

**Date – 1/17/2012**

**Attendees:** CJ Clark, Bill Tuthill, Adam Cron, Adam Ley, Brian Turmelle, Bill Eklow, Carol Pyron, Craig Stephan, Carl Barnhart, Dave Dubberke, Dharma Konda, Heiko Ehrenberg, Jeff Halnon, John Seibold, Josh Ferry, Ken Parker, Peter Elias, Rich Cornejo, Roger Sowada, Roland Latvala, Sankaran Menon, Ted Eaton, Wim Driessen, Hugh Wallace, Francisco Russi,

**Missing with pre-excuse:**

**Missing:** , Bill Bruce, Brian Erickson, John Braden, Kent NG, Lee Whetsel, Matthias Kamm , Mike Richetti, Neil Jacobson, Ted Cleggett,

New Member – Rich Cornejo from Teradyne.

**Agenda:**

- 1) Patent Slides and Rules of Etiquette
- 2) Motion to consider/make: Motion that 1149.1 standard will not have an Annex C  
We stop at Register\_fields, Register\_Assembly and Register\_Mnemonics
- 3) Depending on outcome of that motion (if made): Finish Annex C presentation  
WG can then work on refining and determining what would end up in Annex C as PDL language.

**Meeting Called to order at 10:30am EST** (new starting time)

**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 responses

Review of Working Group Meeting Guidelines

No Objections

Chair solicits for a motion to not include an Annex C

**Adam C: moves to agree on the features/requirements which Annex C is addressing prior to populating Annex C**

**Ted Seconds that motion**

Discussion

Adam C: find out what features we need before defining PDL that we may not need.

CJ: Concerned at how far do we need to go? The group is divided and will get to the same place we are now

Ted: the group will vote on it and be able to agree with it.

Adam C: Informative part will diverge more from p1687 and the less we write down in Annex C the less we will diverge.

Adam L: This is along the lines of what Adam has stated in recent emails. At some point we have to establish the priorities that will guide us towards making the critical cuts that will allow us to complete the project in a timely fashion

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Motion Passes.

Adam C – Yes            Dave D – Yes            Jeff H – Yes    Ted E - Yes  
Adam L – Yes            Francisco R – Yes      Ken P – Yes    Wim D - Yes

Brian T – No            Craig S – No            Josh F – No

Bill T – Abstain        Carl B – Abstain        Carol P – Abstain      Heiko E – Abstain  
John S – Abstain  
8Yes   2 No   5 Abstain

Viewing email from Carl dated Jan 5, 2012 (1149.1 Requirements for PDL)

Adam L: We should have a more formal vote if PDL is what we are talking about.

Carl: True. We are talking in a broader sense.

Carl: ECID would need procedural specification

Ted: Power domain must require procedure. That is not necessarily true. We can manage control cells all the time and we don't need procedural code for that.

Carl: would agree. If there are sequencing requirements than you would require some sort of procedural definition. If it makes no difference and the chip is well designed and no sequencing requirements than you can do your power domain control without procedural specification

Ted: Wants to know how lacks and specific should we be. There is already an extension of .1 that is intended to describe that

Carl: how would you change the requirement statement?

Ted: line number 1 I don't see as a requirement but as an opinion. Needs to be broken out for each item

Adam C: for ECID we only allow a time domain between retrieval.

Carl: unless there is sequencing requirements.

Adam C: we have allowed one person to say we need something, and now everyone needs it. Not the case. Good to listen, but in the end we need to focus and not allow 1 person to allow to define what we need.

CJ: Not agrees. Trying to get to the final draft. But now we are going to debate over what the requirements are. No one will agree 100% what the requirements are.

Adam C: we are trying to standardize on a set of features that work for the majority of the people on the working group.

Carl: of the things defined in the body which may on occasion require some form of procedural description.

Ted: I can design all sorts of things that require procedural description but does that mean it needs to be in the standard.

CJ: should move towards a motion to include #1 of Carl's list. Not sure how we are going to agree on the requirements across the board.

Carol: Carl wrote this email as a kick off of discussion. It is not intended as a requirement spec. There should be some work done to this list and then voted on.

Adam C: Let's say we need IRScans and DRScans and Delays to start

Ted: we should break out what is needed for each instruction.

Carol: We need to break it down. This is too high level. Then we can have something to vote on.

