IBIS Chair's Report

Randy Wolff

Micron Technology

Chair, IBIS Open Forum

DesignCon IBIS Summit

Santa Clara, CA

January 31, 2020

https://www.ibis.org/

26 IBIS Members

Number of Members by Year

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Members	20	23	22	27	33	35	34	31	28	23	32	34	32	32	30	31	31	29	22	22	24	22	26	26	26	26
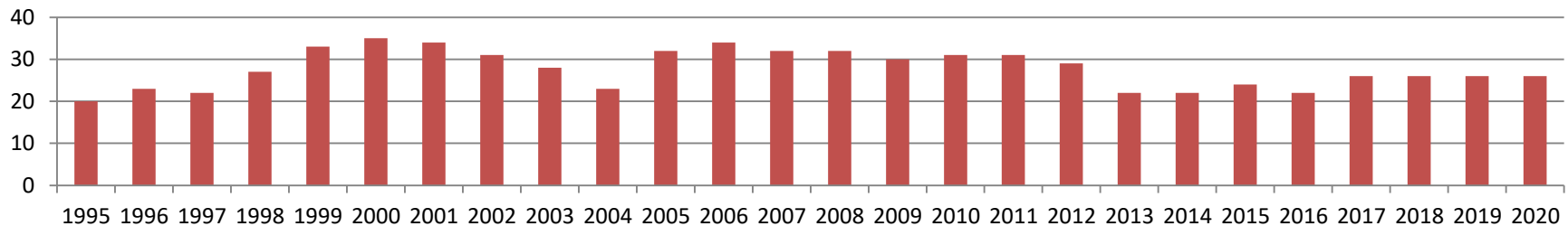
IBIS Officers 2019-2020

Chair: *Randy Wolff, Micron Technology*

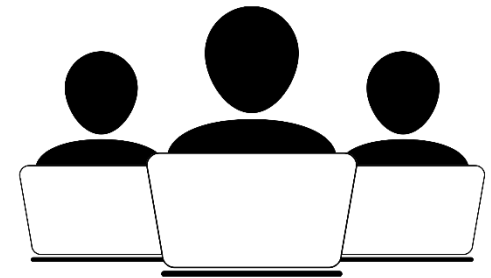Vice-Chair: *Lance Wang, Zuken USA*

Secretary: *Curtis Clark, ANSYS*

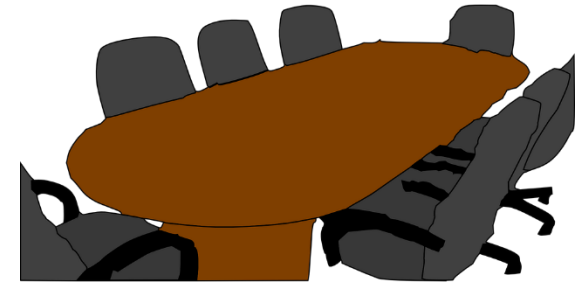Treasurer: *Bob Ross, Teraspeed Labs*

Librarian: *Anders Ekholm, Ericsson*

Postmaster: *Mike LaBonte, SiSoft (MathWorks)*

Webmaster: *Steve Parker, Marvell*

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
- IBIS Summit meetings: DesignCon, IEEE SPI, Shanghai, Taipei, Tokyo
- Participants: 368 in 2019

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, Laurie Strom

- SAE ITC provides financial, legal, and other services

- http://www.sae-itc.org/

SAE ITC
An SAE International Affiliate

Task Groups

- Interconnect Task Group
  - Chair: Michael Mirmak, Intel
  - http://ibis.org/interconn_wip/
  - Develop on-die/package/module/connector interconnect modeling BIRDs

- Advanced Technology Modeling Task Group
  - Chair: Arpad Muranyi, Mentor, A Siemens Business
  - http://ibis.org/atm_wip/
  - Develop most other technical BIRDs

- Quality Task Group
  - Chair: Mike LaBonte, SiSoft (MathWorks)
  - http://ibis.org/quality_wip/
  - Oversee IBISCHK parser testing and development

- Editorial Task Group
  - Chair: Michael Mirmak, Intel
  - http://ibis.org/editorial_wip/
  - Produce IBIS Specification documents

BIRD = Buffer Issue Resolution Document

IBIS China Regional Forum

- Users group originally formed in 2016
- Restart of group initiated based on interest expressed during 2019 Asia Summits
- Meetings to be conducted in Mandarin with minutes provided in English
- Group to focus on IBIS support in China
  - BIRD development, Summit presentations and support
- Coming soon

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**:
  - Back-channel support
  - Interconnect modeling using IBIS-ISS and Touchstone
- 2020? **IBIS 7.1**

