



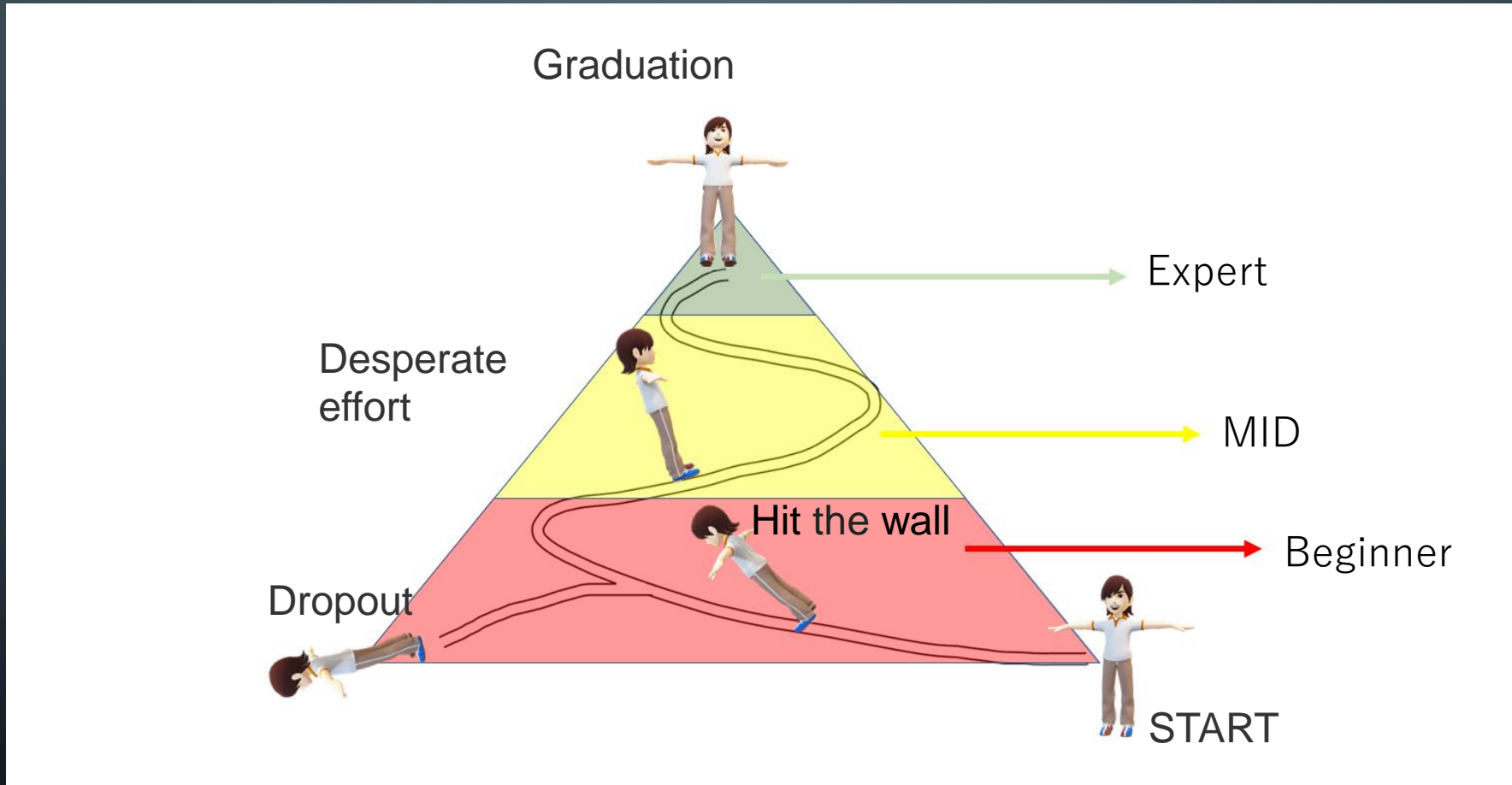
WHY ARE IBIS MODEL ISSUES STILL ALIVE?

KAZUHIKO KUSUNOKI, WADOW INC.

VIRTUAL ASIAN IBIS SUMMIT (JAPAN) 2021

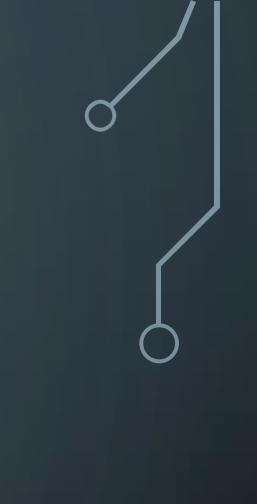

NOVEMBER 12, 2021

THE CHALLENGE OF IBIS MODEL ENGINEER IN JAPAN



2

It is not so easy to become MID/Expert for beginners NOW.



