

IEEE P2520 Working Group Meeting #2 Minutes**24 June 2019 / 9:00 AM – 10:30 AM (EDT)****Teleconference**

Approved: 7/8/2019

Voting Members Present: Troy Nagle, Susan Schiffman, Mike McGinley, Yogesh Gianchandani, James Covington, Hua-Yao Li, Omer Oralkan, Radislav Potyrailo, Hugo Gamboa, Jan Mitrovics

Voting Members Absent: Krishna Persaud, Luis Hoffman, Rachel Sunghie Lee, Howard Choe, Peter Hesketh

Staff: Vanessa Lalitte, IEEE-USA

1. Call to Order – WG Chair, Susan Schiffman

WG Chair Susan Schiffman opened the meeting at 9:03 AM EDT. The Agenda was displayed to the attending WG members. The WG Chair then switched to the WG#2 Slides set (a PDF file that is attached to these minutes). She welcomed the participants to the second meeting of the Working Group to develop an IEEE Standard for Testing Machine Olfaction Devices and Systems. An announcement was made about recording the session for minute-preparation purposes. The file will be destroyed after the minutes have been approved.

2. Roll Call of Individuals & Declaration of Affiliation (Working Group Establishment) – Schiffman

The WG Chair asked everyone present to enter their names into the Chat window. Those who missed the last meeting were asked to also include their affiliations and email addresses. The WG Secretary Troy Nagle indicated that a quorum was present.

3. Approval of Agenda – Schiffman

The Agenda was presented, and no changes were requested. A motion to approve the agenda was moved and seconded, and the motion carried.

4. IEEE Patent Policy – Schiffman

The WG Chair briefly reviewed the IEEE-SA Patent policy. This item is required for every WG meeting. Susan presented slide #3 of the set of slides located at:

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

5. Today's Discussion – Schiffman

- a. The WG Chair reviewed the purpose of the WG.
- b. Next, she presented the general definitions of standards.
- c. That was followed by a list of 15 reasons why e-nose standards are needed.
- d. Then, a review of the three types of IEEE Standards were reviewed (Standards, Recommended Practices, and Guides). A list of 13 new IEEE Standards that were approved in May 2019 were highlighted.
- e. Then the three types of ASTM standards were reviewed (Test Methods, Practices, and Guides). A brief review of 12 different ASTM Standard Tests for odor were discussed. Copies of these standards can be posted to the WG iMeet Central file archival site upon a request of WG members. Six examples of ASTM Practices for odor were also discussed, followed by three ASTM Guides for odor. Finally, a list of six examples ISO Sensory Analysis standards was

displayed.

6. Topics for Future Meetings - Schiffman

- a. EU Odor Standards History: The WG Chair then solicited volunteers for a presentation at our next meeting about the history of EU enose standardization projects. Jan Mitrovics volunteered to give a brief overview of his previous efforts. He can provide a short review of a GOSPEL (General Olfaction and Sensing Projects on a European Level) Network of Excellence in Artificial Olfaction project from about 15 years ago.
- b. Environmental Standards Efforts: Jan also knows about some air quality initiatives that may be of interest to our WG. There is a German WG and an EU WG active in that area now. He will try to “dig out” their current status. He will reach out the VDI (Tomas Poster, Emissions and Ambient Air Instrumental Monitoring initiative, CEN/TC264/WG41) to solicit collaborators.
- c. Future IEEE P2520 Directions Survey: The WG Chair asked for volunteers to prepare and circulate a survey to the WG. The purpose is to help us narrow our focus to some specific application areas. The survey should rank-order potential application areas, suggest important sensor configurations, explore the type of standard to be developed, investigate conformance requirements and methods, and consider desirable performance parameters and metrics.

Susan suggested that we might develop standard practices for determining the sensitivity of an enose device for specific applications such as hog farms or landfills. Jan reminded us that choosing specific target substances that are broad enough to cover several applications is quite difficult. Hence, the approach might be to choose target performance parameters, and then specify how to get a specific gas, liquid, and solid samples appropriately. Specific applications can be quite challenging. He stressed that sampling handling is a critical factor in determining the performance of a device. So, we could define standard test substances for gas, liquid, and solid samples for comparison tests, but there is no guarantee that passing the test would mean that the enose device would perform in exactly the same way in the field. Bottles of test gas mixtures are readily available commercially. However, the characteristics and performance of those cannisters add more variables into the test procedure.

Radislav Potyrailo volunteered to contribute to the survey. James Covington agreed to help but will not be available for the next meeting. Rad suggested that the first survey could be limited to five to 10 questions. James will consider that. Jan suggested that some questions could be multiple choice and others could be open, allowing the respondents to compose and answer. We will begin working on the survey by email.

7. New Business

There was no New Business.

8. Introduction of New Working Group Members

At this point in the meeting, Susan asked that each new participant introduce themselves and state their interest in this new IEEE standards project. Here is a brief summary of the responses:

Hugo Gamboa, Universidade Nova de Lisboa: Hugo Gamboa is in Lisbon Portugal. He is an assistant professor at the University in the Physics Department. He works in instrumentation for biomedical applications and collaborates with Ana Cecilia Roque in the Chemistry Department. She met with some of us at ISOEN 2019 in Fukuoka, Japan. They are developing new technology for the enose. He is an IEEE member and wants to learn how the IEEE standardization process works. Some of his colleagues have a pending patent that seems to be outside the scope of IEEE P2520. He will send the details about that to Troy by email.

Radislav Potyrailo, GE Global Research: Radislav develops different types of sensors to discriminate and quantify different gasses. They can be classified as multivariable sensors, so they could be used in enose applications. He holds many patents that can be seen on the Internet. Susan and Jan commented that our standard will be written so that a license to an existing patent will not be required. Radislav asked for an example of what to avoid. Troy will request such an example from the IEEE-SA.

Jan Mitrovics, JLM Innovations: Jan works at his own small German company that develops sensor-based instrumentation systems. They target research and development groups. They develop special systems under contract and their product line is intended to help small research groups with their instrumentation problems. They are currently involved in a couple of enose development projects that they will exploit in partnership with their collaborators.

9. Next Meetings – Nagle

Troy relayed that this 9 AM time period was not good for some WG members. Jan confirmed that an hour later would be better. There was no objection to moving the time slot for our future meetings to 10 AM on Mondays. The next two meetings were set for July 8 and July 22. We will then take a summer vacation break and resume meetings on September 9.

10. Adjourn

The Introductions completed the agenda. With no other business being brought before the body, Susan thanked the WG members for their participation and adjourned the meeting at 9:57 AM EDT.

H. Troy Nagle
WG Secretary
6/25/2019