



JEITA IBIS Promotion Working Group Report

DesignCon IBIS Summit
Santa Clara, California
January 22, 2016

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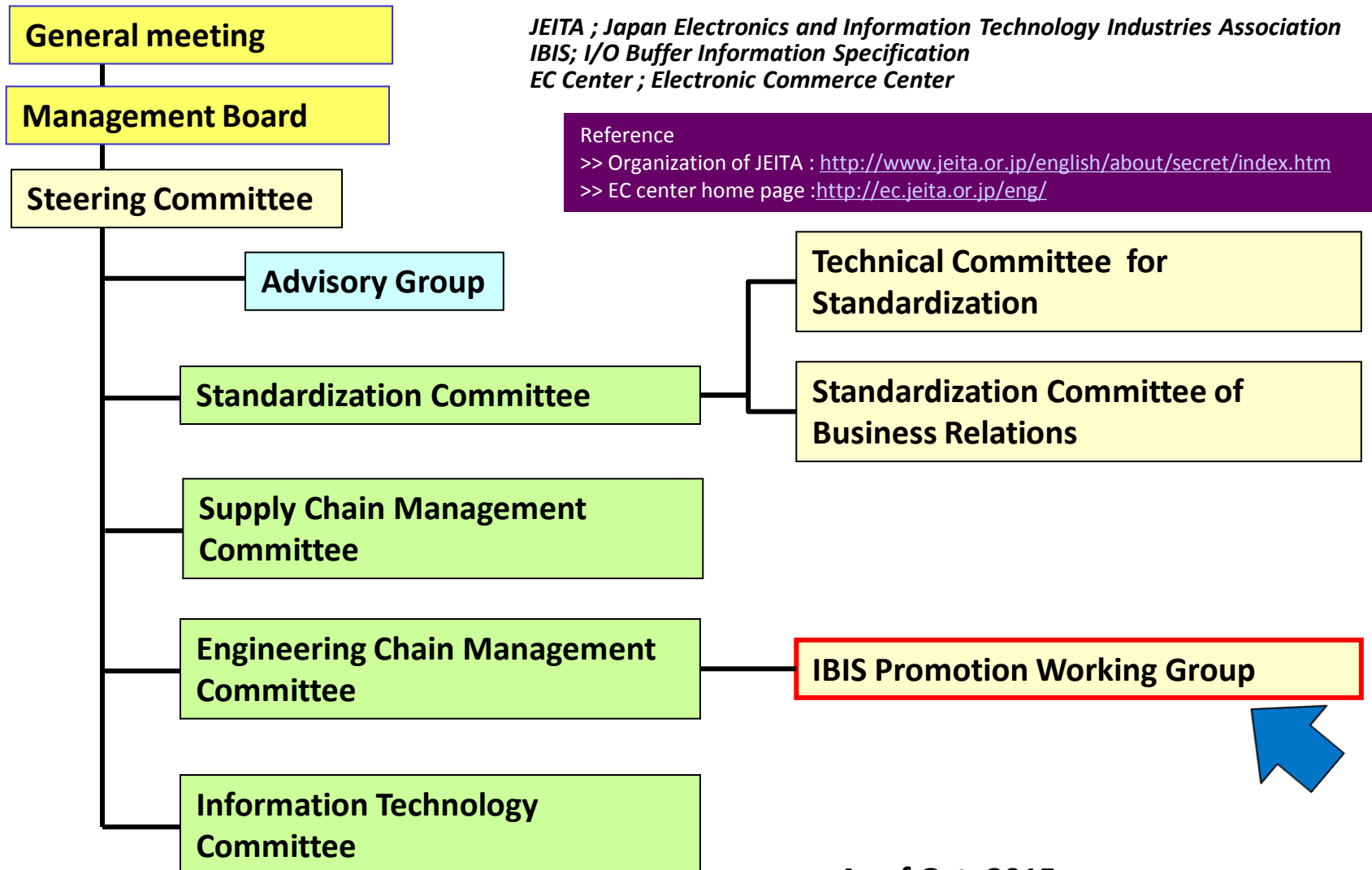
- Agenda -

