Test Technology Standards Committee (IEEE-SA TTSC)

Meeting Minutes

February 10, 2021

1   Name of group

The Test Technology Standards Committee (IEEE-SA TTSC) met.

2   Date and location of meeting

On Wednesday, February 10, 2021 via IEEE Meetings WebEx (teleconference).

3   Officer presiding, including the name of the secretary who wrote the minutes

The presiding officer was Ian McIntosh, TTSC Chair. The secondary presiding officer was Adam Ley, TTSC Vice Chair. The recording secretary was Michael Wahl.

4   Attendance, including affiliation

The roll was taken from the WebEx attendance list. The following persons were present:

Name	Employer	Affiliation (if different from employer)	Role
Ian McIntosh	Leonardo		Chair
Adam Ley	ASSET InterTech		Vice Chair
Michael Wahl	University of Siegen		Secretary
Adam Cron	Synopsys		Member
Alfred Crouch	Amida Technology Solutions		Member
Bradford Van Treuren	VT Enterprises Consulting Services		Member
Erik Jan Marinissen	imec vzw	TU Eindhoven	Member
Greg Maston	(self)		Member
Heiko Ehrenberg	Goepel electronic		Member
Jason Peck	Texas Instruments		Member
Jeff Rearick	AMD		Member
Jim O'Reilly	Intel		Member
Michael Laisne	Dialog Semiconductor		Member
Mike Ricchetti	Synopsys		Member
Saghir Shaikh	Broadcom		Member
Saman Adham	TSMC		Member
Sankaran Menon	Intel		Member
Steve Sunter	Siemens		Member
Tom Waayers	NXP Semiconductors		Member

Rik Dokken	Politecnico di Milano	Observer *
Rodolfo A. Fiorini	Intel	Observer *
Bambang Suparjo		Observer *
Tom Thompson	IEEE	Staff

Members   Have attended at least three consecutive meetings and have the right to vote

Observers Have not (yet) attended three consecutive meetings and have no right to vote

+   having expressed interest, completion of attendance to next meeting satisfies the requirements to be a voting member

*   having expressed interest, completion of attendance to this meeting satisfies the requirements to be a voting member

5   Call to order, Chair's remarks

The meeting was called to order at: (EST) 11:03 AM, Wednesday, February 10, 2021.

Thanks to outgoing officers! Much appreciation to Mr. Cron for his extended term!

5.1   Patent slides

The presiding officer shared the patents slide set (🔒) and provided opportunity for those present to fulfill their duty to inform:

None present identified any potentially essential patent claim(s)/patent application claim(s).

5.2   Copyright slides

The presiding officer shared the patents slide set (🔒) and provided opportunity for those present to fulfill their duty to inform:

A discussion came up on the usage of the copyright slides.

Q: from Michele P, via Alfred Crouch: Do contributions to a meeting constitute a publication, thus preventing submission to conference, etc?

A: Tom: No, but Tom will be happy to follow up on specific concerns.

Steve: Is there any possible conflict with non-IEEE publications?

6   Approval of the agenda

The presiding officer offered the following agenda:

- Call to order, Chair's remarks
  (to include, in every session, patents slideset)
- Approval of agenda
- Approval of minutes of previous meeting

- Action items review
- Technical topics

Standards Committee (SC) ACTION REQUESTED/ REQUIRED

- **Projects in Active Development**
  please expect to consider P&P for
    - P2929 (link🔓) (Menon)
    - P1687.1 (link🔓) (Crouch)
  please expect to consider P&P for
    - P1500 (link🔒) (Ricchetti)

Regular Order

- **Elections review**
  please expect to review election need/ status for
  (EO/EA, status and/or result)
    - TTSC (Laine/Adham)
    - P1687.1 (Crouch)
    - P2654 (Ehrenberg)
    - P2929 (Menon)
- **Status of Projects in Active Development (ref) (link🔒)**
    - SC Project tracking (link🔒) (Macintosh)
    - P1149.1 (link🔒) (Suparjo)
    - P1450 (link🔒) (Dokken)
    - P1450.1 (link🔒) (Maston
    - P1450.6 (link🔒) (Shaik)
    - P1581 (link🔒) (Ehrenberg)
    - P1687.1 (link🔒) ((Crouch)

- **Maintenance review (ref) (link🔒)**
  without SC action, the following standards will expire at the end of 2022:

    - **1149.8.1 C/TT/Boundary Scan Architecture**
      IEEE Standard for Boundary-Scan-Based Stimulus of Interconnections to Passive and/or Active Components

  without SC action, the following standards will expire at the end of 2023:

    - **1149.1 C/TT/Boundary Scan Architecture**
      IEEE Standard for Test Access Port and Boundary-Scan Architecture

  without SC action, the following standards will expire at the end of 2024:

- **1687 C/TT/IJTAG**

  IEEE Standard for Access and Control of Instrumentation Embedded within a Semiconductor Device

without SC action, the following standards will expire at the end of 2025:

- **1149.6 C/TT/1149.6**

  IEEE Standard for Boundary-Scan Testing of Advanced Digital Networks

- **New business**
  - o **SC eTools (McIntosh)**
- **Action items**
- **(Subcommittee's report)**
- **(Items reported out of executive session)**
- **Next meeting – date and location**
  - o **Proposed April 7, 2021, by IEEE-SA meetings WebEx**

A motion for the approval of the agenda was made.

