



# **IEEE 1904 Access Networks Working Group**

## **Opening report**

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- Please, state
  - Your name
  - Your affiliation

## **IEEE SA Standards Board Operations manual**

### **5.3.3.1 Disclosure of affiliation**

Each participant's affiliation shall be disclosed at any working group or project meeting. The chair or the chair's delegate shall inform the meeting of the requirement for disclosure of affiliation (see 5.2.1.5 of the *IEEE-SA Standards Board Bylaws*). This shall be via a sign-in (e.g., sign-in sheet, electronic sign-in, verbal disclosure, or electronic communication) that provides for disclosure of employer and any other affiliation, a reminder of the definition of affiliation, and possible penalties for non-compliance.

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The minutes of each working group or project meeting shall record a list of attendees and the disclosed affiliation of each attendee.

# Executive Secretary Report

- ❑ Posted at  
[https://www.ieee1904.org/meeting\\_archive/2025/04/anwg\\_2504\\_exec\\_report.pdf](https://www.ieee1904.org/meeting_archive/2025/04/anwg_2504_exec_report.pdf)
- ❑ Membership Updates
- ❑ Establishment of Quorum

# Motion to Approve the Agenda

## Motion #1

❑ **Approve the agenda for the April 2025 meeting presented in anwg\_2504\_agenda.pdf.**

- Moved:
- Second:
- (Procedural, required > 50%)

Motion passed by voice vote without opposition



# **IEEE Guidelines**

- **Patent Policy and Call for Patents**
- **Participant behavior in IEEE-SA activities**

# Instructions for the WG Chair

The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:

- **Show slides #1 through #4 of this presentation**
- **Advise the WG attendees that:**
  - IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
  - Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
  - There may be Essential Patent Claims of which IEEE is not aware. Additionally, neither IEEE, the WG, nor the WG Chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.
- **Instruct the WG Secretary to record in the minutes of the relevant WG meeting:**
  - That the foregoing information was provided and that slides 1 through 4 (and this slide 0, if applicable) were shown;
  - That the chair or designee provided an opportunity for participants to identify patent claim(s)/patent application claim(s) and/or the holder of patent claim(s)/patent application claim(s) of which the participant is personally aware and that may be essential for the use of that standard
  - Any responses that were given, specifically the patent claim(s)/patent application claim(s) and/or the holder of the patent claim(s)/patent application claim(s) that were identified (if any) and by whom.
- The WG Chair shall ensure that a request is made to any identified holders of potential essential patent claim(s) to complete and submit a Letter of Assurance.
- It is recommended that the WG Chair review the guidance in *IEEE-SA Standards Board Operations Manual* 6.3.5 and in FAQs 14 and 15 on inclusion of potential Essential Patent Claims by incorporation or by reference.

Note: **WG** includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.

# Participants have a duty to inform the IEEE

- Participants shall inform the IEEE (or cause the IEEE to be informed) of the identity of each holder of any potential Essential Patent Claims of which they are personally aware if the claims are owned or controlled by the participant or the entity the participant is from, employed by, or otherwise represents
- Participants should inform the IEEE (or cause the IEEE to be informed) of the identity of any other holders of potential Essential Patent Claims

**Early identification of holders of potential  
Essential Patent Claims is encouraged**

# Ways to inform IEEE

- Cause an LOA to be submitted to the IEEE-SA ([patcom@ieee.org](mailto:patcom@ieee.org)); or
- Provide the chair of this group with the identity of the holder(s) of any and all such claims as soon as possible; or
- **Speak up now and respond to this Call for Potentially Essential Patents**

If anyone in this meeting is personally aware of the holder of any patent claims that are potentially essential to implementation of the proposed standard(s) under consideration by this group and that are not already the subject of an Accepted Letter of Assurance, please respond at this time by providing relevant information to the WG Chair

# Other guidelines for IEEE WG meetings

- All IEEE-SA standards meetings shall be conducted in compliance with all applicable laws, including antitrust and competition laws.
  - Don't discuss the interpretation, validity, or essentiality of patents/patent claims.
  - Don't discuss specific license rates, terms, or conditions.
    - Relative costs of different technical approaches that include relative costs of patent licensing terms may be discussed in standards development meetings.
      - Technical considerations remain the primary focus
  - Don't discuss or engage in the fixing of product prices, allocation of customers, or division of sales markets.
  - Don't discuss the status or substance of ongoing or threatened litigation.
  - Don't be silent if inappropriate topics are discussed ... do formally object.