IBIS models have grown enough as a standard simulation model in the world.
There should be no problems anymore...

I made an independent investigation.

Interviews with skilled and non-expert people which are involved in IBIS modeling.

Introduce the “IBIS Model Issue” which should not exist.

This information is from a credible source, and everyone needs to know.

INTERVIEWS WITH IBIS MODEL ENGINEERS IN JAPAN

Interviewee

Expert (Skilled):

More than 20 years or 100 projects experiences

MID:

More than 10 years or 50 projects experiences

Non-Expert (Beginner):

Less than 1 year or 10 projects experiences

INTERVIEW WITH EXPERT ENGINEER

- Doesn't have any problems.
- Must make many products equipped with high value-added chips with a faster development cycle. For that purpose, we need to use IBIS models so trial and error simulations can be done quickly.

INTERVIEW WITH MID EXPERT ENGINEER

- I would like IBIS model to describe the LVDS terminator.
- I would like IBIS model to improve the usability of the interconnect model of the package.
- DDR IBIS with pkg model gives an error.
- When using all the SLOW / TYP / FAST corners, there is no DC-passing solution even with ideal trace.

*I wonder if it is simulator's issue?
They need latest tools.*

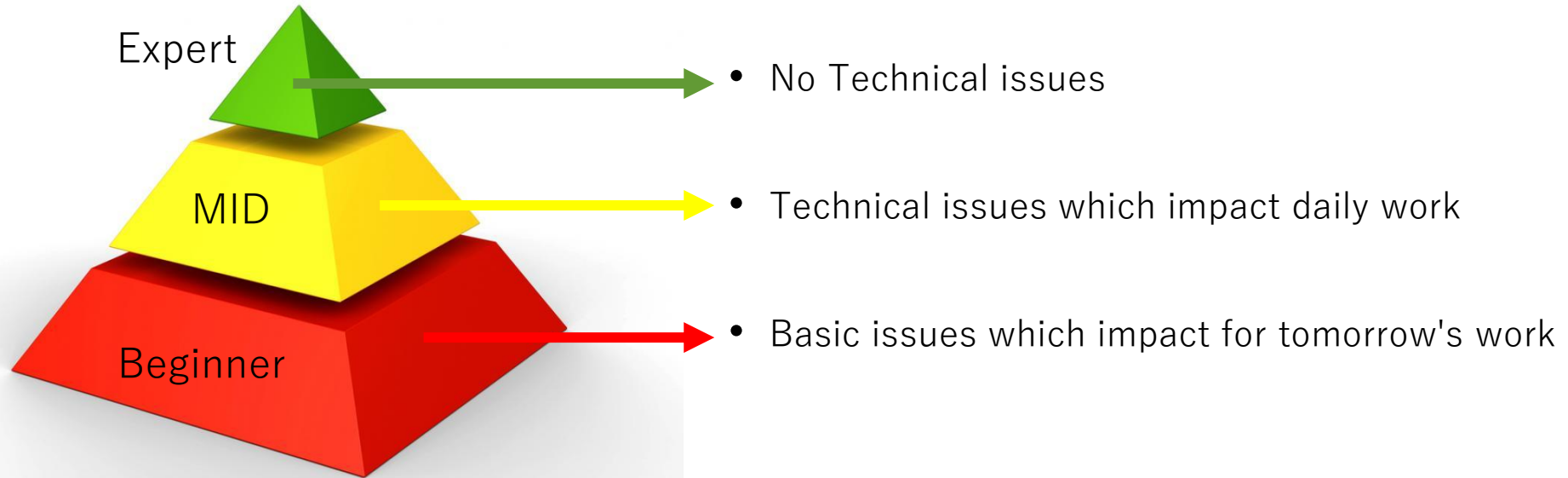
INTERVIEW WITH NON-EXPERT ENGINEER

- It does not match the actual measurement.
- No IBIS model
- If SPICE is more detailed than IBIS, what are the criteria for choosing IBIS?
- Why is there no information inside IC in IBIS?
- Is the consistency of the results obtained credible?
- I have heard that "IBIS model needs to be edited", but isn't this falsification of the information provided by the manufacturer?
- Is there any problem with the results obtained even if IBIS with different accuracy is mixed?
- Can not judge (pass or fail) the simulation result.

