

Date – 07/21/2014

Attendees: CJ Clark, , Bill Tuthill, Bob Gottlieb, Brian Turmelle, Craig Stephan, Dharma Konda, Gobinathan Athimolom, Ismed Hartanto, Jon Colburn, Josh Ferry, Marc Hutner, Tapan J Chakraborty, Teresa McLaurin,

Absent with Excuse : Frans de Jong, Steve Sunter,

Not Present for $\frac{3}{4}$ of meeting:

Missing: Bill Huott, Carol Pyron, Jim Wilson, Kent Ng, Kevin Gorman, Tom Wayers, Heiko Ehrenburg, Dave Armstrong, Roger Sowada, Dwayne Burek, Zahi Abuhanmdeh, Mike Ricchetti, Philippe Lebourg, Saman Adham, Gurgen Harutyunyan, Adam Ley,

Agenda:

- 1) Patent Slide
- 2) Discuss review of Clause 7
 - a. Review of changes in 7.1 and 7.2
 - b. Review of 7.3, 7.4 and 7.5
- 3) Old business
 - a. Call for old business
- 4) New Business
- 5) Adjourn

Meeting Called to order at 11:07 am EDT

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 Clause 7

7.2.2 Updated syntax of BNF

Reviewed BNF syntax

Encoding goes to both RX and TX. Cannot mix encoding

Added SYSCLOCK

Representative Port in port grouping is one leg of differential pair.

Tapan – descriptions will be blended in 1149.1 BSDL or is it separate?

CJ – if you have an 1149.1 TAP than it would be blended in. If you didn't have a TAP than you would need to create a BSDL as described in table 7.1 but wouldn't need the TAP info.

7.3.1 BSDL PACKET MAP

Shows how to expect to be sent data

BNF to describe specifications

Provided flexibility to have MSB first. Typically LSB first.

Parity – None/Even/Odd

Interleave group – Interleave string (specifies size of interleave)

Scan_group_string – grouping of the scan channel - made up of chain list

You can make multiple scan_groups

Examples (7.3.2)

Shows the Packet_Map

Designer of PEDDA IP would have provide so that Tester would know how to communicate with HSTAP.

7.4 Control Chars Attribute.

Special symbols used in serial communication. Control symbols not for Data Table 7-2 describes the control characters used

Marc – when you get Error_Char what do you do next and get out of sequence of things. Do you retry?

CJ – would be prudent to reset to some initialization state and try again. This would be a signal integrity error. A bit was dropped somewhere in the receive process.

Marc- there is the fine line of implementing the full state machine and implementing vectors.

CJ – could make it optional in implementation.

Marc – concept is important. From the programming using model it will be “interesting”

CJ – for certain tester architecture it will be challenging.

XOFF/XON – for flow control.

Tester could format data so it never sends that overflows the interface.

could add comma characters to slow down data transmitted also

Or if you have a Serial Engine type tester than it could send the XOFF character to stop the data transmitted.

Clear character – was reset. Can send Clear from ATE to reset interface. No need to power down.

Compliance character – defining what the compliance character is, but you never send it on the p1149.10 interface during p1149.10 operation. Defines how you get the channel into dot10 mode. 3rd method to get the chip into compliance mode. allows you in system to test the chip.

Attribute called “control_char” for each.

Bit size is smaller than data size.

Tells the tester how the PHY is going to deal with these special characters.

Allows you to use different characters based on protocol

Ismed- is it possible to ask for retransmission if there is an error or do we even need to?

CJ – didn’t define what to do when you receive the Error-character. Open to suggestions. Do we want to specify a certain action?

If you are sending packet in, the data is going to the scan channels because there isn’t a store and forward type method.

Ismed – what does the tester do if it receives error?

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Marc – that comes back to the complexity that was brought up. Do we go back to a point in the patterns that is a known point. Or restart the data from the beginning.

CJ – could use sentinel bits to tell you if you are shifting ok.

When you are doing that you can check on the integrity of the scan data.

When you get the error you don't go back to test number 1 but would go back to the beginning of the individual test that caused the error. May be difficult if you don't have the granularity to see individual tests though. I would depend on your test architecture.

Call for New Business

No new business

Please use reflector to review what is in the Draft.

Please send comments to reflector.

Anything that needs to be updated or you would like discussed

Motion to Adjourn: Ismed

Seconded: Marc

Meeting adjourned: 12:10 pm EDT

Next Meeting:

July 28th, 2014 11:00am

Motion Summary

0 motions made

Action Items

~~*Bill Tuthill – 10-21-2013 – Add minutes and Attendance spreadsheet to the website.*~~

~~*CJ – 11-11-2013 – Reach out to ATE industry and Probe Industry to get update on future of ATE equipment to see which data speeds and protocols they are heading towards.*~~

Philippe – Look into alternative method to create control information (pause, start, terminate, etc.) rather than using K characters in packet.

Bob – create a case study to show use of Attributes

Frans – will start some block diagrams of a simple use case to help illustrate the current architecture

~~*Dwayne – present to the group his ideas for a simplified scheme – Direct Interface.*~~

NOTES:

1149.10 working group website - <http://grouper.ieee.org/groups/1149/10/>

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Here is the WebEx conference link.

<https://meetings.webex.com/collabs/meetings/join?uuid=MAG12PB7HN5W24AM2EOKIOM9KS-KERT>

You can use VOIP on your computer or dial-in using the phone number below.

Audio Connection

+1-415-655-0001

Access code: 194 196 960