1. JEITA/EC Center Committee Organization

2. IBIS Promotion Working Group

- Objective
- Activity Status
- Action Plan

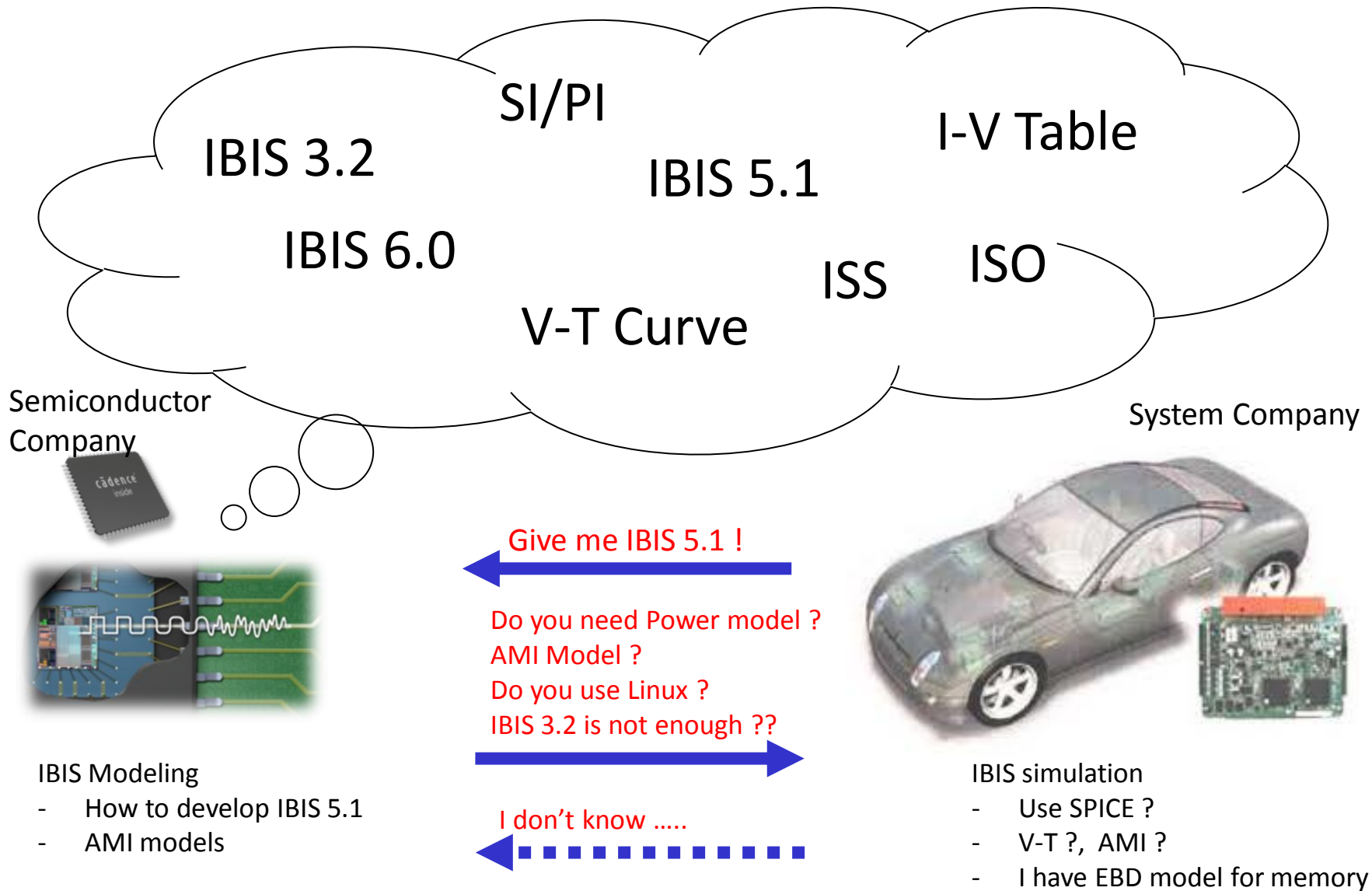
1. JEITA/EC Center Committee Organization



2. IBIS Promotion Working Group

- Objective**
- Activity Status**
- Action Plan**

Objective: Let's Use IBIS Simulation



Activities status: outline

- **Define IBIS simulation step guideline**
 - Simulation Guideline for target topologies
- IBIS promotion of utilization
 - Provide any IBIS related information
 - **IBIS Keyword Summary**
 - **Advanced IBIS technology guidance**
 - **IBIS Seminar**
- **Asian IBIS Summit, Japan**
 - Support IBIS Open Forum for all logistics
- Maintain IBIS Quality WG results
 - IBIS Quality Framework Home Page
 - JEITA Book: “SI Simulation Model handbook”

