



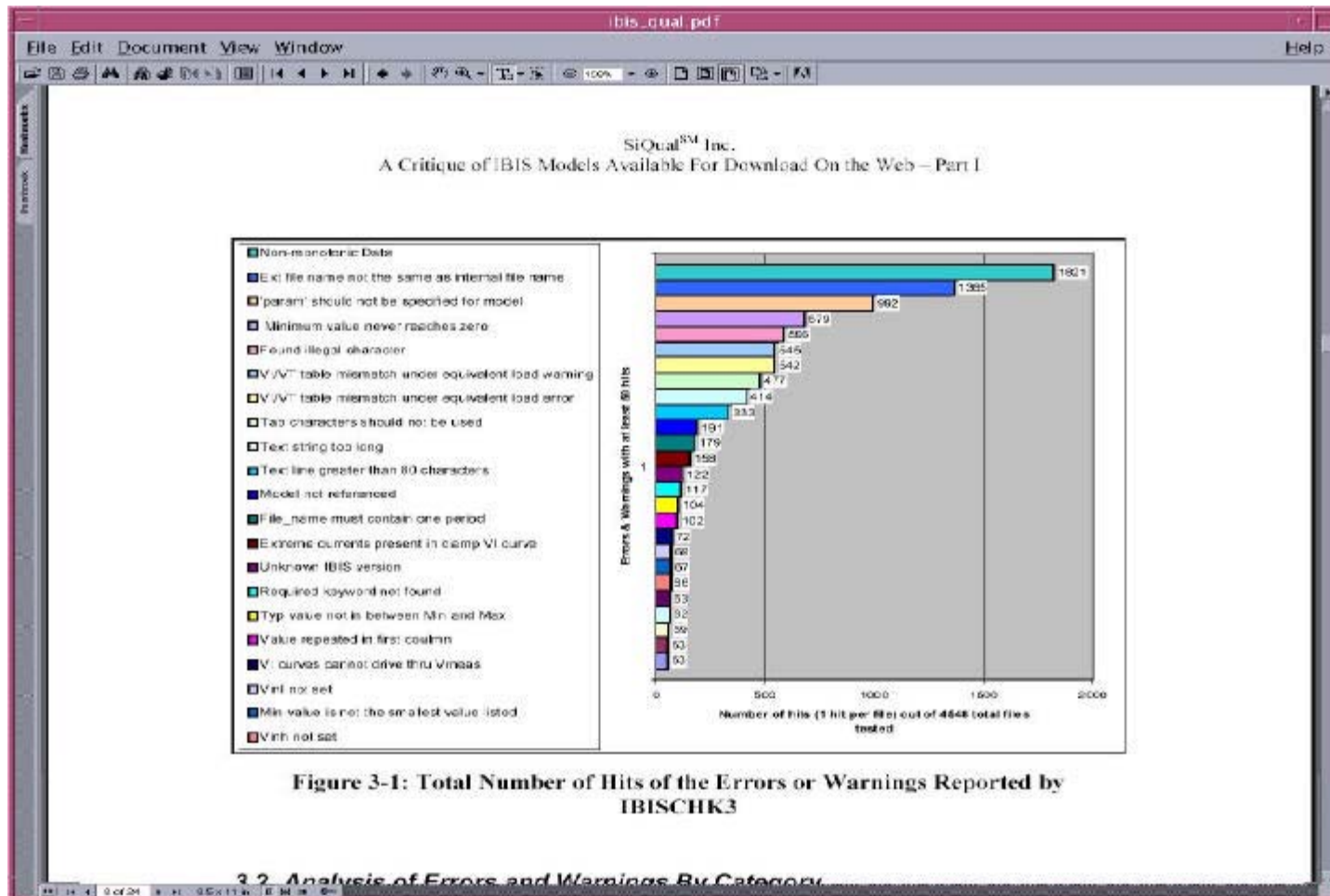
IBIS QUALITY COMMITTEE REPORT

Barry Katz

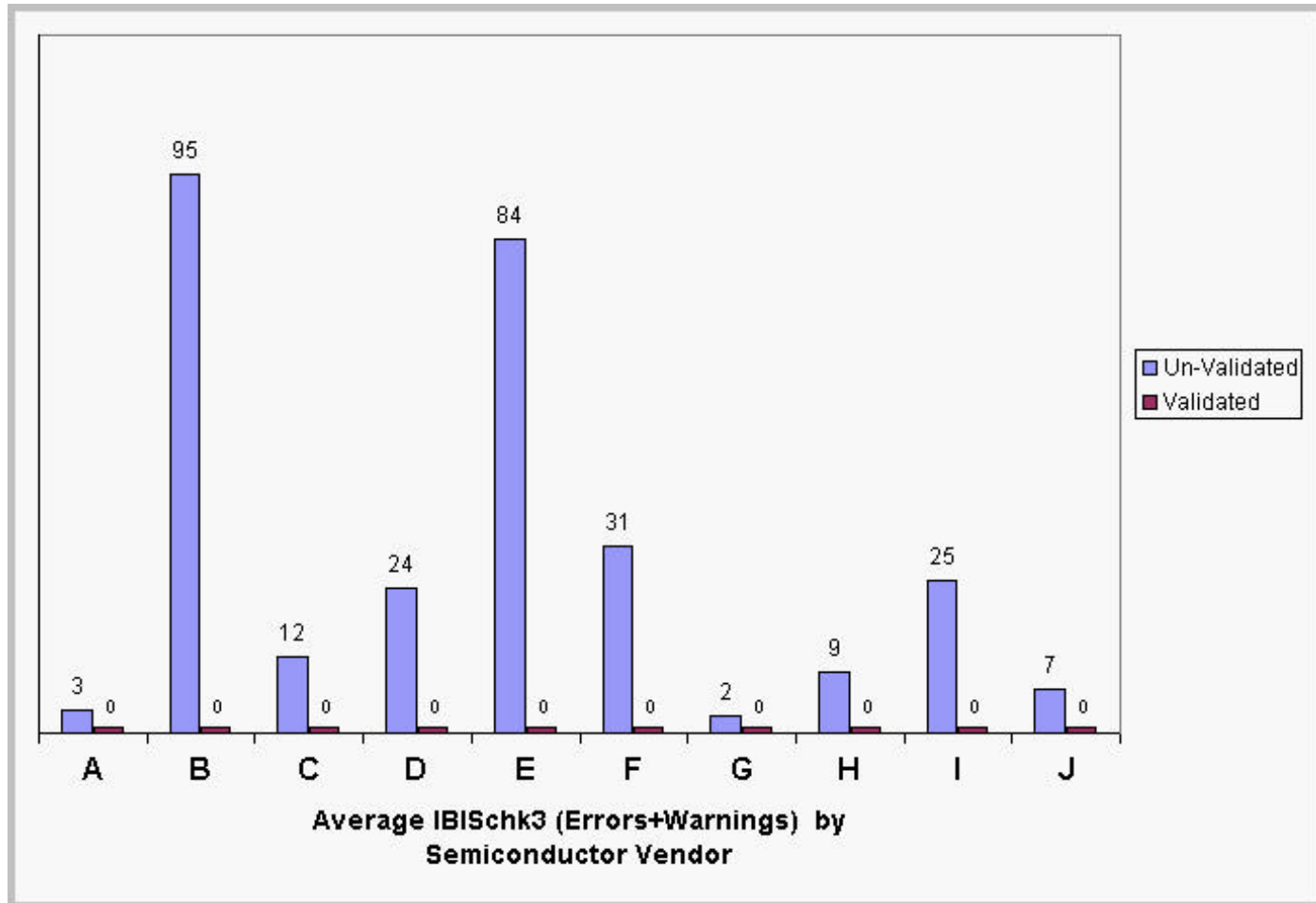
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IBIS Model Quality is Generally Poor



By Semiconductor Vendor





IBIS Quality Subcommittee

- Formed 3/02
- Charter
 - Develop a complete checklist
 - Establish levels of quality
 - This checklist should serve to be incorporated directly into procurement specs.
 - Suggest enhancements to IBISCHK
- Goals
 - Rating system that is easy to understand and adopt
 - Communicate to vendors/users.
 - Cover overall file, component, and model sections
 - Check for completeness, correctness, accuracy
 - Leverage of prior work

IBIS Quality Subcommittee

Active participants

- Committee is represented by Semiconductor vendors, EDA vendors, and IBIS end-users.

SiSoft - Barry Katz (Chairman), Robert Haller, Eric Brock, Kevin Fisher

Siemens – Eckhard Lenski, Katja Koller

IBM – Greg Edlund

Cadence – Lynne Green

Apple – John Figueroa, Kim Helliwell

Mentor – Bob Ross, Hazem Hegazy, Sherif Hammad,

Cisco – Mike LaBonte, Todd Westerhoff

Hitachi ULSI Systems – Shoji Kazuyoshi, Nonoyama Sadahiro

Leventhal Design & Communications – Roy Leventhal

Intel – Benjamin Silva

Teraspeed - Tom Dagostino

AMCC - Peter LaFlamme

Fairchild – Adam Tambone



IBIS Quality Subcommittee

- Meet every 2 weeks (Tuesdays 11:00 EDT for 1 hour)
- Mailing list
