

IBIS Chair's Report and Roadmap



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Chair, EIA IBIS Open Forum

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
 - Now ANSI/EIA 656-A-1999 (R2005)
- ★ 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



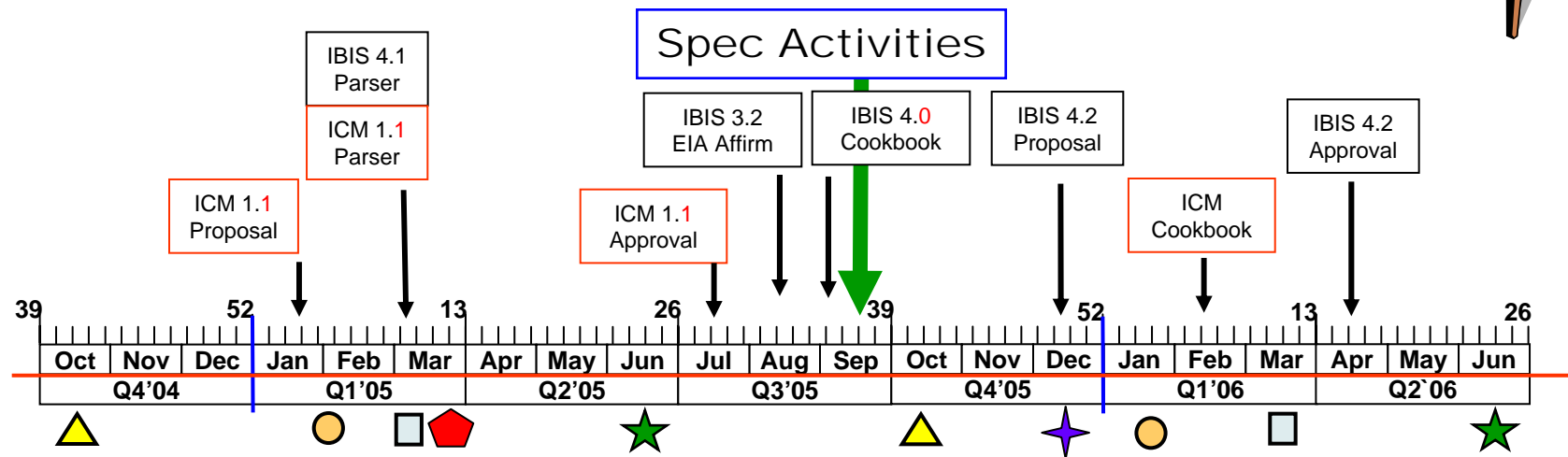
- ★ Over the next six months...
 - Close current IBISCHK4 parser bugs
 - Close BIRD95, BIRD97/98 and BIRD100
 - Complete draft of IBIS 4.2
 - ★ What should it include? See “Long Term Direction”
 - Begin work on ICM 1.1 Cookbook

IBIS Timeline



Not Shown

- July, 2002: IBIS 4.0 approved
- Sep., 2003: ICM 1.0 approved
- Jan., 2004: IBIS 4.1 approved



- Summits
- ★ IBIS Summit Asia
 - ★ DAC
 - DATE
 - DesignCon
 - △ DesignCon East
 - ◆ JEITA IBIS Conference

2005 IBIS Summit at DesignCon East

*Regular summits
in Asia starting
in '06?
Looking likely!*

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?