

IEC and IEEE processes for drafting a dual logo IEC/IEEE International Standard

- Handling of process differences
- Mapping to the IEC/IEEE 60802 joint project

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INTRODUCTION

This document details the IEC and IEEE processes and the handling of the different process elements when drafting an IEC/IEEE dual logo International Standard (IS), as well as the mapping into the IEC/IEEE 60802 joint project. It does not explicitly split the generic part of the processes and the specifics of the IEC/IEEE 60802 joint project, but provides enough clarity to identify the generic elements and the specific elements.

1 Guide to IEC/IEEE Cooperation

1.1 General

The Guide to IEC/IEEE Cooperation [1]¹ provides guidance on the adoption, revision, and joint development of market-relevant standards under the IEC/IEEE Dual Logo Agreement. This provides the basis for the IEC/IEEE 60802 joint project. A flow diagram for the IEC/IEEE Joint Development procedure is given in the Guide to IEC/IEEE Cooperation, Annex C [1]. The differences in the IEEE and IEC high level structures cause some differences in the process on both sides. Voting shall be aligned by a special work plan of the joint project to be applied in both groups, see Clause 2.

The flow diagram in the Guide to IEC/IEEE cooperation, Annex C [1], is mapped in Clause 2 of this document, with the slight adjustments needed to include the IEEE processes and the specifics of IEEE 802.

1.2 Joint Working Group and Joint Project

The Guide to IEC/IEEE Cooperation [1] allows two different organizational approaches.

a) Joint working group

An IEC technical committee (TC) or subcommittee (SC) creates a joint working group (JWG) with an assigned number suitable for this TC or SC and nominates a Convenor, who is typically proposed by the national committee (NC) that proposed the new project. The IEC national committees (NCs) are invited to nominate experts at any time in addition to those nominated by a new work item (NP) voting process or other processes. The related IEEE working group (WG) is invited to nominate experts at any time. This expert list will be processed by IEC Central Office (CO) to add the experts to the JWG member-list and to provide these experts access rights to the Collaboration Platform (private JWG repository area). IEEE may nominate a co-convenor. [Figure 14 shows the organizational structure of a JWG.](#)

[Figure 14 shows the JWG structure in IEC and IEEE organization.](#)

¹ Numbers in brackets refer to an entry in the Bibliography.

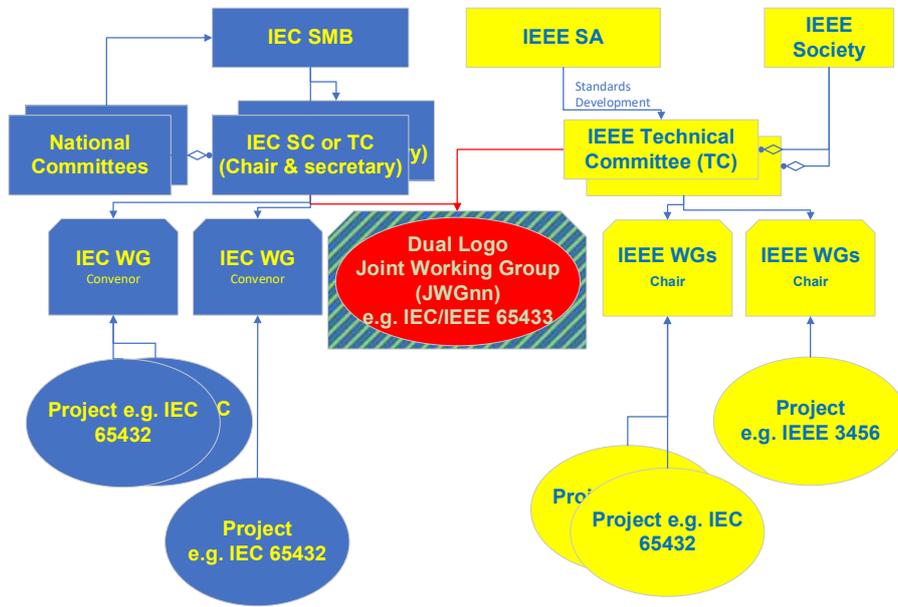


Figure 1 – JWG structure

The JWG is chartered to have the dual logo project. The process of the JWG is somehow decoupled from the IEEE task group and / or working group ballot process. There is a need to define a process how to mirror the CDs of the JWG in IEEE. This organization form is not used by IEC/IEEE 60802.

b) Joint project

A joint project does not touch the organizational form of IEC nor of IEEE. Existing WGs of IEC and of IEEE will host jointly the joint project. Both may nominate a Convenor (IEC term) and a chair (IEEE term). If both organizations (IEC and IEEE) nominated a convenor/chair, then both persons will mutually lead the joint project. Typically, the person nominated by IEC will feed the IEC data repository areas and processes and the person nominated by IEEE will do the same for the IEEE workflow. If only one convenor/chair is nominated, then the convenor/chair shall feed the processes of both IEC and IEEE and shall share the internal documents to both data repository areas. Figure 22 shows the organizational structure of a joint project in IEC and IEEE.

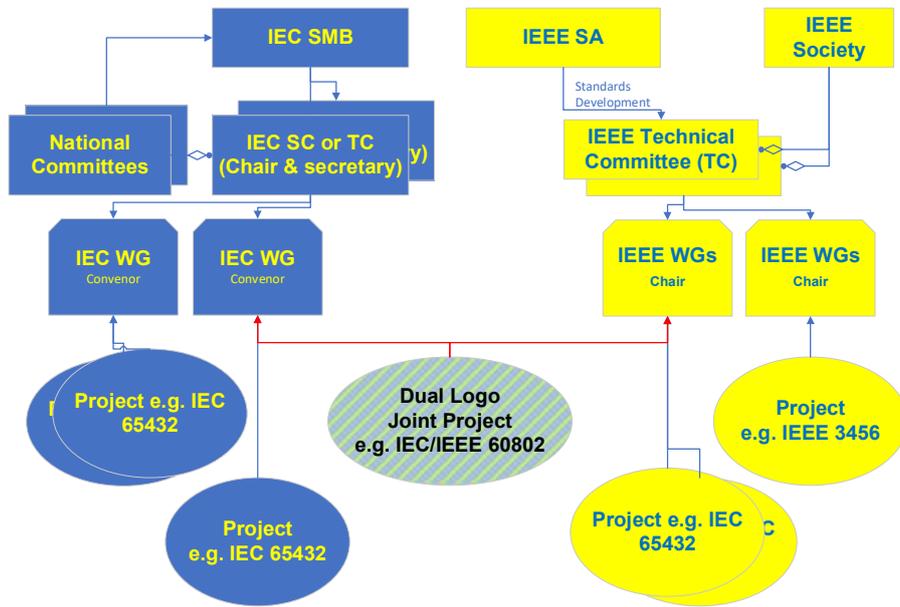


Figure 2 – Joint Project structure

The Joint Project is embedded in the existing structure of the WGs. IEEE experts may also be nominated by a NC to be in the loop of NC ballots. IEC nominated experts may also apply for becoming a voting member of an IEEE WG. The right to vote in an IEEE SA ballot depends on an IEEE (personal) membership.

