IEEE 1149.1 Boundary Scan Working Group Minutes

Date – 11/23/2010

Attendees: CJ Clark, Bill Tuthill, Adam Ley, Heiko Ehrenberg, Ken Parker, Carl Barnhart, Adam Cron, Brian Turmelle, Francisco Russi, Carol Pyron, Craig Stephan, Wim Driessen,

Missing with pre-excuse

Missing :   Roland Latvala, Mike Richettie, Dave Dubberke, Lee Whetsel, Ted Eaton, Neil Jacobson, Bill Eklow

Agenda:

1)   Required Patent Disclosure Slides

2)   Wrap up of clamp_hold/clamp_release

3)   New Business, if any

Meeting Called to order at 11:00 am EST

Minutes:

Should Clamp Hold/ClampRelease rules and description goes into Annex or integrated into the body of the draft?
 Adam L – Any reference to chapter and verse should be fully qualified for the addition by year. Each addition a new standard and should be written as a whole not as a "Frankenstein"
Adam L – if BSDL isn't properly treated in Annex than this is opportunity to fix it.
CJ – It has been cleaned up some.
CJ – Just don't want to bolt on rules at the bottom. Should include more in main body of text.
CJ – at the least we should include these new instructions in the instruction section of the draft
KPP – suggests adding forward references to the Annex where necessary
CJ – Easy to add links to the. Harder in paper copy.

Review of Document sent by Ken on ClampHold/ClampRelease

Review of Section x.1
        Added permission a) to Section 5.1 of standard as rule d).

Section X.2
        Figure x.1 Shows the sequence of events.

Text gives equation for bypass escape

Section x.2.1

Based on rule for current tap statemachine.
Rules
Carol – are we requiring powerup ? Rule B-3 implies it?
Carl - B-3 – Not requiring powerup. Will change state based on power up
Adam L – not requirement to change state but these are the only events allowed to change state.
Adam L – rule C not consistent with tap controller. TRST is use model not design model. Design doesn't conform to it. TRST doesn't have to exist on chip. Rule can not be SHALL. Directive to USER not DESIGNER
KPP-   Rule C is redundant to E and F
KPP - will remove rule C and will put forced into Persistent Off controller state" into E and F
Carol - agrees

CJ -   Has an objection to the NOTE : placement "below" defines a specific place . get rid of below . don't know where text will land.
Carl – rule i) would not have been written this way if was in body. Tables in Clause 11 would need to be changed if in body
j) modifies the behavior of Test Logic Reset. Reset IR but does not reset test logic controlling component pins.
CJ – has an objection on 2nd NOTE : don't want to make it to limited

CJ – Recommendation section- This recommendation would be good for section 8.4 – bypass instruction decoded to all 0's AND all 1's

Section X.3
Clamp hold / clamp release instructions
Attempting to make point that if clamp release is not provided you can not use clamp hold and clamp release.
These should be reserved key words – CLAMP_HOLD and CLAMP_RELEASE
Rule e)
Carl -   Got rid of RTI state as it was unnecessary.   No reason to qualify rising edge of TCK.
Adam L – need to break it up to when it must be done but add note that makes it allowed to set instruction any time.
Adam L – needs to stay a state
Carl – contradictory to have note say can be set anytime but have a rule that shows a state.
CJ – not sure what the value is not including the state
Carl – simpler state diagram.

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Adam L – "Shall" says that every rising TCK edge has to set the state when the respective instruction is selected. Probably should be broken out to 2 rules for ClampHold and ClampRelease.

Adam L - Rule says you have to set the persistent state on every rising TCK edge.

Carl – made change to rule e) to change on the rising edge of TCK in UPDATE IR TAP controller state.

Adam L- clamp hold doesn't affect the clamp persistence

Carol – clamp hold and clamp persistent act like clamp combinatorially

CJ - need something at 11.3.1 any value to include a note there that some of these rules are overwritten by what's in the Annex.

CJ - Not going to do integration of all the information for ClampHold/ClampRelease.

Only going to add to instruction section.. and sprinkle notes where necessary.

Section X.2.3

Section X.4

Bypass Escape register

CJ -   Note 1 the - 2001 is not appropriate.
Carol – you should refer to the rules as they are in this standard.
Carol – for bypass escape phrase. Bypass escape doesn't sound good
CJ – thinks it is a good name.
Carl – either that or persistence escape.
Carol – thinks of it as a mode bit. But can add confusion

Meeting adjourned: 12:00 EST.

Next Meeting: 11/30/2010 11:00 AM EST

NOTES:

Action Item by Carl to elaborate on concerns that he has with OO s on power pins and any rules that would need to be added to the standard to address those concerns.

Current Issues listed and who will champion that issue.

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1   Observe only. –   Ken and Carl
1. Directionality linkage. - CJ
2. Power Pins. - Heiko
3. Pairing power pins with functional I/O - CJ
4. Sample / Capture. – Carol (Freescale) & Roland
5. TRST included in PCB level diagram. – Adam L.
6. Slow to Fall/Rise signaling issue – CJ
7. "No Connect" – Ken and Francisco.
8. Device ID – Still needs work
9. Low-Voltage self observe shorts coverage problem – JJ & Intel
10. Init – Carol & Carl

Action Items:
- CJ will post 1149.1 draft on website with line numbers to make it easier to refer to items in discussion
- Comment #10 CJ will take action to look at possibilities to add to the 1149.1WG website a document which shows which standards are based on 1149.1
- Comment #8 CJ will make changes to draft for observe only
- Comment #7 CJ will get in touch with Doug to get input regarding Comments
- Comment #5 CJ will Add a figure and little text to address TRST use with interconnection of components
- Comment #4 Adam L to add comment about TRST. Update figure 6.8
- Comment #3 Adam L will update language for any proposed change for this section.

Weekly 1149.1 Meeting coordinates

1. Please join my meeting.
https://www1.gotomeeting.com/join/172495048

United States: +1 516 453 0012
Meeting ID: 172-495-048
Audio PIN: Shown after joining the meeting

2. Other call in numbers
Australia: +61 (0) 8 6365 4094
Canada: +1 416 800 9290
Germany: +49 (0) 898 7806 6462
Netherlands: +31 (0) 208 080 380
Sweden: +46 (0) 852 503 470
United Kingdom: +44 (0) 203 051 4835