

CHANGE 1
[IEEE-SA Standards Board Operations Manual]
(Approved by PatCom: December 2018)
(Approved by SASB: December 2018)
IMPLEMENTED IN JUNE 2019

IEEE-SA Standards Board Operations Manual

6.3.4 Multiple Letters of Assurance and Blanket Letters of Assurance

A Submitter may provide the IEEE with a Blanket Letter of Assurance only when the LOA indicates licensing assurance for a specific [Proposed] IEEE Standard that covers all Essential Patent Claims the Submitter may currently or in the future have the ability to license. A Submitter may submit separate Letters of Assurance providing different licensing positions for different potential Essential Patent Claims.

Over time, a Submitter may also provide multiple assurances for a given Patent Claim by submitting multiple Letters of Assurance for such claim. For Essential Patent Claims, each such Letter of Assurance shall be binding on the Submitter. Each potential licensee may choose to invoke the terms of any applicable Letter of Assurance accepted by the IEEE, with one exception: If a Submitter has signed and submitted a Letter of Assurance specifically identifying a Patent Claim before or concurrently with signing and submitting a Blanket Letter of Assurance, the Blanket Letter of Assurance cannot be invoked as to the specified Patent Claim. (The Submitter, however, may submit a separate specific Letter of Assurance offering the Blanket Letter of Assurance terms for the specified Patent Claim.) The intention of this paragraph is to permit the Submitter to offer alternative assurances, and to permit the potential licensee to choose from among the alternative assurances offered.

If, after providing a Blanket Letter of Assurance, the Submitter acquires an Essential Patent Claim or a controlling interest in an entity that owns or controls an Essential Patent Claim, the existing Submitter's Blanket Letter of Assurance shall apply to such acquired Essential Patent Claims unless the acquired entity or the prior holder of the acquired Essential Patent Claim has submitted a Letter of Assurance before the acquisition. Any Blanket Letter of Assurance submitted by the acquired entity or the prior holder of the acquired Essential Patent Claim before the acquisition shall continue to apply to acquired Essential Patent Claims covered by such assurance (but not to the acquirer's Essential Patent Claims). Letters of Assurance covering specified Essential Patent Claims shall continue to apply to specified Essential Patent Claims, whether acquired in the acquisition or held by the acquirer before the acquisition, as provided in this Operations Manual. Nothing in this paragraph shall prevent an acquiring party from asking a seller of an acquired Essential Patent Claim or an acquired entity to submit additional Letters of Assurance before closing of the acquisition.

CHANGE 2
[IEEE-SA Standards Board Operations Manual]
(Approved by ProCom: March 2019)
(Approved by SASB: April 2019)

IEEE-SA Standards Board Operations Manual

~~7. IEEE participation on committees outside the IEEE~~

~~7.1 Liaisons with external organizations~~

~~7.1.1 Definition of an External Liaison~~

~~An External Liaison is appointed by a Standards Committee to an organization external to the IEEE. The External Liaison provides communication between their Standards Committee and the external organization. The volunteer serving in this capacity acts as an information conduit only and may express an opinion as part of the consensus building process.~~

~~An External Liaison is not an External Representative, as defined in the *IEEE Standards Association Operations Manual*, Clause 7.1.1.~~

~~7.1.2 General requirements for the establishment of an External Liaison~~

~~The Standards Committee shall have a sufficient degree of activity within a sector or subsector of the relevant technical or industrial field in which the External Liaison is being established.~~

~~In order to be effective, the liaison relationship shall operate in both directions.~~

~~7.1.3 Establishing an External Liaison~~

~~A Standards Committee may establish an External Liaison with any organization external to the IEEE it deems appropriate. Establishment of External Liaisons shall be communicated to the appropriate IEEE SA Staff Liaison.~~

~~7.1.4 Appointment of External Liaisons~~

~~Once a Standards Committee has established an External Liaison, the Standards Committee shall appoint a representative and notify the appropriate IEEE SA staff with the name and contact information of the representative.~~

~~7.1.5 Responsibilities of an External Liaison~~

~~The External Liaison assists the IEEE in identifying potential collaborative opportunities between the IEEE SA and the external organization.~~

~~7.1.6 Submission of IEEE documents to an external organization~~

~~All participants in IEEE standards activities are responsible for protecting the intellectual property rights of IEEE standards. If a participant wishes to introduce an IEEE copyrighted document to an external organization, the participant shall obtain permission from the IEEE SA.~~

7. Liaisons with organizations external to IEEE

7.1 Liaisons from Standards Committees to organizations external to IEEE

7.1.1 Definition of a Standards Committee External Liaison

A Standards Committee External Liaison is an information conduit that enables sharing of information from a Standards Committee/Subgroup to an organization external to IEEE.

7.1.2 Definition of a Standards Committee External Liaison coordinator

A Standards Committee External Liaison coordinator is appointed by the Standards Committee/Subgroup and facilitates the sharing of information from a Standards Committee/Subgroup to an organization external to IEEE (see subclauses 7.1.6 and 7.1.7).

A Standards Committee External Liaison coordinator is not an External Representative as defined in the *IEEE Standards Association Operations Manual*, subclause 7.1.1.

7.1.3 General guidelines for the establishment of a Standards Committee External Liaison

The Standards Committee/Subgroup should have activity in the relevant technical field of the organization external to IEEE with which the liaison is being established.

7.1.4 Establishing a Standards Committee External Liaison

A Standards Committee/Subgroup may establish a liaison with an organization external to IEEE.

Establishment of a Standards Committee External Liaison shall be communicated to the appropriate IEEE-SA Program Manager.

7.1.5 Appointment of a Standards Committee External Liaison coordinator

Once a Standards Committee/Subgroup has established a Standards Committee External Liaison, the Standards Committee/Subgroup shall appoint a coordinator and notify the IEEE-SA Program Manager with the name and contact information of the coordinator.