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For more details, see *IEEE-SA Standards Board Operations Manual*, clause 5.3.10 and *Antitrust and Competition Policy: What You Need to Know* at <http://standards.ieee.org/develop/policies/antitrust.pdf>

# Patent-related information

The patent policy and the procedures used to execute that policy are documented in the:

- ***IEEE-SA Standards Board Bylaws***  
(<http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6>)
- ***IEEE-SA Standards Board Operations Manual***  
(<http://standards.ieee.org/develop/policies/opman/sect6.html#6.3>)

Material about the patent policy is available at  
<http://standards.ieee.org/about/sasb/patcom/materials.html>

**If you have questions, contact the IEEE-SA  
Standards Board Patent Committee  
Administrator at [patcom@ieee.org](mailto:patcom@ieee.org)**

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## Participant behavior in IEEE-SA activities is guided by the IEEE Codes of Ethics & Conduct

- All participants in IEEE-SA activities are expected to adhere to the core principles underlying the:
  - [IEEE Code of Ethics](#)
  - [IEEE Code of Conduct](#)
- The core principles of the IEEE Codes of Ethics & Conduct are to:
  - *Uphold the highest standards of integrity, responsible behavior, and ethical and professional conduct*
  - *Treat people fairly and with respect, to not engage in harassment, discrimination, or retaliation, and to protect people's privacy.*
  - *Avoid injuring others, their property, reputation, or employment by false or malicious action*
- The most recent versions of these Codes are available at <http://www.ieee.org/about/corporate/governance>

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## Participants in the IEEE-SA “*individual process*” shall act independently of others, including employers

- The [IEEE-SA Standards Board Bylaws](#) require that “*participants in the IEEE standards development individual process shall act based on their qualifications and experience*”
- This means participants:
  - **Shall act & vote** based on their personal & independent opinions derived from their expertise, knowledge, and qualifications
  - **Shall not act or vote** based on any obligation to or any direction from any other person or organization, including an employer or client, regardless of any external commitments, agreements, contracts, or orders
  - **Shall not direct** the actions or votes of other participants or retaliate against other participants for fulfilling their responsibility to act & vote based on their personal & independently developed opinions
- By participating in standards activities using the “*individual process*”, you are deemed to accept these requirements; if you are unable to satisfy these requirements then you shall immediately cease any participation

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## IEEE-SA standards activities shall allow the fair & equitable consideration of all viewpoints

- The [IEEE-SA Standards Board Bylaws](#) (clause 5.2.1.3) specifies that *“the standards development process shall not be dominated by any single interest category, individual, or organization”*
  - This means no participant may exercise *“authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints”* or *“to hinder the progress of the standards development activity”*
- This rule applies equally to those participating in a standards development project and to that project’s leadership group
- Any person who reasonably suspects that dominance is occurring in a standards development project is encouraged to bring the issue to the attention of the Standards Committee or the project’s IEEE-SA Program Manager

- ☐ No audio or video recording
- ☐ No photography
- ☐ No job recruiting
- ☐ No product pitches
- ☐ No corporate pitches
- ☐ No prices
  - This includes costs, ASPs, etc. no matter what the currency
- ☐ No restrictive notices
  
- ☐ Attendance of the press should be announced

# Links to Guiding Documents

- ❑ **IEEE Standards Association Operations Manual**  
<https://standards.ieee.org/about/policies/sa-opman/index.html>
- ❑ **IEEE-SA Standards Board Bylaws**  
<https://standards.ieee.org/about/policies/bylaws/index.html>
- ❑ **IEEE-SA Standards Board Operations Manual**  
<https://standards.ieee.org/about/policies/opman/index.html>
- ❑ **Antitrust and Competition Policy**  
<https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/antitrust.pdf>
- ❑ **IEEE Code of Conduct**  
[https://www.ieee.org/content/dam/ieee-org/ieee/web/org/about/ieee\\_code\\_of\\_conduct.pdf](https://www.ieee.org/content/dam/ieee-org/ieee/web/org/about/ieee_code_of_conduct.pdf)
- ❑ **IEEE Code of Ethics**  
<https://www.ieee.org/about/corporate/governance/p7-8.html>

# Approval of Last WG Meeting's Minutes

## Motion #2

- ❑ Approve minutes of December 2024 WG meeting as recorded in **anwg\_2412\_minutes\_unapproved.pdf**.
- ❑ Post the approved minutes on the WG website as **anwg\_2412\_minutes\_approved.pdf**

– Moved:

– Seconded:

