Date – 10/02/2012
Attendees: CJ Clark, Adam Cron , Adam Ley, Bill Bruce, Bill Tuthill, Brian Turmelle, Carl Barnhart, Carol Pyron, Craig Stephan, Dave Dubberke, Dharma Konda, Francisco Russi, Jeff Halnon, John Seibold, Josh Ferry, Ken Parker, Peter Elias, Roland Latvala, John Braden,
Missing with pre-excuse: Wim Driessen,

Missing: Lee Whetsel, Matthias Kamm , Mike Richetti, Neil Jacobson, Ted Cleggett, Brian Erickson, Scott Wilkinson, Jason Chodora , Roger Sowada,
Kent NG, Sam McMillan, Sankaran Menon, Ted Eaton,
Bill Eklow, Heiko Ehrenberg, Hugh Wallace, Rich Cornejo,

Agenda:

1) Patent Slides and Rules of Etiquette
2) Use LiveMeeting "Raised Hand" to be recognized and take the flo**o**r
3) No method to add 'other files'
4) Permission 4.81 i)
   "Compliance-enable patterns may be changed from one compliance-enable pattern to another while the test logic is active."
5) Logic Diagrams – do we need to change all figures?

Meeting Called to order at 10:33 am EST

Minutes:
Review Patent Slide – Slide Presented to the Group.
        Solicited input from anybody who is aware of patents that might read on our standard.
        No Response
Review of Working Group Meeting Guidelines
        No Objections

Permission 4.8.1 I – compliance enable patterns – Collin's ballot comments
Permission has been there since 2001
Carl – valid point was for some clarification.
        Has a problem with stating about what happens when not in compliance mode.
        Doesn't need more stated for when we are in compliance.
Ken – weird that it is a permission. Seems that it is a permission on the user. If there are more than 1 pattern and we intend for people to change on the fly there should be some discussion as to what that means to the silicon implementer. Not a big deal. Just need some clarification on who the permission applies to and on the silicon implementer

Carl – doesn't have a proposal that fits Collins entire objection.
        This is why it was brought to the working group.
Carol – has a problem changing from a permission to a rule at this state
        Compliance enable pins have never had anything to with clocks. Always assumed to be combinatorial. And they will glitch. If you are in EXTEXT or HighZ you

should not be toggling your compliance enable pins. There are no guarantees what will happen.

CJ – advantage to changing the compliance enable pins is that you get some additional testability at the board level is that these pins can be toggled.

    Some chips will latch compliance pins at the beginning.

Carol – nothing ni the standard about compliance pins being latched

        As a rule it would be too broad.

CJ – Collin suggested a rule that is along the lines of keeping the compliance state regardless of the pattern at the pins changes to

Adam C – saying that if the pattern at the pins changes, the compliance should not change.

Carol – if you can say it is a glitch less state

Adam C – new one is pattern at the pins.

Bill B – why would a chip designer not latch the satet of the pins when bring TRESET high. If that can be done than it doesn't matter what is done to the pins.

CJ – this implies a latching mechanism. Is that good or bad.

Bill B –how do you define it.. it is ambiguous right now. Working group should agree on how it should work and clearly define it to work that way.

Carol – compliance enable pins is for manufacturing test. And Freescale's pins are combinatorial. Could be a glitch in there, but we don't care. No statement in there about clocking.

Ken – noting rule b - that this is combinatorial behavior and not synchronous to anything else. If we delete permission i would anyone care? It is a red herring and we should delete it.   Deleting a permission should have no effect to the standard.

Bill B – TRESET. You would have to tie this to when it is valid. Standard implies that TRESET is the point at which you determine what the state of those pins are.

Carl- people are not going to latch those pins.

Ken – rule b says you can not latch them anyway.

Bill B – if you take away the permission when can you change the state of the pins

Carl – there is nothing that says you can't change it. The permission just makes it clear that you can change it on the fly.

Bill B – what is the protocol of changing those pins. Can they be changed at any time?

