

IEEE P2520.1 Working Group

Meeting Minutes

26 APRIL 2021

WG Chair: James Covington

WG Secretary: H. Troy Nagle (Interim)

1. Call to Order

Chair called meeting to order at 10:04 AM EST. He announced that the meeting is being recorded for the purpose of preparing minutes.

2. Roll Call and Disclosure of Affiliation

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

The Chair directed participants to this link

(https://docs.google.com/spreadsheets/d/1x3Le7jd_5h3bgiNcYMZIfjIbzE2XdE0U8Daon00O8Ks/edit?usp=sharing)

in the Chat window. All participants were asked to enter their attendance by inserting a M for members and NM for non-members. New members were asked to include their affiliations and contact information. A few minutes were allowed for participants to access and complete the registration process. A quorum was not achieved early in the meeting. The participants of this meeting are listed in [Attachment A](#).

3. Approval of Agenda

Although there was no quorum, without objection the Chair continued with the agenda that had been sent earlier by email to the attendees.

4. Approval of Previous Minutes

Approval of the Minutes from our prior meetings was postponed until the next meeting.

5. IEEE 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 reviewed 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 reviewed the required policy regarding copyrights. There were no questions or concerns.

6. Technical Discussion:

In the last WG meeting the Chair presented materials of Stage 1 and Stage 2 of the developing P2520.1 standard. Those documents were posted on iMeet Central and

comments were provided by WG members. The Chair has used those comments to update the posted documents. Based on the feedback, then chair prepared a number of questions that need exploration. Each question should be considered while keeping in mind the P2520.1 Standard Ethos. Our is the first standard and all devices must pass our tests before moving to more targeted standards. So, P2520.1:

- MUST be universal to all of the odour/ VOC analysis devices currently available and will be available in the foreseeable future.
- MUST clearly define what devices the standard will cover.
- MUST be easy to implement without the need of expensive facilities, for example, no permeation tube system.
- MUST be able to purchase/acquire test chemicals at the required concentrations with ease.
- MUST use chemicals that are low risk to those conducting the tests. Thus, tests can be performed equally in an academic or industrial setting.
- MUST not be difficult to pass. We need to have companies and academics use the standard. It is the starting point and other standards will be more challenging.

Question 1: Should we focus our attention to odors, or can we include some single gases like H₂S? The group deliberate this issue. Some felt that we should limit the standard to organic gases.

Question 2: How many levels of difficulty should we include? Currently the draft has three level, each with three stages. A fourth level has been discussed. We could break up the standard into P2520.1.1, P2520.1.2, and the like. It was suggested that we limit each Stage to only two Levels. We could also push some of the more difficult tests up to the application levels of P2520.2.1, P2520.3.1, P2520.4.1, and the like.

Question 3: Do we want to list some common sensor types in Stage 1? Probably not because the list will be very long, and we might miss some. Single chemicals have odor. WG41 has been addressing this same topic. They settled on Instrumental Odor Monitoring Systems. They avoided using the term measurement. Their approach is to bring an instrument into a specific application in which an odor problem has been identified. They then train their instrument to monitor that odor over time as abatement methods are implemented.

Question 4: Do we want to include GC or GC/MS techniques? All P2520.1 tests will primarily use gas-phase species. So, the WG decided to move a large section of Stage 1 into the "boiler plate" of the standard.

Question 5: Should we offer different sets of three gases for the tests. We need a limited number of choices so that users can compare the performance of competing instruments. The standard set (ISB, EtoH, and Propane) was chosen based on wide availability and safety. On the other hand, application-specific sets of test gases have more meaning to end users (e.g., a landfill versus a perfumery). ISB is a standard gas for odorant testing calibration. Can we find a similarly used odor calibrant? Our goal is to find a very limited list for this portion of the standard. WG members were asked to suggest sets of three chemicals, preferably available in cylinders. Bags could be employed.

Question 6: Should we be more specific about sampling and introducing samples to the sensors? Five to 10 minutes was accepted as a time limit.

Question 7: Do we want to specify to specify temperature stability in percentage of the temperature? The WG suggested "normal lab conditions."

Question 8: Should test-day cycling time be specified as "at least 12 but not greater than 24 hours after the start," or "repeating the first testing procedure at the same time each of the following days." No change was suggested here.

Question 9: Do we want to specify a signal to noise ratio? Several suggestions were made regarding the Level 1 passing requirements. EN14181 (Stationary Source Emissions Quality Assurance of Automated Measuring Systems) may have helpful guidance. It provides guidance for quality assurance at Level 1 (laboratory), Level 2 (field installation), Level 3 (field operation), and Level 4 (annual surveillance). Our WG needs to avoid conflicts with this and other existing standards.

Several other edits to the document were discussed. Mixing of standards was identified as a problem. The best approach is to define stable mixtures that can be prepared and purchased from normal vendors.

We may be able to limit P2520.1 to two Levels. The methods for controlling humidity can be placed in the Introduction to the Standard. Humidity levels of 20%, 50% and 70% were recommended.

Can one of the three chemicals be a liquid? Please send ideas to the Chair. The Chair will refine the document and post to iMeet Central. The Chair and Carlos agreed to explore an ISOCS webinar on existing standards. Domenico and Carlos

have done annual compilations of standards. They will report back to the WG about options.

7. New Business/Activities for the Next Meeting

There was no new Business.

8. Future Meetings

The Chair announced the next meeting of the WG will take place on May 24.

9. Adjourn

The Chair adjourned the meeting at 11:17 AM

Attachment A: Participants (20)

Carolos Diaz
Christopher Jensen
Cyril Herrier
Domenico Cipriano
Etienne Bultel
Ettore Massera
Fengchun Tian
James Covington
Katayoun Emadzadeh
Krishna Persaud
Louis-Ray Harris
Pail Kagan
Radislv Potyrailo
Sandrine Isz
Susana Palma
Thierry Livache
Susan Schiffman
Ting Bi
Troy Nagle

Vanessa Lalitte, IEEE Staff