In both cases, the consensus processes of IEC and IEEE shall be applied.

1.3 IEC/IEEE 60802

IEC/IEEE 60802 is established as a joint IEC/IEEE project according to 1.2.b).

This document is using the terms to describe roles in the process as given in Table 22.

Table 1 – Terms used for roles

Term	IEC	IEEE	Joint project	Example
<u>IEC secretariat</u>	Staff in the IEC organization. <u>NOTE former called IEC CO.</u>	=	=	Technical Officer is Ms. Marianna Kramarikova; Editor Ms. Maria-Elena Volet
<u>IEC Secretary</u>	Person that has the <u>position of the Secretary of an IEC TC or IEC SC</u>	=	=	IEC SC65C secretary is Valérie Demassieux.
<u>IEC TC/SC chair</u>	Person that has the <u>position of the chair of an IEC TC or IEC SC.</u>	=	=	IEC SC65C chair is Mr. Ian Verhappen
<u>WG chair</u>	=	<u>WG Chair of IEEE 802</u>	=	<u>IEEE 802.1 chair is Glenn Parsons</u>
<u>TG chair</u>	=	<u>Task Group Chair of IEEE 802.1</u>	=	<u>TSN TG chair is János Farkas</u>
<u>Convenor</u>	=	=	<u>Convenor of the IEC/IEEE 60802 joint project.</u> <u>NOTE This role is</u>	<u>60802 joint project is Ludwig Winkel</u>

<u>Term</u>	<u>IEC</u>	<u>IEEE</u>	<u>Joint project</u>	<u>Example</u>
			<u>called editor or chair in the IEEE 802.1.</u>	
<u>IEEE MEC group</u>	<u>=</u>	<u>Mandatory Editorial Coordination</u>	<u>=</u>	<u>Catherine Berger</u>
<u>Editor</u>	<u>Responsible to provide the comment disposition in the IEC format.</u>	<u>Responsible for the comment disposition to be uploaded to the IEEE server.</u>	<u>Editor of the joint project</u>	<u>Jordan Woods</u>
<u>Provided names applicable when the document was written; could be changed over time.</u>				

2 Process and Stages of drafting an International Standard

2.1 General

2.1.1 Generic IEC process

The process to publish an IEC International Standard (IS) is described in the ISO/IEC Directives, Part 1:2023⁴ + IEC Supplement:2023⁴, 2.1.3 [2]. A graphical overview of the process is shown in Figure 3
[3https://www.iec.ch/standardsdev/resources/processes/stage_codes.htm](https://www.iec.ch/standardsdev/resources/processes/stage_codes.htm).

NOTE—Figure 3 is copied from the IEC server, see
<https://www.iec.ch/standardsdev/resources/processes/workflows.htm>.
 The stage codes are explained in https://www.iec.ch/standardsdev/resources/processes/stage_codes.htm.

Figure 3 — IEC workflow for an IS

2.1.2 Generic IEEE process

The IEEE process to draft an IEEE standard is described in <https://standards.ieee.org/develop/https://standards.ieee.org/develop/develop-standards/process.html>.
 For easy comparison against the IEC process, a graphical illustration of the IEEE workflow is shown in Figure 2.

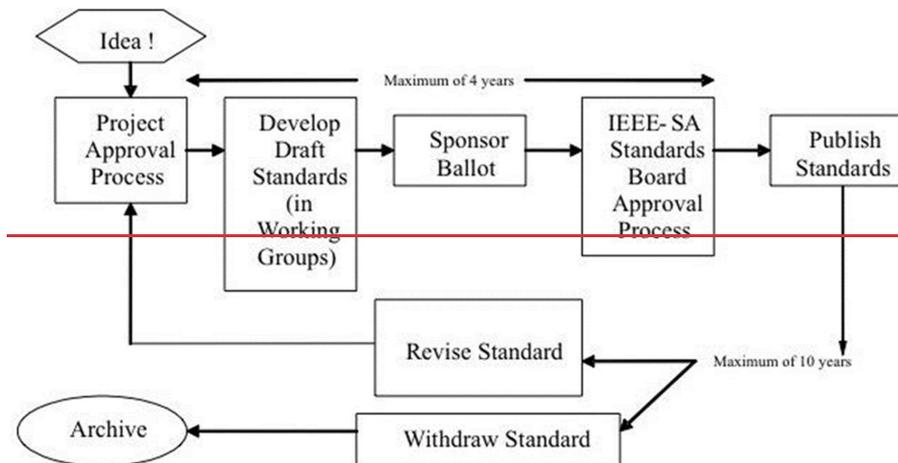


Figure 4— Overview on how are IEEE standards made

NOTE— Figure 5 is copied from the IEEE server, see <https://standards.ieee.org/develop/develop-standards/process.html>.

2.1.3 Mapping of the IEC and IEEE processes

Both the IEC and IEEE rules and processes ~~have to shall~~ be applied during the drafting process ~~the~~:

- IEEE Codes of Ethics and Conduct and the IEC Code of conduct for technical work,
- patent policies of both organizations apply, and the disclosure shall be done to both organizations,
- IEEE SA and IEC Copyright and Participation Policies
- ballots shall be distributed to members of both organizations.

Clause 2 provides details how the process shall be performed and Clause 3 provides some differences and possible solutions between IEEE 802 and IEC TC65 to comply with rules and processes of both organizations.

The IEC process allows some flexibility to map the IEEE process so that both processes can be aligned. The only flexibility for the IEEE process is that NC comments on IEC CDs and CDVs, which are available after the IEEE closing date because of the longer ballot times in IEC, are accepted and integrated later to the IEEE TG and WG ballot.

2.1.4 Liaison process

There are differences between IEC and IEEE Liaison processes. The main differences are described in 3.12.

The IEC Liaison partners have unrestricted access to the section of the IEC Collaboration Platform dedicated to the project, where they can access draft documents of the IEC WG.

The IEEE Liaison partners have to ask explicitly for the draft 60802 document.

The 60802 Joint Project experts do not automatically have access to IEEE 802.1 draft documents. It is only by participating in the IEEE 802.1 plenary meeting that the 60802 experts get credentials to access the private restricted IEEE 802.1 server where the 60802 drafts, documents in the private folder and the other IEEE 802.1 drafts are located.

If other organizations are asking for the draft IEC/IEEE 60802 document, then it should be announced to the joint IEC/IEEE partner organization.

The establishment of a Liaison partnership should be mutual announced to the 60802 joint project partner organization. In IEC liaisons are public information, see [IEC SC65C/WG18 dashboard](#).

2.2 Mapping the generic processes and terms to a specific project

2.2.1 General

In 2.1, 2.4, 2.5 and 2.6, the processes and used terms are generically described, so the document can be used as a basis for other projects with minimal adaptation to the specifics of a specific project.