7.1.6 Responsibilities of a Standards Committee External Liaison coordinator

The Standards Committee External Liaison coordinator:

- a) Shall indicate their Standards Committee/Subgroup Liaison coordinator role when attending meetings of the organization external to IEEE.
- b) May share IEEE information with the organization external to IEEE as authorized by the Standards Committee/Subgroup (a template for sharing written information may be used and can be obtained from the IEEE-SA Program Manager) (see subclause 7.1.7 regarding the sharing of IEEE documents). Any other information shared shall be identified as the views of the individual and not that of the Standards Committee/Subgroup.

Recognizing that a Standards Committee External Liaison coordinator might need to represent another group (such as his/her employer or other affiliation), the Standards Committee External Liaison coordinator is permitted to represent that group as well as serve as the Standards Committee/Subgroup Liaison coordinator in the same organization external to IEEE.

- c) May share materials from the organization external to IEEE with the Standards Committee/Subgroup subject to the other organization's policies and procedures (including copyright policy).

d) Is responsible for adhering to the Standards Committee/Subgroup's policies and procedures. All information shared by the Standards Committee External Liaison coordinator shall comply with the IEEE-SA Copyright Policy, outlined in Clause 7 of the IEEE-SA Standards Board Bylaws and subclause 6.1 of the IEEE-SA Standards Board Operations Manual.

e) If the Standards Committee External Liaison coordinator becomes aware of IEEE copyrighted material being used in another organization's document, the Standards Committee External Liaison coordinator shall notify the IEEE-SA Program Manager.

7.1.7 Submission of IEEE documents to an organization external to IEEE

If a Standards Committee/Subgroup would like to share a draft IEEE standard with an organization external to IEEE, the procedures in subclause 6.1.3.4 of the IEEE-SA Standards Board Operations Manual apply.

If a Standards Committee/Subgroup would like to share a published standard with an organization external to IEEE, please contact IEEE-SA <<https://standards.ieee.org/ipr/copyright-permissions-form.html>> and notify the IEEE-SA Program Manager.

Any requests not addressed above shall be sent to stds-ipr@ieee.org.

7.1.8 Submittal of comments to an organization external to IEEE

Comments submitted to an organization external to IEEE are subject to that organization's intellectual property rights policies.

7.2 Liaisons from organizations external to IEEE to Standards Committees/Subgroups

An organization external to IEEE may request to establish a liaison relationship from the organization external to IEEE to a Standards Committee/Subgroup as an information conduit and may provide information as part of the consensus building process.

7.2.1 Criteria for the establishment of a liaison

In order to establish a liaison relationship with a Standards Committee/Subgroup, the organization external to IEEE shall meet the following criteria:

- a) Have technical competence or expertise in the field of technology represented by the Standards Committee/Subgroup with which the liaison relationship is established
- b) Have a process for developing consensus on any input provided to the Standards Committee/Subgroup

7.2.2 Establishing a liaison with a Standards Committee

An organization external to IEEE may request to establish a liaison with a Standards Committee/Subgroup. The Standards Committee/Subgroup that receives the request shall determine whether to accept it and shall reply to the requesting organization.

Establishment of a liaison shall be communicated by the Standards Committee/Subgroup to the IEEE-SA Program Manager.

7.2.3 Roles and responsibilities of a liaison coordinator

Liaison coordinators may attend and participate in Standards Committee/Subgroup meetings. If a meeting fee is being charged, the liaison coordinator is responsible for paying the fee.

While participating in IEEE standards development activities, all participants shall act in accordance with all applicable laws (nation-based and international), the IEEE Code of Conduct, the IEEE Code of Ethics, the *IEEE-SA Standards Board Bylaws* (see *IEEE-SA Standards Board Bylaws* subclause 5.2.1 on “Participation in IEEE standards development”), and the *IEEE-SA Standards Board Operations Manual*.

Liaison coordinators cannot attain voting rights in the name of the organization external to IEEE.

7.2.4 Technical contributions

If a liaison organization external to IEEE makes a technical Contribution to an IEEE draft standard, the liaison organization thereby agrees to comply with IEEE-SA’s policies and procedures related to Contributions (e.g., the IEEE-SA Copyright Policy, outlined in Clause 7 of the *IEEE-SA Standards Board Bylaws* and subclause 6.1 of the *IEEE-SA Standards Board Operations Manual*; the IEEE-SA Patent Policy in regards to disclosure of potential essential patent holders, outlined in Clause 6 of the *IEEE-SA Standards Board Bylaws* and subclause 6.3 of the *IEEE-SA Standards Board Operations Manual*).

If a liaison organization submits one of its copyrighted documents to a Standards Committee/Subgroup for coordination, the document shall not be considered to be a Contribution and shall not be used in any IEEE document without prior permission from the organization external to IEEE.

7.2.5 Termination of liaisons

Liaisons may be terminated by the Standards Committee/Subgroup at their discretion for reasons including, but not limited to, the following:

- a) All work is deemed to have been completed
- b) The organization external to IEEE has not been compliant with the permission terms associated with an IEEE Standards draft provided to them
- c) The relationship is determined to not be in the best interest of the Standards Committee/Subgroup, IEEE-SA, or IEEE

CHANGE 3
[IEEE-SA Standards Board Operations Manual]
(Approved by ProCom: March 2019)
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IEEE-SA Standards Board Operations Manual

5.4.3 Conduct of the standards balloting process

When a proposed standard is ready for Standards Association balloting, balloting shall be conducted by the Standards Committee or designee via the IEEE Standards Association balloting tools. The standards balloting process consists of Standards Association balloting group members casting votes, with or without accompanying comments, in one or more successive ballots until completion of the standards balloting process. Standards Association balloting group members shall submit votes and comments in a manner and in a format compatible with approved IEEE Standards Association balloting tools. Comments may be submitted against any normative or informative content of the ballot document, except for the Notice to Users section and the list of members of the Standards Association balloting group.

