# Date - 09/04/2012

**Attendees:** CJ Clark, Adam Ley, Bill Bruce, Bill Eklow, Bill Tuthill, Brian Turmelle, Carl Barnhart, Carol Pyron, Craig Stephan, Dave Dubberke, Dharma Konda, Francisco Russi, Heiko Ehrenberg, Hugh Wallace, John Braden, John Seibold, Ken Parker, Peter Elias, Roland Latvala,

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, Adam Cron, Jeff Halnon, Josh Ferry, Rich Cornejo,

### Agenda:

- 1) Patent Slides and Rules of Etiquette
- 2) Use LiveMeeting "Raised Hand" to be recognized and take the floor
- 3) Editor's report on updated draft. No new draft seen this week.
- 4) PREFIX Level discussion
- 5) iApply-iApply Discussion
- 6) Motion to submit draft for ballot by 9/7/2012. We have done our best to reach consensus. 29 days later we are not at ballot.

# Meeting Called to order at 10:40 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

### Editor summary

Carl - Thought he was ready to go to ballot but a new issue with Prefix was raised and that is on hold.

CJ comments on TCL interpreter issue with PDL 0

CJ – the most difficult problem has been how to use a TCL interpreter with PDL level 0 Thought occurred that we can do the checking in iSource.

TCL interpreter could prescan and "\$" could be removed from the command. This should fix Hugh's problem.

Hugh – so PDL level 0 is back to something more parsable?

Carl – substitution takes place in Pdl level 0 and documented. And those rules need to be checked using iSource before anything can be executed. If you are running in a TCL

environment. If not in a TCL environment you need to still do substitutions but you don't have to re-implement all of TCL

PREFIX discussion

CJ – doesn't think this is a big problem.

Rule F needs to be tweaked

Prefixes are used to show dotted hierarchical path.

In BSDL in register fields and register assembly. 2 methods of dealing with hierarchy.

Package file. This helps create a dotted hierarchy through a register assembly. This only works when we are the source

Prefix method is a method of describing the hierarchical path.

Prefix is allowing the prefix to specify what level it is.

Going left to right shows the level.

Does prefix level require deleting all the sublevels or does it automatically delete all the sublevels.

CJ feels that this should be done automatically

Need to change Rule F to make this more clear.

CJ has provided a change for Rule F to review

Carl – objection was that these rules have been there for a long time and apparently haven't been read or reviewed.

The editor is not willing to change without making a vote. As the requirements from the Chair for change were to show how fault or a rule was broken and not just a preference and feels that this change is a preference.

Bill B – has just got around to implementing and is fatally flawed in his opinion.

The dash is bad and will be left in there if we proceed.

CJ – feels that this is a miscommunication. Thinks we have found a problem and would like to address it. Agrees with Bill that it is broken. Agrees that getting rid of the dash would make life easier.

Carl – hasn't heard a flaw yet.

Not just rule F, the example, description, and clause needs rewrite. Would like direction from more than one person.

Bill B – the basic problems were

As soon as you repeat one there is a problem.

If you replace a dot there other are still there.

Carl – rule says that they are sticky until they are replaced.

Bill B – what if I replace it with dash.

Carl – you will get an error

carol relevant number for the current path. Can change based on the path.

CJ – algorithm is that the prefix level when you have a smaller number you need to start over.

Carl – all we are talking about is if we need to use the (-) to remove hierarchy names. ?

Bill B- prefers what CJ has said, get rid of the dash and get rid of the lower levels.

Carl - word "prefer" doesn't meant it is broken.

Bill B - as long as it wasn't ambiguous it would be ok. But from CJ we see it doesn't work the way a user would think.

Bill B – is there a way to get rid of all the levels

# IEEE 1149.1-2012 JTAG Working Group Minutes

Carl -use a (-) and signal name.

Looking at the draft.

Carl – doesn't think Rule D and Rule F are ambiguous.

Carl – Example given in draft. Issue is that doesn't believe anything is flawed.

Bill B – concept that Carl is thinking in is as an index list.

Bill B thinking is that it is plane order list. When you take out the third one the list collapses.

Carl – agrees that is a difference, but the rules are clear.

Bill B – if you just say it is a list of stuff not sure how to interpret it.

Hugh – support of Carl. If it is important than we should show the problem and then we can vote on it.

CJ – not seeing it as a major change. Over the past week we have taken feedback and tweak what needs to be adjust.

Has seen input over the last 4 weeks we have made changes based on the working group.

Not sure why there is resistance of this change.

Carl – sees another instance where Peter and Wim have objection to a rule and that is not being considered a fault but a preference and they can't get their item changed.

Carl - a day's worth of work. 2 rules that have to change and examples that need to change.

Bill B- problem is when carl say they are sticky that clears up everything is not true. All that means that a dash drops one out if it is plane list and Carl claims that there is a dash in the index list

Do we want to keep what we have and add some sentences to clarify if it is a plane old list or an index list or go to a different scheme?

CJ – additional impact is on the tool venders that have to do the symantec checks.

Bill B – if we change it to the rule on the screen there is no way to delete the list.