2.2.2 Mapping to the IEC/IEEE 60802 joint project

Annex B provides a translation of the generic processes and terms to the specifics for the IEC/IEEE 60802 joint project. These general terms are capitalized in this document.

According to the two possible forms of an IEC/IEEE cooperation, the IEC/IEEE 60802 is a joint project (see 1.2, b)).

The IEC/IEEE 60802 joint project uses the following IEC stages out of the possible stages in 2.1.1:

- New work item proposal a NP, see 2.3.1 and 2.3.2
- Committee stage Committee draft(s) CD, see 2.4.1 and 2.4.2
- Enquiry stage Enquiry draft CDV, see 2.4.3
- Approval stage final draft International Standard FDIS, see 2.4.4
- Publication stage International Standard PPUB, see 2.5

The IEC/IEEE 60802 joint project uses the following IEEE stages out of the possible stages in 2.1.2:

- Project approval process (e.g. PAR [9], CSD [10], NesCom), see 2.3.3
- Develop the draft standard (e.g. TG-ballot, WG-ballot), see 2.4.1 and 2.4.2
- IEEE-SA ballot, see 2.4.3
- IEEE-SA Standards Board Approval (e.g. RevCom), see 2.4.4
- Published Standard, see 2.5

2.3 History of the Starting process of the IEC/IEEE 60802 joint project

2.3.1 IEC and IEEE processes

~~Figure 3~~ **Figure-3** shows the principle on both sites in one Figure using for example the terms of IEEE 802 and IEC. Left hand side is showing the IEEE 802.3 process and the right-hand side shows the IEC process. The joint project under discussion was already approved by IEC before the IEEE 802.1 management was asking to establish a joint project, so that the IEC NP stage was earlier than the IEEE 802.1 effort on a PAR and CSD.

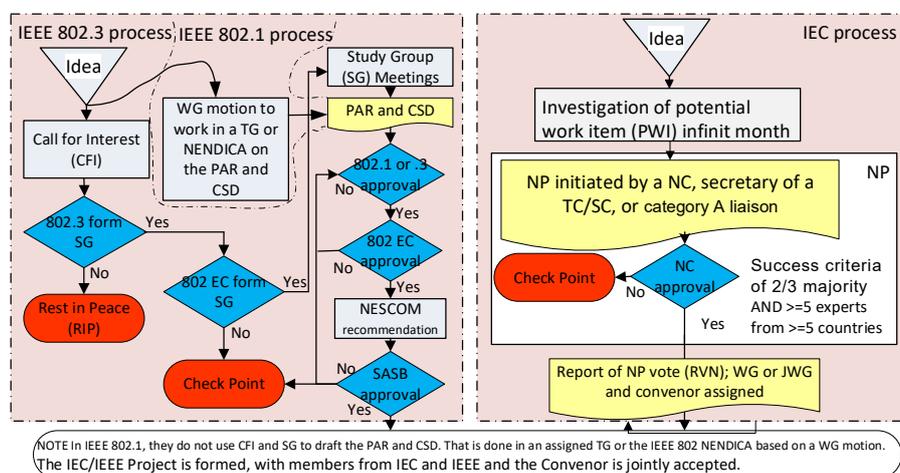


Figure 3 – Flow diagram for beginning a joint project

2.3.2 Actions of IEC

According to the Guide to IEC/IEEE cooperation, a project is triggered via an NP or an RR. IEC SC65C had already approved in July 2017 a project for the topic under consideration (see 65C/875/NP [4] and the resulting 65C/896/RVN [5]).

IEC SC65C therefore circulated in December 2017 a Questionnaire (Q) (see 65C/910/Q [6] and the resulting 65C/917/RQ [7]) to get approval of the conversion of the existing IEC project into a joint IEC/IEEE activity to create a Dual logo standard with IEEE 802. As a result, a dual logo project was established with a revised number and title to highlight the link with IEEE 802: IEC/IEEE 60802, "Time-sensitive networking profile for industrial automation".

As it is a joint project, there was no need for a JWG (see 1.2, b)), so IEC SC65C assigned it to a new WG18 dedicated to all TSN related activities.

This project is under IEC lead, which means that the ISO/IEC Directives Part 2 [3] applies (and not the IEEE style guide) for drafting the International Standard (IS), with the exceptions given in *Standard texts for IEC/IEEE publications* (specific Foreword, header and footer are required, which are different from other IEC publications).

2.3.3 Actions of IEEE 802

2.3.3.1 IEC/IEEE 60802 project start in IEEE 802.1

IEEE 802.1 launched the PAR [9] and CSD [10] at the November 2017 plenary (reviewed by IEEE 802), authorizing creation in January 2018 with IEEE 802 approval in March 2018. The IEEE SASB approved the project in May 2018 and as a result, the joint project was approved both by IEC and IEEE in May 2018.

Within IEEE 802, this joint project is organized in the working group IEEE 802.1 and below the task group (TG) for Time Sensitive Networking (TSN). IEEE 802.3 voting members are ex officio voters in matters of the IEC/IEEE 60802 Joint Project dealing with TSN profile for Industrial Automation.

IEEE 802.1 invited experts from the IEC side of the project to a first joint meeting with IEEE 802 in the ITU offices in Geneva.

2.3.3.2 Reserve meeting time during IEEE 802 sessions

Sufficient time is allocated to the IEC/IEEE 60802 joint project during the IEEE 802.1 plenary and interim sessions, as well as joint sessions with other TG (notably TSN). The IEEE 802.1

working group adds time for reports to the plenary meetings. Most of the work is done in joint session with the IEEE 802.1 TSN TG. [IEEE 802 plenary sessions are mandatory for their WGs.](#)

NOTE Not all IEEE 802.1 interim [sessions](#) are together with IEEE 802.3.

2.3.3.3 Meeting fees

It was proposed with IEEE 802 management that a meeting fee exemption would be requested by the 802.1 WG chair for IEC delegates to attend the IEEE 802 plenary at no cost. It was expected that there would be less than 10 IEC only delegates (note that current IEEE 802 participants may not request an IEC delegate exemption).

For interim meetings, this would require negotiation with each host so that the IEC experts do not have the need to pay for the basic meeting facilities, see 3.14. As an example, the host could collect money for additional services like refreshments, lunch, or a social event, if IEC people wish to jointly have these services. It could be considered to have two different badges for the IEC experts besides the badges for IEEE 802 participants, to easily identify those who just want to attend the JWG sessions, and those wishing the additional services.

NOTE After more than one year of experiences with the joint project sessions, nobody from IEC complained yet about having to pay a meeting fee as is usual for IEEE 802 participants, because they get an added value. No exemption needed to be considered, but because of IEC rules the possibility for the fee waiver remains.