The Standards Committee shall ensure that comment resolution occurs via a comment resolution group, which is a subgroup of the working group. ~~The chair of the comment resolution group may allow persons who are not working group participants to join the comment resolution group.~~

The ballot process may include communication among the Standards Committee's comment resolution group and Standards Association balloting group members regarding the substantive merits and possible resolution of comments. However, no comment resolution member, Standards Association balloting group member, or other participant in IEEE standards development shall intimidate or coerce a specific vote from any Standards Association balloting group member.

CHANGE 4

[IEEE-SA Standards Board Bylaws and IEEE-SA Standards Board Operations Manual]

(Approved by ProCom: June 2019)

(Approved by SASB: July 2019)

(Approved by BOG: August 2019)

IEEE-SA Standards Board Bylaws

2.2 Purpose of IEEE standardization

IEEE standards provide a common ground for communication in some specific area of electrotechnology. They also provide criteria for measuring the acceptable performance of equipment or materials pertinent to the field of electrotechnology.

The purpose of the review by the IEEE-SA Standards Board is to ensure that IEEE standards represent a consensus of interests from those that are materially affected by these standards and that proper procedures have been followed during the development of these standards.

An active IEEE standard gives an authoritative reference that is kept up to date through ~~review~~revision at least every ten years by the Standards Committee responsible for its preparation.

IEEE-SA Standards Board Operations Manual

6.3.3 Inactive standards

All active IEEE standards are subject to periodic ~~review for revision or inactivation~~. Standards that have not completed revision within ten years of IEEE-SA Standards Board approval are subject to~~or~~ transfer to inactive status (see clauses 2.2 and 5.3 of the *IEEE-SA Standards Board Bylaws* and 9.2). Thus, any standard that incorporates patented technology may at some point in time be transferred to inactive status. Clause 6 of the *IEEE-SA Standards Board Bylaws* contains policies concerning the period of validity for any Letter of Assurance received from a party regarding an Essential Patent Claim.

9.2 Removal from active status

Standards that are no longer useful or contain significant obsolete or erroneous information should be recommended for withdrawal from active status by the Standards Committee. A recommendation for withdrawal from active status shall be supported by a Standards Association ballot (see 5.4) with a 50% return and at least a 75% approval.

Every IEEE Standard shall be ~~subject to~~considered for transfer to inactive status by the IEEE-SA Standards Board at the ~~end~~ beginning of the next calendar year ~~that~~after it is ten years past its approval date (i.e., the standard will be labeled *Inactive* and reserved for historical reference).

A standard remains active until it is officially transferred to inactive status by the IEEE-SA Standards Board. When a standard is transferred to inactive status, its amendments and corrigenda are also transferred to inactive status.

CHANGE 5
[IEEE-SA Standards Board Operations Manual]
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IEEE-SA Standards Board Operations Manual

5.4.4 Mandatory coordination

The Standards Committee shall coordinate with the following entities via circulation of drafts and materials that are developed by the Working Group and incorporated by reference in the draft, if any~~with the following entities~~:

- IEEE Standards editorial staff during Mandatory Editorial Coordination, Standards Association ballot, and RevCom review
- The IEEE Registration Authority Committee (RAC) when the draft includes registration activity (see subclause 5.7 of the *IEEE Standards Association Operations Manual*):
 - 1) The PAR indicates the possible registration of assigned names or assigned numbers to be included in or used by the proposed project.
 - 2) It becomes apparent through development of the draft that:
 - a) new registration of assigned names or assigned numbers will be included in the draft that will be assigned under a standards developing organization (SDO), or a Working Group or Standards Committee would like to request authority to conduct such assignment;
 - b) the draft includes reference to, or new specifications for use of, registration activity defined external to the proposed standard.

The RAC, IEEE Standards editorial staff, or RevCom may request RAC review of a draft.

Comments from mandatory coordination entities shall be given appropriate consideration and response by the Standards Committee. At the time of project submittal to the IEEE-SA Standards Board for approval consideration as an IEEE standard, the Standards Committee shall supply the most recent mandatory coordination comments and indicate either acceptance or a request for a waiver (see 4.2.3.2).

CHANGE 6
[IEEE-SA Standards Board Operations Manual]
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IEEE-SA Standards Board Operations Manual

5.4 Standards Association ballots

A Standards Association balloting group shall be one of the following:

- Individuals with voting privileges
- Persons with voting privileges who are of any category other than individual

All Standards Association ballots shall be conducted by the IEEE Standards Balloting Center.

All Standards Association ballots shall be conducted by electronic means.

~~Standards Committees may conduct parallel balloting of a standard using both an individual Standards Association balloting group and an entity Standards Association balloting group. An interested Standards Committee shall make a request to the Standards Committee that is responsible for the standard as identified on the PAR to conduct parallel ballots. The decision to conduct the parallel ballots rests with the Standards Committee that is responsible for the standard as identified on the PAR, and that Standards Committee has the sole discretion on whether or not to use parallel balloting. These parallel ballots shall satisfy all corresponding Standards Association ballot conditions. The management of the parallel ballots rests with the Standards Committee responsible for the standard as identified on the PAR.~~

IEEE-SA shall maintain a single authoritative database for the list of members of the Standards Association balloting group. A request for a Standards Association balloting group membership list shall be submitted to the Standards Committee Chair. The Standards Committee Chair shall then forward such request to the IEEE-SA staff liaison for that Standards Committee. The IEEE-SA staff liaison shall fulfill the request if the standard has been approved or upon its approval. For individual-based balloting, the supplied membership list shall consist of each member's name, affiliation, and interest category. For entity-based balloting, the supplied membership list shall consist of each entity's name, the entity's designated primary voting representative (and, if designated, the alternate voting representative), entity affiliation, and entity interest category.