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
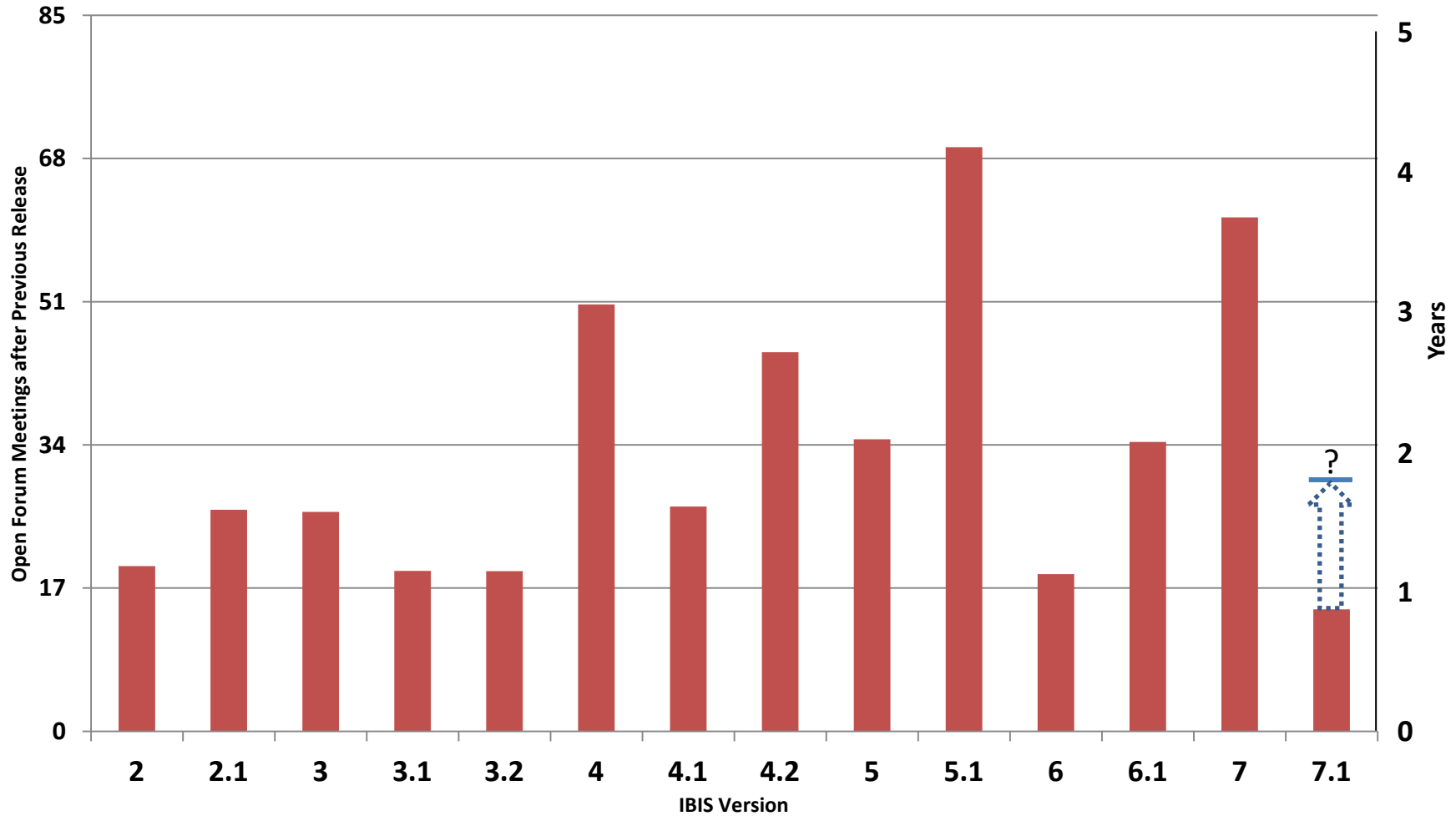
Planning for IBIS 7.1

BIRD	Title
181.1	I-V Table Clarifications
195.1	Enabling [Rgnd] and [Rpower] Keywords for Input Models
197.7	New AMI Reserved Parameter DC_Offset
198	Keyword additions for On Die PDN (Power Distribution Network) Modeling
199	Fix Rx_Receiver_Sensitivity Inconsistencies
200	C_comp Model Using IBIS-ISS or Touchstone
201	Back-channel Statistical Optimization
202	Electrical Descriptions of Modules

- Other BIRDs
  - 2 about redriver flow (BIRD166.4, BIRD190)
- Several BIRDs will take time for full reviews/updates before voting
- Plan to cut off new technical content later in 2020 to start editorial process

Green = currently accepted BIRD

[Thank You]

IBIS Open Forum:
Web: https://www.ibis.org
Email: ibis-info@freelists.org

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