2.4 Drafting the IS

2.4.1 IEC CD circulation and IEEE TG-ballot

2.4.1.1 General

[How an IEEE WG is internally organized can vary. Some IEEE WG have Task Forces, some Task Groups \(TG\) to handle different projects in one WG, and some can have several projects in the WG without a suborganization.](#)

[IEEE 802.1 uses TG to handle one or more projects.](#)

The IEEE 802.1 process for a TG-ballot is to circulate and to vote a Draft for a period of 14 days or one month. The best adjustment on the IEC side is to circulate CDs for the shortest period of 8 weeks out of the possible period of 8, 12 or 16 weeks. If ballots need to be triggered at the same time on both sides, one needs to take into account that IEC Central Office only starts circulation of documents to NCs on week-ends.

For the IEEE TG-ballot all IEEE participants in the activities of an IEEE WG are entitled to submit a ballot, regardless of their voting status in the IEEE WG. For the IEC CD commenting, all NCs of the IEC TC/SC (NCs are divided by Participant and Observer members) can provide comments. [Figure 4](#) shows the IEC CD stage and the IEEE TG and IEEE WG ballot process using the terms of IEEE 802.1 and IEC SC65C.

2.4.1.2 Initiate an IEC CD and the IEEE TG ballot

To initiate an IEC CD and the IEEE TG ballot, the following steps shall be followed for the IEC/IEEE Cooperation Project:

- The Editor of the IEC/IEEE Cooperation Project gets authorization by the IEEE WG to prepare a CD/TG-ballot document (in IEEE by a motion of the IEEE WG; in IEC by default with the approval of the project).
- When the drafting is finished, the Editor shall send the draft to the Convenor.
- The Convenor should check the content formally and forward it to the Secretary [of the IEC TC/SC](#).
- The Secretary checks the content and may make editorial and format improvements; the resulting document is then submitted to the IEC ~~CO~~[secretariat](#).
- IEC ~~secretariat CO~~ uses the content to prepare the PDF file that will be circulated to the NCs for CD commenting. This PDF will also be sent back to the Secretary [of the IEC TC/SC](#) and then to the Convenor.

- The Convenor will initiate the IEEE TG ballot by sending the PDF generated by IEC to the TG chair and forward the WORD document to the Editor as the basis for the next revision.

This process ensures that the PDFs for the IEC CD and the IEEE TG ballot are showing the same content and line numbers.

The duration of the IEC and IEEE circulations are different:

- 4 weeks for IEEE WG and the re-circulations (even if the process allows setting it to 14 days);
- 8 weeks for IEC CD plus time of hand-over to the Secretary and the IEC [secretariatCO](#) (IEC [secretariatCO](#) only starts circulation of documents during a weekend).

IEC collects comments from the NCs and does not allow voting on the document at this stage. The comment types are:

- General
- Technical
- Editorial.

2.4.1.3 IEEE 802.1 Task Group ballot

The primary purpose of IEEE TG-ballots is to solicit input that will assist the Editor in developing the draft to the point where it is ready for the IEEE WG-ballot stage. A vote of "Approve" in this ballot is therefore appropriate if the document is ready for IEEE WG-ballot; i.e., it is substantially complete, although there may still be technical details and issues to resolve at IEEE WG-ballot. Otherwise, the vote should be "Disapprove", along with comments stating what changes need to be made.

The comment types are:

- General or "general and must be satisfied";
- Technical or "technical and must be satisfied";
- Editorial or "editorial and must be satisfied".

When merging the IEC and IEEE comments, the IEC comments are assigned to the corresponding three categories without "must be satisfied". This means, that the IEC comments are also seriously treated and rejecting a comment does not hinder the progress of the draft going to the next stage. In IEEE 802, it needs an approval process to go to the next stage with rejected "must be satisfied" [comment resolutions](#).

2.4.1.4 Number of CDs

In IEC, it is unusual to circulate more than 2 CDs but possible. Also, the IEC CD circulation duration is at least 8 weeks versus 14 days for an IEEE TG recirculation ballot. To accelerate the process, the Convenor asked IEC SC65C for an exemption to skip some CDs. That was done in 2020-04-01 during the IEC SC65C plenary and approved by the NCs, see 65C/1011/DL [8]. Below [a copy of](#) the relevant resolution.

Resolution # 2020-05 (agenda item #6.7)

SC65C authorizes PT60802 to skip some of the IEEE 802 TG ballots for parallel CD circulation in IEC, and instead concatenate the results of intermediate TG ballots into a limited number of CD review cycles.

That means that one or more IEEE TG ballots or the re-circulations of an IEEE WG-ballot can be performed without circulating a new CD in parallel. It is recommended to use this exemption for the WG recirculation ballots before starting the IEEE-SA ballot process.

2.4.1.5 Compiling comments and comment resolution processes

The result of the IEEE TG-ballot will be available earlier than the IEC CD comments. The IEC NCs are invited to send their comments through the nominated experts to the IEEE ballot system before the IEEE TG ballot ends, in order to feed the IEEE WG data base as early as

possible. If there are additional IEC comments, they will then be incorporated in the IEEE WG data base as the basis for the comment resolution work of the IEC/IEEE Cooperation Project. The final comments in the IEEE WG data base shall be converted by the Editor into the WORD template of the IEC comment form. The Convenor will forward this to the Secretary of the IEC TC/SC as the basis for the IEC CC document which has to be circulated in IEC no later than 4 weeks after the closing date of the IEC CD. The compiled comments of IEC and IEEE shall be discussed in the IEC/IEEE Cooperation Project meeting(s) and shall result in a joint comment disposition document. If the comment disposition is not finalized in the time frame of 4 weeks, a first CC document shall be circulated within 4 weeks to the IEC NCs without the comment disposition (equivalent to the IEEE WG process to put the comment data base document to the private server as preliminary comment disposition), and then a revised CC shall be circulated when the comment disposition process is finalized (equivalent to the IEEE WG process to put the comment data base document to the private server as final comment disposition). These documents record the resolutions of ballot comments agreed upon during the IEC/IEEE Cooperation Project.

2.4.1.6 Overview of IEC CD and IEEE TG-ballot processes

IEC and IEEE use different numbering schemes, reflected in [Figure 4](#) ~~Figure 4~~.

The numbering scheme in IEC is: number 1 to n for the CD, e.g. CD 1. There is only one document for the IEC CDV and the IEC FDIS, so these documents are not numbered.

The numbering scheme in IEEE is: number 0.0 to 0.n of the TG version; 1.0 to 1.n for the WG version; 2.0 to 2.n for the IEEE-SA ballot and 3.0 for the further approval process.

The IEEE numbering could also start with the TG ballot using the numbering 1.0, so that all the others ~~are have an offset of~~ +1.