CHANGE 7
[IEEE-SA Standards Association Operations Manual]
(Approved by ProCom: November 2019)
(Approved by SASB: November 2019)
(Approved by BOG: November 2019)

IEEE Standards Association Operations Manual

7.1 External Representatives

The policies and procedures stated in this manual apply to External Representatives of ~~the~~IEEE for which the IEEE-SA has oversight responsibility.

7.1.1 Definition

An External Representative (ER) is a volunteer who has been appointed by the IEEE-SA Board of Governors (BOG) to represent ~~the~~IEEE on standards matters to an organization, committee, or entity external to ~~the~~IEEE, and where a voting position on behalf of ~~the~~IEEE-SA is explicitly required.

A volunteer who serves as a liaison between an IEEE-SA committee and an external committee acting only as an information conduit or expressing opinion as part of consensus building is exempt from policies and procedures described in this clause.

An Owning Board/Committee (OBC) is an IEEE-SA board, an IEEE-SA committee, or Standards Committee responsible for ensuring that positions taken by an ER on technical matters represent the consensus views of the OBC and all materially interested IEEE Technical Committees that provide timely input by any deadline established by the OBC. Positions taken by an ER on policy matters are established by the IEEE-SA BOG.

7.1.2 Requirements and oversight

A request to establish a new ER position shall be reviewed by both the IEEE-SA BOG and the IEEE-SA Standards Board to determine the appropriateness of the ER relationship and to determine the OBC.

The ER shall be an IEEE member of any grade except Student grade and shall be a member of the IEEE-SA. The ER shall be a member or designee of the OBC.

If an OBC ceases to function as an OBC, the ER shall be responsible to the next higher board/committee until a replacement OBC is identified. The ER shall supply the next higher board/committee with the required documentation to enable it to take on this function.

The chair of an OBC shall not serve as an ER unless an exception is granted by the next higher board/committee upon the request of the OBC. The next higher board/committee may accept or deny the request and, at its discretion, may become the Owning Board/Committee for the purposes of this representation. The next higher board/committee may also grant the exception with such conditions as it believes are necessary to assure that the ER can adequately represent ~~the~~IEEE-SA while serving as chair of the OBC. If the next higher board/committee becomes the OBC for the purposes of this representation, then the ER shall provide the reports described in 7.1.4 to this next higher board/committee.

The ER shall act in the best interest of the IEEE-SA at all times. The ER should refer to documented ~~IEEE-SA~~ objectives or consensus positions wherever possible and should encourage development and documentation of relevant objectives or positions where they do not exist.

The ER should not represent another group in the same external organization, committee, or entity to which that person is serving as an IEEE ER. However, recognizing that an ER might need to represent another group (such as his/her employer that underwrites travel costs), the ER may be permitted to represent that group as well as ~~the~~IEEE-SA in the same external organization, committee, or entity. In such situations, the individual serving as an ER shall recuse himself/herself from voting

on issues that would result in a conflict between his/her duty to ~~the IEEE-SA~~ and his/her duty to the other group. The ER shall report such situations to the OBC at the earliest practical time. Once the OBC is made aware of the situation by the ER, the OBC shall decide the best course of action to provide the ~~IEEE-SA~~ position on the issue to the external organization.

7.1.3 Attributes

When appointing an ER, the OBC shall review the following:

- Scientific and technical expertise (e.g., membership ~~of in~~ relevant technical societies) relevant to the scope of operations and activities of the external organization, committee, or entity.
- Familiarity with the operations and goals of the specific external organization, committee, or entity.
- The ability to articulate ~~IEEE-SA~~ goals, objectives, and activities clearly in the context of the external organization, committee, or entity.

Before an individual can serve as an ER, the OBC shall determine that the individual does not have a conflict of interest with respect to the activities of the specific external organization, committee, or entity to which the ER would represent ~~the IEEE-SA~~. To enable the OBC to make this determination, the individual shall

- a) File, with the OBC and the ~~Secretary-Administrator~~ of the IEEE-SA ~~Standards-Board of Governors~~, a letter stating their affiliation(s). This disclosure of affiliation shall meet the requirements of *IEEE-SA Standards Board Operations Manual* sections 5.1.2.3 and 5.1.2.4 and shall be signed by the individual.
- b) File, with the OBC and the ~~Secretary-Administrator~~ of the IEEE-SA ~~Standards-Board of Governors~~, a letter of endorsement from each affiliation disclosed. The letter(s) shall document several key factors relative to the position as the ER and is to be signed by both the individual and ~~an individual by someone~~ who has management responsibility for the individual for that affiliation. The letter(s) shall contain at least the following:
 - 1) Statement of qualification based on expertise in respect to the attributes described above
 - 2) Statement of support for providing necessary resources (e.g., time, travel expenses to meetings), and
 - 3) Recognition ~~that by~~ the individual and by their affiliation is of the expectation to act in accordance with the conditions stated in subclause 7.1.2; ~~in particular that the individual, when serving as the ER, 'shall act in the best interest of the IEEE-SA at all times'.~~
- c) ~~File a e~~Completed the IEEE-SA Conflict of Interest Disclosure Statement [[see https://www.ieee.org/about/compliance/conflict-of-interest/coiandpob.html](https://www.ieee.org/about/compliance/conflict-of-interest/coiandpob.html)] ~~with the Secretary of the IEEE-SA Standards Board.~~

~~An ER shall update existing, or file new, documentation whenever necessary due to a change in circumstances that would make the existing documentation in any way inaccurate.~~

7.1.4 Reports

The ER shall provide regular written reports to the OBC in a format and frequency that has been prescribed by the OBC.

