IEEE Standards Association (IEEE-SA) Working Group Chair
Quick Reference Guide

Standards Development Overview

An IEEE standards development project is started when there is a need for an idea or concept to be standardized. The idea or concept can be broad or specific. Each project requires a Sponsor, which is responsible for the project and provides technical oversight.

A Project Authorization Request (PAR) is submitted to start the standards development process. The PAR is the official document that authorizes work on your standards project in the IEEE. PARs are approved by the IEEE-SA Standards Board (SASB) based on a review and recommendation from NesCom, one of several Board committees.

The IEEE standards development process is open to all materially interested parties. IEEE standards are developed by Working Groups (WG) that follow one of two methods: individual or entity.

Balloting begins when the Sponsor decides the draft of the full standard is stable. The Sponsor forms a balloting group containing persons interested in the standard. Recirculation ballots may be needed to resolve comments received.

Upon completion of the balloting process, the draft can then be sent to RevCom for consideration. RevCom ensures that proper balloting procedures have been followed and makes recommendations to the SASB as to whether or not the document should be approved as an IEEE standard.

This Toolkit is not intended to be a complete guide to the procedural development of a standard. For that, please consult the **IEEE-SA Standards Board Bylaws** and the **IEEE-SA Standards Board Operations Manual**. This is an informational kit and serves as guidance only, as the IEEE-SA has a hierarchy of governance documents which are mentioned within the IEEE-SA policies and procedures.

Basic Principles of IEEE Standards Development

IEEE standards development is guided by a set of principles. These imperatives maximize fairness and good practices during the standards development lifecycle and help to validate approved standards.

- **Openness** - Ensures all interested parties can participate actively

- **Due Process** - Having highly visible procedures for standards creation and following them

- **Consensus** - Holds that a clearly defined majority of those in a balloting group vote to approve a draft standard

- **Balance** - Ensures that a balloting group includes appropriate categories of interested parties and avoid an overwhelming influence by any one party

- **Right of Appeal** - Allows anyone to appeal a standards development decision

standards.ieee.org

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The Standards Development Lifecycle

IEEE standards are developed using a time-tested, effective and trusted process that is easily explained in a six-stage lifecycle diagram.

6. **Maintaining a Standard**

1. **Initiating a Project**

5. **Gaining Final Approval**

2. **Mobilizing a Working Group**

4. **Balloting a Standard**

3. **Drafting a Standard**

Sample Project Workflow ⚙

Stage 1: Initiating the Project
- PAR Submission
- PAR Reviewed by NesCom and SASB Approval

Stage 2: Mobilizing the Working Group
- eTools
- Training Resources

Stage 3: Drafting the Standard
- Tips for an effective meeting

Stage 4: Balloting the Standard
- MEC (Mandatory Editorial Coordination)
- Invitation to Ballot
- Sponsor Ballot/Public Review
- Comment Resolution #1
- Recirculation #1 (Note: multiple recircs may be needed)

Stage 5: Gaining Final Approval
- Submission to RevCom and SASB Approval
- Publication

Stage 6: Maintaining the Standard
- Ten-year maintenance

STAGE 1: INITIATING THE PROJECT

Project Authorization Request (PAR):

The first thing you need to determine is what type of document you intend to produce. It can be one of the three types of IEEE Standards documents:

- **Standards:** Documents with mandatory requirements.

- **Recommended practices:** Documents in which procedures and positions preferred by the IEEE are presented.

- **Guides:** Documents in which alternative approaches to good practices are suggested but no clear-cut recommendations are made.

These levels of requirement are often shown by the use of particular "standards verbs," i.e., "shall" for requirements, "should" for recommendations, and "may" for guidelines. Figuring out what level of requirement you want to stress helps to determine what kind of document you should be creating.

Tips for Submitting a PAR 📍

- Review the **PAR submittal deadlines** for the NesCom agenda.

- A **PowerPoint presentation** is available to assist you with the PAR submittal process.