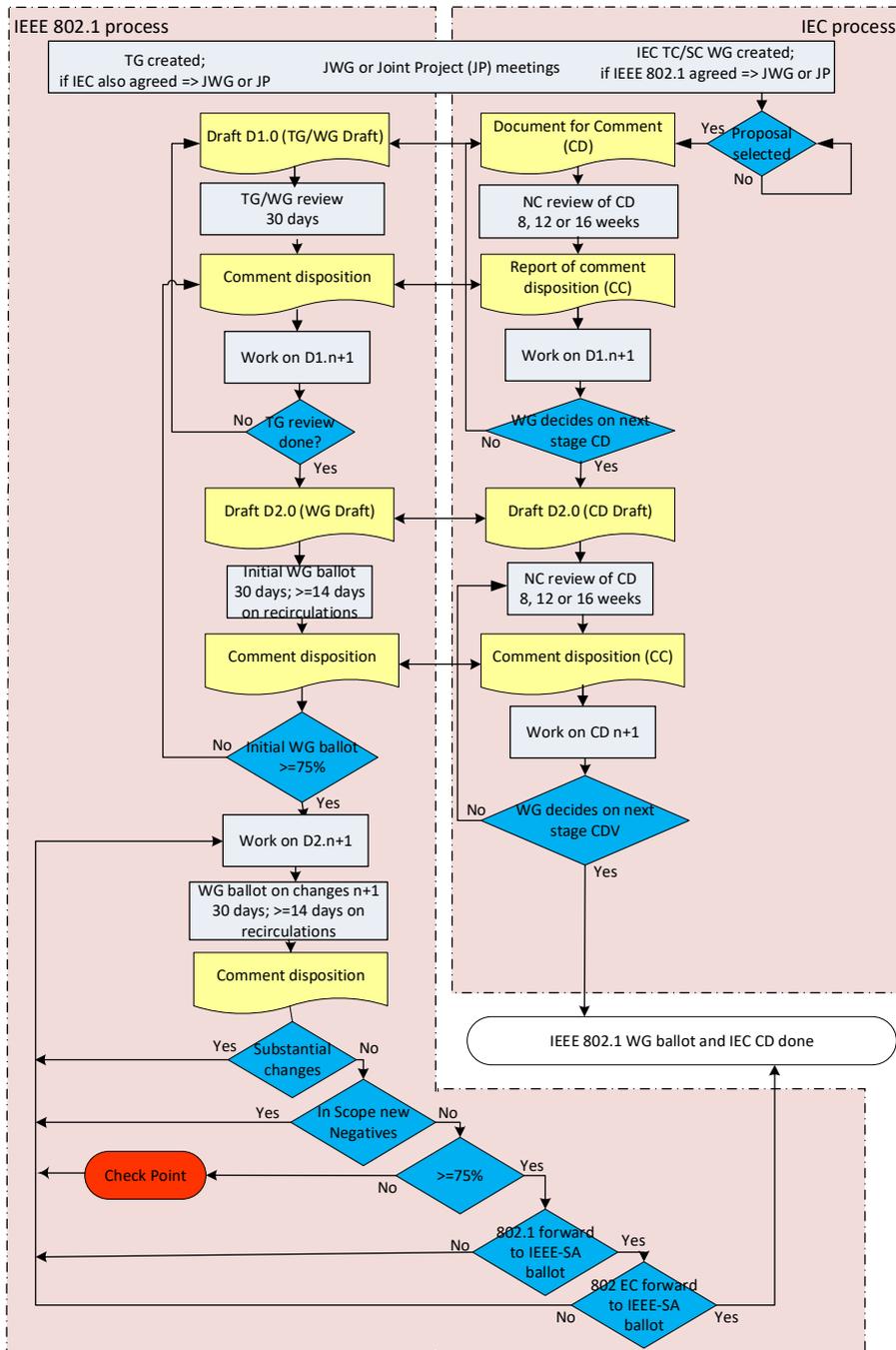


Figure 4 – IEC CD stage and IEEE TG and IEEE WG ballot process

2.4.2 IEC CD and IEEE 802.1 WG-ballot processes

2.4.2.1 General

If the IEC/IEEE Cooperation Project feels that their Draft Document is mature (that means no open issues, no "to be done", etc.), then it shall propose a motion to the IEEE WG to approve that the next IEEE stage of a WG ballot is to start. This can only be done during an [IEEE](#) plenary session. To avoid delays, the motion can also be done shortly before the draft is ready for an IEEE WG-ballot. If the motion passes, then the Editor can prepare the Draft Document with a revision number x.0 (where x is IEEE TG ballot version number +1).

EXAMPLE If the TG ballot number started with 0, then it is D1.0 or if it started with 1, then it is D2.0.

2.4.2.2 Initiate an IEC CD and the IEEE WG ballot

The start of the IEEE WG ballot is similar to the process described in 2.4.1.2 except that instead of the IEEE TG chair, now the IEEE WG chair starts the IEEE [initial](#) WG ballot.

For IEC, no major change is needed in the process as the stage is still the Committee Stage. An IEC CD document will be circulated for comments, but the revised final Compilation of Comments (CC) document shall wait until the final comment disposition of the last IEEE WG recirculation ballot is available. The Editor shall then convert the data base with all comments of the initial and the recirculation ballots to the IEC comment form. The Convenor will send this document to the Secretary for creating the revised CC document, to be circulated to the IEC NCs. This revised CC will be the basis for drafting the IEC CDV.

2.4.2.3 Initial IEEE Working Group Ballot

Only IEEE WG voting members and ex-officio members (in case of IEC/IEEE 60802 and also IEEE 802.3) are entitled to vote on an IEEE WG-ballot. However, any non-voting participants in the activities of IEEE 802.1 may submit a "Comment Only" ballot on the draft. In accordance with established practice in the IEEE [802](#), all comments received, whether from voters or non-voters, are given due consideration during the ballot resolution process.

NOTE 1 In a formal IEEE WG ballot or recirculation ballot, voting "Approve" means that, in one's professional opinion, the document is considered to be technically complete, and ready for the IEEE-SA ballot. Hence, sending in an "Approve" ballot response within a small number of minutes of the ballot start time cannot possibly mean that the voter has given the document the level of professional consideration necessary to make such a judgment.

The IEEE WG voting members that are entitled to a vote on this ballot are the ones listed in the email that announces the WG ballot.

NOTE 2 For an IEEE WG ballot or recirculation ballot, the voting population is fixed at the start of the ballot, and does not change during any subsequent recirculation ballots, regardless of any membership changes over the course of the balloting cycle.

In case the 1st initial WG ballot fails, then a 2nd initial WG-ballot etc. is needed until the 2/3 majority and the needed 50% quorum is achieved.

2.4.2.4 IEEE Working Group Recirculation Ballot

Only IEEE WG voting members and IEEE WG liaisons are entitled to vote on an IEEE WG recirculation ballot; however, any non-voting participants in the activities of an IEEE WG may submit a "Comment Only" ballot on the draft. In accordance with established practice in the IEEE [802](#), all comments received, whether from voters or non-voters, are given due consideration during the ballot resolution process.