7.1.5 Duties of the Owning Board/Committee

7.1.5.1 Appointment

Upon recommendation of the OBC, an ~~Each~~ ER candidate shall be considered for appointment as an ER by the IEEE-SA BOG for a term of no less than one year, and may be reappointed at the discretion of the OBC. Before an individual can serve as an ER, the IEEE-SA BOG shall confirm the appointment, or reappointment, to that position. If ~~†~~ The OBC does not shall indicate a desired term of appointment for each recommended ER candidate, ~~it shall be for two years.~~

An ER may be reappointed upon recommendation of the OBC and confirmation by the IEEE-SA BOG.

An ER shall update documentation whenever necessary due to a change in circumstances that would make the documentation on file with the OBC and/or the IEEE-SA BOG substantively inaccurate, including changes in affiliation or employment.

7.1.5.2 Annual review

The OBC shall establish the report format and frequency for ERs under its responsibility (see 7.1.4).

The OBC shall provide an annual report to ~~both the IEEE-SA BOG Board of Governors and the IEEE-SA Standards Board~~ on the status of ERs under its responsibility.

7.1.5.3 Liaison relationships with other committees within IEEE-SA

The OBC ~~shall~~ should attempt to identify other committees within IEEE-SA technical communities (e.g., IEEE Societies, Standards Committees, IEEE-SA Standards Coordinating Committees, etc.) that would be likely to have an interest in positions taken represented by the ERs under the OBC's responsibility. The OBC shall develop liaison relationships with those ~~other committees~~ IEEE technical communities that have indicated interest in the activities of the OBC and shall keep them informed of a positions taken represented by the ERs under the OBC's responsibility.

7.1.5.4 Provision of information to materially interested individuals

The OBC shall provide information about positions represented by ERs under its responsibility to materially interested individuals within IEEE upon request.

7.1.6 Public listing of ERs

The IEEE-SA ~~BOG Board of Governors~~ shall maintain a list of all ERs on the IEEE-SA web site. The web site will include a link to an email alias that will allow any comments about ER activity to be submitted to the Secretary of the IEEE-SA staff Board of Governors, who will then direct their handling through appropriate channels.

CHANGE 8
[IEEE-SA Standards Board Bylaws]
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IEEE-SA Standards Board Bylaws

5.2.1.2 Membership requirements for standards developed under the entity method

Officers of IEEE standards working groups developing standards under the entity method shall be representatives of Advanced Entity Members of the IEEE-SA. Designees (those designated to manage the Standards Association ballot) in the IEEE Standards Association entity ballot process shall be representatives of Advanced Entity Members.

Every entity observing a project within an IEEE-SA entity standards working group is required to be at least a Basic Entity Member of IEEE-SA, and only Advanced Entity Members can contribute and hold voting privileges. Entity nonmembers may observe at one IEEE-SA entity standards working group meeting per project.

An entity can represent either itself or another entity's interest in an entity working group. In order to be a voting member in a particular entity working group, each entity's representative shall declare that the interests of that entity are not knowingly represented by another member of the working group and that the entity is not knowingly funding directly or indirectly the participation of another person in that working group for the purposes of influencing the outcome of the vote.

Each entity project shall have at least three voting members in good standing to maintain its validity. Each entity project is required to host its working group email reflector(s) through the IEEE, with designated IEEE staff serving as administrators. Each Standards Committee responsible for the entity project is permitted to send a designated Standards Committee Representative (SCR) to meetings of that entity-based working group in a non-voting role.

The following qualify as entities for standards-development purposes:

Corporation: A for-profit or not-for-profit entity that is not under the control, as defined in 5.2.1.2.1, of another entity and that is organized under articles of incorporation or similar legal structures. Limited Liability Companies are considered to be Corporations.

Partnership: An unincorporated association of two or more individuals who are co-owners of a business.

Sole proprietorship: An unincorporated business owned by a single individual.

Government agency: An entity that is part of an executive, legislative, or judicial branch of a government and that has sufficient discretion in the management of its own affairs to distinguish it as separate from the administrative structure of any other governmental entity.

Academic institution: An educational entity that, in addition to having a controlling body such as a Board of Regents or a Board of Governors, has sufficient discretion in the management of its own affairs to distinguish it as separate from the administrative structure of any other educational entity.

IEEE-SA entity standards working groups may employ up to two individuals in non-voting positions for the purposes of technical editing and other administrative functions that shall not involve technical contributions. Such individuals will be allowed to participate in working group activities as deemed appropriate and need not represent Entity Members of IEEE-SA.

IEEE-SA entity standards working groups may vote to allow individuals to offer specific technical expertise in non-voting positions at up to three entity standards working group meetings during the standards development process for a particular project. Such individuals need not represent Entity Members of IEEE-SA. However, if an individual's expenses to attend entity standards development meetings are sponsored by his or her company, that company must be at least a Basic Entity Member of IEEE-SA.

When entity standards working group meetings are co-located with IEEE individual standards working group meetings, the participants in the individual standards working group may observe such co-located entity working group meetings at up to two meetings per calendar year without having to fulfill any specific membership requirements.

CHANGE 9

[IEEE-SA Standards Board Bylaws and IEEE-SA Standards Board Operations Manual]

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IEEE-SA Standards Board Bylaws

5.2.1.1 Membership requirements for standards developed under the individual method

~~Officers, Chairs, Vice Chairs, Secretaries, and Treasurers~~ of IEEE standards working groups developing standards under the individual method shall be members of IEEE-SA and shall also be either IEEE members of any grade, except Student grade, or IEEE affiliates. Designees (those designated to manage the Standards Association ballot) in the IEEE Standards Association individual ballot process shall be members of IEEE-SA and shall also be either IEEE members of any grade, except Student grade, or IEEE affiliates.