(Procedural, required > 50%)

Motion passed by voice vote without opposition

- ❑ Posted at  
[https://www.ieee1904.org/meeting\\_archive/2025/04/anwg\\_2504\\_treasurer\\_report.pdf](https://www.ieee1904.org/meeting_archive/2025/04/anwg_2504_treasurer_report.pdf)
- ❑ Presented at the last meeting of a calendar year

# Detailed schedule (Dec'24 to Apr'25)

Target Date	Actual Date	Item
<b>12/10</b>	<b>12/10</b>	IEEE 1904 WG meeting (this meeting)
<b>12/17</b>	<b>12/12</b>	Release D2.4
<b>12/17–1/7 (22 d)</b>	<b>12/16–1/7 (22d)</b>	4 <sup>th</sup> Recirculation Ballot
<b>12/17</b>	<b>12/16</b>	Submit D2.4 to AccessCore-SC (the Sponsor) for preview
<b>12/17–2/10 (55 d)</b>	<b>12/16–1/16 (31d)</b>	MEC on D2.4
<b>12/17–2/10 (55 d)</b>	<b>12/17–1/21 (35d)</b>	Ballot Group Invitation Period
<b>2/11–2/12</b>	<b>2/4–2/6</b>	<del>IEEE 1904 WG meeting to resolve 4<sup>th</sup> recirc. and MEC comments</del> Electronic vote
<b>2/18</b>	<b>2/6</b>	Release D3.0
<b>2/18</b>	<b>2/6</b>	Submit D3.0 (summary of changes from D2.4, if any) to AccessCore-SC
<b>2/19–3/5 (14 d)</b>	<b>2/7–2/13 (7 d)</b>	AccessCore-SC approval to start 1904.4 SA ballot (electronic vote)
<b>3/5–4/15 (42 d)</b>	<b>2/13–3/30 (46 d)</b>	Initial SA ballot
<b>4/22–4/23</b>	<b>4/22</b>	IEEE 1904 WG meeting (Ballot resolution meeting)

# Electronic motion, February 6-10, 2025

Move to

- In reference to *IEEE P1904.4 MEC Report* dated January 15, 2025, resolve all Section 1 issues and Section 2 issues as implemented in **draft\_1904\_4\_D3\_0\_clean.pdf**;
- Approve the file **draft\_1904\_4\_D3\_0\_clean.pdf** as the IEEE P1904.4 draft D3.0;
- Direct the working group chair to seek approval from AccessCore-SC and take other steps necessary to initiate the SA ballot on the IEEE P1904.4 draft D3.0.

Moved: Marek Hajduczenia

Seconded: Curtis Knittle

(Requires 2/3 approval per P&P, 7.1.2)

**APPROVE: 7**

**DISAPPROVE: 0**

**ABSTAIN: 0**

Marek Hajduczenia	Charter	APPROVE
Curtis Knittle	CableLabs	APPROVE
Glen Kramer	Broadcom	APPROVE
Mark Laubach	Ciena	APPROVE
JC Marion	Ciena	APPROVE
Craig Pratt	CableLabs	APPROVE
Zhen Zhou	Fiberhome	APPROVE

# WG ballot results



	Initial Ballot (D2.0)	1 <sup>st</sup> Recirc (D2.1)	2 <sup>nd</sup> Recirc (D.2.2)	3 <sup>rd</sup> Recirc (D.2.3)
<b>Total Voters</b>	7	7	7	7
<b>Approved</b>	3	6	6	6
<b>Disapproved</b> (with comments)	2	1	1	1
<b>Disapproved</b> (without comments)	0	0	0	0
<b>Abstained</b>	0	0	0	0
<b>Total Returns</b>	5	7	7	7
<b>Response Ratio</b> (Req. > 50%)	71.4%	100%	100%	100%
<b>Abstention Ratio</b> (Req. < 30%)	0%	0%	0%	0%
<b>Approval Ratio</b> (Req. $\geq 2/3$ )	60%	85.7%	85.7%	85.7%

# SA ballot results



	Initial Ballot (D3.0)	1 <sup>st</sup> Recirc (D3.1)		
<b>Total Voters</b>	24			
<b>Approved</b>	19			
<b>Disapproved</b> (with comments)	1			
<b>Disapproved</b> (without comments)	0			
<b>Abstained</b>	1			
<b>Total Returns</b>	21			
<b>Response Ratio</b> (Req. $\geq 75\%$ )	<b>87%</b>			
<b>Abstention Ratio</b> (Req. $< 30\%$ )	<b>4%</b>			
<b>Approval Ratio</b> (Req. $\geq 75\%$ )	<b>95%</b>			

