

# IBIS Chair's Report

Douglas Burns

---

Chair, IBIS Open Forum



An SAE Industry Technologies Consortia Program

2025 Hybrid IBIS Summit

@ IEEE International Workshop on Advanced Interconnects

Hualuxe Hotel, Ningbo City

November 7, 2025, China Time Zone

JEITA 2025 Hybrid IBIS Summit

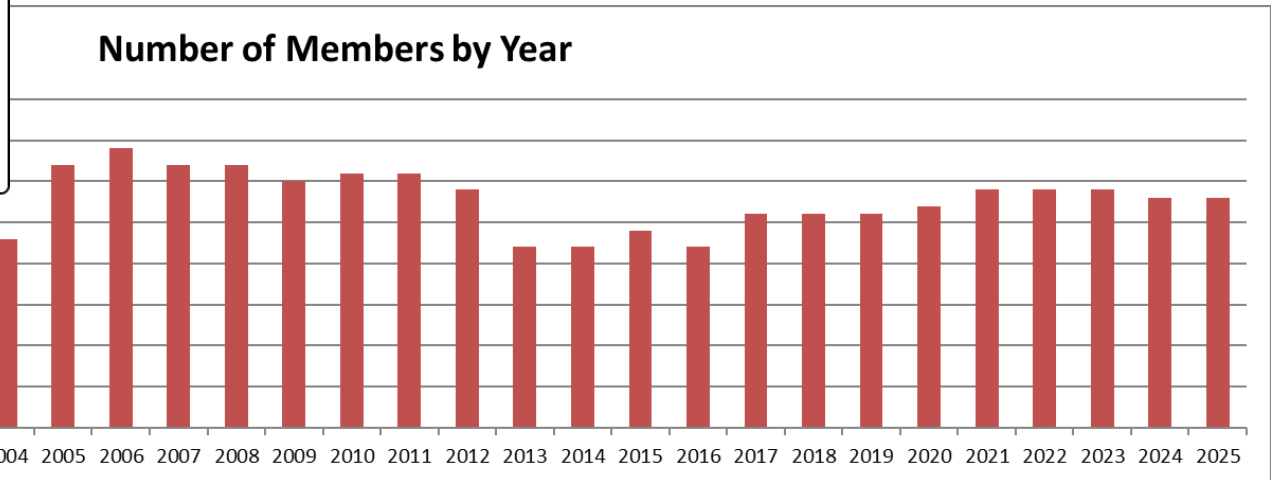
OTE Center Bldg. 1-1-3, Chiyoda-ku, Tokyo 100-0004, Japan

November 11, 2025, 9:00-12:00 JST

# 27 IBIS Members (Organization-based)



**Our Members**



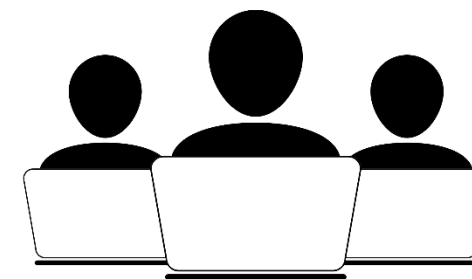
# IBIS Officers June 2025- May 2026



Chair: *Douglas Burns, SI-Clarity*  
Vice-Chair: *Walter Katz, Mathworks*  
Secretary: *Graham Kus, Signal Edge Solutions*  
Treasurer: *Randy Wolff, Siemens EDA*  
Librarian: *Zhiping Yang, MST*  
Postmaster: *Curtis Clark, Synopsys*  
Webmaster: *Steve Parker, Marvell*

- University Relations: *Chulsoon Hwang, MST*
- IEEE DASC IBIS Liaison: *Michael Mirmak, Intel*
- Social Media: *Edna Moreno*