5.6 Open source software development

IEEE standards development and Industry Connections activities shall comply with all IEEE and IEEE-SA requirements for development of open source software, including acceptance of the Terms of Use for the IEEE Open Source Platform. Any IEEE Standards project or Industry Connections activity that intends to develop or incorporate open source software (either normatively or informatively) in the standard or Industry Connections deliverable shall indicate this intent on the PAR or ICAID. Approval by the IEEE-SA Standards Board of the PAR or ICAID that indicates possible incorporation of open source software, as well as approval by the IEEE-SA Board of Governors of the use of the IEEE Open Source Platform for these open source activities, constitutes approval for contribution, development, and maintenance of open source software for the IEEE standard or Industry Connections deliverables. An IEEE Standards project or Industry Connections activity shall not develop open source software without prior approval of the IEEE-SA Standards Board.

All Contributions of open source software for use in IEEE standards development and Industry Connections activities shall be accompanied by an approved IEEE Contributor License Agreement (CLA) appropriate for the open source license under which the Work Product will be made available. CLAs, once accepted, are irrevocable.

IEEE-SA Standards Board Operations Manual

2 Related documents

American National Standards Institute, *ANSI Essential Requirements: Due process requirements for American National Standards* (current edition).

IEEE Standards Association Operations Manual.

IEEE-SA Standards Board Bylaws.

IEEE-SA Board of Governors Open Source Operations Manual.

PAR Form.

IEEE-SA Standards Board Working Guide for Submittal of Proposed Standards and Form for Submittal of Proposed Standards. (Known as the IEEE-SA Working Guide for the Submittal of Proposed Standards.)

IEEE Standards Style Manual.

Robert's Rules of Order, Newly Revised (current edition).

5.4.4 Mandatory coordination

The Standards Committee shall coordinate via circulation of drafts with the following entities:

- IEEE Standards editorial staff during Mandatory Editorial Coordination, Standards Association ballot, and RevCom review
- The IEEE-SA Board of Governors when the standard incorporates (either normatively or informatively) Open Source developed by the Standards Committee or Working Group (see 6.5 and subclause 5.6 of the *IEEE Standards Association Standards Board Bylaws*)
- The IEEE Registration Authority Committee (RAC) when the draft includes registration activity (see subclause 5.7 of the *IEEE Standards Association Operations Manual*):
 - 1) The PAR indicates the possible registration of assigned names or assigned numbers to be included in or used by the proposed project.
 - 2) It becomes apparent through development of the draft that:
 - a) new registration of assigned names or assigned numbers will be included in the draft that will be assigned under a standards developing organization (SDO), or a Working Group or Standards Committee would like to request authority to conduct such assignment;
 - b) the draft includes reference to, or new specifications for use of, registration activity defined external to the proposed standard.

The RAC, IEEE Standards editorial staff, or RevCom may request RAC review of a draft.

Comments from mandatory coordination entities shall be given appropriate consideration and response by the Standards Committee. At the time of project submittal to the IEEE-SA Standards Board for approval consideration as an IEEE standard, the Standards Committee shall supply the most recent mandatory coordination comments and indicate either acceptance or a request for a waiver (see 4.2.3.2).

6.5 Open Source

Open Source is digital work for which the human-readable source code is available – in the preferred form for making modifications – for use, study, re-use, modification, enhancement, and re-distribution by the users. Open Source applies to software and hardware, which may include computer code, hardware designs, data, documentation, documents, and other digital objects. Other Open Source terms are defined in Clause 2 of the *IEEE-SA Board of Governors Open Source Operations Manual*.

Development of Open Source for incorporation in IEEE standards, as a normative or informative component, shall utilize the IEEE Open Source Platform and tools that are designated by IEEE for IEEE Open Source Projects. The Standards Committee and Working Group shall comply with IEEE Open Source policies and procedures, and policies of the IEEE Open Source Platform. All IEEE Open Source Projects shall be hosted on the IEEE Open Source Platform.

6.5.1 Project authorization

Project authorization for the incorporation of Open Source in an IEEE standard requires both PAR approval by the IEEE-SA Standards Board and approval by the IEEE-SA Board of Governors to host the IEEE Open Source Project on the IEEE Open Source Platform, subject to an approved open source license. Addition of Open Source to a completed standard or an active IEEE standards development project requires approval of a Revision or Modified PAR by the IEEE-SA Standards Board, as

applicable.

A PAR Study Group shall not develop Open Source (neither code nor documentation).

The PAR shall indicate whether Open Source may be incorporated (whether normatively or informatively), and the type of open source license under which any Open Source developed in connection with the IEEE Open Source Project shall be distributed.

The Standards Committee and Working Group shall obtain approval from the IEEE-SA Board of Governors for development on the IEEE Open Source Platform of the IEEE Open Source Project under a single IEEE approved open source license.

Changes to the type of open source license are discouraged, and will require a Modified PAR with the request for a change of license noted in Section 8.1 of the PAR. If the license type is changed, then appropriate Contributor License Agreements (CLAs) for the new open source license must be obtained from all previous Contributors prior to publicly indicating a change in the license on the IEEE Open Source Platform. The open source license type identified on the PAR shall not be changed once the Standards Association ballot has begun.

If the PAR for an IEEE standard that incorporates Open Source expires or is withdrawn, the Standards Committee shall either

- Transfer the IEEE Open Source Project to another active standards development project (which may require a New or Modified PAR);
- Transition the IEEE Open Source Project to another project category on the IEEE Open Source Platform; or
- Transition the IEEE Open Source Project to inactive status.