Ted: all the industry is looking for ECID is to read the data and record it. No complex code is needed

CJ: In many cases it goes beyond just reading the value. They can be used for many different reasons. The question comes down to do you write your own code to do your procedure or having the supplier give you that code.

Ted: There is no reason the user would have to go understand what the different fields are.

Carl: what does that have to do with the current discussion? This is a discussion on how to just recover it.

Ted: CJ said there are many cases that use PDL1 for ECID

Carl: Back to the original question - are there times when ECID requires a procedural operation.

Ted: that is too vague.

Carl: will a chip ever require a procedural operation

Bill E: Do you want me to write something up about how an ECID works and what requirements are needed

CJ: That would be good to do in parallel

Bill E: We are looking for ways to determine if we have valid ECIDs or not. May add some code to read in ECID and analyze ECID in the future.

Carl: does anyone believe we will never need procedural code to recover the ECID?

Adam L: would be happy to require that there is not any conditional procedural description for ECID. Agree there should be some sort of procedural description but could be an execution attribute that we had in the past.

In item number 1 I would like see them placed in a priority order and get a consensus on what the priorities are.

CJ: Standard has defined user-defined TDR. Have never had an ability to manage those with a common language. I think this is what we are discussing and changing the requirements to Standard TDRs is throwing that away.

Carl: we will build off of the standard TDRs

Carol: add bullet below that says

Ted: feels that CJ's intention is saying that we should be able to architects our PDL to be able to be used on any TDR

CJ: It all comes down to defining it and allowing people use it, or not defining it and having proprietary code created.

Carl: we define requirements based on Standard TDRs and see what is missing for user TDRs. At least get the definition of standard TDRs and when we get there we might get the other covered. Need to start from the standard because we don't know what user TDRs are

Wim: what is a user TDR. Private instruction?

Carl: it is not possible to user PDL with a private instruction and TDR because you don't know anything about register/instruction

CJ: it is the user defined TDRs that you would supply a register access section for

Carol: do need another line that says we can use the same things to control the user-tdrs

Bill E: As we get into user-defined TDRs we confuse 1687 and .1 We will have to be careful on which areas are defined by each standard.

Don't need to go down each case. If we need for any of these constructs on #1 then we really need pd10. No sense in saying we have to support for each case. If there is one instance where we require it than we require it.

Adam L: not convinced that 1149.1 has a requirement for a generalized procedural description for the basic 1149.1 test logic. We have done without that for 20 years. Not to say that the status quo is fine, but there has to be some process by which we come to an understanding what is really needed and what we can define in a given time and resources of the working group

Bill E: saying its not required. Are you saying it shouldn't be optional?

Adam L: Not convinced that 1149.1 needs to address that issue at all in a mandatory fashion or optional fashion.

Carl: move to accept #1 as the first set of requirements as minimum

Bill E seconds

TED: clarification on the "IF" on ECID

Carol: more actions are required.

Carl: changed write up. Removed IF

CJ: does the motion include procedural language or not

Carl: no.

CJ: so standard always tells has support for these

Carl: standard doesn't tell you how to use these things

Bill E: shouldn't we vote what was seconded and not changed.

CJ: You can rescind your second as Carl is changing the motion.

Bill E: let's get the requirements down and discuss how to support them.

CJ: don't understand the first requirement since we have support for these.

CJ: going forward we will have a rule that there are no motions in the last 10 minutes of the meeting.

Carl: moves to table his motion until Tuesday's Meeting

Carol seconds

No one opposed.

**Meeting adjourned: 12:00 EST.**

### ***Motion Summary***

#### **1 Motion Made**

**Agree on the features/requirements which Annex C is addressing prior to populating Annex C**

**8 yes 3 No 5 Abstain**

**Next Meeting: 1/24/2011 11:00 AM EST**

## IEEE 1149.1- 2012 JTAG Working Group Minutes

### HomeWork Status

John has passed his examples in to the working group. CJ is running them through the parser.

Carol – is still working on examples  
Heiko is still working on examples.  
CJ is still working on port assignments

### Homework assignments.

Heiko and Carol's assignments are outstanding and will be done for next week's meeting

CJ will have examples of port assignments  
Bill E – work on more concrete example and definition of the ESSID register

### NOTES:

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

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**JOIN the meeting as GUEST – will have to ask to present**

Meeting time: Tuesdays 11:00 AM (EST) (Recurring)

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