

**IEEE P2520.1 Working Group #29**

Draft Meeting Minutes

11 December 2023

WG Chair: James Covington

WG Secretary: H. Troy Nagle

**1. Call to Order**

Chair called meeting to order at 10:02 AM EDT. He announced that the meeting was being recorded for the purpose of preparing minutes.

**2. Roll Call and Disclosure of Affiliation**

*Affiliation FAQs:* <http://standards.ieee.org/faqs/affiliation.html>

Participants can sign-in at this link:

[https://docs.google.com/spreadsheets/d/1x3Le7jd\\_5h3bgiNcYMZIfjIbzE2XdE0U8Daon00O8Ks/edit#gid=0](https://docs.google.com/spreadsheets/d/1x3Le7jd_5h3bgiNcYMZIfjIbzE2XdE0U8Daon00O8Ks/edit#gid=0).

The Chair asked the Secretary to check for a quorum. The List of Participants is shown in **Attachment A**. A quorum was achieved (12 of the 15 voting members were present).

**3. Approval of Agenda**

The Chair asked for approval of the agenda. Troy Nagle made the motion; Susan Schiffman seconded. Without objection to unanimous consent, the motion was adopted.

**4. Approval of Previous Meeting Minutes**

Minutes for WG#28 were considered. The Chair asked for approval of the recently circulated minutes. Radislav Potyrailo moved for approval; Fengchun Tian seconded. Without objection to unanimous consent, the motion was approved.

**5. IEEE-SA Patent & Copyright Policies**

**a. Call for Patents**

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>

Per standard IEEE SA WG meeting practice, the Chair displayed the required policy regarding potentially essential patents. No one raised concerns for consideration.

**b. Copyright Policy** <https://standards.ieee.org/ipr/copyright-materials.html>

Per standard IEEE-SA WG meeting practice, the Chair displayed the required policy regarding copyrights. There were no questions or concerns.

**6. Update on main text of standard**

The Chair thanked those who responded with comments and now has generated version 18.1. The Chair will next reformat the draft using the IEEE-SA Standards Style Manual. That will be distributed to the Working Group as version 19.

Continuing the discuss from our last meeting on additional reviewers for the draft standard, the Chair has asked Patrik Aspermaier for a complete review. He has also asked Alphus Wilson and he has agreed. At our last meeting, Andreas Mershin (MIT/Osmocosm and RealNose.ai) and Jan Mitrovics were suggested. New names put forward were Santiago Marco, Laura Capelli, Joe Stetter, and Federico Cangialosi.

The purpose of these final reviews is to determine if we have missed any important considerations in the six Methods or three Levels of our standard. The reviewers need to have practical experience in testing similar systems. We need this feedback in Q1-2024.

The WG prioritized the candidate reviewer list. The Chair will approach them in priority order. Engaging three reviewers is the target goal.

- (1) Alphus Wilson
- (2) Joe Stetter
- (3) Santiago Marco
- (4) Laura Capelli
- (5) Jan Mitrovics
- (6) Federico Cangialosi
- (7) Andreas Mershin

#### **7. Discussion/update on methods**

The Chair outlined progress since our last meeting. The Methods Document is almost complete.

- Method 1: Sample introduction using an Autosampler – Sandrine/JAC
- Method 2: Sample introduction using positive pressure gas flow – Christopher
- Method 3: Sample introduction using sample bags & barrel with negative pressure – Carlos/Fengchun
- Method 4: Sample introduction through static/dynamic headspace collection - Susana
- Method 5: Sample introduction using permeation tubes and positive pressure - Ettore
- Method 6: Sample introduction via an odor point source – Krishna/JAC

The Chair reviewed some recently received changes, and will update and distribute a new version soon.

The Chair asked for opinion about adding diagrams to the Methods. The WG agreed that some diagrams might be helpful. Krishna will review the methods and propose diagrams that might clarify the testing Methods.

It was suggested that we develop a series of video tutorials showing the basic fundamentals. However, the IEEE-SA Test Suite Specification (TSS) documents that we develop will give detailed step-by-step procedures for conducting the standard Level tests.

#### **8. Discussion on Method Recording Document**

The IEEE-SA has provided an example for consideration. The Chair has inserted our testing results list from our last WG meeting into the suggested IEEE table format. He

will circulate that to the WG prior to our next meeting. At the next meeting, we will review and adjust the reporting details of each of the three Levels.

#### 9. Any further updates on the standard

Going forward, the following process was recommended:

1. We complete the draft standard including the Methods Appendix and Test Reporting Documentation.
2. We identify three to five EUTs for feasibility testing purposes.
3. We select an appropriate Method for each EUT.
4. We conduct a feasibility testing for each EUT/Method pairing. The steps that are undertaken during the feasibility testing are carefully documented.
5. The results of the feasibility tests guide our setting of the passing parameters for the standard.
6. The documented feasibility testing steps are then formatted into ICAP TSS publications.

A discussion then began about which enose sensor technologies and which companies might be considered for our testing phase. The following working list was developed:

- Metal-Oxide eNose, IMS/FAIMS, Optical, Nanotubes, Biological, MEMS/Mechanical, QCM
- Warwick – [AlphaMOX FOX](#), PEN3, Cyrano, Lonestar, [FlavourSpec...?](#)
- [Ayballe](#) – Optical System
- Applied Sensor (NST 3320)
- [Airsense](#) GDA-FR
- [AlphaMOS Hercules...GC-GC-FID](#)
- [CommonInvent eNose](#)
- [NanoNose?](#) C2 Electronic Nose
- Ellona? Smart [NanoTubes](#) Technologies??
- M5 UV Light?

The Chair will update this list for our next WG meeting.

#### 10. New Business/Activities for the next meeting

There was no New Business.

#### 11. Future Meetings

The Chair announced that the next meeting (WG#30) will take place on Monday, January 22, at 10:00 AM EST.

#### 12. Adjourn

The hour having ended, the Chair adjourned the meeting at 11:00 AM.

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**Attachment A: Participants (14)**

<b>NAME</b>	<b>AFFILIATION</b>
Christopher Jensen	Self
Cyril Herrier	Aryballe
Duke Oeba	Egerton University, Kenya
Ehsan Danesh	Advanced Sensing Technologies Ltd
Ettore Massera	ENEA
Fengchun Tian	Chongqing University
Hua-Yao Li	Huazhong University of Science and Technology, Wuhan
James Covington	University of Warwick
Krishna Persaud	University of Manchester
Paul Kagan	AWLDM Systems
Radislav Potyrailo	GE Research
Sandrine Isz	Alpha MOS
Susan Schiffman	North Carolina State University
Troy Nagle	North Carolina State University