

**IEEE P2520.1 Working Group #23**

Meeting Minutes

25 April 2023

WG Chair: James Covington

WG Secretary: H. Troy Nagle

**Call to Order**

Chair called meeting to order at 10:05 AM EDT. He announced that the meeting was being recorded for the purpose of preparing minutes.

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

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

The Chair announced that 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 (10 of the 16 voting members were present).

**2. Approval of Agenda**

The Chair asked for approval of the agenda. Carlos Diaz made the motion; Fengchun Tian seconded. Without objection to unanimous consent, the motion was adopted.

**3. Approval of Previous Meeting Minutes**

Minutes for WG#22 were considered. Carlos Diaz moved for approval; Fengchun Tian seconded. Without objection to unanimous consent, the motion was approved.

**4. 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.

**5. Discussion of funding application**

For future support of our WG testing activities, several potential funding sources are available. First is the IEEE TAB Committee of Standards (TAB-CoS) as we discussed in our last meeting. Proposals to that program can be up to \$10K/yr. The Sensors Council Standards Committee (SC-SC), our Sponsor, submitted a successful grant application for this program last Fall. The grant funded a Standards Workshop at the IEEE Inertial 2023 Conference held in Hawaii last month. The workshop had about 25 participants (\$25 registration fee) and laid out a path forward to develop new inertial sensor standards. The grant did not support travel expenses. Administrative staff fees were covered.

Our WG Chair prepared a draft proposal for the TAB-SoC program last Fall but was not able to complete the negotiations to split the funding between fiscal years 2022 and 2023. However, the materials he generated then may be resubmitted to TAB-CoS at a future call for proposals.

There is a second near-term potential funding source from the IEEE Sensors Council AdCom. The Sensors Council has a New Initiatives (SC-NI) Program that has as one of its primary goals the establishment of closer collaborations with industry. It was suggested that the Chair investigate submitting his former TAB-CoS proposal as a two-year SC-NI effort (Fall 2023-Spring 2024) for an amount such as \$20K (\$10K/yr). The Chair agreed to investigate this opportunity. The SC-NI deadline is May 1. Industry members of the WG agreed to collaborate on such a proposal.

A potential third opportunity is the US National Science Foundation Convergence Accelerator program. Soon, this program will be opening calls for proposals. Members of our WG participated in a workshop organized by Ricardo Gutierrez-Osuna (see the report [here](#)). The Chair and Secretary will contact Ricardo to see if funding for our P2520.1 testing activities might be funded through a future proposal that he may organize. Ricardo gave a seminar to the P2520 Guide Working Group in Feb. 2020.

## 6. Discussion on scoring system for Level 2

Clarifying from our discussion at our last meeting, the Level 2 is a classification test employs a choice of three chemicals from our Appendix. A **measurement** is the process of exposing the EUT to a specific chemical at a specific temperature setting and specific humidity setting (pressure is assumed to be constant). During a measurement period (**MP**), the three chemicals are measured by the EUT in a specified order. During the tests, the EUT is exposed to three successive MPs, each with a different order of exposure. These three MPs form a MP Set (**MPS**).

Level 2 testing can be described in four sublevels. A **Day Complete Set** combines the measurements in LVL2-2 and LVL2-3. The sublevel tests are specified here:

LVL2-1: Standard temperature and standard humidity settings (1 MPS).

LVL2-2: Three different temperature settings, all at standard humidity (3 MPSs; one can be carried over from LVL2-1).

LVL2-3: Three different humidity settings, all at standard temperature (3 MPSs; one can be carried over from LVL2-1).

LVL2-4: Three Day Complete Sets, 3 days over a 5-day period (18 MPSs, 15 MPSs if the LVL2-1 MPS is carried over).

To pass a MPS, the EUT must correctly identify 8 of the 9 measurements. To pass LVL2-1, the EUT must pass 1 MPS. For LVL2-2 and LVL2-3, The EUT must pass 3 MPSs (2 if LV2-1 is carried over). For LVL2-4, the EUT must pass 17 of the 18 MPSs (14 of the 15 if LVL2-1 is carried over).

**7. Discussion on testing of the standard**

The Chair then continued the Methods Testing Protocols discussion from our last session. Currently we have seven Methods. The Chair has created draft documents for Method 1 and Method 2. He will send those out to the WG to use as models. He solicited volunteers to create drafts for Methods 3 through Method 6. After some discussion, the following primary and secondary assignments were made:

- Method 1: Syringe autosampler – JAC/Sandrine
- Method 2: Positive pressure gas flow – JAC/Saverio
- Method 3: Sample bags with negative pressure – Fengchun/Carlos
- Method 4: Sample bags with barrel – Krishna/JAC
- Method 5: Headspace collection – Saverio/JAC
- Method 6: Permeation tubes – JAC/Troy
- Method 7: Point source – Susan/Krishna

**8. New Business/Activities for the Next Meeting**

There was no New Business.

**9. Future Meetings**

The Chair announced that the next meeting (WG#24) will take place on May 29 at 10:00 AM EDT.

**10. Adjourn**

Christopher Jenson moved to adjourn; Carlos Diaz seconded. Without objection to unanimous consent, the Chair adjourned the meeting at 10:54 AM.

**Attachment A: Participants (11)**

NAME	AFFILIATION
Carlos Diaz	Ambiente et Odora
Christopher Jenson	Self
Cyril Herrier	Aryballe
Fengchun Tian	Chongqing University
James Covington	University of Warwick
Katayoun Emadzadeh	Self
Paul Kagan	AWLDM Systems
Sandrine Isz	Alpha-MOS
Saverio De Vito	ENEA
Susan Schiffman	North Carolina State University
Troy Nagle	North Carolina State University