Carl – you can delete items in the list.

CJ – recluses himself from the chair

Carol will take over chairing the meeting.

Motion - CJ makes motion to modify B.8.19 rules D and F as needed to help clarify and make Prefix easier to work with for humans and machines.

Carl seconds motion.

Ken would like clarity on what the motion means

Carl – means we open it up to make changes.

Bill B – Motion to consider doing it?

CJ – no this is to do it

Bill B – if we do what you have in mind how do we delete the entire prefix.

CJ – you allow the level 0 or you use the dash to remove the top level.

Carl – still think we need one dash.

CJ – ok with that. Current motion doesn't require we come up worth a solution

# IEEE 1149.1-2012 JTAG Working Group Minutes

Carl – do we go to ballot as is or do we make the modification?
Question called
YES
Bill B. Craig S.

Bill T. Dharma K. Brian T. Francisco R.

No

Abstain

Adam L Dave D. John B Roland L.

Bill E. Heiko E Ken P Carl B. Hugh W. Peter E

Vote passes

6 yes 0 no 10 abstain

Move the discussion for this to the reflector.

CJ resumes as Chair.

iApply-iApply discussion example

iWrite regA 0x55 iRead regA 0x55 iApply

iWrite regA 0x55 iApply iRead SEGFIELD iApply

Peter – feels that this example is not a real example.

CJ -

Peter - iApply captures TDR. Not sure what is TDR

Bill B – Peter is right on with worries of iApply and being different between tool vendors. Need to standardize on what the tools do with iApply. If we focus on iApply and everyone does the same than users will know what to expect.

Should put it in outline of iApply.

CJ – you gave something to Carl to show the flow. What happened to that?

Bill B - will pass it to CJ if you have time to work it.

CJ – I don't but pass it to me and see what I can do.

Peter – hasn't seen flow chart either.

CJ – if the flow chart is present does that satisfy your concern?

Peter – would prefer to solve in a more fundamental way, but if these set of rules are there that may solve the problem.

Would like to collapse scan chain on each iApply

CJ – that would be impractical. Would increase time on every scan. Real world PDL would have 100 reads and writes to register. If you collapse on every iRead and iWrite it would hinder the performance of the tool as you would have to expand it to talk to the register again . will typically be multiple accesses to a register.

Peter – is it allowed or not allowed is more of the question. If you allow the tool to change the TDR as needed.

CJ – it is completely allowed. Want the tools to optimize the scan access. Let the tools manage. Just questioning the idea of collapsing on every iApply.

Peter – there is some fundamental ambiguity

CJ – don't really have ambiguity. Have a situation where you have mutually exclusive register where capture and update have more than 1 event. There is 2 capture and 2 update events. Need to write PDL with that in mind.

Example from Wim/Peter has two iReads and iWrites under 1 iApply. This isn't correct PDL

Issue is that the PDL coder can't leave the paths in an ambiguous state.

Peter – cannot know what to do with iApply. There is no rules on how it behaves.

CJ – number of rules for iApply.

Peter – not for a specific status of the TDR will be after finishing the iApply..

CJ – what is the rule you want to have.

Peter – Agree that it is more of a concept that we have a problem with than the rules.

Carl – ambiguity is in the rules but the PDL system always knows what the configuration of the TDR. The user may not but the tool will

We have a rule that says we cannot write to do different TDR. Would a similar rule for mutually exclusive segments between two iapplys.

Peter – not sure would have to think about it.

Bill B – sent CJ the iApply document and relinquishes the authorship to CJ.

Carl – will take authorship

Bill B – don't send Bill B changes. Just edit the document and make changes.

Meeting adjourned: 12:05 pm EST.

Summary of Motions Voted on

1 Motions voted on

**Next Meeting**: 9/11/2012 10:30 AM EST

#### NOTES:

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

# IEEE 1149.1-2012 JTAG Working Group Minutes

To Join the meeting

https://www.livemeeting.com/cc/intellitech/join?id=2CQ2PQ&role=attend&pw=n%26d%5DNqX%284

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

### **AUDIO INFORMATION**

-Computer Audio(Recommended)

To use computer audio, you need speakers and microphone, or a headset.

-Telephone conferencing

Use the information below to connect:

Toll: +1 (218) 862-1526

Participant code: 11491

### **FIRST-TIME USERS**

To save time before the meeting, <u>check your system</u> to make sure it is ready to use Office Live Meeting.

#### **TROUBLESHOOTING**

Unable to join the meeting? Follow these steps:

1. Copy this address and paste it into your web browser:

https://www.livemeeting.com/cc/intellitech/join

2. Copy and paste the required information:

Meeting ID: F9R6S6 Entry Code: k/d6<@M6j

Location: <a href="https://www.livemeeting.com/cc/intellitech">https://www.livemeeting.com/cc/intellitech</a>
If you still cannot enter the meeting, contact support.

### **NOTICE**

Microsoft Office Live Meeting can be used to record meetings. By participating in this meeting, you agree that your communications may be monitored or recorded at any time during the meeting.