In an IEEE WG recirculation ballot, some different rules apply:

- The balloting period is a minimum of 15 days.
- The subject matter of the ballot is NOT the entire document; the scope of this ballot is ONLY those changes to the draft that were made to resolve the ballot comments on the previous draft, any ballot resolutions that may have been incorrectly applied, and any ballot comments that may have been rejected.
- A new vote on this ballot is required ONLY if the previous vote needs to be changed. If no new vote is submitted, the previous vote will apply unchanged.

- Responses are particularly solicited from those voters that made Disapprove votes on the previous ballot, to confirm whether or not the agreed ballot resolutions address their concerns. This means that an IEEE WG voting member who has submitted a previous Disapprove will have to be tracked until a response is received.

2.4.2.5 IEC process during IEEE WG recirculation

The IEC process does not allow a partial commenting on an IEC CD. The IEEE WG recirculation ballot requests that only comments are allowed about those changes to the Draft Document that were made in order to resolve the ballot comments on the previous Draft Document, see 2.4.2.4, –. To avoid confusion by getting IEC CD comments to other material and to accelerate the process, there will be no CD circulation in parallel to the IEEE WG recirculation ballots.

The final comment disposition of the IEEE WG-ballot, which will be the basis to initiate the IEEE-SA ballot and to draft the IEC CDV, shall be used to create the revised IEC CC document of the last IEC CD which was circulated in parallel to the initial IEEE WG-ballot.

2.4.3 IEC CDV and IEEE-SA ballot processes

The decision to enter the IEC enquiry stage (-see) is based on the consensus principle.

If the IEC/IEEE Cooperation Project has reached consensus to elevate the stage to an IEEE-SA ballot, then the IEEE TG chair together with the Convenor shall ask the IEEE WG for a motion to approve the Draft Document to be elevated to an IEEE-SA ballot. If this motion has been passed, the IEEE WG chair asks the IEEE 802 EC for approval to start the IEEE-SA ballot (prerequisites [of in IEEE 802](#)). The Convenor can then propose to the Secretary [of the IEC TC/SC](#) to start the IEC enquiry stage. [Figure 5](#) shows both the IEEE and IEC processes in principle. The steps and communication needed to start the IEC CDV and IEEE-SA ballot are listed below.

- The WORD file is sent by the Editor to the Convenor to make a final format check.
 - The Convenor sends the WORD file to the Secretary [of the IEC TC/SC](#).
 - The Secretary [of the IEC TC/SC](#) performs a format check against the IEC guidelines and will inform the Convenor if any changes are needed or if changes were done by the Secretary [of the IEC TC/SC](#). In the second case, the revised WORD file will be sent to the Convenor.
 - The Convenor sends the revised WORD file (themselves or the Secretary) to the IEEE MEC group for basic checking of compliance with IEEE legal guidelines, with a copy to the Secretary [\(4 weeks\)](#).
 - If changes are needed, then the IEEE MEC group sends comments to the WORD file to the Secretary, with a copy to the Convenor.
 - The Secretary checks the changes requested by the IEEE MEC group and after approval, prepares a revised WORD file.
 - The Secretary submit the final WORD version (CDV/IEEE-SA document) to IEC [COsecretariat](#), with a copy to the IEEE MEC group and the Convenor.
 - The document is held within IEC [secretariatCO](#) for 7 weeks for other countries to translate the document to facilitate proper review by nations during the IEC CDV ballot.
 - IEC [COsecretariat](#) uses this final WORD file to prepare a PDF file as the official CDV and IEEE-SA document. This final PDF will be sent to the [Secretary and then to the Convenor, Cc to the IEEE-MEC group. The convenor forwards the PDF to the IEEE WG chair for initiating for use in the IEEE-SA ballot and to form the IEEE SA ballot pool.](#) If the French translation is delivered in time, it will be part of the IEC and IEEE ballot.
 - The IEC CO starts the CDV circulation with or without the French translation for 12 weeks to the IEC NCs (IEC CO only starts circulation of documents at a weekend).
- ~~k) The start of the IEEE-SA ballot should be delayed so that the end of the can start immediately without any synchronization to the IEC CDV circulation, and the end of~~
- ~~k) After the initial IEEE-SA ballot (60 days) the joint project may start with comment resolution, but cannot finalize it until the CDV result is forwarded by the Secretary to the~~

~~Convenor. If there are additional comments, then they shall be integrated in the IEEE SA ballot comment list and together resolved, are synchronized (plus/minus a week).~~

~~l)m)~~ During the IEC CDV phase, IEC ~~CO-secretariat~~ will do an extensive check of the WORD file content and will provide comments at the end of the IEC CDV phase within the WORD file, edited in revision mode. This will be sent back to the Secretary at the end of the IEC CDV stage. The Secretary will then send it to ~~the~~ Convenor who will then send it to the Editor.

~~m)n)~~ The IEC "edited CDV" WORD file ~~must-shall~~ be used from this point onwards; the Editor addresses the comments from the IEC ~~-, the IEEE SA ballot and the IEC CDV result (NC comments), first (with the coordination discussion with the group and the Secretary if and where relevant).~~

If the IEC CDV vote was approved, then the CDV cannot be repeated and cannot have recirculation ballots as is usual for the approved IEEE-SA ballot with negative votes from a commenter.

As described in the Guide to IEC/IEEE Cooperation, Annex C [1], the critical part is ~~-,~~ to synchronize the end of the CDV with the end of the initial IEEE-SA ballot and continue on the IEEE side with recirculation ballots until the comment resolution is completed.

The first recirculation of the IEEE-SA ballot shall use the IEC CDV comments and IEEE-SA ballot comments to create the Draft Document for the re-circulations. The IEEE-SA recirculation ballots can only consider changes based on the IEC CDV and IEEE-SA initial ballot.

The IEC report on the CDV (RVC document type), shall contain the comments of the initial IEEE-SA ballot, the comments of the IEC CDV vote and the comments of the IEEE-SA recirculation ballot(s), concatenated into a single IEC RVC document.

The IEEE contact also provides any editorial comments to the project author in time for the preparation of the draft FDIS.

2.4.4 IEC FDIS and IEEE SASB approval process

The FDIS document must be based on the CDV draft edited by IEC to ensure that the document conforms to the ISO/IEC Directives Part 2 [3]. All comments resolutions from the final RVC shall be incorporated, including all comment resolutions of the IEEE-SA ballot, before the FDIS can be submitted for ballot.

If the FDIS is approved, all technical comments made during the IEC FDIS vote are postponed until the next edition. Technical comments shall be considered at the start the next edition draft. If the FDIS is not approved, refer to the Guide to IEC/IEEE Cooperation [1] for how to proceed. Only editorial comments on the FDIS ballot can be considered by the IEC ~~secretariatCO~~ to create the final publication.

The planning steps are the same as for a normal IEC document. The additional steps/communication are listed below.

