

# IBIS Update



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

Mike LaBonte

SiSoft

Chair, IBIS Open Forum

2018 Asian IBIS Summit

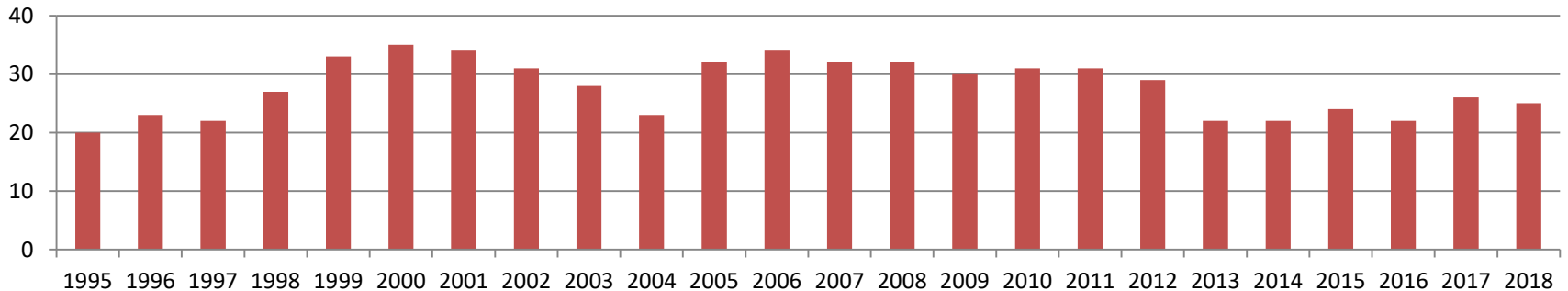
Taipei, ROC

November 16, 2018

# 25 IBIS Members

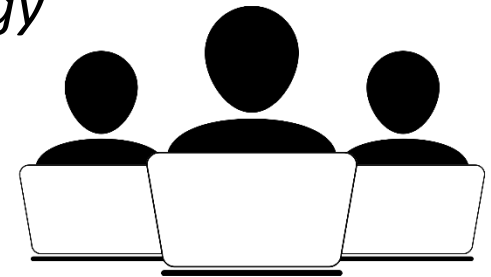


Number of Members by Year

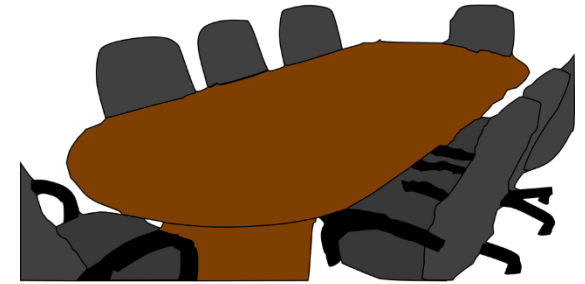


# IBIS Officers 2018-2019

- Chair: *Mike LaBonte, SiSoft*
- Vice-Chair: *Lance Wang, IO Methodology Inc.*
- Secretary: *Randy Wolff, Micron Technology*
- Treasurer: *Bob Ross, Teraspeed Labs*
- Librarian: *Anders Ekholm, Ericsson*
- Postmaster: *Curtis Clark, ANSYS*
- Webmaster: *Mike LaBonte, SiSoft*



# IBIS Meetings



- Weekly teleconferences
  - Quality Task Group (Tuesdays)
  - Advanced Technology Modeling Task Group (Tuesdays)
  - Interconnect Task Group (Wednesdays)
  - Editorial Task Group (some Fridays)
- IBIS Open Forum teleconference every 3 weeks
  - 480 meetings so far
- IBIS Summit meetings: DesignCon, IEEE SPI, EDICON USA, EPEPS, Shanghai, Taipei, Tokyo

# SAE ITC

- SAE Industry Technologies Consortia is the parent organization of the IBIS Open Forum
- IBIS is assisted by SAE employees José Godoy, Phyllis Gross, Dorothy Lloyd
- SAE ITC provides financial, legal, and other services
- <http://www.sae-itc.org/>



# Task Groups

- Interconnect Task Group
  - Chair: Michael Mirmak
  - [http://ibis.org/interconn\\_wip/](http://ibis.org/interconn_wip/)
  - Develop on-die/package/module/connector interconnect modeling BIRDs
- Advanced Technology Modeling Task Group
  - Chair: Arpad Muranyi
  - [http://ibis.org/atm\\_wip/](http://ibis.org/atm_wip/)
  - Develop most other technical BIRDs
- Quality Task Group
  - Chair: Mike LaBonte
  - [http://ibis.org/quality\\_wip/](http://ibis.org/quality_wip/)
  - Oversee IBISCHK parser testing and development
- Editorial Task Group
  - Chair: Michael Mirmak
  - [http://ibis.org/editorial\\_wip/](http://ibis.org/editorial_wip/)
  - Produce IBIS Specification documents

