

IEEE P2520.2.1
Machine Olfaction Devices and Systems used for General Outdoor Odor Monitoring
(SEN/SC/TMODS/OOM/2520.2.1)

Working Group Meeting #19 Minutes
13 March 2023 / 10:00 AM – 11:00 AM (EST)

WG Chair: Ehsan Danesh

WG Secretary: Troy Nagle (substituting)

1. Call to Order

The Chair called the meeting to order at 10:05 AM ET. The Chair also 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>

The Chair directed participants to a Google Docs link in the Chat window:

https://docs.google.com/spreadsheets/d/1ydvTFKxRSYRrpT1CX-22zaNkETV4_aqD2NDVSoxxfk8/edit?usp=sharing

Participants were asked to register for the meeting by placing an X at the intersection between the row including their name and the column including the meeting date. First-time participants and individuals whose information was not already listed within the Google document were instructed to include their name, affiliation, and status under the appropriate columns at the bottom of the Google form. The Chair advised participants that member status is contingent upon provision of all required information, any missing information having been highlighted (yellow) in the Google document for participant's convenience. Participants were also asked to include their affiliations in parentheses after their name in the Chat window, if using the chat area. A few minutes were allowed for participants to access and complete the sign-in process. The Secretary added the attendance status of participants who did not complete their attendance status directly.

At least two (2) of the most recent four (4) WG meetings must be attended to maintain voting rights.

The participant information from the online participants list and from the Google participant registration document has been merged and 23 names and affiliations may be found in [Attachment A](#).

3. Approval of Agenda and Previous Meeting Minutes

The Chair displayed the announced agenda. Fifteen of the 25 voting members were attending. Since a quorum of 13 was met, the Chair called for a motion to approve the Agenda and Minutes as circulated of the last Working Group Meeting on February 13. Sandrine Isz made the motion; George Suciu Jr. seconded. The motion passed without objection to unanimous consent.

4. 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.

5. Technical Presentation(s) and Discussion

a. Past WG Presentations

In preparation for the discussion on Subgroups, then Chair reviewed lists of prior presentations by olfaction experts over the last two years. These lists are displayed below:

2021

Date	Speaker	Role	Topic
08/03/2021	Anton van Harreveld	CEO of Odornet and then Convenor of CEN/TC264/WG41	EU Standard for Instrumental Odour Monitoring systems (IOMS)
12/04/2021	Domenico Cipriano	Convenor of UNI 11761:2019	Italian Standard on Odour Determination using IOMS
10/05/2021	Laura Capelli	Professor at Politecnico di Milano	Testing and performance evaluation of IOMS applied in environmental monitoring and medical diagnosis
12/07/2021	Santiago Marco	Professor at University of Barcelona	An introduction to machine olfaction devices and systems used for odour monitoring
13/09/2021	Michael McGinley	Lab Director at St. Croix Sensory	Design and operation of olfactometers
13/12/2021	Wolfhard Reimringer	Product Manager at 3S GmbH	Reference Gas Cylinder for Outdoor Odour Monitoring Devices

2022 & 23

Date	Speaker	Role	Topic
14/02/2022	Robbie Wilmont Fred Farrow-Dunn	Researchers at UK National Physical Laboratory (NPL)	Primary reference materials (PRMs) for volatile organic compounds (VOCs) and odorant mixtures
14/03/2022	Kurt Haerens	Environmental Consultant with OLFASCAN	Odor sampling techniques and testing methodologies
13/06/2022	Scott Gentry	KIN-TEK Analytical	Permeation tubes and test instruments
19/09/2022	François Loubet	Project Manager at Ellona.io	Techniques and methodologies for odor intensity measurement in the field: training, detection, and classification
14/11/2022	Sandrine Isz	Health & IP Manager at Alpha MOS	HERACLES electronic nose system, applications, and calibration
13/02/2023	Stéphane Cariou	Researcher at IMT Mines Alès	The relationship between odor and physicochemical data

These presentations have yielded many fruitful discussions regarding our challenge in preparing a general outdoor odor monitoring standard. Summaries of these presentations are available in the WG Meeting Minutes that are posted on our website (<https://sagroups.ieee.org/2520-2-1/>).