- NesCom has a number of **conventions** that it follows when it examines PARs. You should look over these conventions to see if there are any issues they address that might directly affect your PAR.

- FAQs on the PAR form can be found **here.**

- Review PAR documentation **here.**

STAGE 2: MOBILIZING THE WORKING GROUP

With PAR approval, a Working Group can officially begin its work to develop or write the draft standard. Working Groups are open to anyone who wishes to participate. Although IEEE or IEEE-SA membership is not required to participate in individual-based projects, IEEE-SA corporate membership is required for entity-based projects.

eTools

IEEE-SA offers a variety of tools to assist in the standards development process. For assistance with requesting access to any of the tools, please contact your IEEE-SA Program Manager.

- **myProject Suite:**
    - **myProject:** The Standards Association's tool used by individuals who want to participate in the standards process. It allows you to keep up to date on projects and topics that you are interested in, participate in sponsor balloting and manage the project approval process. Use your IEEE Web Account username and password.
    - **IMAT:** A meeting attendance tracking tool for WGs. If meeting attendance is a requirement of voting rights within the WG, this tool may be useful. WG Chairs are able to set up their meetings, manage participation, and determine voting rights.
    - **Mentor:** A web-based tool for Working Groups to have a secured area to manage and share documents, with private and public view options. Login using your IEEE Web Account username.

- **Standards Dictionary:** A database of terms as defined in IEEE standards. Working Groups are strongly encouraged to use definitions that already exist instead of creating new definitions or use existing definitions and slightly modify. The dictionary is available via IEEE Xplore at no cost. Visit ieeexplore.ieee.org/xpls/dictionary.jsp

- **iMeet Central (formally Central Desktop):** Web-based collaboration platform offered to standards development groups. iMeet Central provides many tools including secure file sharing, email discussions, forums, wikis, project management and more.

- **IEEE Xplore:** IEEE's platform for the IEEE store and subscriptions containing IEEE standards, journals, transactions, letters, magazines and conference proceedings, IET journals and conference proceedings, and IEEE educational courses.

- **Join.Me:** Web/Teleconference service offered at no cost to Sponsors and their WGs. Contact your PM for creation.

- **Listserv:** Email list management tool for IEEE groups.

- **NetSuite:** A tool used for reporting Sponsor/Working Group financial activity.

Tips for Working Group Meetings

- Every WG must have WG Policies & Procedures (P&Ps). Check with the Sponsoring Committee to see if they have common WG P&P for all WGs. The WG P&Ps explain the role of the WG officers, actions requiring a vote, and additional information. Baseline P&Ps are available on the **AudCom site.**

- Send out agendas in accordance with the WG P&Ps.

- Remember to **disclose affiliations.**

- Establish quorum during meetings; see WG P&Ps.

- Make a Call for Patents at the start of each WG meeting; see information on the **Patent Policy.**

- Do not discuss commercial activities or terms.

- Follow guidance on meetings minutes in the WG P&Ps and **Standards and the Law.**

- Distribute meeting minutes on time.

- Maintain an updated roster.

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STAGE 3: DRAFTING THE STANDARD

The first milestone for many Working Groups is finishing their first complete draft. One of the ways to start is to break the document down into segments or sections. Next, an outline can be created. Often, this outline will also serve as the structure for the standard, and can help create writing assignments.

Using material from other copyrighted documents also needs to be addressed. Please see the copyright tips below to assist you.

IEEE-SA Editorial Overview

To help Working Groups in the editing and preparation of their documents, the IEEE-SA has a professional staff of editors who offer guidance to Working Groups on all editorial matters ranging from formatting to basic copyright issues.

The initial review — **Mandatory Editorial Coordination (MEC)** — is required prior to the start of the initial Sponsor Ballot in order to help ensure conformance with the IEEE-SA Standards Style Manual and editorial requirements.

The IEEE-SA Standards Style Manual establishes preferred style for the preparation of proposed IEEE standards (drafts).