- a) Once the draft FDIS is ready (English), the Secretary (or could be Editor or Convenor) sends this to IEEE contact, for review and possible recirculation. Once ready the document is submitted by the Secretary to IEC CO (with a copy to IEEE contact) for final preparation (layout, editing, etc.) before FDIS circulation.
- b) Just before circulation, when all editing steps have been completed at IEC ~~secretariatCO~~, a copy of the FDIS for circulation is sent to the IEEE (email to IEEE contact, cc Director). The objective at this point is to detect any final editorial issues regarding IEEE conventions, etc. Time limit: 5 working days.
- c) Once IEEE contact has given an OK, the document is circulated by IEC ~~secretariatCO~~.
- d) When IEEE contact receives the automated notification of circulation, the received document is used for balloting purposes/final approval in the IEEE.

The FDIS voting result is either to adopt the standard where no technical comments are considered (in case the vote is in favour) or reject with technical comments. If the ballot is

successful, then technical comments from both positive and negative voters can only be considered in the next edition. Editorial comments are possible and can be solved by the IEC CO editors.

The IEEE SA staff works to coordinate approval with IEC (sometimes the SASB approves first; sometimes, the FDIS is approved first - it all depends on the timing).

2.4.5 Possible Timelines

The changing actions from IEC to IEEE back and forth on different stages on the IEC CDV, IEEE SA ballot, IEEE Revcom and IEC FDIS processes depend on the different length of stages in IEC and IEEE processes and the approval process in IEEE 802 during a plenary meeting or by correspondence (e-poll).

- The IEC CDV process is led by IEC.
- The IEEE-SA ballot recirculations are led by IEEE.
- The IEC FDIS

Figure 5 shows the IEC CDV and IEC FDIS process with a linear timeline. It does not reflect completely all actions and does not show delays to start actions by the joint working group or other groups (e.g., plenary meeting). Considering all the factors, the overall time can be extended but also reduced as some of the timings are worst case and could be shorter.

When the project approaches the IEC CDV stage, the relative timeline can be transformed to a dated timeline and be synchronized with the scheduled meetings when actions are required.

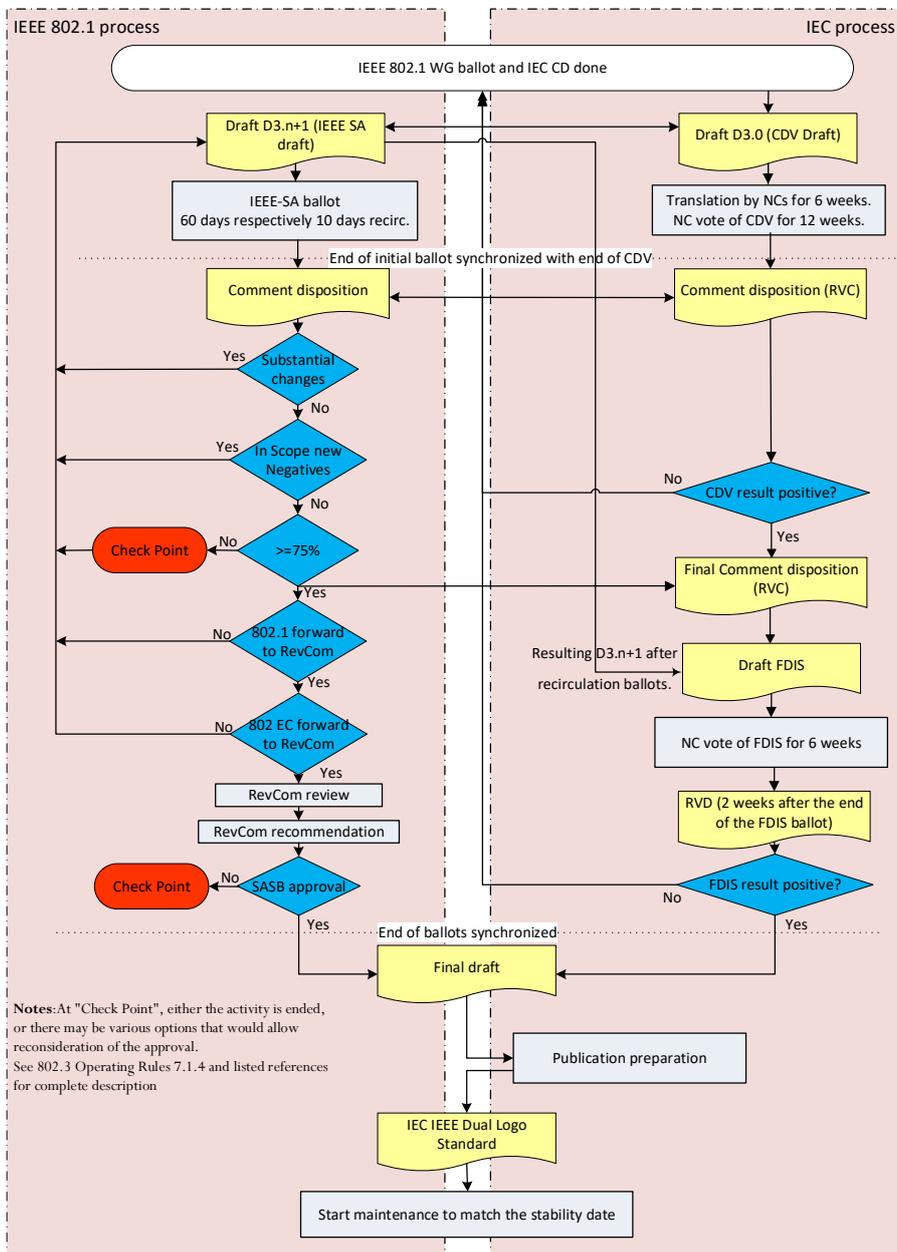


Figure 5 – CDV and FDIS process

2.4.6 Comment resolution

2.4.6.1 IEC comment resolution

The resulting comments of CD, CDV and FDIS are delivered by IEC in a WORD file using a template, see an example in Figure 66.

		Date	Document	Project No.
		2023-08-18	650212615 CD	82667-2-014
Item	Line	Comment	Proposed Change	Observations of the Secretariat
IE 61	3490	6.2	gd	Text
JP 01	3492	6.2.4	nd	Text
JP 02	3492	6.2.4	nd	Text
JP 03	3500	7.1.2	nd	Text
JP 04	3504	Annex A	nd	Text
JP 05	3507	Annex A	nd	Text

Page 1 of 1

Figure 6 – Example of a comment list

It is ordered by line numbers. The Type (called Category in IEEE) of comment could be

- Editorial
- Technical or
- General

The joint project group decides about the comment resolution. The resulting comment resolution should be written in the column "Observations of the secretariat" with the following terms that express the resolutions.

- Noted
- Accepted
- Not Accepted
- Withdrawn

The term "Noted" shall not be used as there is no equivalent in IEEE. The term Not Accepted shall be exchanged by Rejected and General by Technical when converting the IEC template to the IEEE template.

At the end of the IEC CDV and IEC FDIS, the embedded comments from the editor of the IEC secretariat shall be converted by the Editor to the comment list, so that the resulting comment resolutions are also visible and being part of the IEEE recirculation process.

