#### Date - 01/18/2016

**Attendees:** CJ Clark, Adam Ley, Bill Tuthill, Brian Turmelle, Craig Stephan, Dharma Konda, Gobinathan Athimolom, Gurgen Harutyunyan, Heiko Ehrenburg, JF Cote, Jon Colburn, Mike Ricchetti, Steve Sunter, Josh Ferry, Marc Hutner, Tapan J Chakraborty, Dwayne Burek,

Absent with Excuse: Bob Gottlieb,

**Missing:** Bill Huott, Carol Pyron, Jim Wilson, Kent Ng, Kevin Gorman, Tom Wayers, Dave Armstrong, Roger Sowada, Zahi Abuhanmdeh,

Teresa McLaurin, Philippe Lebourg,

John Braden,

Saman Adham,

Ismed Hartanto, Frans de Jong,

# Agenda:

- 1) Patent Slides
- 2) Comments on draft V80/V81 light.
  - a. Is there a motion to accept Draft 81?
  - b. (this draft incorporates the changes voted on prior to the holiday for removing c-e pins. And has some editorial fix-up submitted by Craig in v81).
- 3) Let's step through draft v82. WG needs to decide on areas which one could call "user-defined verification".
- 4) Discuss Recommendation/Figure with b-s register and P1149.10
- 5) New Business
- 6) Adjourn

## Meeting Called to order at 11:05 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 responses noted.

Review of Draft v80/81.

No one commented on any issues or problems.

Craig makes a motion to accept draft v81 pending any future editorial modifications Bill Seconds

No discussion

# IEEE 1149.10 High Speed JTAG Working Group Minutes

Yes - 9

Bill T Gobinatihan A Mike R Brian T Gurgen H Tapan C Dharma K Jon C Craig S

No – 0 Abstain -2

Marc H Steve S

Motion passes. 9 yes. 2 abstain

#### Review of Draft v82

Discussion about parallel scan chains of different lengths. May need some clarification about the length differing from chain to chain.

# Decompression:

Do we need to attribute? Need a key word with scan channel association to say that this scan group is using decompression mode. And these steps for verification would work? An Attribute that says over-shift valid? Assumes that there is an over-shift mechanism. Editor will add some clarification in response to differing scan lengths

Motion to Adjourn – Steve Seconded – Tapan

Meeting adjourned: 11:57am EST

## **Next Meeting:**

January 25<sup>th</sup> 2016 11:00am

Motion Summary
0 motion 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
- 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 - <a href="http://grouper.ieee.org/groups/1149/10/">http://grouper.ieee.org/groups/1149/10/</a>

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** 

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Access code: 194 196 960