Today's report

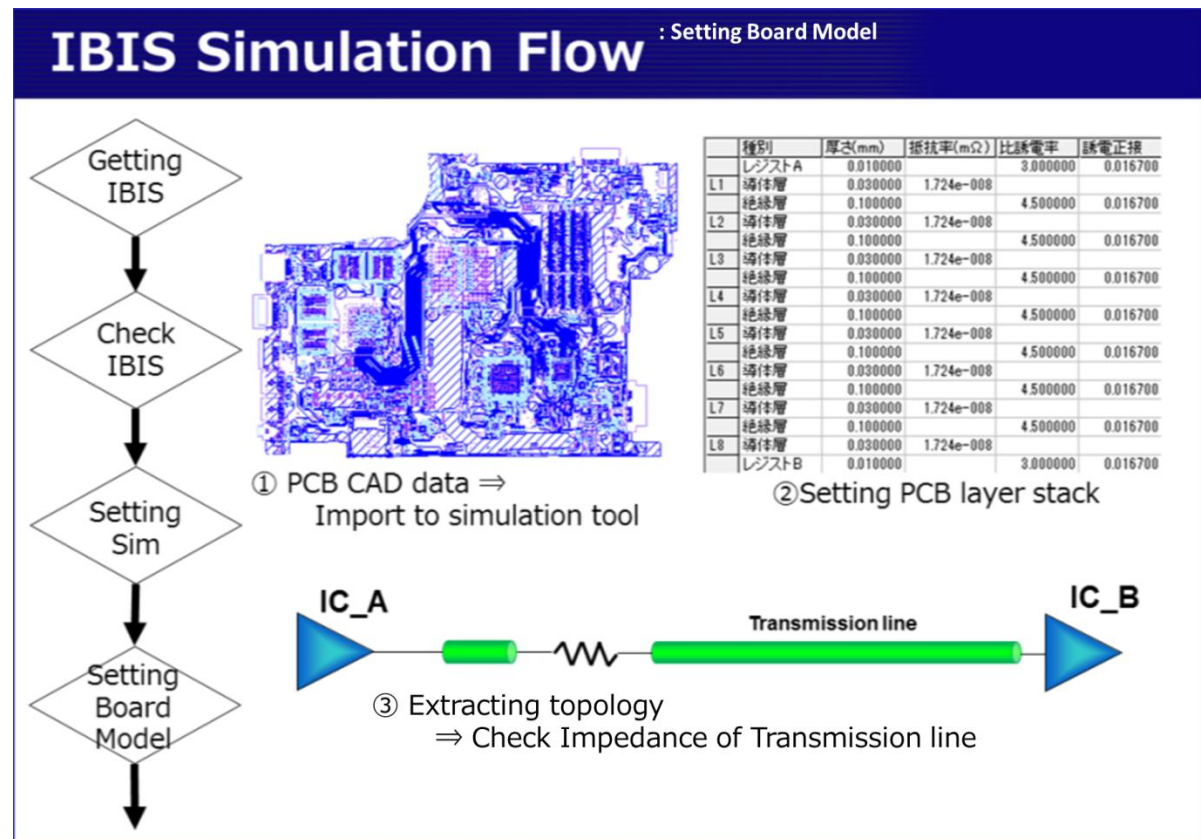
Activity 1: Define IBIS simulation step guideline

- Define recommended IBIS simulation flow

e.g.

- IBIS Check
- Sim setting
- Test sim

- FAQ



Activity 2: IBIS Keyword Summary

- Major 38 keyword summary
 - Frequently used keywords and parameters
- Keyword guideline for simulation purposes

2.3.2 Model Spec

- **D_overshoot_area_h** Dynamic overshoot high area (in V-s)
- **D_overshoot_area_l** Dynamic overshoot low area (in V-s)
- **D_overshoot_ampl_h** Dynamic overshoot high max amplitude
- **D_overshoot_ampl_l** Dynamic overshoot low max amplitude

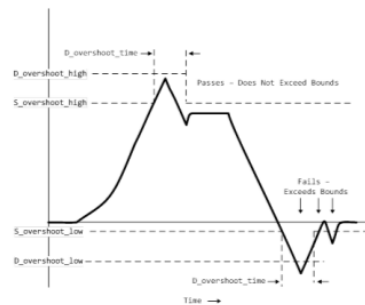


図-2.6 V3.2の仕様

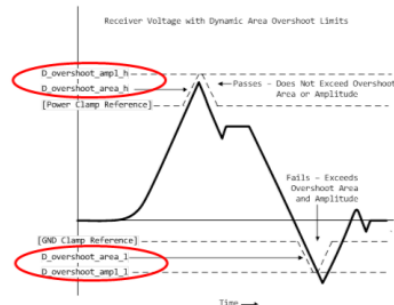
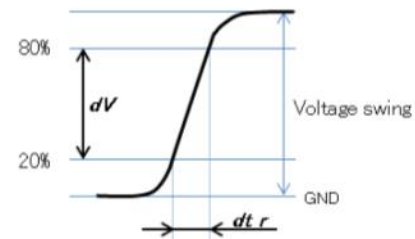
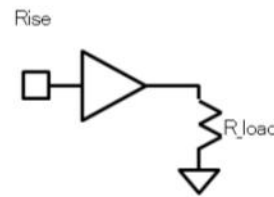