 - ibis-quality@freelists.org
 - <http://www.freelists.org/archives/ibis-quality>
 - Over 50 subscribers from a large cross section of companies
- Web Site
 - <http://www.sisoft.com/ibis-quality>
- Need your help

Accomplishments/Status

- Compiled and published IBIS Quality checklist
 - <http://www.sisoft.com/ibis-quality/>
- Defined quality levels
 - Level 0 – Passes IBISCHK
 - Level 1 – Complete and correct
 - Level 2a, 2b – Correlation: Simulation, Measurement
 - Leverage off of IBIS Accuracy Handbook (spec)
 - Level 3 – All of the above
- Submitted multiple IBISCHK enhancements
- Submitted IBIS Golden Parser open source proposal
- Documentation
 - In progress

Sample Documentation

- Receiver Waveform Processing
 - ✓ ...
 - ✓ V_{inl} and V_{inh} values are below and above, respectively, V_{meas} .
 - ✓ V_{meas} in the [Model] section matches the value given in the datasheet for the part technology.
 - ✓ If min and max values for V_{inl} and V_{inh} are known, these are given in the [Model Spec] section. For example, some technologies switch near a reference voltage that may change in typ, min, and max modes.
 - ✓ ...
- Ramp Data
 - ✓ ...

Summary

- IBIS model quality *MUST* improve
- IBIS Quality subcommittee is on the job!
- Accomplished a lot
 - Checklist
 - Levels
 - IBISChk Bug submissions/proposals
 - Draft documentation
- More work required
 - Documentation
 - Refine Quality Levels