6.5.2 Governance of IEEE Open Source Projects incorporated in IEEE standards

Development and maintenance of the technical content (code and documentation) of IEEE Open Source Projects incorporated in an IEEE standard are the responsibility of the Standards Committee and its Working Groups. This responsibility continues as long as the standard is active. A Standards Committee may form an Open Source subgroup that coordinates Open Source development for multiple Working Groups under that Standards Committee. A Standards Committee may establish one or more Open Source subgroups to manage several IEEE Open Source Projects, or delegate responsibility to the applicable Working Group to establish its own Open Source subgroup. The Open Source subgroup shall comply with all IEEE Open Source policies and procedures, and all policies of the IEEE Open Source Platform.

An Open Source subgroup (of the Standards Committee or Working Group) shall be led by an IEEE Open Source Project Lead who shall be designated as an officer of the responsible Standards Committee or Working Group. The IEEE Open Source Project Lead is responsible for the vitality, organization, development, evaluation, operation, security, and maintenance of an IEEE Open Source Project. The IEEE Open Source Project Lead may communicate directly with the IEEE Open Source Platform team regarding technical matters.

Each IEEE Open Source Project incorporated in an IEEE standard shall have at least one Maintainer, who may be the IEEE Open Source Project Lead. Maintainers have the authority to commit (save changes) to the IEEE code and document repository associated with an IEEE Open Source Project, and to assign Committers. Maintainers shall be a member of the Standards Committee or Working Group responsible for the project and shall be an IEEE member of any grade and a member of IEEE-SA. Committers shall be members of the Standards Committee or Working Group responsible for the project and shall be responsible for committing code to the IEEE code and document repository associated with an IEEE Open Source Project.

The IEEE Open Source Project Lead and Maintainer(s) shall be responsible for coordinating the development of Open Source with the Working Group and comment resolution group, and obtaining applicable CLAs for all Contributions to the IEEE Open Source Project.

6.5.2.1 Contributions to Open Source

An IEEE Open Source Contributor is any person who submits any material to an IEEE Open Source Project, whether as an individual or on behalf of an organization. Material may include, but is not limited to, Open Source works, comments, and marketing materials. IEEE membership is not required to be a Contributor. Every Contributor is required to obtain an IEEE account that requires agreeing to the IEEE Code of Conduct. Every submission by an IEEE Open Source Contributor shall be associated with the IEEE account of the Contributor. All Contributors to IEEE Open Source Projects incorporated in an IEEE standard shall declare their affiliation(s) (see 5.1.2.3).

All members of the Open Source subgroup shall submit CLAs applicable for the entire IEEE Open Source Project(s) for which they are responsible, or for all IEEE Open Source Projects under the applicable open source license(s). The Working Group Chair is responsible for confirming that appropriate CLAs are submitted for all Contributions to any Open Source developed by the Working Group.

Every Contribution to an IEEE Open Source Project shall have an appropriate CLA for the Contribution and be under the same open source license as indicated on the repository. If the type of open source license is changed on the PAR, updated CLAs shall be obtained from all Contributors to the IEEE Open Source Project prior to indicating a change in the license on the IEEE Open Source Platform.

6.5.2.2 Application of patent policy

The IEEE-SA patent policy applies to Open Source that is incorporated in a standard, even if a CLA has been submitted. IEEE does not determine whether there is consistency between Letters of Assurance and CLAs. A call for patents notice shall be posted on the IEEE Open Source Platform in the area where CLAs are submitted for all Open Source developed by the Working Group that is incorporated normatively or informatively in a draft or approved standard.

The IEEE Open Source Platform, in the area where CLAs are submitted, shall have a pointer to Accepted Letters of Assurance, as well as the appropriate sections of the *IEEE-SA Standards Board Bylaws* and *IEEE-SA Standards Board Operations Manual* relating to intellectual property.

The IEEE Standards website shall make available information about all Accepted CLAs for IEEE Open Source Projects incorporated in an IEEE standard, and information about Accepted CLAs shall also be available where Accepted Letters of Assurance are posted on the website.

6.5.2.3 Incorporation of Open Source in standards

IEEE standards may incorporate the use of Open Source in two ways:

- Normatively, where use of the Open Source is required when implementing the standard
- Informatively, where the Open Source is provided for information only, and not required for implementation

All IEEE standards that incorporate Open Source shall identify the appropriate use (normative or informative) of the Open Source for compliance with the standard, and the location of the software code and documentation in the IEEE Open Source repository.

Open Source that is incorporated normatively without a specific version shall not be included in the text of the draft standard unless it is marked as an *Example*.

Informative documentation shall be included in the published standard (e.g., as an Annex) explaining how to access and run the Open Source. The form of this documentation shall comply with the *IEEE Standards Style Manual*, and files provided to IEEE Standards editorial staff shall be compliant with requirements for standards publication.

IEEE Open Source incorporated in a draft IEEE standard that is published prior to approval of the standard by the IEEE-SA Standards Board shall include IEEE-SA disclaimer text (see the *IEEE Standards Style Manual*) on the IEEE Open Source Platform and in all IEEE Open Source in the IEEE Open Source repository for the IEEE Open Source Project.

The guidance on references listed in the *IEEE Standards Style Manual* applies to normative and informative references to

Open Source. A reference shall specify one or more source code libraries within a specified project in a specified code repository. A reference may specify one or more specific versions, including “the most current version,” of each library.

Normative use of Open Source is discouraged, unless required for accuracy, functionality, safety, security, or compatibility. Open Source that is incorporated normatively without referencing specific version(s) (i.e., it is undated) shall be made available and maintained on the IEEE Open Source Platform. This restriction does not apply to informative references.