Elected

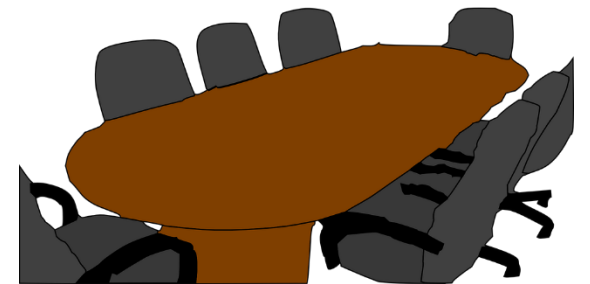


Appointed

# IBIS Meetings



- Weekly teleconferences
  - Quality task group (Tuesdays, 09:00 PT)
  - Advanced Technology Modeling (ATM) task group (Tuesdays, 12:00 PT)
  - Interconnect task group (Wednesdays, 08:00 PT)
  - Editorial task group
- IBIS Open Forum teleconference every 3 weeks (Fridays, 08:00 PT)
- IBIS Summit meetings (USA and international)
  - DesignCon, IEEE SPI, IEEE EMC+SIPI, Ningbo City, Tokyo (JEITA-organized)
- Participants: ~290 in 2024



# SAE ITC



- SAE Industry Technologies Consortia is the parent organization of the IBIS Open Forum
- IBIS is assisted by SAE employees Tammy Patton, Phyllis Gross, and Rich Demary
- SAE ITC provides financial, legal, and other services
- <https://www.sae-itc.com/>



# Task Groups



- Advanced Technology Modeling Task Group
  - Chair: Arpad Muranyi, Siemens EDA
  - [https://ibis.org/atm\\_wip/](https://ibis.org/atm_wip/)
  - Develop non-interconnect technical BIRDs
- Editorial Task Group
  - Chair: Michael Mirmak, Intel
  - [https://ibis.org/editorial\\_wip/](https://ibis.org/editorial_wip/)
  - Produce IBIS specification documents
- Interconnect Task Group
  - Chair: Michael Mirmak, Intel
  - [https://ibis.org/interconn\\_wip/](https://ibis.org/interconn_wip/)
  - Develop on-die/package/module/connector interconnect modeling BIRDs
- Quality Task Group
  - Acting Chair: Randy Wolff, Siemens EDA
  - [https://ibis.org/quality\\_wip/](https://ibis.org/quality_wip/)
  - Oversee IBISCHK parser testing and development



BIRD = Buffer Issue Resolution Document

# IBIS Milestones



## I/O Buffer Information Specification

## Other Work

- 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)
- 2002-2006 **IBIS 4.0-4.2:**
  - Receiver models
  - AMS languages
- 2007-2012 **IBIS 5.0-5.1:**
  - IBIS-AMI SerDes models
  - Power-aware model
- 2013-2015 **IBIS 6.0-6.1:**
  - PAM4 multi-level signaling
  - Power delivery package models
- 2019 **IBIS 7.0:**
  - Back-channel time-domain support
  - Interconnect modeling using IBIS-ISS and Touchstone
- 2021 **IBIS 7.1:**
  - DDRx IBIS-AMI support
  - Electrical Module Description (EMD)
  - IBIS-AMI back-channel statistical optimization
- 2023 **IBIS 7.2:**
  - Redriver simulation flow fixes
  - PAMn IBIS-AMI support
- **2025 IBIS 8.0**
  - In progress
- 1995: **ANSI/EIA-656 (IBIS 2.1 International standard)**
- 1999: **ANSI/EIA-656-A (IBIS 3.2 International standard)**
- 2001: **IEC 62014-1 (IBIS 3.2 International standard)**
- 2003: **Interconnect Model Specification (ICM 1.0)**
- 2006: **ANSI/EIA-656-B (IBIS 4.2 International standard)**
- 2009: **Touchstone 2.0**
  - Official Touchstone donated from Agilent/Keysight
- 2011: **IBIS-ISS 1.0 (Interconnect SPICE Subcircuit)**
  - Subset of HSPICE
- 2024: **Touchstone 2.1**
  - Clarify S-parameter Definition
  - [End] Keyword Corrections and Other Editorial Changes
  - Per Port Reference Resistance on the Option Line
  - Clarify File Extension Rule for Touchstone 1.0 and 1.1 Files
- **IBISCHK:** IBIS file syntax parser
  - Current version 7.2.1
  - Source code available for purchase
  - Compiled executables available free of charge
- **TSCHK2:** Touchstone 2.1 file syntax parser
  - Current version 2.1.0
  - Source code available for purchase
  - Compiled executables available free of charge



