

NEWS RELEASE

IBIS Celebrates 30 Years of Collaboration, Innovation, and Signal Integrity

Past and Present Officers Gather to Celebrate IBIS – and Cut the Cake!

Oakhurst, CA – February 17 2023 – In 2023 IBIS, the I/O Buffer Information Specification, completes 30 years as the electronics industry's dominant Signal Integrity (SI) model format. To celebrate IBIS's success and longevity, on February 3, 2023 every past and present IBIS Chair gathered at the IBIS Summit, in person and over Zoom, to reflect on the past and chart a course for the next 30 years. "The gathering was a proud moment for the IBIS Open Forum, celebrating 30 years of contributions to the signal integrity field and high-speed designs" said Randy Wolff, current IBIS Chair. "This is an important moment, and it's an honor to celebrate IBIS's accomplishments together after so many years," said Donald Telian, SI Consultant and originator of IBIS, as he helped cut the celebration's cake. In a world where technology changes at lightspeed "it is not often that a technical specification remains alive and active for 30 years and counting," said Stephen Peters, IBIS Chair, 2002-2003. Past and present IBIS developers attribute IBIS's continued success to its collaborative spirit, relentless innovation, and laser focus on all things SI.

IBIS is Collaborative

From its inception, IBIS has championed open access, participation, and collaboration – practices not typical among standards organizations. Thirty years later, IBIS's open stance has proven to be a wise choice. "The key to IBIS's longevity and success is our open, non-proprietary, collaborative approach to solving the shared signal integrity challenges faced by the whole electronics industry," said Will Hobbs, IBIS Cofounder and 1993-1997 Chair. Telian affirms "The day in 1993 I initiated the first 'IBIS Open Forum' meeting, I stressed the word 'open.' By design, there is, and always has been, room in IBIS for everyone to get involved and contribute." "IBIS is a rare example of a technology standard that is not driven by a single dominant company, and for which companies do not have to pay big bucks to get the documents or rights to use it," said Mike LaBonte, 2015-2020 IBIS Chair. And Wolff confirms "the collaborative spirit of those early IBIS pioneers is still alive in the discussions and debates taking place in the IBIS Open Forum today." Randy further exemplified IBIS's spirit as he collaborated with the caterer to recover the IBIS 30-year cake lost enroute during the meeting. "That the IBIS specification remains as relevant as when it was first proposed is a testament to both the need for IBIS and the cooperation between silicon vendors and EDA companies -- without which there would be no IBIS Open Forum members, confirms the fact that every IBIS Chair is here, as well as numerous past officers and original Open Forum members, confirms the fact that we all experienced fruitful and meaningful collaboration in IBIS," said Telian.

IBIS is Innovative

To keep pace with digital electronics' 1,000+ increase in frequency over the past 30 years, innovation has always been a hallmark of IBIS. As Michael Mirmak, two-time IBIS Chair for a total of 11 years, notes "IBIS created an ideal place for itself within the industry: it addresses the user's need for a universal data format but also enables silicon and software vendors to deliver innovative features. That's how it stays relevant for decades in a very fast-changing ecosystem." Musing over another 30-year metric, Bob Ross, two-time IBIS Chair, quipped "IBIS: From 7 pages in 1993 to 413 pages in 2023, and growing!" Indeed, over the years Ross and others have meticulously curated the IBIS Specification to ensure the syntax is clear and concise, enabling electronic product

design engineers to trust the veracity of IBIS models. To ensure efficient translation from written specification to valid model syntax, IBIS maintains a "golden parser" developers and users can execute on their model files to confirm compliance to the latest specification. To underscore IBIS's relentless innovation, Wolff added "The celebration coincided with the release of IBIS version 7.2, the 16th update to IBIS since the release of IBIS 1.0 in June of 1993."

IBIS is Signal Integrity

Going forward, IBIS continues to serve as the hub of the wheel for all things Signal Integrity. Telian asserts, "In 1993 the engineering discipline of Signal Integrity was emerging, and hence had no center point, data formats, or industry-wide context to share ideas. When IBIS jumped into that void, it helped define and even curate the practice of SI." During the 30-year celebration, numerous old-time SI engineers laughed about the challenges and vagaries of solving SI in the world before IBIS. As Wolff mused "Hearing about the early history of IBIS really helped me appreciate how far SI has evolved since the Wild West days of simulation before the IBIS model was developed." And evolved it has, as nearly every modern digital design deploys SI analysis powered by IBIS models.

Indeed, IBIS has reason to celebrate the fact it has garnered an important place in electronics history. "Now and then I look at the electronics in my pocket, house, and garage, and I remind myself that IBIS had a part in developing most of that. We all benefit from IBIS, yet most people have never heard of it, a sign of meaningful success," concluded LaBonte.

Celebration Photos



Past and present IBIS Officers. From left to right, Graham Kus, Steven Parker, Michael Mirmak, Donald Telian, Will Hobbs, Randy Wolff, Lance Wang.



The lost and found IBIS Celebration cake. Inset: IBIS Co-founders Hobbs and Telian hi-five IBIS's accomplishments, along with an unknown and unspecified creature, prior to cutting the cake.

For additional information:

Section 7.1 in Donald Telian's book <u>Signal Integrity, In Practice</u> documents the origins and history of IBIS. IBIS origins are also documented in <u>the presentation "IBIS: 30 Years and Counting"</u> given at the Celebration by Donald Telian, Arpad Muranyi, and Will Hobbs.

About IBIS

IBIS is a standard for electronic behavioral specifications of integrated circuit input/output analog characteristics. In order to enable an industry standard method to electronically transport IBIS modeling data between silicon vendors, simulation software vendors, and end customers, the IBIS template is proposed. The intention of this template is to specify a consistent format that can be parsed by software, allowing simulation vendors to derive models compatible with their own products. More information on IBIS can be found at https://ibis.org/.

About SiGuys

SiGuys leverages decades of Signal Integrity (SI) experience to provide consulting services and training to electronic hardware design teams. SiGuys handles all types of SI challenges with particular focus on today's highest speed serial links, deploying advanced simulation capabilities to ensure designs work right the first time. SiGuys' customers receive real data, clear communication, and documented solutions for their most-challenging SI problems. Real data, no nonsense. More information on SiGuys can be found at www.siguys.com.

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