## WG Ballot

Comment type	D2.0	D2.1	D2.2	D2.3
E	11	3	1	2
ER	1	0	0	0
T	5	5	6	3
TR	8	3	4	1
Total	25	11	11	6

## SA Ballot

Comment type	D3.0			
E	9			
ER	1			
T	5			
TR	3			
Total	18			

# IEEE 1904 Webex account

- ❑ This account is only for IEEE 1904 standards development meetings
- ❑ May schedule a future meeting or start an instant meeting
- ❑ Anyone may use it, but need to coordinate, as we are allowed only one meeting at a time.

## IEEE 1904 Access Networks Working Group

### Webex Online Meeting

To schedule a meeting, log in to <https://ieeesa.webex.com> using

- **Username:** p1904@ieee.org
- **Password:** <the same password you used to get to this page>

#### Note:

- Only the meeting host needs to log in to this Webex account. Viewers/participants do not need to login.
- Only one meeting can be held at any time. When you schedule a call, please announce it on the [working group reflector](#), so that other subgroups don't schedule it for the same time.

### Instant meeting

- **URL:** <https://ieeesa.webex.com/meet/IEEE1904>
- **Pin:** -666-

#### Note:

- This is a permanent meeting room account. No Webex reservation is necessary.
- The host needs to login and start the meeting.

### Help Topics

- [How to join a Webex meeting](#)
- [Get Started with Cisco Webex Meetings for Hosts](#)
- [Get Started with Cisco Webex Meetings for Attendees](#)
- [Webex Training](#)
- [Webex Support](#)

For additional help topics, visit [Webex Help Center](#)

#### Note:

- In compliance with the IEEE SA policy, meeting recording function has been disabled.

# 1904 Working Group Website



- ❑ Located at <http://www.ieee1904.org/>
  - Archived technical contributions and reflector messages are public
- ❑ ANWG Password-protected area
  - Standard drafts are password-protected (IEEE SA rules)
  - All online submission forms are password-protected to avoid spam.
    - TF4: [http://www.ieee1904.org/private/4/tf4\\_presentproc.shtml](http://www.ieee1904.org/private/4/tf4_presentproc.shtml)
    - RMTF: [http://www.ieee1904.org/private/revision/rmtf\\_maint\\_request.shtml](http://www.ieee1904.org/private/revision/rmtf_maint_request.shtml)
  - The same username/password for all task forces under 1904 WG
    - Username: \*\*\*\*
    - Password: \*\*\*\*

## ❑ 1904 WG Reflector

- Used for general discussions/announcements. **Everyone MUST subscribe!!!**
- Archive is public: [http://www.ieee1904.org/wg\\_pub\\_archive.shtml](http://www.ieee1904.org/wg_pub_archive.shtml)
- Subscription instructions: [http://www.ieee1904.org/wg\\_reflector.shtml](http://www.ieee1904.org/wg_reflector.shtml)

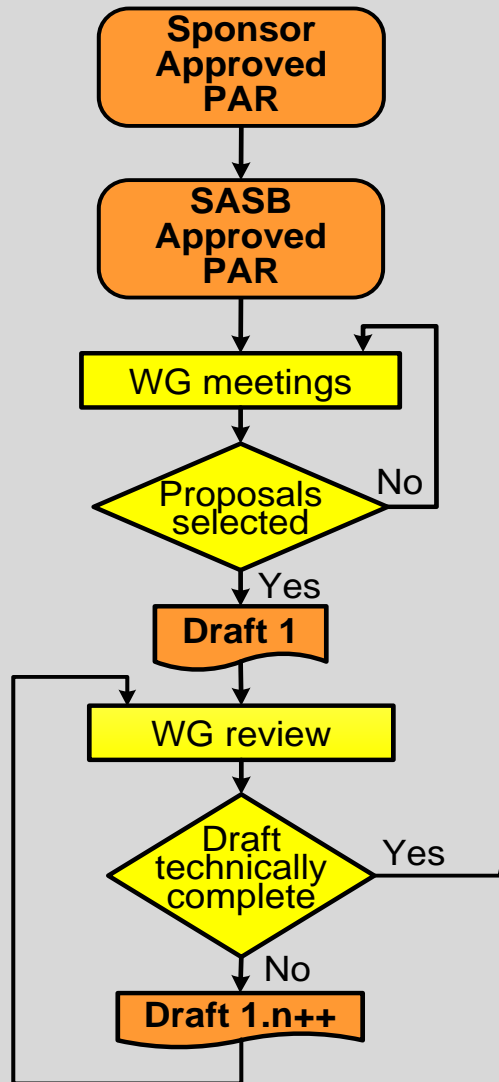
## ❑ 1904.4 TF Reflector

- Used for 1904.4 *TF discussions*
- Archive is public: <http://www.ieee1904.org/4/email/index.html>
- Subscription instructions: [http://www.ieee1904.org/4/tf4\\_reflector.shtml](http://www.ieee1904.org/4/tf4_reflector.shtml)