Some of the key items reviewed and checked by the editor prior to the IEEE-SA Standards Board review are:

- Draft number and date identification on every page

- Proper copyright statements

- Correct structuring of clauses

- References current and handled properly

- Appropriate standards verbs (shall, should, or may) used predominantly and correctly through out the draft

- Permissions obtained from copyright holders for reprinted material, including material from IEEE publications

- Trademark names

- Units used consistently, with metric units appearing first

- Inclusion of an Introduction

After a standards project is approved by the IEEE-SA Standards Board, the IEEE-SA staff editor prepares the final text for publication.

Copyright Tips

- Be familiar with the **IEEE-SA Copyright policies**

- The request for permission should be made as soon as the WG is aware that it will incorporate contributions from previously published sources (including from another IEEE standard).

- Contact **stds-ipr@ieee.org** to obtain permission to reprint information from an IEEE standard.

- All copyright permissions must be obtained prior to including the relevant text in the draft, prior to Sponsor Ballot invitation. If new contributions from previously published sources are included after Sponsor ballot initiation, the permissions shall be obtained prior to the recirculation.

- For questions or assistance in determining whether copyright permission is needed, please **contact the stds-ipr@ieee.org.**

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STAGE 4: BALLOTING THE STANDARD

Sponsor Ballot

When the WG has met the requirements to move the draft to Sponsor Ballot per their P&Ps, the WG Chair needs to:

1. Initiate the invitation request in myProject. **For instructions, refer to 6.2 of the myProject User Guide.**
2. Submit the draft for a MEC review in myProject. **For instructions, refer to 6.2 of the myProject User Guide.**
3. Note that the MEC and invitation can run concurrently and take approximately 30 days each.
4. Incorporate any necessary changes from the MEC and initiate the request for Sponsor Ballot in myProject. **For instructions, refer to 6.2 of the myProject User Guide.**

Comments Received

All comments shall receive consideration and be responded to either by completing the disposition status and detail columns on the comment spreadsheet located in the myProject system or by responding individually in the myProject system.

Public Review

IEEE-SA Public Review is a part of IEEE's continuing support of open standards development.

The Public Review starts simultaneously with the initial Sponsor Ballot, and the duration is 60 days. This allows interested parties to purchase a copy of the draft, submit comments for consideration, and review responses to their comments from the IEEE Standards Working Group.

The Working Group shall consider all of the Public Review comments.

Sponsor Ballot Tips

- No one ballot classification can be more than 1/3 of the ballot group.

- The initial Sponsor Ballot will be a minimum of 30 days.

- You will need to achieve a 75% response rate. If not, you will need to reopen/extend the ballot or begin the ballot process again.

- The approval rate of 75% also will need to be achieved, but not required during the Initial Sponsor Ballot. Until 75% approval rate is met, the entire document will remain open for comment.

- Any changes made to the draft will require a recirculation ballot.

For instruction on Sponsor Balloting, refer to 6.2 of the myProject User Guide

Sponsor Ballot FAQs

1. When is a project ready for a Sponsor ballot? How do I start this process?
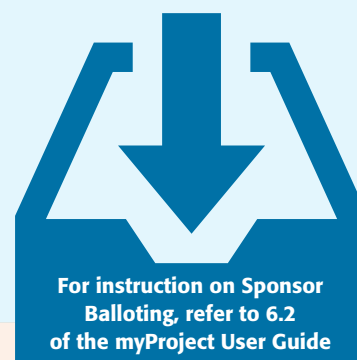
A project is ready for a Sponsor ballot when it has completed its working group (or technical committee) development. After the Sponsor ballot process is complete, the Sponsor will move the process toward final review and approval.

When the Sponsor is ready to form the ballot group, the Sponsor begins the invitation process by clicking "Submit Invitation Request" within myBallot. A designated IEEE Staff Liaison External Link will then review and approve the invitation request. Once approved, the invitation period opens and ballot group formation begins.

