August 27, 2010

Minutes of IEEE 1149.1 - Initialize Sub-Group Meeting

Attendees:
Carl Barnhart
John Braden
CJ Clark
Dave Dubberke
Adam Ley
Ken Parker
Francisco Russi
Brian Turmelle

Minutes:

This meeting started with discussion of CJ's example drawing and the coding of it by Carl.
- Several syntax typos were found and fixed, and a comment was rewritten.
- The group decided to drop the parenthesis around each field in the list. CJ will check whether that still works in the parser.
- Serdes_BandkX3 was reordered in a TDI to TDO (downto) order, top to bottom, and changed to array notation.
- Irregular mapping of mnemonic value to Channel.Protocol was added to comment.

Francisco raised the issue of the work of the 3D task force, and that perhaps that work should be folded into dot-1. CJ agreed, and pointed out that the schedule was such that we should get out the changes we have, and the get a new PAR for the 3D work, if appropriate.

Since thee was time, CJ raised the issue that BSDL does not document when input pins will float to a predictable value when not driven. This is equivalent to the PULL_1/0 or WEAK_1/0 for output pins.
- CJ wants such documentation to allow support for the walking 1/0 test that would help detect the "false passing short."
- It would also help with pins tied off on the board, but open.
- CJ proposed new boundary cell <function> of INPUT1 and INPUT0.
- Ken objected that, without knowing exactly the source and sink currents, it is still impossible to determine the final value at the input in many cases
- Carl objected to coding this in the <function>, and recommended adding an optional field to the boundary cell description (This was CJ's original position as well.)
- CJ ruled out requiring deterministic behavior on all inputs.
- Carl pointed out that there are two questions: Whether to document this aspect of the chip input design or not in the BSDL, and what the ATPG programs should do with that information. Given that BSDL documents the chip design without dictating any tests, Carl recommended adoption of this change. Consensus vote was to do so, with Adam "not objecting" and Ken no longer on the phone. CJ will put a "stake in the ground" in terms of the changes to the Standard.

Current Status:
Formalize Rules – In progress.

BSDL Constructs - – BNF coding in progress, semantic checks in progress.

Formalize PDL constructs – We need to start on this.

Actions:
- CJ will provide an example of a dynamic register for discussion.

- CJ to bring the INPUT discussion up at the Tuesday meeting

Work still to be done:
Formalize side-file language.
Incorporate INIT into 1149.1 Std.

Next meeting date:
Same time next Friday Sepember 3rd.