

IBIS Chair's Report



<http://ibis.org/>

Mike LaBonte
SiSoft
Chair, IBIS Open Forum

Asian IBIS Summit
Shanghai, China
November 9, 2015

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

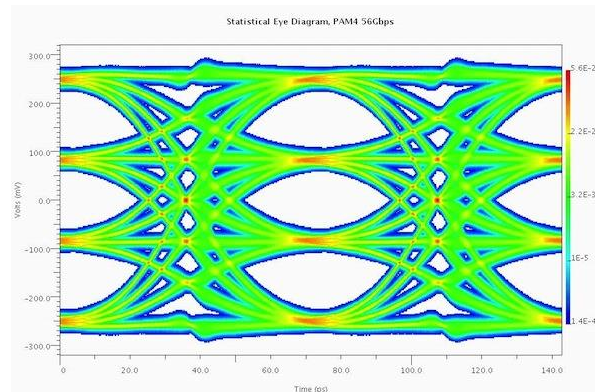
Other Work

- 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

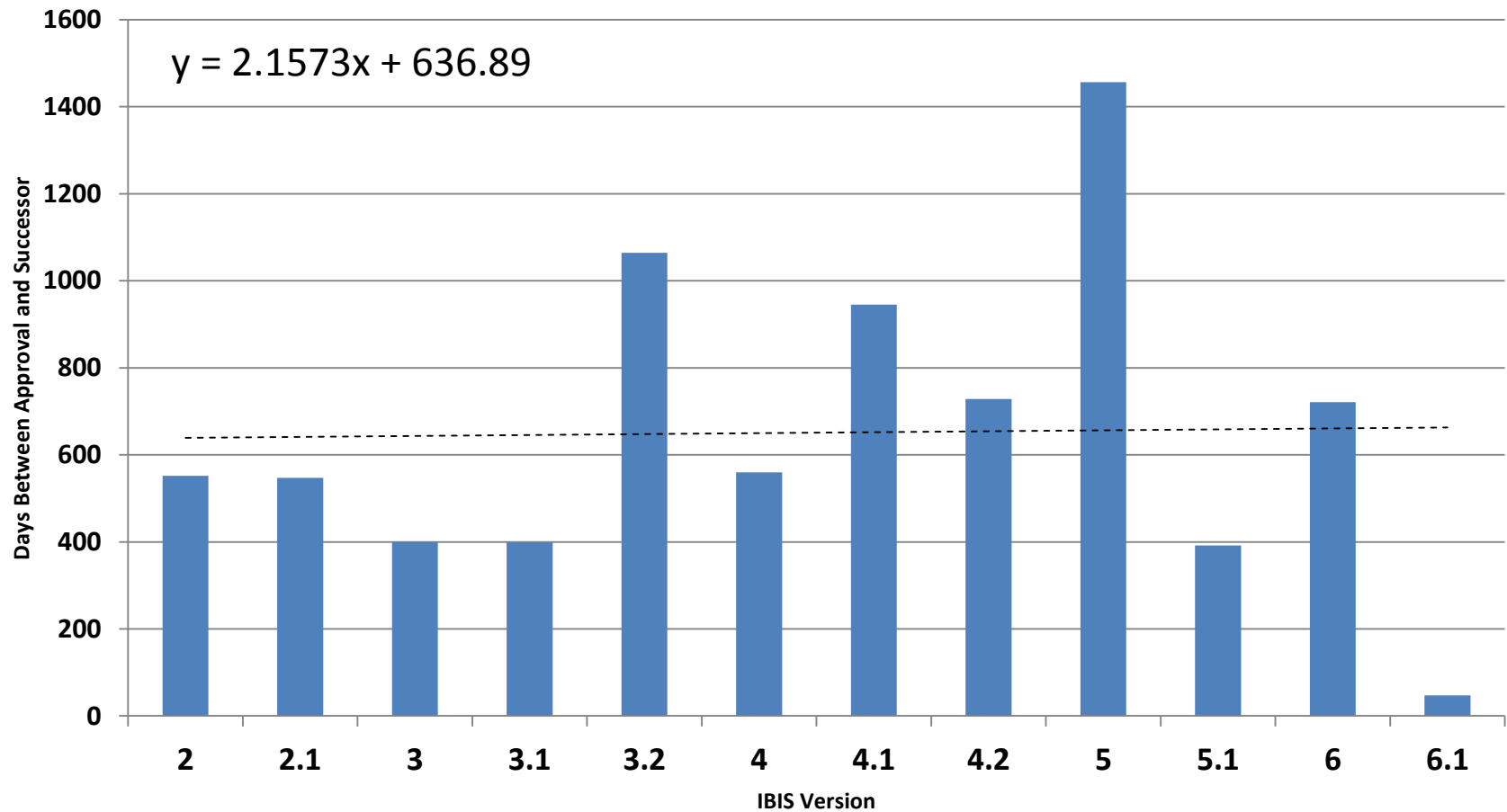
**Touchstone® is a registered trademark of Agilent Technologies, Inc.*