- BIRDS planned for IBIS 8.0
  - <https://ibis.org/birds/>

ID#	Issue Title	Requester	Date Submitted	Date Accepted	Supporting Version
232	<a href="#">Clarification of Ts4file and Non-AMI Feature Relationships</a>	Michael Mirmak, Intel Corporation	19-Nov-24	21-Feb-24	
231	<a href="#">Clarifications on AMI Block Concepts</a>	Michael Mirmak, Intel Corporation	26-Mar-24	31-May-24	
230.1	<a href="#">Adding a Definitions Section to IBIS</a>	Michael Mirmak, Intel Corporation	19-Mar-24, 30-Apr-24	31-May-24	
229.1	<a href="#">AMI Test Data Support</a>	Michael Mirmak, Intel Corp.	19-Dec23, 13-Feb-24	19-Apr-24	
228	<a href="#">Pin Name Field Extension</a>	Michael Mirmak, Intel Corporation	5-Dec-23	26-Jan-24	
227	<a href="#">AMI Ignore Block Feature</a>	Alaeddin A. Aydiner, Sai Zhou, Intel Corp.	14-Nov-23	5-Jan-24	
225	<a href="#">Clarification for bus_label rules</a>	Arpad Muranyi, Weston Beal, Randy Wolff, Siemens EDA	11-Jul-23	15-Sep-23	
224	<a href="#">New AMI Reserved Parameters for Ts4file port order</a>	Liwei Zhao, Intel Corp.; Michael Mirmak, Intel Corp.	25-Apr-23	23-Jun-23	

- IBIS BIRDS 223.1 and 226 have been delayed until IBIS 8.1

# IBIS 8.0



- Draft Proposal available on IBIS Website <https://ibis.org>
  - Presently in Active Review
  - Review & provide feedback before 11/5/2025
- Vote for approval scheduled for 11/7/2025
- IBISCHK V8.0 Parser development will start after IBIS 8.0 approval
  - Planned availability is early 2026



- Touchstone 2.1 specification passed January 2024
- Open TSIRDs:
  - <https://app.ibis.org/tsirds/>

## Touchstone Issue Resolution Documents (TSIRD)

To submit an TSIRD to the IBIS Open Forum, please use the [TSIRD Template Rev. 1.0](#).

ID#	Issue Title	Requestor	Date Submitted	Date Accepted	Supported Version
8	Option line changes	Arpad Muranyi, Siemens EDA	March 20 2024	May 10 2024	
7.2	Standardized Pole-Residue Representation of Touchstone Data	Arpad Muranyi, Siemens EDA	February 14, 2024; May 7, 2024; June 3, 2024	August 23, 2024	



# IBISCHK Development

- The latest parser (7.2.1) was delivered on December 21, 2023
- 10 Open BUGS (246 – 255)
  - <https://ibis.org/bugs/ibischk/>

ID#	Title	Requester	Date Submitted	Severity	Priority	Status	Date Closed	Supported Version
255	<a href="#">Incorrectly harsh Warning about mixing C_comp and C_comp *</a>	Curtis Clark, Ansys, Inc.	June 26, 2025	MODERATE	MEDIUM	OPEN		
254	<a href="#">AMI Reserved Parameter Repeater Type erroneously reported as missing</a>	Arpad Muranyi, Siemens EDA	April 24, 2025	MODERATE	LOW	OPEN		
253	<a href="#">Non-comments allowed after [End Interconnect Model Set] keyword</a>	Justin Butterfield, Chinmaya Patra, Bibhu Panda; Micron Technology	March 31, 2025	MODERATE	MEDIUM	OPEN		
252	<a href="#">Incorrect BCI Interpretation Invalidates All Tx Models</a>	Michael Mirmak, Intel Corporation	March 17, 2025	SEVERE	HIGH	OPEN		
251	<a href="#">Missing Repeater Type not seen through Model Selector</a>	Arpad Muranyi, Siemens EDA	November 15, 2024	SEVERE	HIGH	OPEN		
250	<a href="#">Incorrect [Diff Pin] caution report</a>	Michael Mirmak, Intel Corp.	July 1, 2024	ANNOYING	LOW	OPEN		
249	<a href="#">Memory leaks caused by algmod.c, ami.c and cmn.c</a>	Michael Mirmak, Intel Corporation	March 28, 2024	ANNOYING	LOW	OPEN		
248	<a href="#">Crash Caused by iassert macro and abort()</a>	Michael Mirmak, Intel Corporation	March 19, 2024	FATAL	MEDIUM	OPEN		
247	<a href="#">Changing BOOL from Type Enum to Int</a>	Michael Mirmak, Intel Corporation	March 19, 2024	ENHANCEMENT	LOW	OPEN		
246	<a href="#">Clarification on Slash Characters and Parser Usage</a>	Michael Mirmak, Intel Corporation	December 22, 2023	MODERATE	MEDIUM	OPEN		

