineon Technologies AG      | (Christian Sporrer)  |
| Intel Corporation             | (Michael Mirmak), Myoung (Joon) Choi, Vishram Pandit, Richard Mellitz                      |
| IO Methodology                | Lance Wang   |
| LSI                           | Brian Burdick*   |
| Mentor Graphics               | Arpad Muranyi*, Neil Fernandes, Zhen Mu  |
| Micron Technology             | Randy Wolff*   |
| Nokia Siemens Networks GmbH   | Eckhard Lenski*  |
| Samtec                        | (Corey Kimble)   |
| Signal Integrity Software     | Walter Katz, Mike Steinberger, Todd Westerhoff, Barry Katz                                 |
| Sigrity                       | Brad Brim, Kumar Keshavan  |
| Synopsys                      | Ted Mido   |
| Teraspeed Consulting Group    | Bob Ross*, Tom Dagostino   |
| Toshiba                       | (Yasumasa Kondo)   |
| Xilinx                        | Mike Jenkins   |
| ZTE                           | (Huang Min)  |
| Zuken                         | Michael Schaefer   |

## OTHER PARTICIPANTS IN 2010

|           |                 |
|-----------|-----------------|
| AET, Inc. | Mikio Kiyono    |
| Altera    | John Oh, Hui Fu |

|                          |   |
|--------------------------|---|
| Avago                    | Razi Kaw                                |
| Broadcom                 | Mohammad Ali                            |
| Curtiss-Wright           | John Phillips                           |
| ECL, Inc.                | Tom Iddings                             |
| eSilicon                 | Hanza Rahmai                            |
| Exar Corp.               | Helen Nguyen                            |
| Mindspeed                | Bobby Altaf                             |
| National Semiconductor   | Hsinho Wu*                              |
| NetLogic Microsystems    | Eric Hsu, Edward Wu                     |
| Renesas Technology       | Takuji Komeda*                          |
| Simberian                | Yuriy Shlepnev                          |
| Span Systems Corporation | Vidya (Viddy) Amirapu                   |
| Summit Computer Systems  | Bob Davis                               |
| TechAmerica              | (Chris Denham)                          |
| Texas Instruments        | Bonnie Baker                            |
| Independent              | AbdulRahman (Abbey) Rafiq, Robert Badal |

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 |
| March 12, 2010 | 203 880 061    | IBIS             |

For teleconference dial-in information, use the password at the following website:

<https://cisco.webex.com/cisco/j.php?J=203880061>

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, 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**

Takaji Komeda of Renesas Technology introduced himself. He is interested in the IBIS specification including AMI. He is an IBIS user.

Hsinho Wu of National Semiconductor introduced himself. His company is reengaging with IBIS activities. They are doing SerDes designs, and customers asking them to provide updated IBIS models including AMI.

## **CALL FOR PATENTS**

Bob Ross called for any patents or pending patents related to the IBIS 3.2, IBIS 4.2, IBIS 5.0, Touchstone 2.0 or ICM 1.1 specifications. No patents were declared.

## **MEMBERSHIP UPDATE AND TREASURER'S REPORT**

Bob Ross reported that he requested an update from TechAmerica, but they have been closed for about a week due to snow. Our target is about 30 members for the year. Two ibischk5 parser purchases are pending. One tschk2 parser purchase is in progress, with two more possible.

## **REVIEW OF MINUTES AND ARS**

Bob Ross called for comments regarding the minutes of the January 29, 2010 IBIS Open Forum teleconference and the February 4, 2010 DesignCon IBIS Summit. Both sets of minutes were approved without changes.

## **WEB PAGE UPDATES**

Syed Huq reported that there has been a delay from TechAmerica getting updates done, but they are posted now. The events page and poster page are updated. Eckhard Lenski is working on changes to the FAQ pages.

## **MAILING LIST ADMINISTRATION**

Bob Ross reported for Mike LaBonte that email bounce issues have been resolved with Mentor and Micron. The eda.org mail server has been updated.

## **MODEL LIBRARY UPDATE**

Anders Ekholm updated a link on the model page and sent the update to TechAmerica.

## **PRESS UPDATE**

None.

## **MISCELLANY/ANNOUNCEMENTS**

None.

## **OPENS FOR NEW ISSUES**

Syed Huq requested time for a web discussion later in the meeting.

## **INTERNATIONAL/EXTERNAL ACTIVITIES**

### **- DASC**

No update. 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**

Signal Propagation on Interconnects Workshop (SPI) is May 9 - 12, 2010 in Hildesheim, Germany. There is SI content and sometimes IBIS topics at this conference. The European IBIS Summit will be held in conjunction with this event on Wednesday afternoon.

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

## **TECHAMERICA STATUS**

Bob Ross noted that TechAmerica support may have been disrupted due to the snowstorm issues causing people to stay home last week.

## **IEC APPROVAL ACTIVITIES**

No update.

## **SUMMIT STATUS**

### **-DesignCon Summit Review**

The meeting was held Thursday, February 4, 2010. There were 56 attendees with 12 presentations. Bob thanked Cisco for their co-sponsorship of the meeting. Syed Huq noted that we may want a larger room next year.