Progress: IBIS 6.1 Ratified

- Ratified 11 September 2015
- Support for PAM4
- IBIS-AMI Parameters Simplified
- Package Models for Power Integrity
- and more ...



Lifespan of IBIS Versions



In The Works

- IBIS 6.2 dedicated to reference node clarifications
 - Potential SAE standard
- Advanced Technology Modeling Task Group
 - 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

Status of IBIS Standards

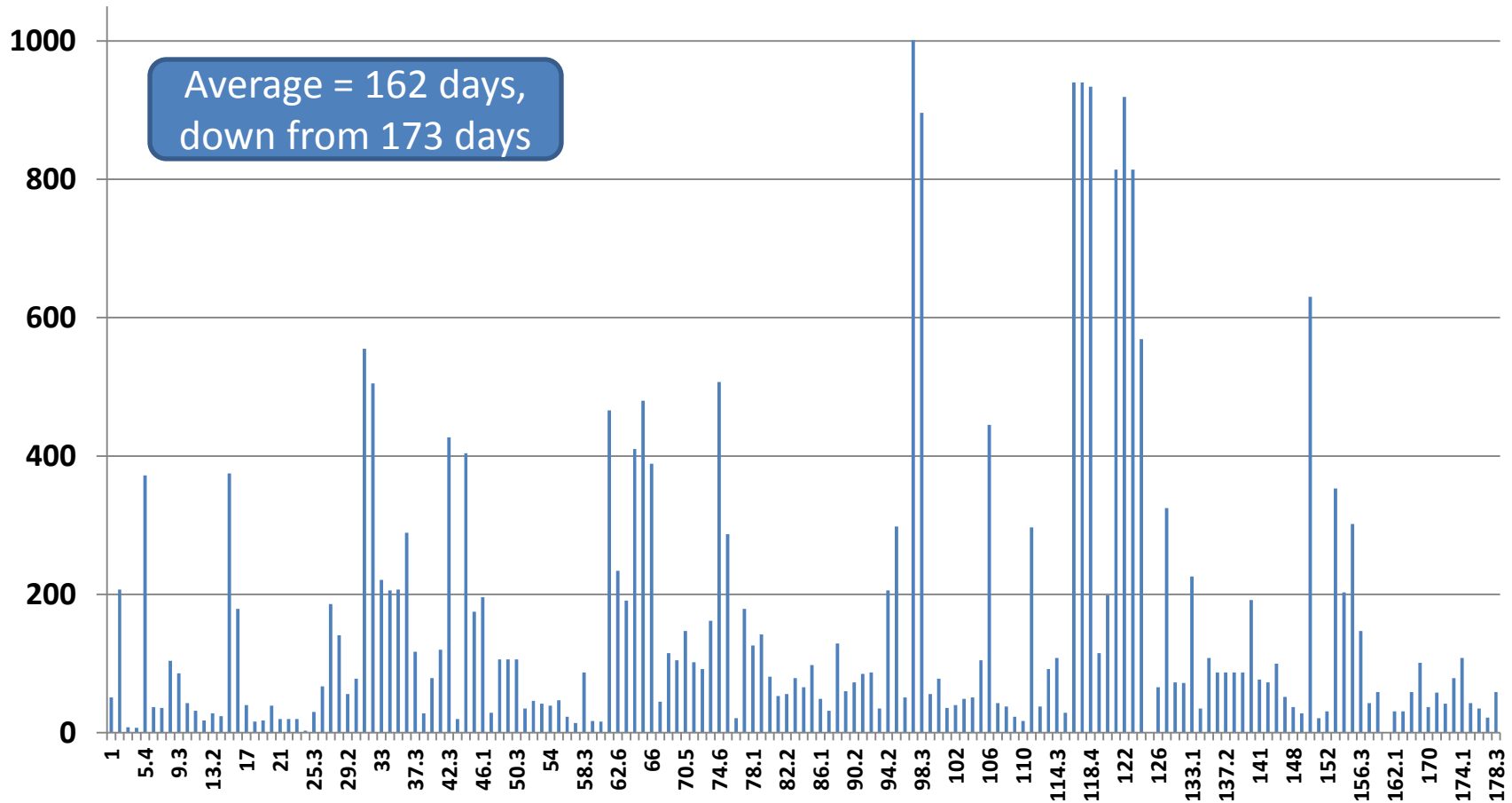
I/O Buffer Information Specification	IBIS 4.2: SAE/EIA-STD-656-B IBIS 3.2: IEC-62014-1
IBIS Interconnect Modeling Specification	ICM 1.1: ANSI/GEIA-STD-0001