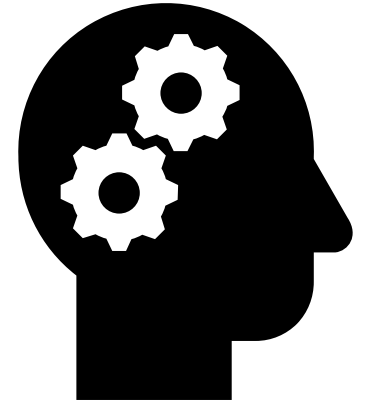
# Recent and Future Developments in IBIS



- IBIS Open Forum's task groups are discussing these topics:
  - Expanded system-level perspective
    - Clock/data relationships, timing information, equalization training
  - Power Integrity focused modeling
    - Generalized Power Integrity Model (PIM) discussions (Significant Focus this Fall) with Goal of IBIS 8.1 Release
  - Multi-level analog buffer modeling
  - Interconnect Modeling
    - IBIS-ISS expansions
  - Quality and Testing
    - IBISCHK8 Parser Development
- What else should we be looking at? Bring your ideas!

# Participation in IBIS

- The success of IBIS depends on active participation and volunteering
- Bringing your ideas and talents to IBIS
  - Task groups for technical discussions and document editing
  - IBIS email reflectors
  - Open Forum teleconferences for event planning and voting
  - Summit presentations
  - IBIS Board and task group volunteering
  - Writing BIRDs – Buffer Issue Resolution Documents
    - Official method for submitting a proposed change to the IBIS specification
    - Many developed collaboratively in task groups
    - Discussed and voted on in Open Forum meetings
- Social Media:
  - What topics to promote for increased exposure



# IBIS Website Resources



IBIS Summits →

Task Group Info →

Member FAQ →

Spec documents →

\*IRDs →

Email support →

Syntax Parser Downloads →

The screenshot shows the IBIS Open Forum website. At the top, it says 'Welcome to the IBIS Open Forum'. Below this, there are three news items, each with a 'NEW' tag: '2025 Hybrid IBIS Summit @ IEEE EMC SPI Agenda and Presentations', 'TSCCHK2.1.0 parser is released and available for free executable download', and 'Touchstone 2.1 Specification is approved and available for download'. The main content area is divided into three sections: 'Our Specifications', 'Our Members', and 'Support'. The 'Our Specifications' section lists documents like 'I/O Buffer Information Specification', 'IBIS Interconnect Modeling Specification', 'IBIS Interconnect SPICE Subcircuit Specification', and 'Touchstone® File Format Specification'. The 'Our Members' section displays a grid of logos for various companies including Altair, AMD, Analog Devices, Ansys, Arm, Aurora System, Broadcom, Cadence, Ciena, Cisco, Dassault Systèmes, GE Healthcare, Google, Huawei, Infineon, Intel, Keysight, Marvell, MathWorks, Micron, Missouri S&T, SI-Clarity, Siemens, Signal Edge Solutions, ST, Synopsys, ZTE, and Zuken. The 'Support' section includes links for Model Review, Training, FREE Tools, IBIS Parsers, IBISCHK, IBISCHK Bugs, TSCCHK, TSCCHK Bugs, IBIS Cookbook, Accuracy Handbook, and IBIS Quality Spec. A sidebar on the left contains navigation links for Upcoming Events, Past Summits, Open Forum, Regional Forums, Task Groups, Members, Specifications, Models, and Site Map.

IBIS.org

# Thank You



An SAE Industry Technologies Consortia Program

IBIS Open Forum:

Web: <https://ibis.org>

Email: [info@ibis.org](mailto:info@ibis.org)

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