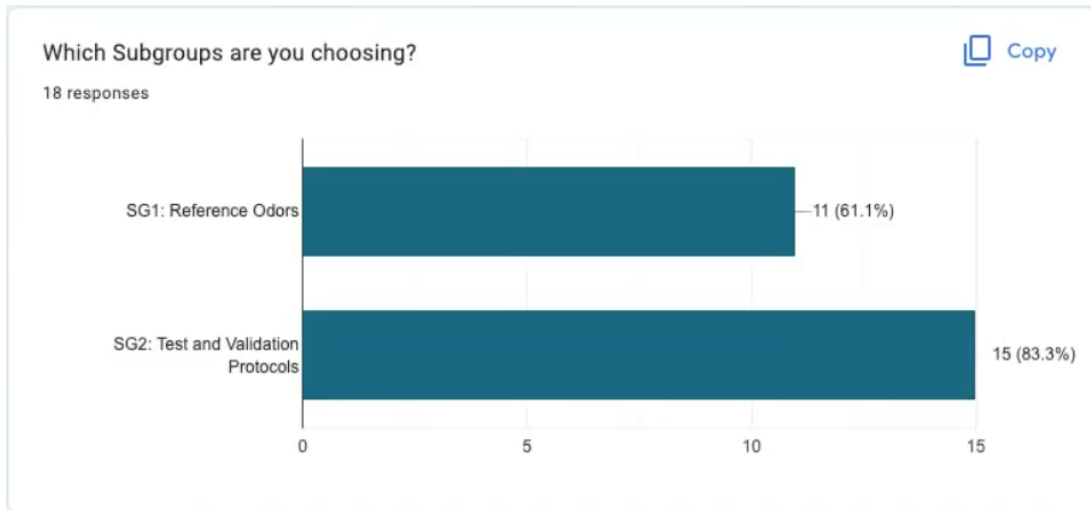
With this background of information, the Chair suggests that we form two subgroups to accelerate the standard writing process.

b. Subgroups

The Subgroups can operate in a less formal mode and can bring results to future WG meeting for feedback and approval. The Subgroups can meet independently as needed and the WG meetings will be less frequent. Page 10 of our WG Policies and Procedures document describes the rules for Subgroups. Our WG specifies the scope and delegates duties to the Subgroup. Outcomes of the Subgroup must be confirmed by our WG. Our WG Chair appoints the Chairs of the Subgroups. Subgroup membership is not restricted to our WG members. Anyone can be a member of the Subgroup. The subgroup can use online tools (e.g., Google files and folders) to prepare their materials. Formal WG documents will be archived on iMeet Central. The Chair then opened the floor to discuss the following two Subgroups (SG1: Reference Odors, and SG2: Test & Validation Protocols):

Subgroup	SG1	SG2
Name	Reference Odors	Test & Validation Protocols
Scope	<ul style="list-style-type: none"> Identify <i>at least</i> three reference odor compositions representing outdoor odor monitoring applications (eg, landfill, sewage and hog farm) Consider parameters such as odor threshold, intensity and character as measured by human panels (ie, olfactometry) Advise on automatic sample delivery methods (eg, gas cylinders and permeation tubes) 	<ul style="list-style-type: none"> Develop testing procedures and requirements for the measurement of SG1 reference odors using an e-nose equipment under test (EUT) in lab Consider detection limit, repeatability, reproducibility, short-term stability, cross-interference and environmental factors (ie, temperature and relative humidity) Advise on data quality objective (DQO) and performance classification Provide guidance on field testing and long-term stability

The Chair then opened an online Google File and asked WG members to volunteer for one or both of these new Subgroups. After a few minutes, 11 members joined SG1; 15, SG2.



After some discussion, the Chair announced that he planned to appoint Danyel Gafsou to Chair SG1 and Radislav Potyrailo to Chair SG2.

The SG1 Chair will provide online forms for sharing KPIs for the subgroups, references, and CAS numbers. The SGs should meet prior to our next WG Meeting in June. It was suggested that the SGs prepare summaries of their meetings to record progress.

6. New Business

There was no new business.

7. Future Meetings

The next meeting of the WG was scheduled to occur at 10 AM ET on June 12, 2023. It will be a two-hour session.

8. Adjourn

The hour having past, Susan Schiffman moved adjournment and John Saffell seconded. Without objection to unanimous consent, the WG Chair adjourned the meeting at 10:56 AM EST.

Attachment A: Meeting Participants (23)

Last Name	First Name	Affiliation
Chen	Allen C	Self
Covington	James	Univ. of Warwick
Danesh	Ehsan	Adsentec Ltd
Deshmukh	Sharvari	Visvesvaraya National Institute of Technology
Gafsou	Danyel	Via Scent Ltd
Herrier	Cyril	Aryballe
Isz	Sandrine	Alpha MOS
Izquierdo	Cyntia	Olores.org website
Kuna	Kishore	Honeywell Technology Solutions
Lotesoriere	Beatrice Julia	Politecnico di Milano
Majewski	Leszek	The University of Manchester
Manikandan	M Sabarimalai	Indian Institute of Technology Bhubaneswar
Manjula	Raja	SRM University AP
Mulla	Mohammad Yusuf	Research Institutes of Sweden (RISE)
Nagle	Troy	North Carolina State University
Palma	Susana	NOVA university of Lisbon
Peaslee	David	SPEC Sensors, LLC
Potyrailo	Radislav	GE Research
Roman-Gonzalez	Avid	Business on Engineering and Technology S.A.C. (BE Tech)
Saffell	John	NosmoTech Ltd.
Sagar	A S M Sharifuzzaman	Sejong university, South Korea
Schiffman	Susan	North Carolina State University
Suciu Jr.	George	Beia-Ro