IBIS 6.2 might be next ...

The screenshot shows the SAE International website interface. At the top, there is a navigation bar with links for 'Contact Us', 'Help', and 'Shopping Cart'. Below this, a secondary navigation bar includes 'SAE Standards Works', 'My Home', 'Technical Committees', and 'Intellectual Property Policy'. The main content area is titled 'IBIS, I/O Buffer Information Specification' and features tabs for 'Committee', 'Main', 'WIP', 'Documents', and 'SAE Members Only'. On the left side, there is a 'SAE Login' section with fields for 'User Id:' and 'Password:', a 'Remember Me' checkbox, and a 'Login >' button. The 'Documents' tab is active, displaying a 'Document List' table. The table has columns for 'Document', 'Title', 'Date', and 'Status'. A single document is listed: 'EIASTD656B' with the title 'I/O Buffer Information Specification (IBIS) Version 4.2', dated 'Sep 01, 2006', and status 'Revised'. The footer contains copyright information for 2015 SAE International and links to various policies and feedback options.

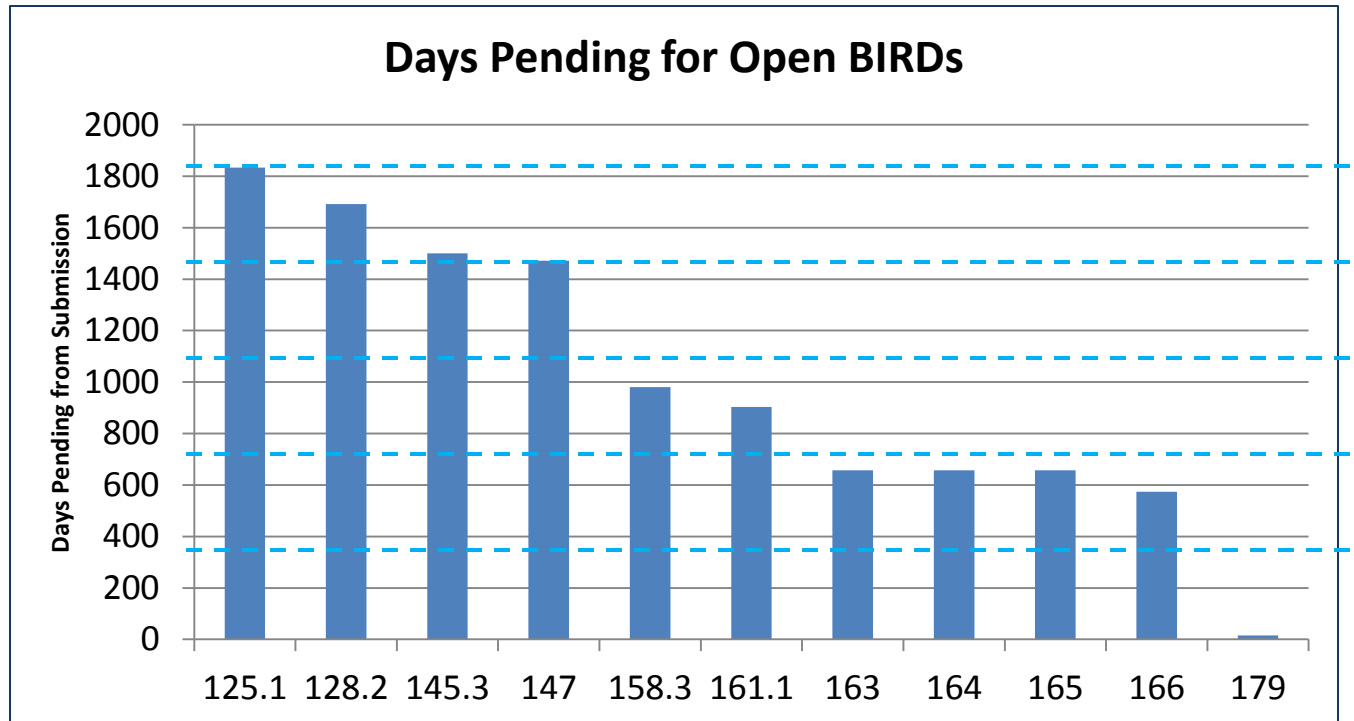
Document	Title	Date	Status
EIASTD656B	I/O Buffer Information Specification (IBIS) Version 4.2	Sep 01, 2006	Revised

Days To Resolve BIRDs



Pending BIRDs

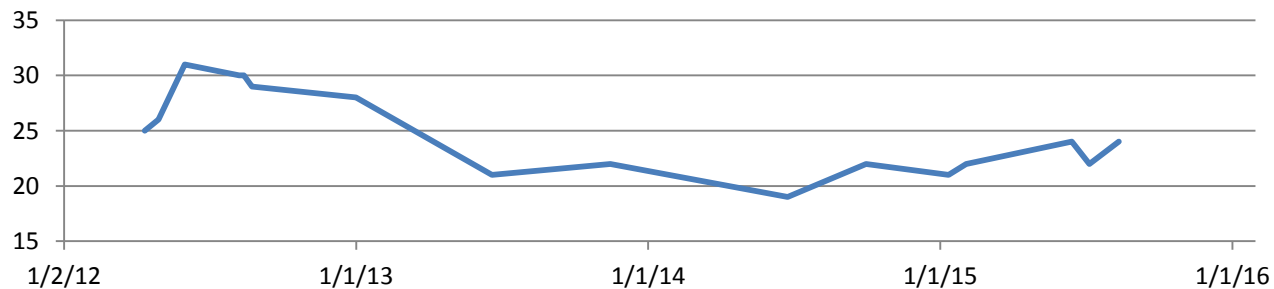
BIRD125.1 pending for 5 years, a new “record”



24 IBIS 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 Activities

- So far in 2015:
 - 15 Open Forum teleconferences
 - 3 Summit meetings (including this one)
 - 2015 first year for EPEPS IBIS summit
 - 38 ATM Task Group teleconferences
 - 10 Editorial Task Group teleconferences
 - 10 Interconnect Task Group teleconferences
 - 35 Quality Task Group teleconferences



