

IBIS Chair's Report



<http://ibis.org/>

Mike LaBonte

SiSoft

Chair, IBIS Open Forum

DesignCon IBIS Summit

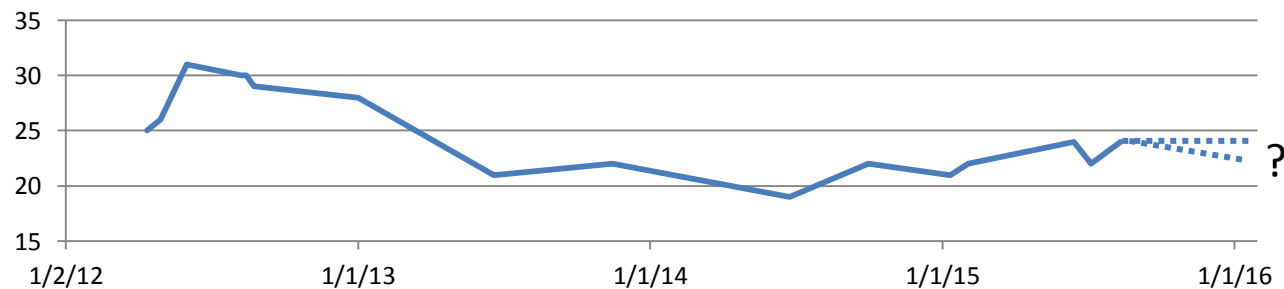
Santa Clara, CA

January 22, 2016

23-24 IBIS Open Forum Members



Number of Members



IBIS Officers 2015-2016

- New Chair, Treasurer and Postmaster elected 15 June 2015
- Many thanks to incumbent IBIS officers for their continued service

A special thank you to outgoing chair Michael Mirmak
(Total of 11 terms!)

Chair: *Mike LaBonte, Signal Integrity Software*

Vice-Chair: *Lance Wang, IO Methodology Inc.*

Secretary: *Randy Wolff, Micron Technology*

Treasurer: *Bob Ross, Teraspeed Labs*

Librarian: *Anders Ekholm, Ericsson*

Webmaster: *Mike LaBonte, Signal Integrity Software*

Postmaster: *Curtis Clark, ANSYS*

Organizational Status

- IBIS Open Forum: ad-hoc, unincorporated
- SAE Industry Technologies Consortia 501(c)(6)
 - Affiliate of SAE International
 - Fiscal sponsor: receive and disburse funds
 - Legal assistance
 - Liability insurance
 - Access to SAE web, publishing support, etc.
 - IBIS is one of four ITC clients
 - New organization, still in formation process



IBIS Milestones

I/O Buffer Information Specification

- 1993-1994 **IBIS 1.0-2.1:**
 - Behavioral buffer model (fast simulation)
 - Component pin map (easy EDA import)
- 1997-1999 **IBIS 3.0-3.2:**
 - Package models
 - Electrical Board Description (EBD)
 - Dynamic buffers
- 2002-2006 **IBIS 4.0-4.2:**
 - Receiver models
 - AMS languages
- 2007-2012 **IBIS 5.0-5.1:**
 - IBIS-AMI SerDes models
 - Power aware
- 2013-2015 **IBIS 6.0-6.1:**
 - PAM4 multi-level signaling
 - Power delivery package models

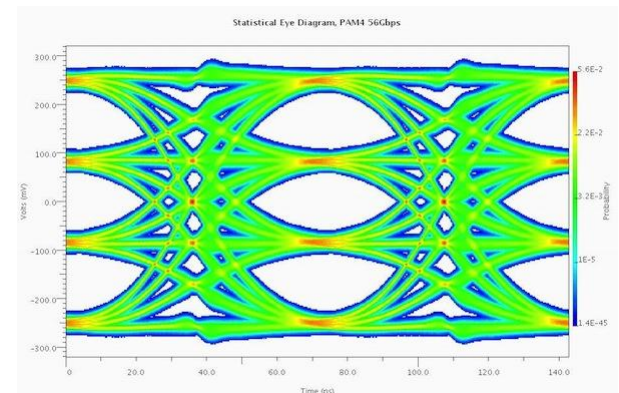
Other Work

- 1995: **ANSI/EIA-656**
 - IBIS 2.1
- 1999: **ANSI/EIA-656-A**
 - IBIS 3.2
- 2001: **IEC 62014-1**
 - IBIS 3.2
- 2003: **ICM 1.0**
 - Interconnect Model Specification
- 2006: **ANSI/EIA-656-B**
 - IBIS 4.2
- 2009: **Touchstone® 2.0***
- 2011: **IBIS-ISS 1.0**
 - Interconnect SPICE Subcircuit specification