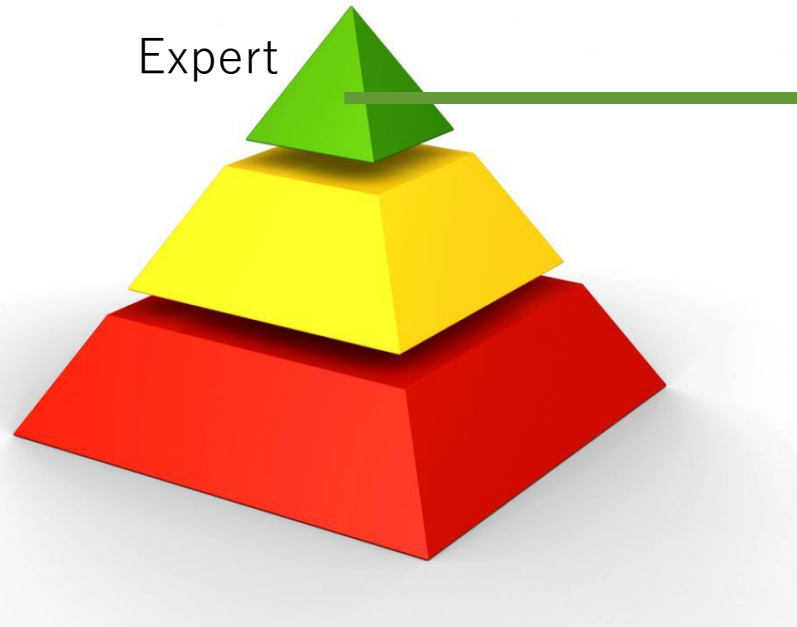
The background is a dark blue gradient. In the four corners, there are decorative white line-art elements that resemble circuit traces or a stylized tree structure. These elements consist of thin lines that branch out and terminate in small circles.

IBIS MODEL ISSUES STILL EXIST.

INTERVIEW SUMMARY



INTERVIEW SUMMARY

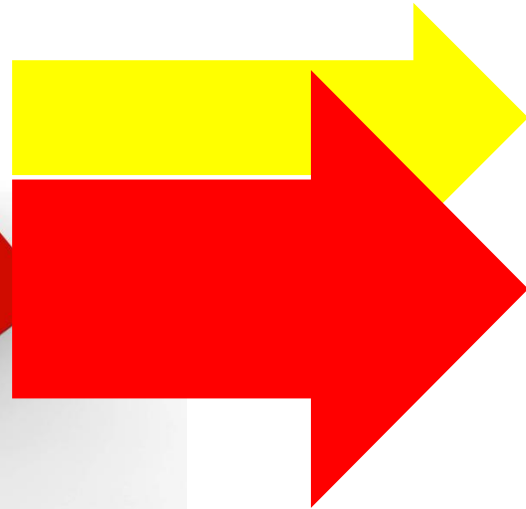
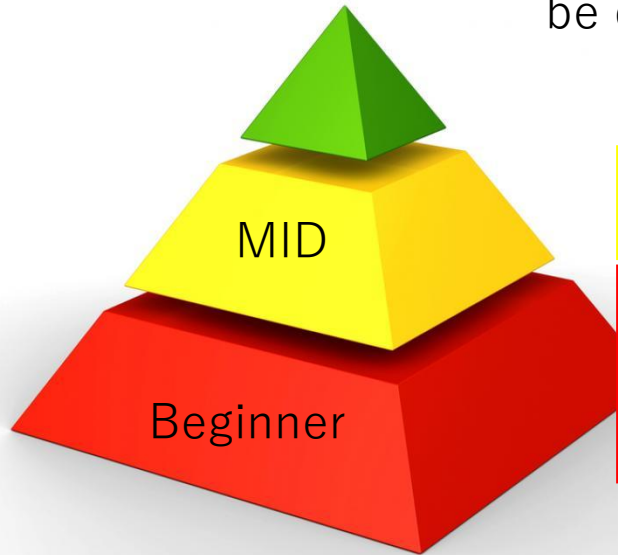


Expert

- No Technical issue
 - Enough Experience and Education
 - Technical issues and Basic issues were already solved by oneself.