### **-European Summit Planning**

Wednesday afternoon of May 12 is planned for the summit after the SPI conference. There are major flights into Hannover, Germany which is close to Hildesheim. Sigrity and Zuken are co-sponsors.

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 reported that the group is continuing discussion of correlation issues. Last week, they had a presentation from Bruce Archambeault of IBM about Feature Selective Validation (FSV). It could provide a way to correlate a reference signal to an IBIS simulation result. The comparison is done in the frequency domain after a Fourier transform of the time domain signals. Low frequency and high frequency comparisons are provided separately. This is a standardized approach. The new Quality Checklist is also now available on the website.

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

[http://www.eda.org/ibis/quality\\_wip/](http://www.eda.org/ibis/quality_wip/)

### **IBIS MODEL REVIEW TASK GROUP**

No update.

### **ADVANCED TECHNOLOGY MODELING TASK GROUP**

Arpad Muranyi reported that the group has finished the first pass through of Walter Katz's AMI BIRD in the last meeting. Meetings are continuing on Tuesdays.

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)**

Bob Ross reported that the group is continuing discussion on three topics. The sparse matrix mapping discussion is in progress. Labels were changed to a text-based syntax. The group will be discussing binary encoding of Touchstone data. Also, the Model Connection Protocol is planned to be introduced in a few weeks.

Task group material can be found at:

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

### **NEW ISSUES**

To provide updates in a more timely and efficient manner, Bob Ross introduced the idea of moving some of our website content away from TechAmerica so that we can have direct access for website updates. We already have systems programmer privileges on eda.org site, but

could also consider another domain which has been purchased. Syed Huq took the AR to setup a meeting next week with some IBIS officers to discuss the topic further.

## **TSCHK2 BUG STATUS**

No BUGs to report.

## **IBISCHK5 BUG STATUS**

Bob Ross introduced BUG112 entitled "Wrong Message for AMI File without Extension." This is a minor BUG. The parser will process and pass an AMI file even if it does not have the .ami extension. This is inconsistent with the handling of .pkg and .ebd files. The BUG was classified as Annoying severity, Medium priority and Open status.

Bob introduced BUG113 entitled "Segmentation Error in V5.0.2 Compilation." This BUG found that ibichk5 V5.0.2 produced a segmentation fault under 64 bit Linux SUSE 64 compilation. This BUG is already fixed in the ibischk5 V5.0.3 release. Although closed, BUG113 was officially classified as Severe severity, High priority.

Eckhard Lenski introduced BUG114 entitled "V4.X Name and Column Lengths for [Submodel] and [Model Selector]." This BUG found that [Submodel] and [Model Selector] names were being truncated by the parser and causing errors. The [Submodel] name should allow for 40 characters but reports an error with over 20 characters. The parser is also not allowing 120 characters in the [Model Selector] length. The BUG was classified as Severe severity, High priority, and Open status. It will be fixed in a future release of the parser, but not immediately.

## **IBISCHK5 PARTIAL BUG FIX RELEASES V5.0.2, V5.0.3**

The V5.0.2 release fixed BUG109, BUG110 and BUG111. It was distributed on 1/30/2010. BUG113 was fixed in the V5.0.3 release on 2/11/2010. Executables have been uploaded.

## **IBISCHK5 PROJECT**

Bob Ross has been in contact with the parser developer. Bob plans to begin a new parser project to fix the 8 currently open BUGs.

## **NEW ISSUES**

None.

## **NEXT MEETING**

The next IBIS Open Forum teleconference will be held March 12, 2010 from 8:00 to 10:00 AM US Pacific Standard Time.

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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 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/)  
[http://www.eda.org/ibis/tschk\\_bugs/bugform.txt](http://www.eda.org/ibis/tschk_bugs/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>

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## IBIS CURRENT MEMBER VOTING STATUS

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

| Organization                  | Interest Category | Standards Ballot Voting Status | January 8, 2010 | January 29, 2010 | February 4, 2010 | February 19, 2010 |
|-------------------------------|-------------------|--------------------------------|-----------------|------------------|------------------|-------------------|
| 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              | Active                         |                 |                  | √                | √                 |
| Cisco Systems                 | User              | Active                         | √               | √                | √                | √                 |
| Ericsson                      | Producer          | Active                         |                 | √                | √                | √                 |
| Freescale                     | Producer          | Inactive                       |                 |                  | √                |                   |
| Green Streak Programs         | General Interest  | Inactive                       |                 |                  | √                |                   |
| Huawei Technologies           | Producer          | Inactive                       |                 |                  |                  |                   |
| Hitachi ULSI Systems          | Producer          | Inactive                       |                 |                  |                  |                   |
| IBM                           | Producer          | Active                         | √               | √                | √                | √                 |
| Infineon Technologies AG      | Producer          | Inactive                       |                 |                  | √                |                   |
| Intel Corp.                   | Producer          | Inactive                       |                 |                  | √                |                   |
| 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:

- 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.