

**Date – 03/06/2012**

**Attendees:** (27) CJ Clark, Adam Cron, Adam Ley, Bill Eklow, Bill Tuthill, Brian Erickson Brian Turmelle, Carl Barnhart, Carol Pyron, Craig Stephan, Dave Dubberke, Dharma Konda, Francisco Russi, Heiko Ehrenberg, Hugh Wallace , Jeff Halnon, John Braden, John Seibold, Josh Ferry, Ken Parker, Kent NG, Peter Elias, Rich Cornejo, Roger Sowada, Roland Latvala, Ted Eaton, Wim Driessen,

**Missing with pre-excuse:**

**Missing:** Bill Bruce, , Lee Whetsel, Matthias Kamm , Mike Richetti, Neil Jacobson, Ted Cleggett, Sankaran Menon,

**Agenda:**

- 1) Patent Slides and Rules of Etiquette
- 2) Use LiveMeeting “Raised Hand” to be recognized and take the floor
- 3) BSRMission
- 4) Homework Review
- 5) Editor’s motion for draft

**Meeting Called to order at 10:41am 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 responses

Review of Working Group Meeting Guidelines

No Objections

BSRMission Keyword discussion

CJ presents slides on BSRMission Keyword

All instructions in Instruction Register decode to something where the mux gets controlled to either mission or test.

BSRMission indicates if the TDR wants the boundary scan register to be in a mission mode or test mode.

Allows you to understand what IP is compatible with what. Mission mode with Mission mode and Test mode with test mode

Proposal is add key word to TDR Characteristics “type”

Adam L: might be cases where one might wish to designate the operation of the boundary register. Are we talking about assembling the boundary register or some other TDR that I selected by an instruction that forces the boundary register into mission or test mode.

CJ: trying to get “like IP” on the same TDR.

What do we do with the test data register?

How can we assemble the different IP blocks together?

This key word is merely indicating how we want the boundary register to be controlled by the instruction that controls the TDR. Tagging it with mission mode capability. That would allow you to have more instructions to use the TDR in mission or test mode.

It is just indicating the type of IP block and test register to go along with other

Adam L: there is only one sense of the keyword? Lack of “mission” indicates test?

CJ: is open to using 2 keywords if that makes it more robust

Carl: have the feeling that most blocks (IP) are going to be don't care if the IO is in mission or not. Agrees with Adam that it might need 2 keywords.

CJ: want to have as much controlled in test mode as possible. Would make it safer for the test engineer to test?

CJ: BSRMISSION can be overwritten with test with another instruction. It is indicating which IP can be on the same scan chain and have it in mission mode.

Ken: if you have several register glued together in a TDR, if one is BSRMission, they are all BSRMISSION? They all have to have the BSRMISSION to be a Mission TDR?

CJ: yes.

Ken: is it an error if you put a non BSRMISSION on the TDR?

CJ: would not be wise. Would not define what the tool does.

Ken: if I had another keyword BSRTEST and mixed that with BSRMISSION would that create an error?

CJ: We are not creating a rule. Just a keyword to describe what the TDR wants for an instruction.

Ken: does clamp hold does it override the BSRMISSION?

CJ: clamp hold will work the way it always worked. No override. What clamp hold gives you is more options. If they have mission mode capabilities you can over ride that with clamp.

Roland: how much of this is descriptive? Or are you doing a matrix of mixing and matching of TDR segments?

CJ: It is just descriptive. It is like the keywords “SHARED”

Carl: this documents the request from the chip designer.

Roland: this is just describing to the hardware designer how to mux his chains together?

CJ: yes.

Ted: determining if a TDR should be in mission mode or not is not an all or nothing case. Depending on case it could be behave in mission mode or test mode. Keyword is lacking. Doesn't get close to where you need to be to describe its behaving.

CJ: It's not trying to define behavior. It is indicating who it is compatible with .

The issue is that you can have more than one instruction. You could have another instruction to get you in test mode or mission mode.

Ted: grouping is not based on what mode they want the boundary register to be.

Not sure how this guides anyone to where they need to be.

TDR may have multiple modes. Don't want multiple TDRs

Not nearly ever the case that a TDR is dedicated for mission or test mode case.

CJ: agreed it doesn't do everything in the world but its purpose is to grab the lowest hanging fruit. Just trying to avoid bad situation that are not compatible.

Ted: you shouldn't have shared registers in any case.

CJ: now we allow you to share registers that are mission mode and test mode.

CJ: just to point out that registers are not compatible. Just trying to look at the rules that we have in the standard that allow you to do things and trying to make sure that no one shoots themselves in the foot by following those rules.

Ted: the temperature monitor case seems like a corner case.

CJ: not a corner case. Shared can't be done with mission mode.

Ted: Opinion is that it doesn't get you to the end where you need to be

Carol: Use of any of these keywords is optional?

CJ: can't have shared and not document shared?

Carol: Sometimes see that it is not all black and white. A lot of TDRS you can safely scan in mission mode if you follow the right order.

Don't know how to document the right way to scan with these keywords

CJ: Shared means that the scan flop is being shared with the mission mode functionality.

Carol: don't see how these keywords map to usage

CJ: yes you can ignore these keywords if you want. Just a documentation piece

No rule that says you must follow these keywords.

Rest of the BSRMISSION Keyword discussion will be taken off line

#### Editor Review

#### Homework.

Posted "MEC ready" draft

3 concepts need to be decided on

-sync

BSDL constraints

PDL Assertions (pre and post)

May have impact on schedule.

Done with non connected ports.

Wim: sent a proposal over email to the reflector about iApply -sync

Carl: what Wim is trying to solve is when iProcs are not independent. The question we need to answer is "Do we need a mechanism that supports inter-dependant iProcs."

CJ: doesn't have to do with Merging.

Carl: not as we have defined in the standard no.

CJ: Through a show of hands, how many people would like to go forward and add support of iApply -sync

Carl: is there value in being able to deal with interdependent iProcs?

Half the group feels there should be some write made to look into this.

Carl will go off and make a write-up and pass it to Wim and the working group.

MEC

Goal for MEC was for next week.

May be delayed by adding the iApply –sync but Carl doesn't think the write up will take more than a day or two.

Carl would like everybody to take a look at the draft that is out there before we send to MEC.

**Meeting adjourned: 12:01 EST.**

***Summary of Motions Voted on***  
**0 Motions voted on**

**Next Meeting:** 3/13/2012 11:00 AM EST

NOTES:

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

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## IEEE 1149.1- 2012 JTAG Working Group Minutes

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