図-2.7 V5.1で追加された「ampl」「area」

2.3.6 Ramp

- Ramp dV/dt

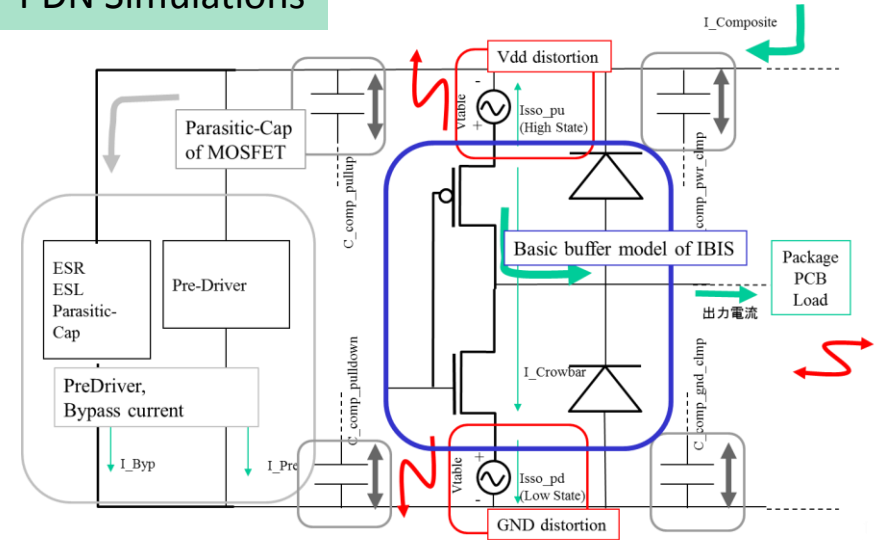
$$\frac{dV}{dt} = \frac{20\% \text{ to } 80\% \text{ Voltage swing}}{\text{time it takes to swing the above voltage}}$$



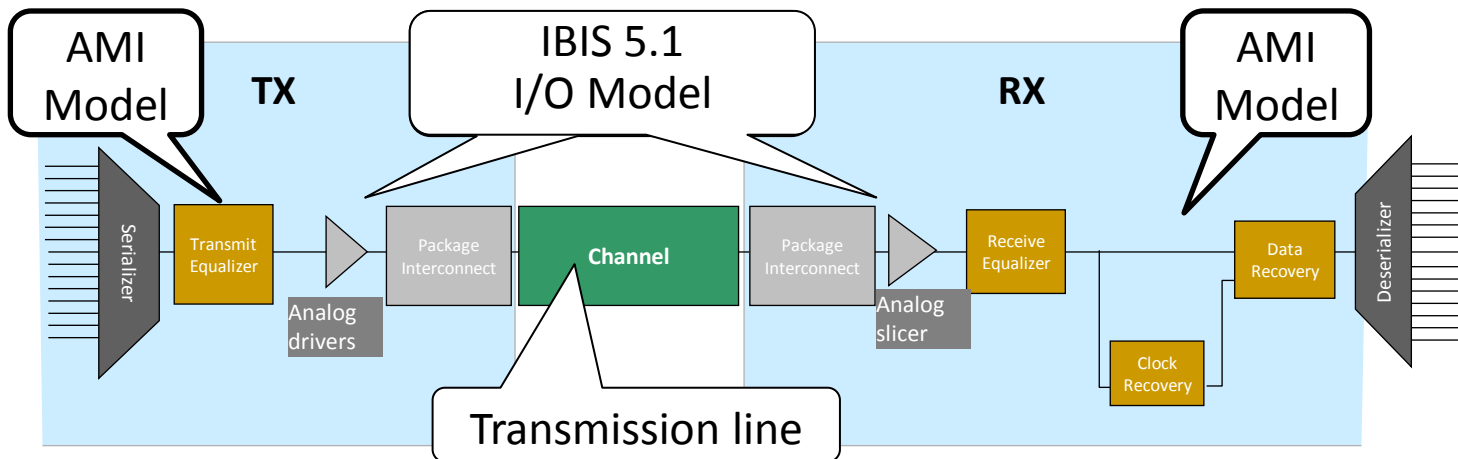
Activity 3: Advanced IBIS technology guidance