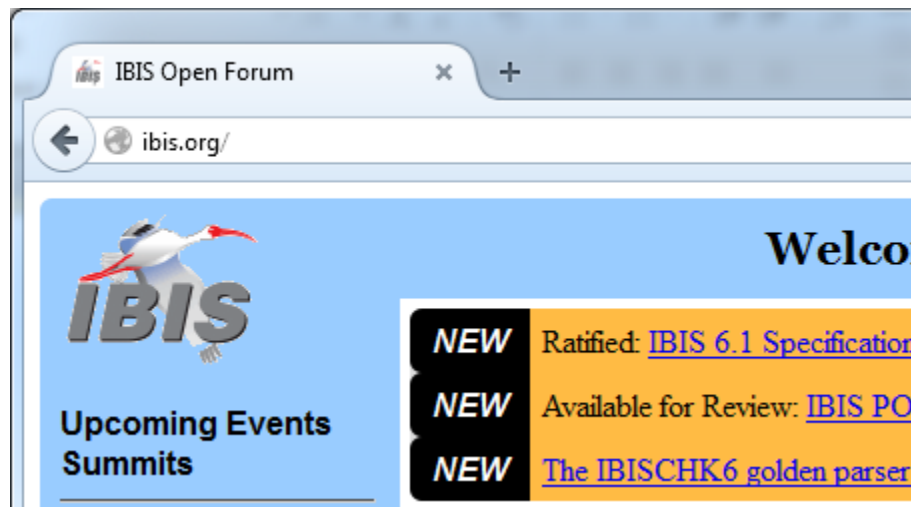
Upcoming Summits

- Asian IBIS Summit, Shanghai, China
– November 9, 2015
- Asian IBIS Summit, Taipei, Taiwan
– November 13, 2015
- Asian IBIS Summit, Tokyo, Japan
– November 16, 2015
- DesignCon IBIS Summit, Santa Clara, CA
– January 22, 2016
- SPI IBIS Summit, Torino, Italy
– May 11, 2016



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
- Perl scripts

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

Logos of member companies: ADETA, ANSYS, Avago Technologies, cadence, CISCO, CST, Ericsson, HUAWEI, IBM, Infineon, intel, JCMetfi, KEYSIGHT, MAXIM, Mentor