**Touchstone® is a registered trademark of Agilent Technologies, Inc.*

Recent Progress: IBIS 6.1 Ratified

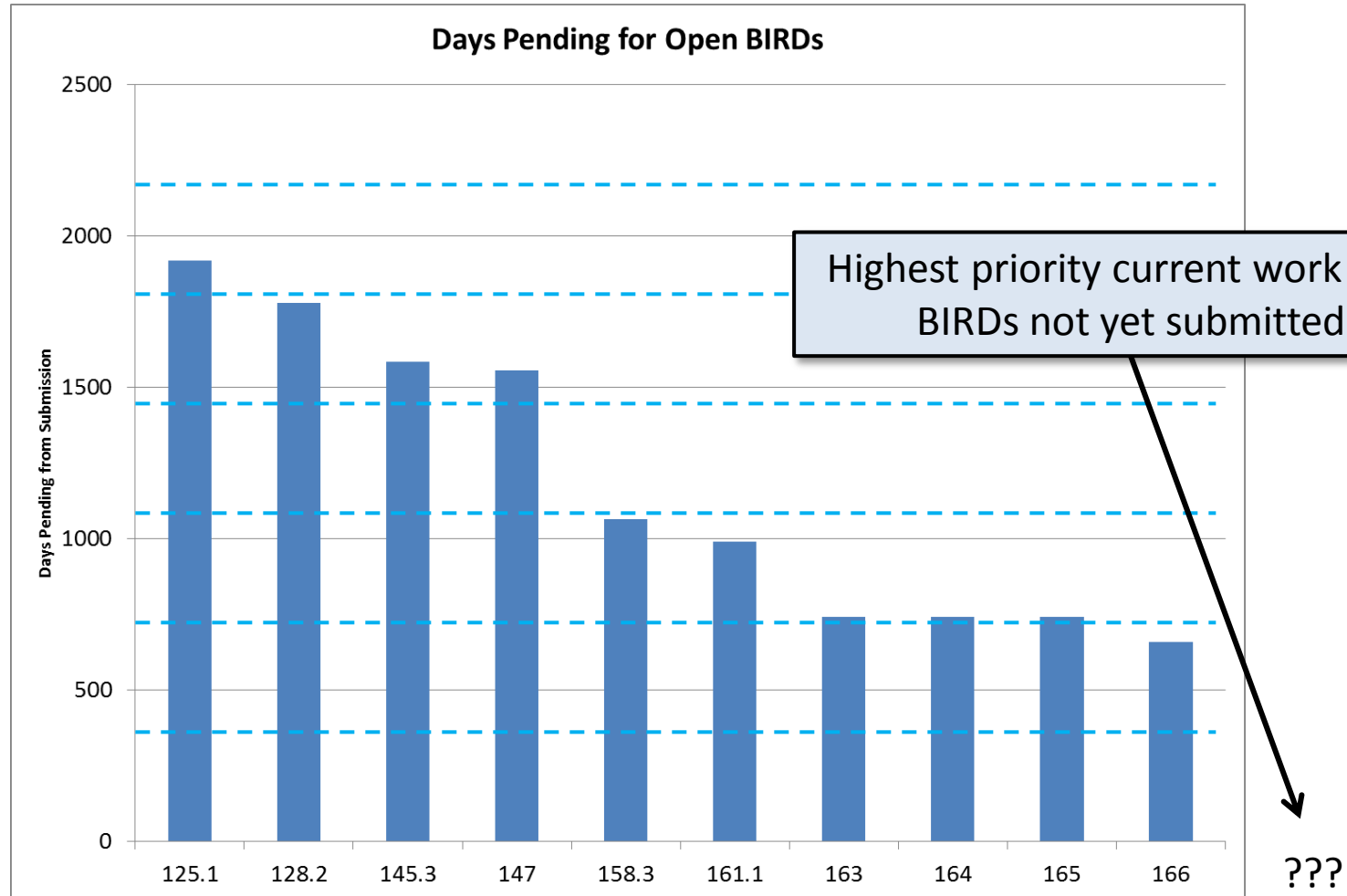
- Ratified 11 September 2015
 - Support for PAM4
 - Dependent IBIS-AMI Parameter Support (AMI_Resolve)
 - Package Models for Power Integrity
 - and more ...
- IBISCHK 6.1.2 available



