

## IEEE 1149.10 High Speed JTAG Working Group Minutes

### **Date – 12//14/2015**

**Attendees:** CJ Clark, Bill Tuthill, Bob Gottlieb, Brian Turmelle, Craig Stephan, Dharma Konda, Frans de Jong, Gobinathan Athimolom, Gurgen Harutyunyan, JF Cote, Jon Colburn, Marc Hutner, Mike Ricchetti, Steve Sunter, Tapan J Chakraborty,

### **Absent with Excuse:**

**Missing:** Bill Huott, Carol Pyron, Jim Wilson, Kent Ng, Kevin Gorman, Tom Wayers, Heiko Ehrenburg, Dave Armstrong, Roger Sowada, Zahi Abuhanmdeh, Teresa McLaurin, Philippe Lebourg, John Braden, Dwayne Burek, Saman Adham, Adam Ley, Ismed Hartanto , Josh Ferry,

### **Agenda:**

- 1) Patent Slides
- 2) Review Draft v78
- 3) Discussion of Compliance-enable pins
  - a. New Figure for asserting Enable\_1149\_10
  - b. Are they really like 1149.1 compliance enable pins?
  - c. Motions
- 4) New Business
- 5) Adjourn

### **Meeting Called to order at 11:11 am EST**

#### **Minutes:**

The Chair would like members to use the “raised Hand” feature.

    Trouble seeing that feature in Webex.

    Will investigate this.

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 Changes to draft

Updated member list

Updated definitions section

    Enable\_1149\_10 signal definition added

Updated 4.1.2 Specifications – Rule c

## IEEE 1149.10 High Speed JTAG Working Group Minutes

### 6.6.2 Added the word “Rules”

Rule e. updated

Permissions

Added g)

### 9.7.2 Specifications

Rules

b) c) updated

enable\_149\_10 and disable\_1149\_10 updates

Clause 10.

Added more steps for verification

Step 17

Step 18

Step 19

Step 20

Discussion

Allowed source of Enable\_1149\_10

No rules on what it is allowed to be sourced by. But there is a rule that says if you have 1149.1 tap that you need a PDL procedure (which should also configure HSTAP.)

Leave it to the designer to assert signal as need. Only define it as an input to the PEDDA

CJ showed a simple enable circuit of the Enable\_1149\_10 signal. This is not the only way to do it. Just an example.

No discussion on figure.

CJ suggests using this simple circuit to replace figure 5-3 per the discussion of the enable\_1149\_10 pin.

Discussion on Compliance Enable pins

HSTAP is not dedicated test logic. May need to be setup

Compliance enable pins swap between mission mode and compliance (.10) mode

Problematic if compliance-enable character not implemented.

Need extra rule to remove compliance-enable

How badly do we need the compliance enable pin?

Discussion moved to reflectors.

Motion to Adjourn – J.F

Seconded – Frans

**Meeting adjourned: 12:03pm EST**

**Next Meeting:**

December 21<sup>st</sup> 2015 11:00am

## IEEE 1149.10 High Speed JTAG Working Group Minutes

### *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
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

# IEEE 1149.10 High Speed JTAG Working Group Minutes