

Date – 07/5/2011

Attendees: CJ Clark, Bill Tuthill, Brian Turmelle, Carl Barnhart, Peter Elias, Adam Cron, Craig Stephan, Ken Parker, Josh Ferry, John Braden, Ted Eaton, Carol Pyron, Bill Eklow, Roland Latvala

Missing with pre-excuse Wim Driessen, Heiko Ehrenberg, Adam Ley,

Missing: Lee Whetsel, Neil Jacobson, Mike Richetti, Ted Cleggett, Matthias Kamm, Dave Dubberke, Francisco Russi,

Agenda:

- 1) **11:00** Patent Slides and Rules of Etiquette
- 2) **11:05** BSDL discussion
 - a. Register Assembly
 - b. Homework assignments

Meeting Called to order at 11:00 am EST

Minutes:

Review Patent Slide – Reminder sent out over email during the last week.

Review of Working Group Meeting Guidelines

BSDL discussion

Register Assembly.

Friday the group came to consensus to use the ARRAY keyword

CJ - suggested using the keyword PACKAGE to define the package file to help with parsing

Carl- asks why we are redefining the register segment in Register Assemblies that was previously defined in Register Fields

CJ - doesn't see a reason why we shouldn't include them. Same yak grammar as under Register_mnemonics

Ted - feels things are getting more complex than they need to be to meet the needs of board test

Carl - brings up that the syntax isn't true VHDL. Would prefer "is" where "of" in example

CJ - points out that Register_mnemonics' syntax is not true VHDL either and the group was ok with that.

Ken - also feels that there is excess complexity

Adam C- suggests modifying the package file to fix the problem.

CJ – people might be leery of changing the package file.

Adam C – this syntax might allow some IP sneak out

Carol – might be cases where you don't want to document registers

Would not want to release setup information for registers

CJ – asks carol if she would want to copy/ modify the package file or change the BSDL

Carol – would like to copy over the information and make it their own file so likes Adam's suggestion

CJ – if you purchase the IP, it might have a lot of configuration options, but user might not need that extensive level of programmability. How do you describe not using all the settings?

Carl – need to modify the mnemonics. Should copy choices (content) into the BSDL from the package file?

Adam C – if it is in the BSDL file it will be safer and let likely to be modified.

CJ – should leave it to the IP provider if they want to copy and paste everything from a package file into the BSDL that is great, but might be a tedious task given the depth.. Feels it should be left that multiple files are allowed to allow flexibility.

Ted – Adam's point is well taken. Maintaining all the package files in the manufacture environment would be difficult.

Carl – feels that CJ's point is valid that it would be a simple to make a tool to take in all the package files and put them into the BSDL. Purpose of BSDL is to hide design file and give minimum amount of information needed for test.

CJ – We still need package files. And need a way for chip designer to pull out only things needed from the package files.

Carol – may ask IP providers for package files that show all the details and a package file that is minimal. Feels package files are a good thing.

Even .1 today you can have user package files.

PDL would be side files

Ted – doesn't want users hand changing files

Doesn't want two places to have same data. So doesn't see why we have the iwrite in RegisterAssmebly overwriting the other iwrite from Register Fields

Josh – feels that allowing reuses package files would be a good thing.

Also Feels that overwriting attributes is a dangerous thing.

John - in favor of keeping things as simple as possible. Would only have iwrties ,etc in one place and not allowed anywhere else.

Carl – one of the confusions is that the iwrite, iread stuff is just setting up faults for PDL. All of this assumes that this register remains writable. The iwrite can be in one place, the PDL is what is going to set up the configuration of the chip.

CJ – if we remove the iwrite, iread, etc

Carl – should be MSB to LSB and LSB is TDO

Carl – register fields specifies a segment length of length-1 downto 0 to create path for register Assembly. TDO is at 0

CJ – what was written is consistent. TDI at top and TDO at bottom.

Ted – what is the purpose of 0 to 1. Can't swizzle the TDI to TDO connection

Carl – field names are aliases to bits in register segment. Can swizzle bits out of TDR to field.

CJ – these are arbitrary names so it is up to the user to organize the date. One TDR chunk before the other TDR chunk.

Ted – how does the person writing the BSDL know that it should be 0 to 1 or 1 downto 0

Carl – this is just how a segment is named.

Ted – so the whole array thing is short hand?

CJ – yes

Ted – how do you match up package files, should be specific in the standard

Carl – will make sure it is specific in the standard

CJ – are we comfortable with PACKAGE keyword to direct the compiler to what is coming next.

Carol – yes.

Carl – we should use “IS” format since it was in Register _Fields

Peter – do we still need Package if we got rid of the iwrites and ireads etc

CJ – yes, we are trying to specify where the TDR is

Peter – was the reason for PACKAGE because of the iwrites and ireads etc?

CJ - No

CJ – do we want “OF” or “IS”

Consensus in the group is for “IS” (see example below)

Carl suggests PKG instead of PACKAGE

PACKAGE already exists as a keyword so we will stick with PACKAGE

Carol has started her examples but is not finished

Has reviewed Carl’s updates to example

Homework assignments.

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

Bill E – work on more concrete example and definition of the ESSID register

- **Meeting adjourned: 12:04EST.**

Next Meeting: 7/12/2011 11:00 AM EST

Register_ASSEMBLY example

Provided in email after meeting

CJ-Based on today’s discussion this is what we have, using ‘OF’ instead of ‘IS’ and not allowing iWrite/iRead/Save.

- *attribute REGISTER_ASSEMBLY of xxxxxx : entity is*
- *"mytdr3 ("&*
- *TDI*
- *"(i1 IS mbist), "&*
- *"(ARRAY i4(0 TO 1) IS mbist), "&*
- *"(ARRAY i5(0 TO 1) IS PACKAGE MEMD : mbist), "&*
- *"(i6 IS PACKAGE MEMD : mbist) " &*
- *TDO*
 - *");*

0 Motions Made

NOTES:

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

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

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