In The Works

- Advanced Technology Modeling Task Group
 - Reference node clarifications (IBIS 6.2)
 - Optimization/Back-channel support
 - External circuit enhancements
- Interconnect Task Group
 - External Package/on-die models using IBIS-ISS
- IBIS Quality Task Group
 - IBISCHK enhancements and documentation

Pending BIRDs

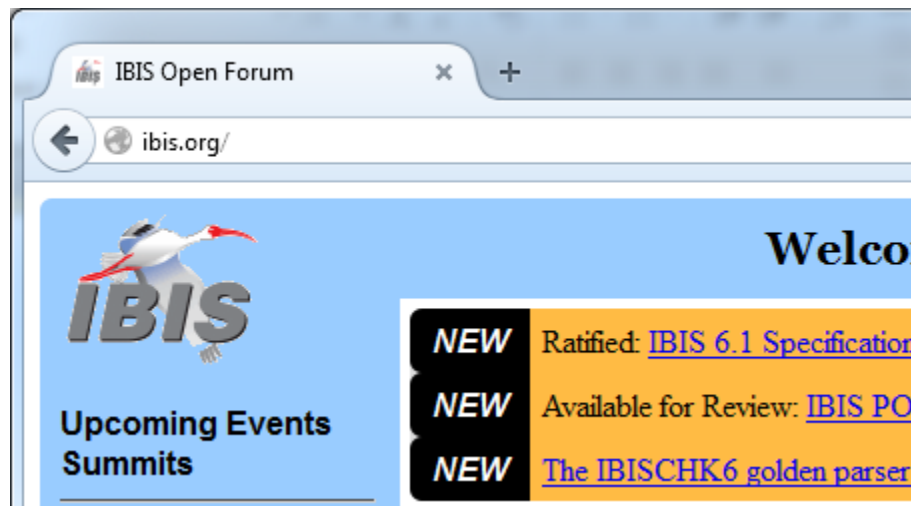


Workflow Enhancement Ideas

- Automatic BIRD expiration?
 - Pressure to keep momentum
- More task groups?
 - Increased “parallelism”
- Break up the BIRD?
 1. BIDD: Buffer Issue Definition Document
 - Settle problem definition and solution requirements first
 - For enhancements, not required for fix and clarification BIRDs
 2. Solutions are proposed and discussed
 - Refer to BIDD number
 3. One or more BIRDs submitted against BIDD
- ...?

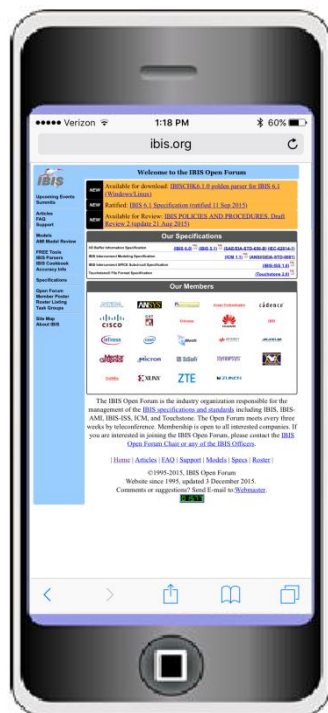
We Have Moved!


- Our gratitude to Accellera for eda.org web and email service from 1993 to 2015
- Email lists have moved to freelists.org
- Website has moved to <http://ibis.org>



Same Website For Now

- Manually edited HTML
- Server shell login required
- Not great on phones











Welcome to the IBIS Open Forum

NEW Ratified: [IBIS 6.1 Specification](#) (ratified 11 Sep 2015)






NEW Available for Review: [IBIS POLICIES AND PROCEDURES](#), Draft Review 2 (update 21 Aug 2015)






NEW The IBISCHK6 golden parser is now available for Windows/DOS and Linux. [Click here.](#)




Our Specifications


I/O Buffer Information Specification	(IBIS 6.0)  (IBIS 5.1)  (SAE/EIA-STD-656-B)  (IEC-62014-1)
IBIS Interconnect Modeling Specification	(ICM 1.1)  (ANSI/GEIA-STD-0001)
IBIS Interconnect SPICE Subcircuit Specification	(IBIS-ISS 1.0) 
Touchstone® File Format Specification	(Touchstone 2.0) 