- Featured items
 - IBIS-AMI
 - IBIS Models for PDN
 - BIRDs since IBIS v6.0

PDN Simulations

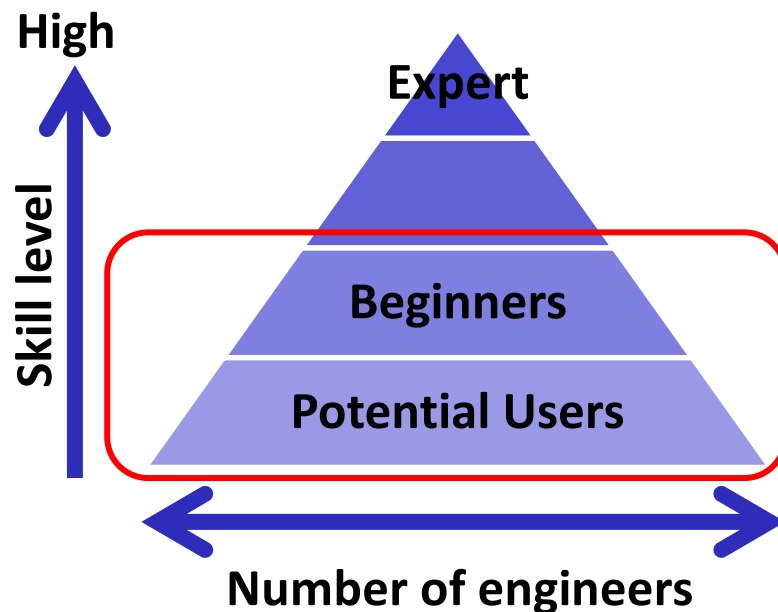


IBIS-AMI



Activity 4: IBIS Seminar

- 1st IBIS free seminar on Nov. 16 2015
(In the morning of IBIS Summit day)
 - 2-hour lecture using output of activities 1~3
 - Attendees: 93 persons



Voice of Attendees

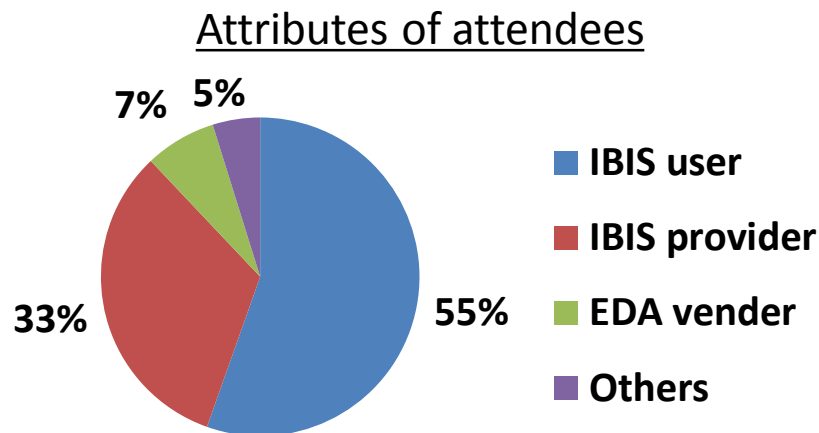
- The seminar was very valuable to learn about IBIS basic.
- I would like you to explain the difference of IBIS versions.

Target of the seminar

- Using IBIS model, but not familiar
- To use IBIS model soon

Activity 5: Asian IBIS Summit, Japan

- Asian IBIS Summit, Tokyo, Nov. 16, 2015
 - Attendees: 108 persons (64 companies)



Voice of Attendees

- IBIS Summit brought a lot of useful information about IBIS latest developments, IBIS-AMI and use cases.
- Expecting more information how to make and verify IBIS V5.0 or later.
e.g. IBIS-AMI, Pre-driver, On-chip capacitor in PDN

Action Plan

- Enhance IBIS promotion materials
 - Define IBIS simulation step guideline
 - Add target topologies, e.g. DDR4 and High-speed SerDes
 - IBIS keyword summary
 - Increase descriptions of keywords for simulation purposes
 - Advanced IBIS technology guidance
 - Add description about Over clocking
- 2nd IBIS free seminar
 - We are planning 4-hour seminar, because there were many requests to lecture in more detail.