TO SOLVE THE EXPERT ENGINEER'S ISSUE

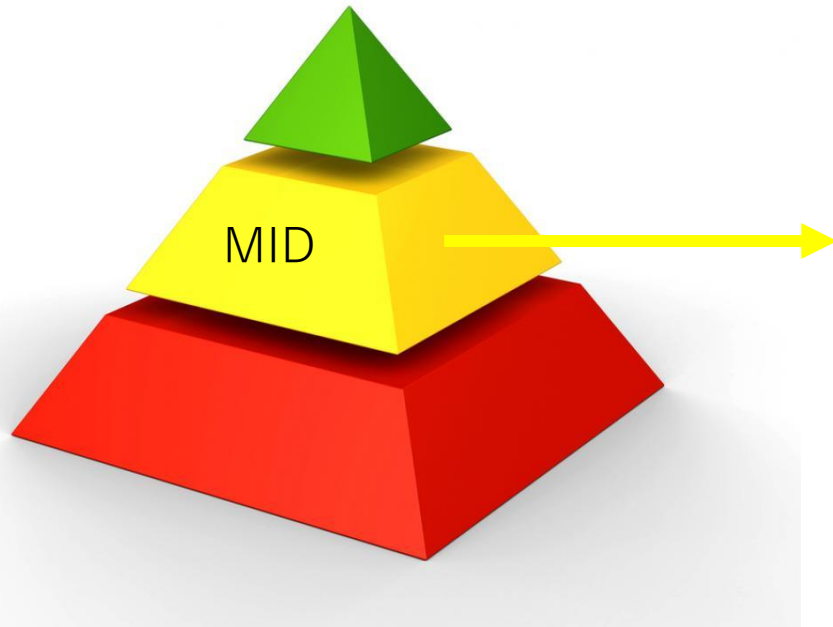
Must make many products equipped with high value-added chips with a faster development cycle. For that purpose, we need to use IBIS models so trial and error simulations can be done quickly.



Many and quickly

Without their help,
we can not make it.
Especially Beginners
because they have huge
potential.