Carl – yes

Bill B- the standard says that you need to go through TRESET. Intent was to go through it at TRESET.

Carl – should be strictly combinational function.

Ken – that is what rule b stays.

CJ – permission is to discuss changing from a pattern that enables compliance to another pattern that enables compliance.

Ken – will note that the compliance pattern could have X's. You could change one of those pins and it doesn't matter. That would make i sense.

CJ - yes. You could have several x's in there. So the compliance pattern can be changed from one pattern to another compliance pattern as long as the enable is there.

Carol – could delete the permission if it is ambiguous.

Ken – whose silicon will not be compliant if we do that?

Carl – won't be that dramatic
Carl – could delete the permission but keep the discussion.
CJ – do we need a vote?
Ken – could do a quick motion and vote.
Carl – moves to deletes permission 4.8.1 i from standard
Carol seconds.

Yes
Adam C	Brian T	Craig S	John B	Ken P
Bill B	Carl B	Dharma K	John S	Roland L
Bill T	Carol P	Jeff H	Josh F	

Abstain
Adam L	Peter E
Dave D	
Francisco R	

Motion passes 14 yes 4 abstained

Adam L – believes the sense of Collin's proposed rule is embodied in rule c

Logic Diagrams
Should all the figures have the same symbols or preferably with IEEE standard symbols?

CJ – stylistically Collin sees that figures should all look the same.
        Editor had left some figures the same as to not confuse anyone who would have been familiar with the previous figures.
Carol – don't have a problem with mixed figures. Used to the old symbols. Standard IEEE symbols used are not that common in the industry.
CJ – what is the suggestion?
Carol – fine leaving it mixed and pushing back.
Ken – appears that a large number of figures that would have to be opened and fixed.
        Not sure it is worth the effort to fix the figures and have more important fixes to be made and budget our time with the figures at the bottom.
CJ – can we ask the balloter to redraw the figures?
Ken – We don't have the man power and time to fix these
Adam C – 6-7 needs to be redrawn
Ken – done it.
Adam L – not incumbent upon us to take an action to change his vote.
CJ – we are motivated to change the draft based on balloter's negative comments.
Adam L – it is in our best interest, but not a necessity.
CJ – agreed we are not guaranteed that the vote will be changed but would want to make our best effort to satisfy the feedback

CJ – so what would we respond on this comment.
CJ proposes this response

All figures were already re-drawn; the older IEEE symbols were intentionally kept. The WG sees consistency with the past 1149.1 document as having a higher priority than uniformity of the symbols. All symbols are legal IEEE symbols. The cross reference figure shown was updated. Figures were supplied to IEEE editor and figures went through IEEE Mandatory Editorial Coordination

Carl – concurs
Carl was told by IEEE that there is no symbol requirement and the standard allows the modern symbols.

Ken – moves to use CJ's proposed response stated above
John B – seconds.

Francisco- how many figures do we need to change?
Carl – in clause 11 there are 20 alone..

Adam L – POI, once the recirculation ballot is open all comments are open to all balloters.

Yes

Adam C	Brian T	Dave D	Jeff H	Josh K	Roland L
Bill B	Carl B	Dharma K	John B	Ken P	
Bill T	Craig S	Francisco R	John S	Peter E	

Abstain
Adam L

Motion passes
17 Yes 1 Abstain

Meeting adjourned: 11:35 pm EST.

Summary of Motions Voted on
2 Motions voted on

1) *Motion to deletes permission 4.8.1 i from standard*
    a. *14 yes*
    b. *4 Abstain*
    c. *Motion passes*
2) *Motion to accept CJ's proposed response concerning the redrawing of the logic diagrams in standard*
    a. *17 yes*
    b. *1 abstain*
    c. *Motion passes*

Next Meeting: 10/9/2012 10:30 AM EST

NOTES:

1149.1 working group website - http://grouper.ieee.org/groups/1149/1/

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Meeting time: Tuesdays 10:30 AM (EST)   (Recurring)

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