Sub-Committee Participants

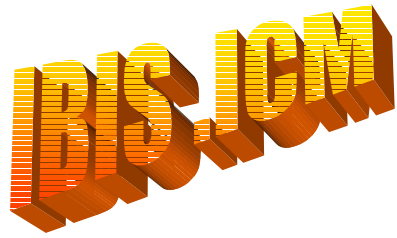**IBIS.icm**

Connectors

Simulation Vendors
- Ansoft
- Cadence
- HyperLynx / Pads
- Innoveda
- Mentor

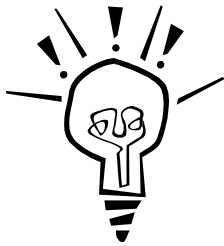•**Connector Companies**
- AMP / Tyco
- Berg / FCI
- Molex
- Teradyne

End Users
- EMC
- IBM
- Compaq

Our goals:

- Incorporate changes requested at DAC 2000 IBIS meeting.

- Ensure syntax is not ambiguous

- Improve syntax descriptions, grammar, etc.

- Release the specification for vote near ~~DAC 2000~~ Christmas time frame.

What has been done so far?

☑ • Changes requested at the DAC 2000 IBIS meeting have been added.

☑ • Several areas of ambiguous syntax were identified and have been clarified.

☑ • Several pages of documentation have been added to improve description of keywords and syntax.

☑ • Converted the specification to Word format and formatted it using fixed point fonts so that it can be output as .doc, .txt, and .pdf formats…ALSO INCLUDE TABLE OF CONTENTS

- Anywhere a "Begin" is named so must be the corresponding end statement. Before , it was optional.

- Added usage rule for "NC" locations in the [Begin_Cn_Phy_Map], [End_Cn_Phy_Map] section.

- Change all references to case in-sensitive references to "case sensitive".

- The words "could,would,should" were change to "shall,must" as appropriate.

- Added a paragraph to the swath section that also "covers" vertical swath by referencing the horizontal swath

- Changed the specification to supports both lumped and distributed models. Previously only distributed models were supported. For example: [Begin_Cn_Section] references to inductance, capacitance, resistance these can now be either lumped or distributed.

- Changed "per-unit-length' references; now allows using the same matrix multiple times in series with a single reference. Matrix uses now have multipliers in Cn_Section and Cn_Stub.

IBIS.icm — What has the editing committee been up to?

- Improved swath descriptions by adding a section titled "Application of Swath Matrices".   Also removed Cn_Z which is no longer required as we added a suggested algorithim for converting to a full banded matrix.

- Changed the usage of Cn_Section and Cn_Stub to refer to these as sub-parameters and expanded their descriptions. Also added section multipliers.

- Changed the usage of the following from keywords to sub-parameters: Diagonal_matrix, Banded_matrix, Sparse_matrix and added a missing definition for the sub-parameter Full_matrix

- Changed Cn_Section and Cn_Stub to be keywords following the same form as used by matrix keywords like Banded_matrix

- Converted master document to "WORD" and added a "table of contents" and a "document map". Fixed width fonts were used so the document can now be output in .txt, .doc, or .pdf.

Also improved descriptions and cleaned up wording for:

- The capacitance matrix description

- The frequency dependent loss note to specify only that this is not supported at this time.

- The coupled mated-model derivation notes

- Under [Redistribution] and also under [Begin Cn Model Description], and for any other keyword where this exists, the Usage Rule "Text may contain up to 4 lines" was changed to "It is recommended that a maximum of 4 lines be used"

IBIS.ICM   What's Next?
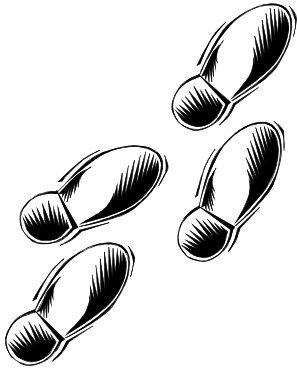
Editing Committee Short Term Goals:

- Consider changing "automap" connector creation to use "more common language constructs" such as "for" and "next".

- Final editing of text for swath keyword

- Release the final document back to the IBIS open forum.

IBIS open forum Short Term Goals:

- **Vote to adopt the version 1.0 "ICM" specification before the new year.**

- Ask for funds to create the golden parser to be used for syntax checking connector models. Initiate parser development.

- Update the examples to support the final syntax and keywords

- Additional accuracy confirmation of .icm model
  - compare to SPICE model
  - compare to IBIS Package model

- Consider a project to convert IBIS connector models ".ICM" to SPICE format.