Our Members













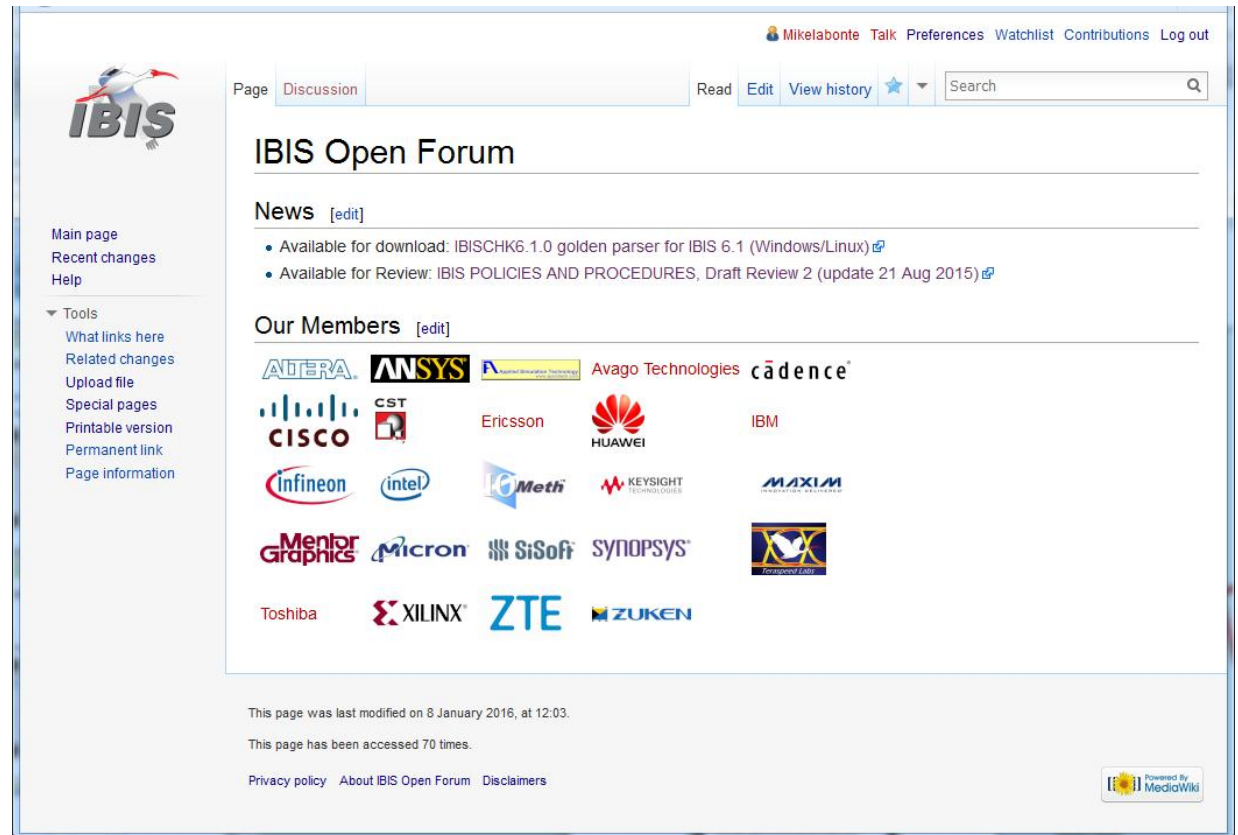
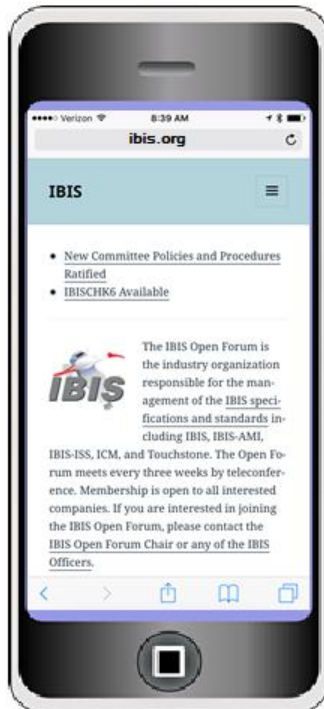
The IBIS Open Forum is the industry organization responsible for the management of the [IBIS specifications and standards](#) including IBIS, IBIS-AMI, IBIS-ISS, ICM, and Touchstone. The Open Forum meets every three weeks by teleconference. Membership is open to all interested companies. If you are interested in joining the IBIS Open Forum, please contact the [IBIS Open Forum Chair](#) or [any of the IBIS Officers](#).