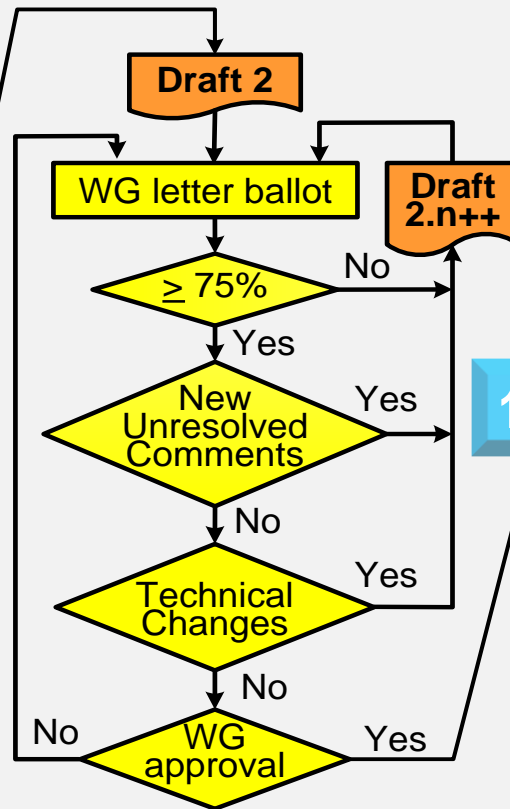
## ❑ RMTF Reflector

- Used for Revision & Maintenance technical discussions
- Archive is public: <http://www.ieee1904.org/3/email/index.html>
- Subscription instructions: [http://www.ieee1904.org/revision/rmtf\\_reflector.shtml](http://www.ieee1904.org/revision/rmtf_reflector.shtml)

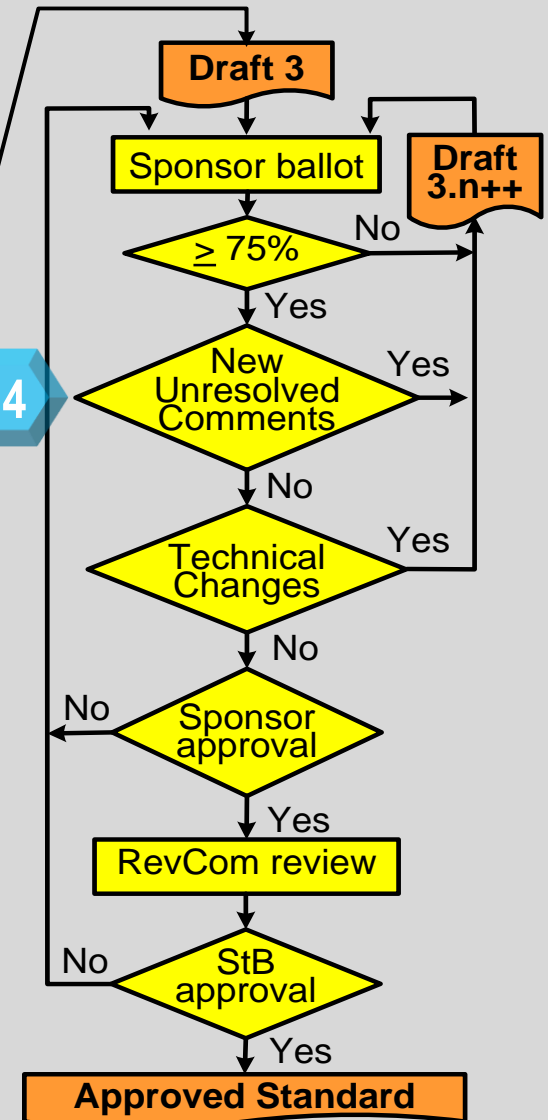
# Current Project(s) Status



Working Group  
Review



Working Group  
Ballot



Sponsor Ballot 26



# Thank You