MOTION	Approve the minutes of the meeting 2020 10 28, as amended.
Mover	Adam Cron
Second	Al Crouch
Votes	The vote was not conducted on a roll call basis. No objections were raised.
Decision	Approved

7   Approval of minutes of previous meeting

The SC secretary reported that minutes for the previous meeting had been submitted and were pending approval. These were made available to TTSC members and read to the meeting participants as follows

- [TTSC meeting minutes 2020 10 28 as submitted 2021 02 10.pdf](#)

The SC secretary noted that these were thought to be complete and correct.

The following reformulation of page 14, paragraph 1, sentence 1 was suggested:

It was also inquired as to why IEEE-SA does not broadcast to all members. Staff observed that not all participants to standards are IEEE-SA.

A motion for approval of the minutes of previous meeting October 28th, 2020, including the suggested change, was made as follows:

MOTION	Approve the minutes of the meeting 2020 10 28, as amended.
Mover	Bradford Van Treuren
Second	Jim O'Reilly
Votes	The vote was not conducted on a roll call basis. No objections were raised.
Decision	Approved

Accordingly, the minutes of these previous meetings, as approved, are finally recorded as follows:

Link to the amended and approved minutes

8 Action items review

Action	Who	When
Organize a tiger team to work toward draft proposed common form letter for all calls for standard maintenance.	Ian McIntosh	Forthwith
Work toward draft proposed common P&P for all TTSC working groups on a staff-provided baseline and template. On hold because we expect e new baseline to be published in March 2021.	Ian McIntosh/ Soo Kim	Forthwith
Inquire IEEE staff to see the current state of this matter (deprecating use of racially charged terminology in IEEE standards). Closed. Ref email circulated by Ian.	Soo Kim	Closed
All groups chairs are requested to consider/ survey their respective standards regarding use of racially charged terminology therein and take up the matter with their working groups or up the chain, as suitable. **	All group chairs/ Ian McIntosh (follow up)	Closed
Effect approval of revision PAR for P1450.	Adam Cron	Closed
Request IEEE editors prepare Word source, on current template, for revision draft to seed P1450. Closed.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Effect approval of revision PAR for P1450.1.	Adam Cron	Closed
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1450.1.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Effect approval of revision PAR for P1450.6.	Adam Cron	Closed

Action	Who	When
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1450.6. Closed.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1149.4. Closed.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1581. Closed.	Soo Kim/ Tom Thompson	Forthwith
Create "cookbook" for how to startup a new (or revision) project/ working group.	Adam Cron	Forthwith
Effect approval for SC ballot for P1149.7.	Adam Cron	Forthwith
Conduct P2654 Elections	Ehrenberg/ Menon	Forthwith
Organize P1687.1 Elections	Crouch	Forthwith
Organize P2929 Elections	Menon	Forthwith
Inquire IEEE staff as to alternatives to requesting SC and WG email forwards of items such as requests for awards nominations; else request that such items are formatted in such a way that they do not suggest self-promotion on the part of those asked to do the forwards.	Soo Kim/ Tom Thompson	Forthwith
Communicate expectations concerning submission of WG rosters to IEEE-SA.	Soo Kim/ Tom Thompson	Forthwith
Address listserv question offline (can a WG have two listservs= one for full participants versus one for parties who wish to receive only meeting minutes?).	Sankaran Menon/ Adam Cron	Forthwith

** Moving on, in interest of time

9   Technical topics

Standards Committee (SC) ACTION REQUESTED / REQUIRED

- **Projects in Active Development**

- **P2929 (link🔓) (Menon)**

MOTION	Accept P&P for P2929
Mover	Adam Ley
Second	Saman Adham
Votes	The vote was not conducted on a roll call basis. No objections were raised.
Decision	Approved

- **P1687.1 (link🔓) (Crouch)**

MOTION	Accept P&P for P1687.1
Mover	Adam Ley
Second	Al Crouch
Votes	The vote was not conducted on a roll call basis. No objections were raised.
Decision	Approved

- **P1500 (link🔒) (Ricchetti)**

The status of the group is close to the ballot-ready draft. The SC advised Mike Ricchetti to go to MEC and to open a ballot group. He might seek an approval for SC ballot in the interim to the next TTSC meeting. MR would like to get the approval in 2021.