BIRD = Buffer Issue Resolution Document

# IBIS Milestones

## I/O Buffer Information Specification

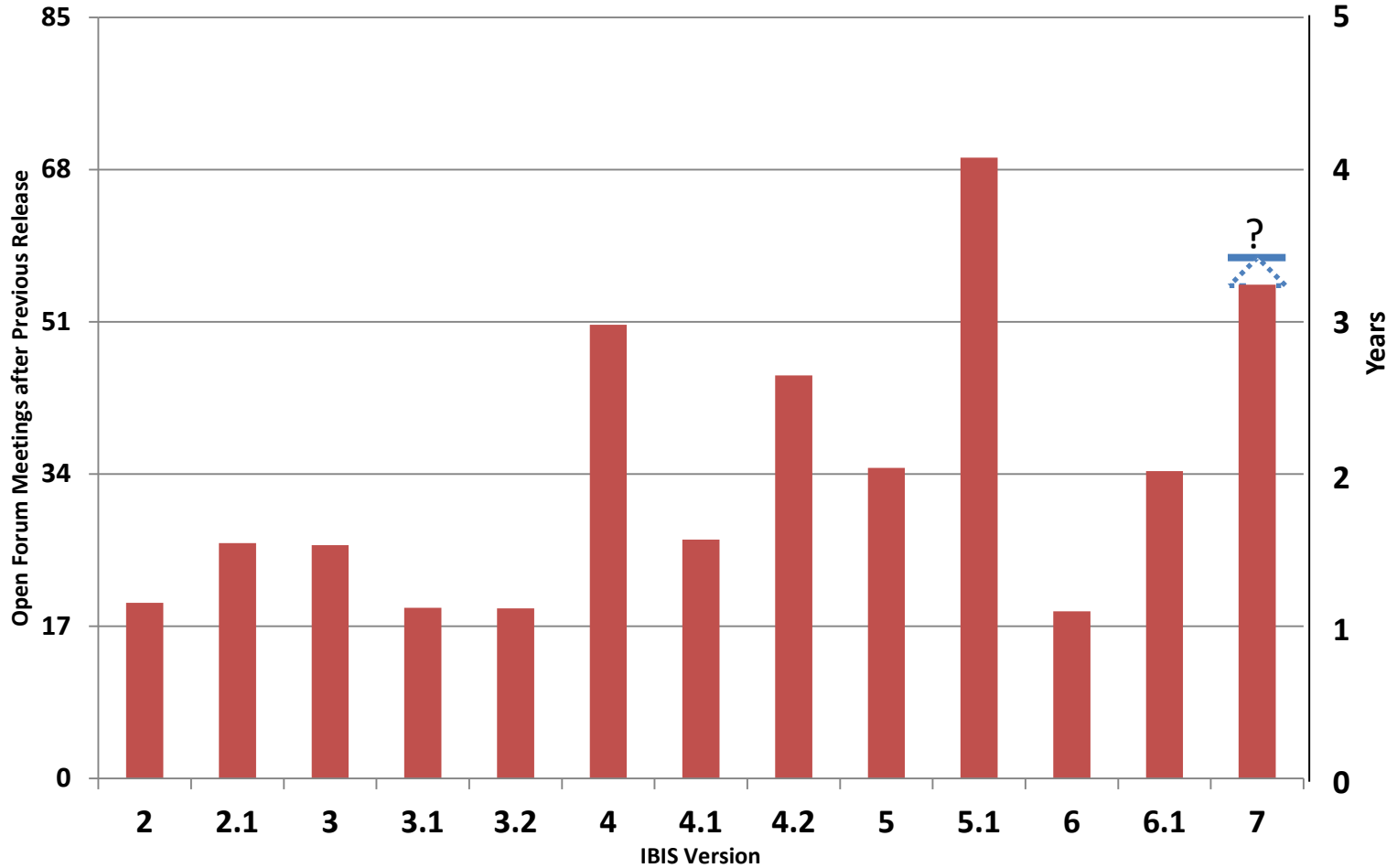
- 1993-1994 **IBIS 1.0-2.1:**
  - Behavioral buffer model (fast simulation)
  - Component pin map (easy EDA import)
- 1997-1999 **IBIS 3.0-3.2:**
  - Package models
  - Electrical Board Description (EBD)
  - Dynamic buffers
- 2002-2006 **IBIS 4.0-4.2:**
  - Receiver models
  - AMS languages
- 2007-2012 **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
- **2019? IBIS 7.0**

*Current  
development*

## 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

# IBIS Version Development



As of 12-Nov-2018



# Possible IBIS 7.0 Timeline

Meeting Date	Milestone
4/21/2017	Vote to establish 7.0 as the next IBIS version passes.
...	<i>BIRD review and acceptance (30 meetings)</i>
7/20/2018	7.0 BIRD set accepted.
...	<i>Editorial task group drafts IBIS 7.0</i>
12/21/2018	Editorial announces IBIS 7.0 ready. Review period begins
1/11/2019	
2/8/2019	Vote to ratify 7.0 scheduled for next meeting
3/1/2019	IBIS 7.0 ratified



# BIRDs Included in IBIS 7.0

BIRD	Title
147.6	Back-channel Support
165	Parameter Passing Improvements for [External Circuit]s
179	New IBIS-AMI Reserved Parameter Special_Param_Names
180	Require Unique Pin Names in [Pin]
182	POWER and GND [Pin] signal_name as [Pin Mapping] bus_label
183	[Model Data] Matrix Subparameter Terminology Correction
184.2	Model_name and Signal_name Restriction for POWER and GND Pins
185.2	Section 3 Reserved Word Guideline Update
186.4	File Naming Rules
187.3	Format and Usage Out Clarifications
188.1	Expanded Rx Noise Support for AMI
189.6	Interconnect Modeling Using IBIS-ISS and Touchstone
191.2	Clarifying Locations for Si_location and Timing_location
192.1	Clarification of List Default Rules
193	Figure 29 corrections
194	Revised AMI Ts4file Analog Buffer Models
196.1	Prohibit Periods at the End of File Names

# BIRDS Excluded from IBIS 7.0

BIRD	Title
166.2	Resolving problems with Redriver Init Flow
181.1	I-V Table Clarifications
190	Clarification for Redriver Flow
195.1	Enabling [Rgnd] and [Rpower] Keywords for Input Models

Green = Approved BIRD

# [Thank You]



IBIS Open Forum:

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

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