

Date – 2/16/2015

Attendees: CJ Clark, Bill Tuthill, Bob Gottlieb, Brian Turmelle, Craig Stephan, Dharma Konda, Frans de Jong, Gobinathan Athimolom, Jon Colburn, Steve Sunter, Tapan J Chakraborty,

Absent with Excuse: Adam Ley,

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, Mike Ricchetti, Saman Adham, Teresa McLaurin, Philippe Lebourg, Ismed Hartanto, Dwayne Burek, Gurgen Harutyunyan, Josh Ferry, Marc Hutner,

Agenda:

- 1) Patent Slide
- 2) Packet formatting ideas
 - a. - some slides I put together to stimulate discussion
 - b. - Let's speak and then give others a chance to speak.
- 3) New Business
- 4) 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.

Packet Formatting

64/66 Encoding.

Can 4 bytes of CRC32 be split across 32 bit word boundary? (CRC found in first 32 bits and second 32 bits)

Can add second CMD Byte to align CRC on 32 bit boundary

With 8b/10b.

CRC32 is aligned on 32 bit boundary without second command.

With second command CRC will be split on 32 bit boundary.

Could use SOP's to PAD to align CRC32 on 32 bit boundary.

Fill in SOPs to map to 32 bit boundary and 2 command bytes.

This will give you a CRC32 on 32 bit boundary as one 32 bit word.

And finish at the end of Packet with EOP and Fill with EOPs to make 32 bit boundary

Is this too much overhead for SPI interfaces?

IEEE 1149.10 High Speed JTAG Working Group Minutes

To lessen overhead

Could have 1 SOP out of 4 bytes. 3 IDLES

Could have 1 EOP out of 4 Bytes. 3 IDLES

Frans – could you have a double words of IDLES after SOP before COMMAND?

CJ – would need to have IDLES that fit 32 bit boundaries.

Do we need a rule that requires that there not be an odd number of Channel-Select words?

Craig likes the 32bit boundaries from a hardware perspective.

Frans – makes sense to have boundaries because it is done in hardware.

CJ – need to be concerned about how much logic we require.

Are we adding too much overhead for SPI?

Frans – would not fiddle around with definitions because of SPI. Fine even if it requires some overhead.

Steve – likes to have CRC aligned with port width

SOP should be regarded as special case. Very next byte would be command.

Wouldn't have to pad SOP.

IDLEs would be same number of port width.

CJ – what needs to be formatted?

Steve – packet fields would never get split between words.

CJ – additional areas are SOP/ Channel Select/ EOP

Send any New Business requests to the reflector

Please use reflector to review what is in the latest version of the draft. Please send any comments on the new material to the reflector. This will let us get a start on the material before the meeting. Please include anything that needs to be updated or anything you would like discussed

Motion to Adjourn: Steve

Seconded: Brian

Meeting adjourned: 12:00pm EST

Next Meeting:

Feb 23rd, 2015 11:00am

Motion Summary

0 motions made

IEEE 1149.10 High Speed JTAG Working Group Minutes

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/>

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