IBIS Chair’s Report and Roadmap

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IBIS Summit
DesignCon East 2005
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http://www.eda.org/ibis/
http://www.eigroup.org/ibis/
Agenda

- Organizational Health
- Key Recent Events
- Short-term Direction of IBIS
- IBIS Timeline
- Long-term Issues
- Thanks to Key Participants
- Questions
Organizational Health

- **Membership**
  - IBIS Open Forum has 30 members
  - One new half-year membership under discussion

- **ICM and IBIS Parsers**
  - New written license agreements available!
  - All links to GPL removed for ICMCHK1
  - ICMCHK1 public announcement anticipated shortly

- **Task Groups**
  - New group: IBIS Macromodeling Library Task Group

- **Finances**
  - Income good, but still behind outlays by US$6000

Membership is healthy
Need strong sales of ICMCHK1 parser code
Key Recent Events

- IBIS 3.2 reapproved by EIA Aug. 17
- ICM 1.1 approved by the Open Forum Jul. 15
  - Now in balloting for EIA standardization
  - Unofficially passed; ballot closes Sept. 26
- IBIS 4.0 Cookbook released Sept. 16
  - First revision since 1997
  - Covers IBIS 4.0 keywords, features
  - Includes differential, pre-emphasis discussion
Short Term Direction

🌟 Over the next six months…
  – Close current IBISCHK4 parser bugs
  – Close BIRD95, BIRD97/98 and BIRD100
  – Complete draft of IBIS 4.2
    ✴ What should it include? See “Long Term Direction”
  – Begin work on ICM 1.1 Cookbook
Not Shown
- July, 2002: IBIS 4.0 approved
- Sep., 2003: ICM 1.0 approved
- Jan., 2004: IBIS 4.1 approved

IBIS Timeline

Spec Activities
- IBIS 4.1 Parser
- ICM 1.1 Proposal
- IBIS 3.2 EIA Affirm
- IBIS 4.0 Cookbook
- IBIS 4.1 Approval
- ICM 1.1 Approval
- ICM Cookbook
- ICM 1.1 Proposal
- IBIS 4.2 Proposal
- IBIS 4.2 Approval
- IBIS 4.2 Approval

Summits
- IBIS Summit Asia
- DAC
- DATE
- DesignCon
- DesignCon East
- JEITA IBIS Conference

Regular summits in Asia starting in ’06? Looking likely!

2005 IBIS Summit at DesignCon East
Short Term Direction

* BIRDs Under Consideration

  - Futures Task Group is discussing…

  - **BIRD95**: Power Integrity Analysis Using IBIS
    * Adds table for current from source through buffer
    * Adds RLGC values to describe buffer power-ground path

  - **BIRD97/98**: Gate Modulation Effect
    * New parameters change I-V tables as supply voltages change
    * Example: Power_coeff_typ = 0.8
    * I-V table reduced by 8% for a 10% change in supply voltage
    * BIRD98 is table-based; BIRD97 is equation-based

  - **BIRD100 (Draft)**: IBIS-ICM Linking
    * Not yet released
    * Significant questions remain on native IBIS package support
Long Term Issues

★ IBIS 4.1 Cookbook
  – IBIS community needs guidance on behavioral modeling with AMS
  – IBIS 4.1 keywords can be confusing
  – This may not be feasible until IBIS 4.2/5.0

★ What should the next revision of IBIS include?
  – Need power delivery (BIRD95, BIRD97/98) features
  – Need ICM-IBIS links soon
    ★ 4.1 specification actually implies ICM without naming it
  – User-defined measurements for [Ext. Circuit]?
    ★ Many tools need these for SI analysis
  – Macromodeling support through standard libraries
  – Major changes will increase cost of a new parser
IBIS 4.2 vs. IBIS 5.0

- Current trends on IBIS 4.2, 5.0
- IBIS 4.2 would…
  - “Clean up” language to save parser costs
  - BIRD94, BIRD99 and bug fixes only
- IBIS 5.0 would…
  - Add BIRD95, BIRD97/98
  - Add explicit support for ICM (Draft BIRD100)
  - Support [External Circuit] with [Model]
  - Incorporate EMI support (BIRD74.5)
  - Include user-defined measurements (“stretch goal”)
- Do we need these features earlier than 5.0?
- Is this plan supportable?
Thanks to Key Players

Our members and parser owners

• Actel
• Agere
• Agilent*
• AMD
• Ansoft
• Aplac*
• Applied Simulation Technology
• Cadence Design Systems
• Cisco
• Fluent
• Green Streak Programs
• Hitachi ULSI Systems
• Huawei
• ICS
• Intel
• Legend Design*
• LSI Logic

• Marvell
• Mentor Graphics
• Micron
• NEC
• Panasonic (Matsushita)
• Samtec
• Siemens
• Signal Integrity Software
• Sigrity
• Silego
• Silicon Image
• Silvaco*
• Synopsys
• Teraspeed Consulting Group
• Texas Instruments
• Xilinx
• Zuken

* non-member parser licensee
QUESTIONS?