If an IEEE standard normatively references a specific version of the Open Source (i.e., it is a dated reference), the version can be changed only through a revision of the standard, or an amendment or corrigendum to the standard. The restriction on published amendments (see 8.1.2) does not apply for amendments that are intended only to update Open Source or references to Open Source.

For normatively referenced Open Source that does not have a specific version, the Standards Committee or Working Group shall review updates to the Open Source during the standards development process and should review updates to the Open Source after IEEE-SA Standards Board approval to determine if the software continues to align with the standard, and if not, to take appropriate action (e.g., determine whether a dated reference should be noted in the standard instead).

6.5.3 Mandatory coordination

During mandatory coordination, the Standards Committee shall include all Open Source developed by the Working Group and incorporated in the draft. All applicable CLA identifiers shall be submitted during Mandatory Editorial Coordination. The IEEE Open Source Community Manager and IEEE-SA IPR Staff shall review the Open Source, CLAs, and associated documentation prior to initial ballot. Mandatory coordination comments by the IEEE Open Source Community Manager and IEEE-SA IPR Staff shall be addressed prior to initial ballot.

6.5.4 Standards Association ballot and public review

All IEEE draft standards that incorporate Open Source developed by an IEEE Working Group shall provide notification during the invitation to ballot and on the public review site that (a) the IEEE draft standard incorporates Open Source, (b) applicable CLA(s) are required for any Contributions to IEEE Open Source incorporated in an IEEE standard, and (c) template CLAs are available, with links to the applicable CLA templates.

During the Standards Association ballot, balloters shall be granted access to view any referenced Open Source. After the initiation of the Standards Association ballot process, the IEEE Open Source incorporated in an IEEE standard shall only be updated to reflect changes approved by the ballot group or required by IEEE for the secure and productive operation of the IEEE Open Source Platform.

The IEEE Open Source Project Lead and at least one Maintainer shall be members of the comment resolution group.

Any comments that provide modifications to IEEE Open Source may not be implemented in the IEEE Open Source or the draft standard and may not be considered unless an applicable CLA was previously submitted to IEEE. The IEEE Open Source Project Lead and Maintainer are responsible for obtaining all CLAs prior to the start of initial ballot, and prior to the next recirculation ballot if the Open Source Contribution is inserted during comment resolution.

Once the Standards Association ballot is completed for a draft standard, any IEEE Open Source developed by the Working Group that is incorporated shall not be updated until after IEEE-SA Standards Board approval, and then only if the Open Source is undated.

Public review commenters shall be granted access to view the IEEE Open Source developed by the Working Group. Any public review comments that provide modifications to the IEEE Open Source may not be implemented in the IEEE Open Source or in the draft standard and may not be considered unless an applicable CLA was previously submitted to IEEE.

6.5.5 Release and maintenance of Open Source

Release of Open Source incorporated into an IEEE standard shall occur only after approval of the standard by the IEEE-SA Standards Board, and the IEEE Open Source Project shall be included in the official IEEE listing. After the standard is approved, only Open Source that does not have a specific version (undated) may be updated without requiring a revision of the standard, or an amendment or corrigendum (see 8.1.2). Normatively referenced Open Source that is undated may be updated only with approval from the Standards Committee, Working Group, or a subgroup delegated with that responsibility, unless the changes are required by IEEE for the secure and productive operation of the IEEE Open Source Platform.

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(Approved by ProCom: November 2019)
(Approved by SASB: November 2019)

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7.2.4 Technical Contributions

If a liaison organization external to IEEE makes a technical Contribution to an IEEE draft standard, the liaison organization thereby agrees to comply with IEEE-SA's policies and procedures related to Contributions (e.g., the IEEE-SA Copyright Policy, outlined in Clause 7 of the *IEEE-SA Standards Board Bylaws* and subclause 6.1 of the *IEEE-SA Standards Board Operations Manual*; the IEEE-SA Patent Policy in regards to disclosure of potential essential patent holders, outlined in Clause 6 of the *IEEE-SA Standards Board Bylaws* and subclause 6.3 of the *IEEE-SA Standards Board Operations Manual*).

If a liaison organization submits one of its copyrighted documents to a Standards Committee/Subgroup for coordination, the document shall not be considered to be a Contribution and shall not be used in any IEEE document without prior permission from the organization external to IEEE. Prior to distributing the organization's document, the Standards Committee/Subgroup shall reference the Working Group Draft Sharing List to determine if guidance is required from the IEEE-SA Program Manager.

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(Approved by ArCom: September 2019)
(Approved by BOG: November 2019)

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5.2.2.2 IEEE-SA Standards Board Working Group Chair Award

This award may be presented, at the discretion of the Working Group Chair, to the officers of the working group and to technical editors, in recognition of a significant contribution to the development of the approved IEEE standard. For standards developed jointly with other organizations, this award may also be presented to the Working Group Chair, to the officers of the working group, and to the technical editors of the standard.

Processing of a request for awards shall occur after IEEE-SA Standards Board approval of the standard has been received.

Further information on the award is provided at the IEEE Standards website.

~~**5.2.2.3 IEEE-SA Standards Board International Joint Working Group Chair Award**~~

~~This award, acknowledging contributions made during the development of a standard jointly developed by the IEEE-SA and either ISO, IEC, or ISO/IEC, shall be presented to the IEEE-SA Working Group Chair and to the ISO, IEC, or ISO/IEC Working Group Chair counterpart. [Note: This award shall be presented to the IEEE-SA Working Group Chair in addition to the IEEE-SA Standards Board Working Group Chair Award (see 5.2.2.2).]~~

~~The award, which is issued automatically upon publication of the jointly developed standard, consists of a framed certificate containing the contributor's name, the designation of the standard, and the title of the standard.~~