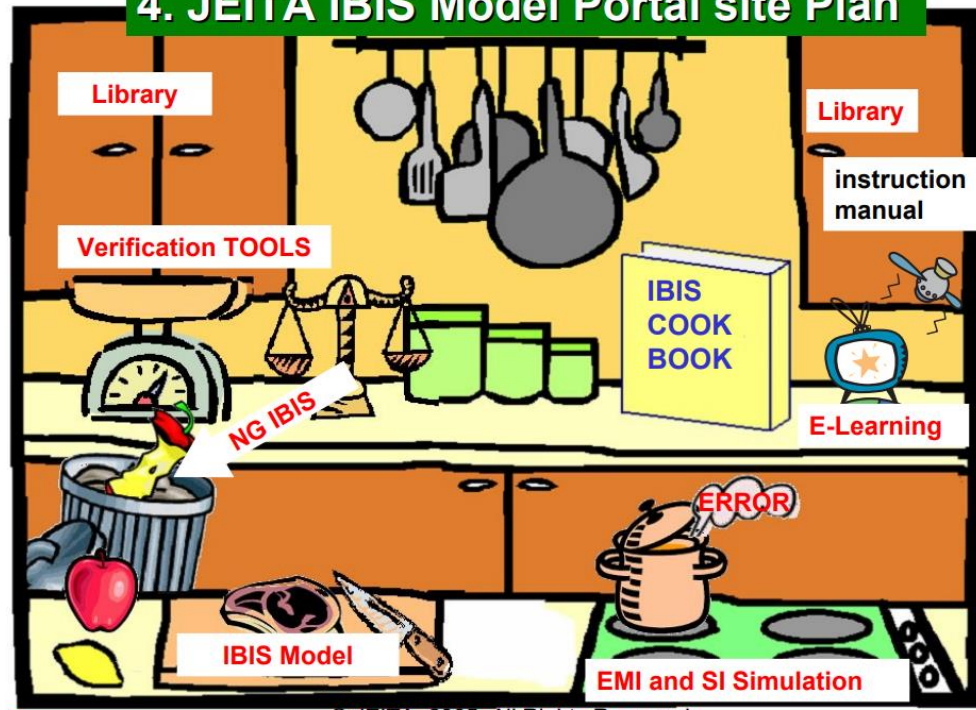
INTERVIEW SUMMARY



- Technical issues which impact daily work
 - Basic issues were already solved

Dec 6, 2005
Asian IBIS SUMMIT in Shenzhen, China

4. JEITA IBIS Model Portal site Plan



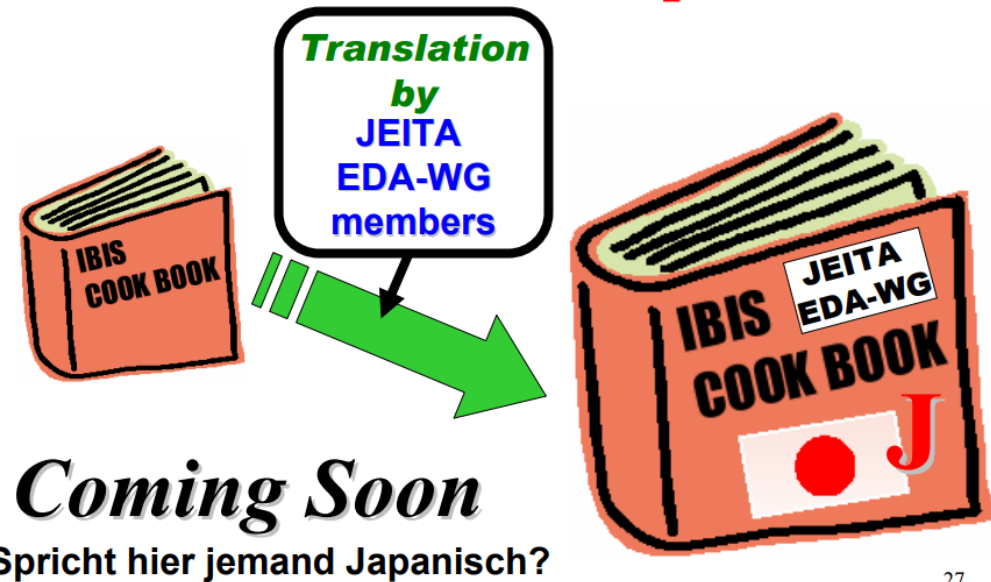
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Reference: Asian IBIS Summit Shenzhen
2005

March 10, 2006
European IBIS SUMMIT in Munich

IBIS Documentations

IBIS Cook Book in Japanese

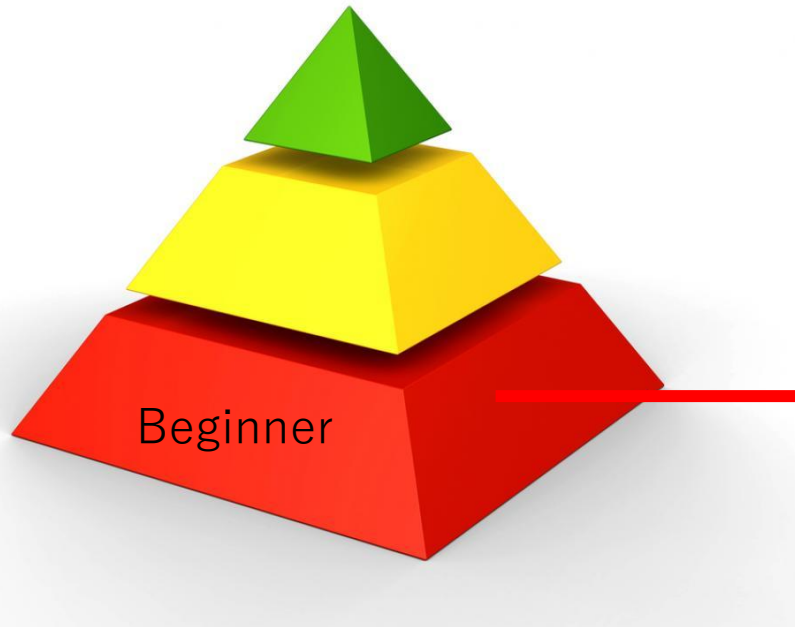


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Reference: European IBIS Summit Munich
2006

JEITA did contribute over a long period of time
to solve basic issues which MID people used to have.

INTERVIEW SUMMARY



- Basic issues which impact tomorrow's work
 - They feel anxious

“CROSSTALKS” for every IBIS beginners

Let's join the “CROSSTALKS” which is the place for every engineers (musician, dancer, artist, athlete and anyone) can communicate regardless of their professions or places of employment! Solve the your IBIS model issues with other beginners! No membership fee needed! Held at random times in theaters near you!



**Asian IBIS Summit
Yokohama, JAPAN
November 22, 2013**

Reference: Asian IBIS Summit Yokohama
2013

Before the COVID-19, every IBIS beginner had a place to solve IBIS model issues with other beginners.

I hope we can do something like this for Beginners.

- Prepare an IBIS model for pseudo verification for each standard protocol.
 - If there is no IBIS model, we can use it by selection of each protocol.
- Add each signal criteria information to IBIS model.
 - Eye mask, AC/DC Spec, etc.
- Help them to use the latest tools.

WE STILL HAVE SOME IBIS MODEL ISSUES

- Save the beginners, and Let's focus on training MID people.
 - Every Engineer who is using IBIS models must attend and do a speech at the IBIS Summit to disseminate opinions to the world.



Let's Have a Crosstalks again!

Recording : WADOW Hakone Sengokuhara simulation LAND

Many thanks to :

Prof. Atsuji Ito, Osaka University,
Siunis, TowaElectronics, Ibdenshi-Kogyo and many friends