Graphics, Micron, SiSoft, SYNOPSYS, Toshiba, XILINX, ZTE, ZUKEN.

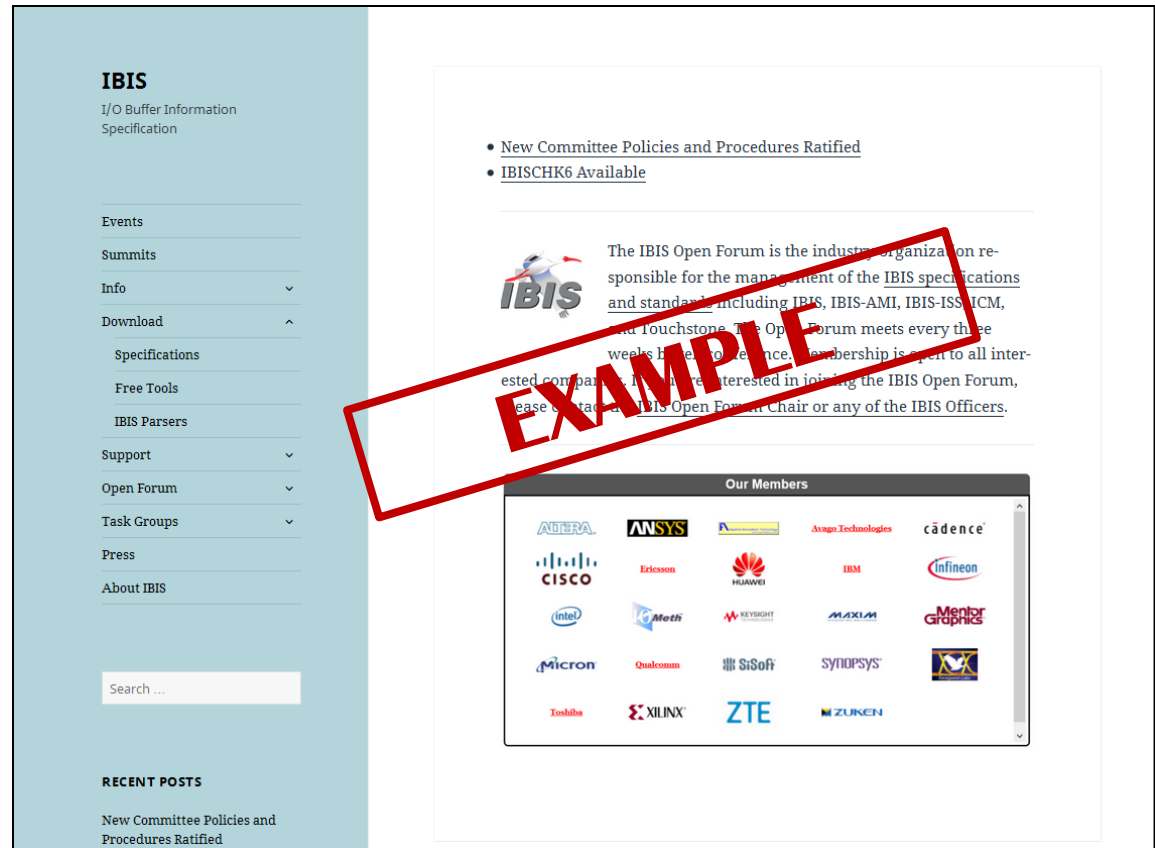
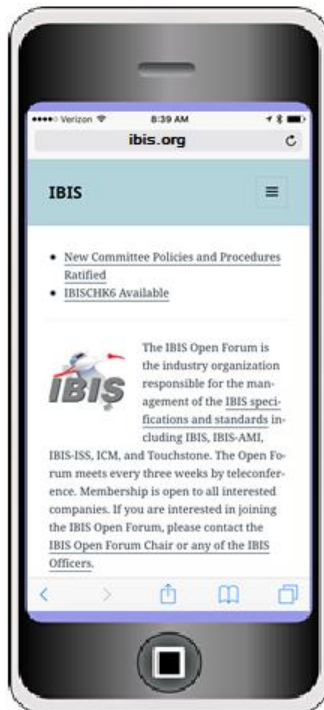
The IBIS Open Forum is the industry organization responsible for the management of the [IBIS specifications and standards](#) including IBIS, IBIS-AMI, IBIS-ISS, ICM, and Touchstone. The Open Forum meets every three weeks by teleconference. Membership is open to all interested companies. If you are interested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

