

Date – 5/18/2015

Attendees: CJ Clark, Adam Ley, Bill Tuthill, Brian Turmelle, Craig Stephan, Dharma Konda, Frans de Jong, Gobinathan Athimolom, Jon Colburn, Josh Ferry, Mike Ricchetti, Tapan J Chakraborty,

Absent with Excuse:

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, Zahi Abuhanmdeh, Saman Adham, Teresa McLaurin, Philippe Lebourg, Ismed Hartanto, John Braden, Dwayne Burek, Marc Hutner, Bob Gottlieb, Gurgen Harutyunyan, Steve Sunter,

Agenda:

- 1) Patent Slide
- 2) Review of Draft V58
- 3) Discussion of Channel-Selects in their own packet
 - a. This will require re-do of scan packet figures and examples
- 4) New business
- 5) Adjourn

Meeting Called to order at 11:00 am EST

Minutes:

Review Patent Slide – Slides Presented to the Group.

Solicited input from anybody who is aware of patents that might read on our standard.

No other responses noted.

Review of draft v58

Frans questioned a few definitions. CJ made any necessary corrections.

Scan Packet

#Payload-Frames number of payloads occurring in frame.

Rules (h) (k) and (l) updated in section 6.6

Figures in section 6.6 updated

Expanded ID to 8 bits wide

TargetR Packet

Updated to show 32 bit formatting.

ResetR packet

Updated to show 32 bit formatting

IEEE 1149.10 High Speed JTAG Working Group Minutes

Rawr Packet

Updated to show 32 bit formatting

ScanR Packet

Updated to show 32 bit formatting

Figures updated and specifications updated

Updated to show 4 bits of padding

Changed Data Bytes to #Payload-Frames

Control_Chars

Updated definition of Error_Character

Scan Channel Associations

Updated Examples to show real number for Max Clock

Channel Bonding

Most number of changes

For 32 bit formatting need to send 4 bond characters

(BOND CHAR x4 in example)

PLD and Compliance Verification

3 to 4 months of work

Frans – is it true that if you have a high volume of test data is lane 4 busy?

CJ – scan data would work out into lane 4. It wouldn't be idle all the time

No preference. If we want to restrict the SOP only to be on the first lane we can.

If you are doing scan you would make use of the 4th lane if you had the data.

CJ – would like to get the acceptance or rejection of what has been done in the current draft in order to get a sense if it was done as desired

Channel Select

Channel select packet used once to configure system.

Simplifies the scan packet.

Enlarged Scan_Group and #Ch-Select

2¹⁶ of Scan Groups and 2¹⁶ of #CH-Select

Every time you go to a new Scan Group you would have to reconfigure

Could add ScanGroup to scan packet

Mike – you would change groups less often than channel selects?

Craig – typically you would group the channels to talk to the channels in the group.

CJ – if you needed to change channels for each scan frame it still wouldn't be much overhead compared to previous formatting. Be saving the CRC32 and 4 EOPs

No motion made for new packet.

Review current rev of draft for next meeting in order to make motion to vote up or down changes made.

IEEE 1149.10 High Speed JTAG Working Group Minutes

Next Monday is Memorial Day (US Holiday)

No new business

Motion to adjourn: Craig
Seconded: Frans
Meeting adjourned: 12:00 pm EST

Next Meeting:
June 1st, 2015 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.*~~

~~*Adam—invite someone from IEEE to speak on IEEE benefits of standardization at WG meeting*~~

Call for Essential Patent notes

Adam Ley 12/1/2014

PN, TTL, AN

7348796, METHOD AND SYSTEM FOR NETWORK-ON-CHIP AND OTHER INTEGRATED CIRCUIT ARCHITECTURES, DAFCA INC.

Steve Sunter 11/17/2014

1. US 7610532 "Serializer/de-serializer bus controller interface" Avago, granted 2009
2. US 7739567 "Utilizing serializer-deserializer transmit and receive pads for parallel scan test data" Avago, granted 2010
3. US 8543876 "Method and apparatus for serial scan test data delivery" Altera, granted 2014

NOTES:

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

IEEE 1149.10 High Speed JTAG Working Group Minutes

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