IBIS Chair’s Report & Roadmap

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Stunning Progress...

- IBIS 4.1 approved
  - Verilog-AMS and VHDL-AMS are now linked to IBIS!
  - Flash! April edition of EDN Japan features discussion of JEITA EDA-WG and consumer applications of IBIS 4.1!
- IBIS 4.0 parser released
  - Ver. 4.0.1 covers all BUGs except BUG80 and BUG82
  - Thanks to the parser licensees for their support!
- Ansoft
- Cadence
- Cisco
- Huawei
- Intel
- LSI Logic
- Mentor Graphics
- Synopsys
- Texas Instruments
- Zuken

- IBIS 4.1 parser bidding underway
- ICM 1.0 approved and a golden parser distributed
  - Thanks to developer Kelly Green for his considerable efforts
- Membership remains strong despite economic situation
  - 2003 ended with 28 paid members
  - 2004 membership invoices are already being filled
- IBIS Quality Committee continues work

IBIS is an active and growing force in the industry
…And Upcoming Challenges

- Maintain our development pace
- Drive IBIS enhancements in the industry
  - Publish an updated Cookbook
  - Work actively with other modeling standards groups (IEEE, Accelera)
  - Promote 4.1 language extensions in trade publications
- Promote widespread ICM adoption
  - Support the ICM with a cookbook, example models and tool enabling
  - Prepare for ICM 1.5/2.0 (frequency-dependent RLGCs, fixes to known issues)
- Improve international support and interaction
  - Maintain active participation in European IBIS Summits
  - Develop “Electronic Roadshow” to support Asia, Europe and the US with summit-quality teleconference presentations
- Increase the Open Forum’s value
  - Expand our membership as we help drive behavioral modeling
  - Develop our public image through web and publication improvements

As always, thank you for your support!

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Roadmap Agenda

- **IBIS History**
  - Specification Revisions
  - Parser Revisions
  - Challenge for the Future
- **Call to Action!**
  - Proposed Development Guidelines
  - Proposed Two-year Roadmap
  - Futures Subcommittee
  - Cookbook & Training
**IBIS History**

- **Specification Revisions**
  - IBIS 1.0 – April 1993
  - IBIS 1.1 – June 1993
  - IBIS 2.0 – June 1994
  - IBIS 2.1 – Dec. 1995
  - IBIS 3.0 – June 1997
  - IBIS 3.1 – July 1998
  - IBIS 3.2 – Sept. 1999
  - IBIS 4.0 – July 2002
  - IBIS 4.1 – January 2004

- **Parser Revisions**
  - Ver. 1.0 – July 1995
  - Ver. 2.0 – April 1996
  - Ver. 2.0+ – Aug. 1998
  - Ver. 3.0 – July 2002
  - Ver. 4.0 – Dec. 2003

- **Average Delivery Times**
  - 24 months for a major specification revision
  - 12 months for a minor specification revision
  - 28 months for a parser from final specification revision

**The Challenge**

- We need to “close the gaps” to keep IBIS relevant to the industry
  - PC products on an 18 month cycle (“Moore’s Law”)
  - Increased synergy between transportation, PC and home electronics markets
    - Example: DVD, Bluetooth® in automobiles
    - Cellular telephones, cameras and PCs now integrating
    - Traditional PC makers now entering home electronics
  - New technologies in almost every product generation
  - IBIS is not the only choice for modeling
    - IBIS universality is a “plus” BUT
    - Any perception that IBIS is “behind” is a major negative

- How can we keep IBIS valuable?
  - Support the latest design trends *fast and proactively*
  - Lower barriers to acceptance of new IBIS revisions
  - Lower barriers for users of IBIS features
Call To Action!

- Support new design technologies
  - Faster release of new specification revisions
  - Address new technologies with new IBIS features
  - Be proactive with features, rather than reactive
  - Faster release of parsers
  - Avoid delaying EDA tools or driving custom parsers
- Lowering barriers for users of IBIS features?
  - Regular Cookbook updates
  - Practical training through web and “E-Roadshow”
- Proposed Development Guidelines
  - Specification-to-parser delay of 6-8 months
  - Add in 8-12 months for EDA product integration
  - Parser-to-cookbook delay of 6 months
  - Cookbook to be available with new EDA tool releases
  - Specification revision cycle of 18 months or less
  - Major vs. minor to be clarified?

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Development Timeline

Not Shown
- July, 2002: IBIS 4.0 approved
- Sept., 2003: ICM 1.0 approved

Spec Activities

- IBIS 4.1 Approval
- ICM 1.0 Cookbook
- ICM 1.5 Proposal
- IBIS 4.1 Proposal
- ICM 1.0 Cookbook
- IBIS 4.1 Cookbook
- ICM 1.5 Approval
- IBIS 4.2 Approval

Summits

- DAC
- DATE
- DesignCon Summit
- PCB East
Futures Subcommittee

- "New" Futures Subcommittee
  - Meeting every two weeks
  - To create, discuss and draft IBIS/ICM updates
- Tasks for IBIS 4.2 and Beyond
  - "Clean up" of language and resolve conflicts
    - Example: [Series Pin Mapping] & [Model Selector] (BIRD87)
  - [External Model] integration issues
    - Example: Acceptable digital states for input ports
  - [External Circuit] usage issues
    - User-definable measurement parameters and delay fixtures
  - Specification "hooks" between ICM and IBIS
- Tasks for ICM
  - Add frequency-dependent RLGC matrix support
  - Resolve known parser assumptions and keyword conflicts

Cookbook & Training

- Cookbook Subcommittee
  - Meeting every two weeks, with Futures Subcommittee
  - To create, edit and distribute Cookbooks
    - Practical examples of new keywords
    - Hints for data extraction and correlation
    - See S. Peters' 1997 IBIS 2.1 Cookbook
  - Separate ICM and IBIS publications
- E-Roadshow
  - Summit-level teleconference presentations for global audiences
    - Foster worldwide interaction, rather than separate IBIS communities
  - Two presentations (60-90 minutes, plus Q&A)
  - Schedule to be tailored for specific location
    - GMT+1 for Europe (ex. 6 AM US Pacific)
    - GMT+6/9 for Asia (ex. 10 PM US Pacific)
Summary

- A Motto to Remember:
  - How can we keep IBIS valuable to the industry?
    - Support the latest design trends *fast and proactively*
    - Lower barriers to acceptance of new IBIS revisions
    - Lower barriers for users of IBIS features

- Implementation
  - Adopt a regular, aggressive schedule
  - Organize to make changes quickly
    - Two new subcommittees

- Volunteers are welcome!

*Your participation and contributions are critical to IBIS!*