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Website since 1995, updated 9 January 2014.
Comments or suggestions? Send E-mail to: [Webmaster](#).

New Website In The Works

- MediaWiki
- Searchable
- Multi-User
- Adapts to phones



Interactive Multi-User Website

The screenshot shows the IBS website interface. At the top, there's a navigation bar with links: Mikelabonte, Talk, Preferences, Watchlist, Contributions, and Log out. Below this is a search bar and a 'Page' dropdown menu set to 'Discussion'. The main heading is 'Power Pin Package Modeling Project'. Underneath, there's a 'Contents [show]' button. The 'Requirements' section, marked as '[edit]', contains a paragraph about supporting compact coupled package models. The 'Tasks' section, also marked as '[edit]', lists several tasks with sub-points, including investigating new [Row] syntax, [Pin Numbers] syntax, and keyword(s), as well as writing [Merged Pins] BIRD and matrix quality checking issues. The 'Documents' section, marked as '[edit]', lists three documents: 'Package RLC Matrix Diagonals draft', 'Power Pin Package Modeling BIRD draft', and 'Terminal Names in IBS'. The 'BIRDS' section, marked as '[edit]', lists two BIRDS: 'BIRD173.3 Package RLC Matrix Diagonals' and 'BIRD176 Power Pin Package Modeling'. A left sidebar contains links for 'Main page', 'Recent changes', 'Help', and a 'Tools' section with links for 'What links here', 'Related changes', 'Upload file', 'Special pages', 'Printable version', 'Permanent link', and 'Page information'.

Page: Discussion Read Edit View history Search

Power Pin Package Modeling Project

Contents [show]

Requirements [edit]

Support compact coupled package models that reduce the number of terminals associating multiple power/ground pins with a smaller number of terminals that neverthe associated pin. In IBIS 6.0 each pin in the [Pin Numbers] keyword is required to map to no way to associate a [Row] with multiple pins.

Tasks [edit]

- Investigate new [Row] syntax
 - Done. Considered unfeasible.
- Investigate new [Pin Numbers] syntax
 - Done. Considered unfeasible.
- Investigate new keyword(s)
 - [Merged Pins] syntax recommended.
- Write [Merged Pins] BIRD
 - Submitted (BIRD176).
- Investigate matrix quality checking issues.
 - Optional task related to expected use of larger matrix models.
- Write matrix quality rules BIRD
 - Submitted BIRD173
 - Submitted BIRD173.1
 - Submitted BIRD173.2
 - Submitted BIRD173.3

Documents [edit]

- Package RLC Matrix Diagonals draft
- Power Pin Package Modeling BIRD draft
- Terminal Names in IBS

BIRDS [edit]

- BIRD173.3 Package RLC Matrix Diagonals
- BIRD176 Power Pin Package Modeling

The screenshot shows the IBS website interface with a calendar view for January 2016. The top navigation bar is the same as the previous screenshot. The 'Page' dropdown menu is set to 'Discussion'. The calendar shows events for each day of the month. The left sidebar is the same as the previous screenshot. The footer contains links for 'Privacy policy', 'About IBS Open Forum', and 'Disclaimers', along with a 'Powered by MediaWiki' logo.

Page: Discussion Read Edit View history Search

Today < > January 2016 Day Week Month 4 Days Agenda More

Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29 11 IBIS Quality Task Group 12p IBIS ATM Task Group	30 11 IBIS Interconnect Task G	31 New Year's Eve	Jan 1 New Year's Day	2	3
4	5 11 IBIS Quality Task Group 12p IBIS ATM Task Group	6 Epiphany 11 IBIS Interconnect Task G	7	8 Last day for presentations 8 IBIS Open Forum	9	10
11	12 11 IBIS Quality Task Group 12p IBIS ATM Task Group	13 11 IBIS Interconnect Task G	14	15	16	17
18 Martin Luther King Day	19 DesignCon	20 DesignCon	21 DesignCon	22 8 DesignCon IBIS Summit	23	24
25 1st Bishop	26 11 IBIS Quality Task Group 12p IBIS ATM Task Group	27 11 IBIS Interconnect Task G	28	29	30	31

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[Thank You]



IBIS Open Forum:

Web: <http://ibis.org>

Email: ibis-info@freelists.org

We welcome participation by all IBIS model makers, EDA tool vendors, IBIS model users, and interested parties.