- WordPress
- Bug trackers
- Live Calendar
- Responsive Design



[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.

Open BIRDs

125.1	Make IBIS-ISS Available for IBIS Package Modeling	Arpad Muranyi, Mentor Graphics	21-Oct-10
128.2	Allow AMI parameters out to pass AMI parameters in data on calls to AMI GetWave	Walter Katz, SiSoft	11-Mar-11
145.3	Cascading IBIS I/O buffers with [External Circuit]s using the [Model Call] keyword	Taranjit Kukal, Ambrish Varma, Cadence Design Systems, Inc. Arpad Muranyi, Mentor Graphics.	19-Sep-11
147	Back-channel support	Marcus Van Ierssel, Snowbush IP; Kumar Keshavan, Sigrity, Inc.; Ken Willis, Sigrity, Inc.; Walter Katz, SiSoft	18-Oct-11
158.3	AMI Touchstonefile (R) Analog Buffer Models	Walter Katz, Signal Integrity Software, Inc.	20-Feb-13
161.1	Supporting Incomplete and Buffer-only [Component] Descriptions	Michael Mirmak, Intel Corp.	8-May-13
163	Instantiating and Connecting [External Circuit] Package Models with [Circuit Call]	Arpad Muranyi & John Angulo, Mentor Graphics; Ambrish Varma & Brad Brim, Cadence Design Systems, Inc.	9-Jan-14
164	Allowing Package Models to be defined in [External Circuit]	Ambrish Varma & Brad Brim, Cadence Design Systems, Inc.; Arpad Muranyi, Mentor Graphics	9-Jan-14
165	Parameter Passing Improvements for [External Circuit]s	Arpad Muranyi & John Angulo, Mentor Graphics; Ambrish Varma & Brad Brim, Cadence Design Systems, Inc	9-Jan-14
166	Resolving problems with Redriver Init Flow	Walter Katz, Signal Integrity Software, Inc. Darshan Shah, F5Networks, Inc.	2-Apr-14
179	New IBIS-AMI Reserved Parameter Special Param Names	Arpad Muranyi, Mentor Graphics	13-Oct-15