Regular Order

- **Elections review**
  please expect to review election need/ status for
  (EO/EA, status and/or result)
  - TTSC (M. Laine/S. Adham)
  - P1687.1 (A. Crouch), Thanks to H. Ehrenberg & J. Peck
  - P2654 (H. Ehrenberg), Thanks to H. Ehrenberg & S. Menon
  - P2929 (S. Menon), Thanks to M. Ricchetti

  - All Elections were done and the new officers are in place.
  - Exception: P 2654: There is no secretary. One member will be appointed by the chair.
- **Status of projects in active development (ref) (link🔒)**
  - **SC project tracking (link🔒)**

    There was a short discussion on project tracking. SC works on a simply project status reporting/ standardize formatting across standards.

- **P1149.4 ([link]🔒) (B. Suparjo)**

  The group is currently organizing and will start immediately.

- **P1450 ([link]🔒) (Dokken)**

  The group is organizing and supported by T. Thompson and J. Oreilly

- **P1450.1 ([link]🔒) (G. Maston)**

  The group is forming. A mailing list is required.

- **P1450.6 ([link]🔒) (Shaik)**

  The group Undertook a WG chairs training. Requested assistance to organize.

- **P1581 ([link]🔒) (H. Ehrenberg)**

  The group is going to prepare for participating in IEEE marketing. There have been three formal meetings. The first formal meeting will be held on February 24, 2021

- **P1687.1 ([link]🔒) (A. Crouch)**

  The PAR has been extended. The group is active and meeting weekly. The new editor is R. Rearick.

- **Maintenance review ([ref]) ([link]🔒)**

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    IEEE Standard for Boundary-Scan-Based Stimulus of Interconnections to Passive and/or Active Components
    Steve to send "form letter" when we get it.

  without SC action, the following standards will expire at the end of 2023:

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    IEEE Standard for Test Access Port and Boundary-Scan Architecture

  without SC action, the following standards will expire at the end of 2024:

  - **1687 C/TT/IJTAG**
    IEEE Standard for Access and Control of Instrumentation Embedded within a Semiconductor Device

  without SC action, the following standards will expire at the end of 2025:

  - **1149.6 C/TT/1149.6**
    IEEE Standard for Boundary-Scan Testing of Advanced Digital Networks

- **New business**
  - **SC eTools (I. Macintosh)**
    The Grouper website will become obsolete in the future. We will make a transition to the WordPress web site for public information and user iMeetCentral for private information. This transition will take some time and will be finished hopefully in the middle of the year

10 Action items

New actions items, as mentioned above, and four carry overs, are recorded in the action summary table appended at the end of these minutes.

11 Subcommittee reports

Other than as given above, under various subheadings, no further subcommittee reports were given.

12 Items reported out of executive session

There was no executive session and, as such, no items were reported out of executive session.

13 Recesses and time of final adjournment

A motion for adjournment was heard and seconded. Adjournment approved.

Meeting adjourned at: (EST) 12:00 PM, Wednesday, February 10, 2021.

14 Next meeting - date and location

Proposed Apr 7, 2021, by IEEE-SA meetings WebEx

As offered, the next meeting is to be arranged as follows:

NEXT MEETING	
Location	Via IEEE-SA Meetings WebEx
When	(EDT) 11:00 AM, Wednesday, April 7, 2021

MOTION	To adjurn
Mover	Adam Cron
Second	J. Rearick
Votes	The vote was not conducted on a roll call basis. No objections were raised.
Decision	Approved

History of these minutes

Meeting notes recorded by: Michael Wahl

Minutes submitted by: Michael Wahl, TTSC Secretary; April 7, 2021

15 Action summary table

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Organize a tiger team to work toward draft proposed common form letter for all calls for standard maintenance.	Ian McIntosh	Forthwith
Work toward draft proposed common P&P for all TTSC working groups on a staff-provided baseline and template. On hold because we expect e new baseline to be published in March 2021.	Ian McIntosh/ Soo Kim	Forthwith
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Effect approval of revision PAR for P1450.1.	Adam Cron	Closed
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1450.1.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Effect approval of revision PAR for P1450.6.	Adam Cron	Closed
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1450.6. Closed.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
Request IEEE editors prepare Word source, on current template, for revision drafts to seed P1149.4. Closed.	Soo Kim/ Tom Thompson	Upon PAR approval (NesCom)
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Address listserv question offline (can a WG have two listservs= one for full participants versus one for parties who wish to receive only meeting minutes?).	Sankaran Menon/ Adam Cron	Forthwith