2. What documents do I need prepare to start the ballot in myBallot?

For an initial ballot, you will need the draft in pdf format.

For the recirculation ballot, you will need the revised draft in pdf format, including current date and updated draft number, with changes highlighted (preferable) or a summary sheet showing changes made to the last draft.

Completed comment resolution in myBallot.

Recirculation letter (required) outlining the major changes to the document.

STAGE 4: BALLOTING THE STANDARD (CONTINUED)

Recirculation(s)

Once the ballot review group has examined and dealt with all comments, the Working Group must recirculate the ballot if there is a need for that. The major reasons for recirculation are that new technical changes have been introduced in the document or that there are unresolved negative comments. The full balloting group has the right to examine these along with any revisions to the document and determine whether they want to maintain their vote.

Once the draft standard has achieved 75% approval, comments in subsequent ballots shall be:

- based only on the changed portions of the balloted proposed standard
- portions of the balloted proposed standard affected by the changes
- portions of the balloted proposed standard that are the subject of unresolved comments associated with Do Not Approve votes

The recirculation will need to run a minimum of 10 days. Balloters have an opportunity to review comments, changes, and change their vote.

To Initiate a Recirculation, refer to 6.18.4 of the myProject User Guide.

Recirculation/Comment Resolution FAQs

When is the recirculation of a ballot necessary?
A recirculation ballot is necessary when there are unresolved negative comments on the original ballot, or any technical or substantive changes have been made to the draft.

Who does a recirculation of a ballot get distributed to?
When a recirculation ballot is opened, the entire balloting group has the opportunity to review the comments, responses, and the changed portions of the document.

What constitutes a new negative after recirculation?
It is up to the working group ballot Comment Resolution Group to decide whether or not a negative comment is new or an iteration of a previous comment. Remember, during a recirculation ballot, balloters can only vote on the changed portion of the document and on any unresolved negative comments.

When must the Sponsor initiate an additional recirculation?
If new negatives with comments are received on changes to the draft being recirculated, or if technical changes were made to the draft as a result of the previous recirculation, the Sponsor must initiate an additional recirculation.

Comment Resolution Tips

- All comments shall be considered, and evidence of consideration provided in myProject.

- Comments not based on the proposed standard may be deemed out of scope.

- The WG may form a CRG (Comment Resolution Group), which is a group of individuals to work between meetings on resolving the comments and then bringing them back to the WG. Make sure to notate in the minutes the charter of the CRC.

- Track changes on your draft as you implement changes.

- Don't make, or promise to make, any post-ballot changes to the draft.

- Do recirculate any changes that you want to guarantee will be made.

- Don't cross reference the disposition detail of other comments.

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STAGE 5: GAINING FINAL APPROVAL

Submitting to RevCom

The next step is to submit the draft to RevCom, the Standards Review Committee. RevCom ensures that procedural requirements of the IEEE-SA, as outlined in the IEEE-SA Standards Board Bylaws and Operations Manual, have been met. The Working Group Chair submits the draft to RevCom through myProject and will then receive an email acknowledgement of receipt from the IEEE-SA RevCom Administrator.

Key Items for RevCom Submittal

- Address all outstanding negative ballots with comment(s) before submitting to RevCom.
- If there is an outstanding negative from the last round of balloting, do email the balloter a reason for rejecting the comment. Inform the balloter that the draft is being submitted to RevCom. Do monitor email for RevCom comments prior to the RevCom meeting.
- Do not include a confidentiality statement within any communication to RevCom or the IEEE-SA Standards Board.
- Electronic source file(s) of the last balloted draft should be uploaded.

To Submit to RevCom, refer to 7.1 of the myProject User Guide.

RevCom URLs ★

- **RevCom Home Page**
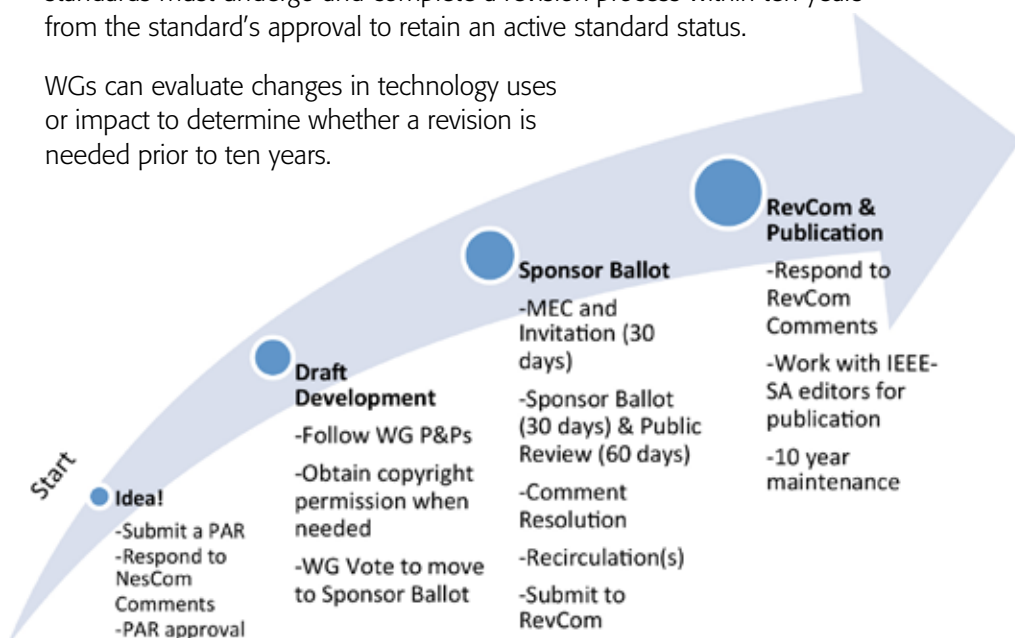- **RevCom Conventions**

Acronyms 💬

- **NesCom:** New Standards Committee
- **MEC:** Mandatory Editorial Coordination
- **PAR:** Project Authorization Request
- **PM:** Program Manager
- **PR:** Public Review
- **RAC:** Registration Authority Committee
- **RevCom:** Standards Review Committee
- **IEEE-SASB:** IEEE Standards Association Standards Board
- **WG:** Working Group

STAGE 6: MAINTAINING THE STANDARD

All published IEEE standards have a ten-year maintenance cycle, where IEEE standards must undergo and complete a revision process within ten years from the standard's approval to retain an active standard status.

WGs can evaluate changes in technology uses or impact to determine whether a revision is needed prior to ten years.

Start

Idea!
-Submit a PAR
-Respond to NesCom Comments
-PAR approval

Draft Development
-Follow WG P&Ps
-Obtain copyright permission when needed
-WG Vote to move to Sponsor Ballot

Sponsor Ballot
-MEC and Invitation (30 days)
-Sponsor Ballot (30 days) & Public Review (60 days)
-Comment Resolution
-Recirculation(s)
-Submit to RevCom

RevCom & Publication
-Respond to RevCom Comments
-Work with IEEE-SA editors for publication
-10 year maintenance

Additional Resources 👁

- **IEEE-SA Website**
- **Editorial/Training Videos**
- **myProject User Guide**
- **FAQs**
- **Program Manager list**

Additional Programs 🌐

- **Alliance Management Services**
- **IEEE Conformity Assessment Program (ICAP)**
- **Industry Connections**

standards.ieee.org

Consensus

WE BUILD IT.

Connect with us on:

Facebook: facebook.com/ieeesa

Twitter: @ieeesa

LinkedIn: linkedin.com/company/ieee-sa-ieee-standards-association

IEEE-SA Standards Insight blog: standardsinsight.com

YouTube: youtube.com/IEEESA

Google+: google.com/+IEEESA

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