2.4.6.2 IEEE comment resolution

The Comment Resolution Tool is an application that can be used to process the comments from myProject sponsor balloting and provide a file for upload back into myProject. Also, the resulting comments of a TF, TG, WG ballot are using in IEEE 802 the Comment Resolution Tool.

The TF, TG, WG ballots are using a EXCEL template, see Figure 77. The myProject tool delivers the same information.

Category	Page	Sub-clause	Line #	Comment	Proposed Change	Must Be Satisfied
----------	------	------------	--------	---------	-----------------	-------------------

<u>Technical #</u>	<u>Yes</u>
<u>Editorial</u>	<u>No</u>

Figure 7 – Example of a comment list

The Categories (called Type in IEC) in combination with "Must be satisfied" are:

- Editorial;
- Technical;
- Editorial required ("Must be satisfied" = Yes) (ER);
- Technical required ("Must be satisfied" = Yes) (TR).

It is ordered by comment numbers. The Comment Resolution Tool creates the final disposition PDF document in the order by subclause, page, and line number. It may export it using different sorting and file format, that can be used to create the IEC template WORD file.

The IEEE Categories ER and TR shall be exchanged by ed and te when exporting the comments to the IEC template.

The Disposition of comments could be

- Accepted
- Not Accepted
- Withdrawn

2.4.6.3 IEEE Recirculation process

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. 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. 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 Standards Committee must initiate an additional recirculation.

There is no equivalent in IEC, see also 2.4.1, 2.4.2, 2.4.3, 2.4.3.

The IEEE Recirculation process can be seen as a revision process of the initial comment disposition, see Table 9Table-9.

Table 2 – Example of a comment disposition evolution during the recirculation

<u>Proposed Change in IEC</u>	<u>Stage</u>	<u>Example of a comment disposition</u>
<u>Change the value from 233 to 234</u>	<u>Initial comment disposition</u>	<u>Change the value from 233 to 234</u>
	<u>1st recirc.</u>	<u>Change the value from 234 to 235</u>
	<u>2nd recirc</u>	<u>Change the value from 235 to 236</u>
	<u>3rd recirc = final disposition</u>	<u>Change the value from 236 to 237</u>

That means that the IEC comment resolution ideally shows only the final disposition. As this is a lot of manual work, the proposed solution is as follows.

The IEEE follows their process. No variation needed.

The process to convert the final disposition in the IEC template shall be that the comment lines are ordered in such a way that the final disposition is shown below the initial comment disposition as the "last line" and the recirculation comments in between, see Table 9Table-9. The final disposition is overwriting the initial comment disposition and the previous recirculation comment disposition.

Commented [LW1]: Under discussion with 60802 editor and IEC 65C secretary.

NOTE The Clause/Subclause and line numbers of the recirculation comments are based on the recirculation ballot document and can vary from the initial ballot document.

2.5 Publication stage

After FDIS circulation, the IEC TO and TDM approve the document for publication (BAT stages) as per normal FDIS processing.

The document moves on to publishing. When the final file is ready, publishing sends a copy to IEEE contact (cc Director), with pricing. One week period is given for any final remarks.

Document is then published.

2.6 Maintenance

The stability date shall be given by the joint project to the Secretary, who will forward this information to the IEC CO for updating the IEC data base entry of the project. This stability date is not known by IEEE but is publicly available on the IEC website.

(Definition of stability date: end of the stability period, when the committee's decision (withdrawal, confirmation, amendment, revision) has been implemented.)

The joint project organization should take the responsibility to organize the next edition or corrigenda or amendments.

The stability date can be extended, or the maintenance team shall implement a project plan to enable the maintenance work to be completed by the end of the stability period. A project plan can be done by the IEC/IEEE Cooperation Project during their last meeting generating the IEC RVD document. ~~Figure 8~~Figure-8 shows the different maintenance processes of IEEE and IEC for re-establishing the joint project to work on the next edition. The other drafting stages are the same as described in Clause 2.

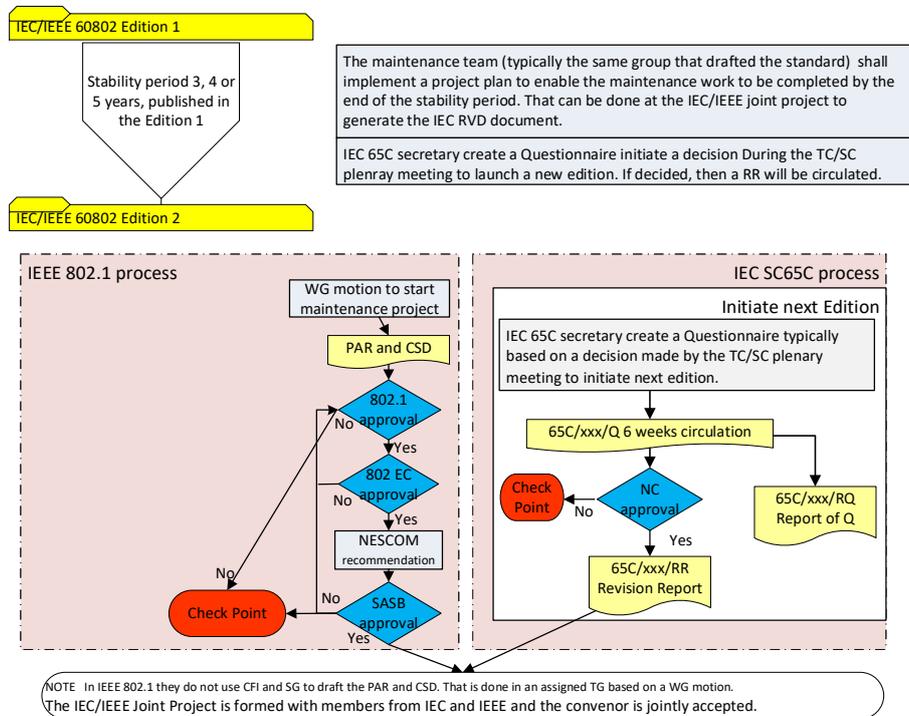


Figure 8 – Maintenance process

3 Differences between IEEE 802 and IEC TC65 behaviors

3.1 General

The tables in Clause 3 shows some differences between IEEE 802 and IEC TC65 behaviors. They provide on the right-hand column the conclusions of the differences. A long dash in the most right column indicates that there are no impacts or requirements to change existing processes.

3.2 Decorum

Table 33 shows the differences concerning decorum.

Table 3 – Differences concerning decorum

IEEE 802	IEC TC65	Harmonization/Exception needed
Photography or recording by permission only (2010 SASB Op Manual 5.3.3.4)	See code of conduct. https://www.iec.ch/basecamp/iec-code-conduct-technical-work	—
Cell phone ringers off	Same	—
Press (i.e., anyone reporting publicly on this meeting) are to announce their presence (5.3.3.5)	Not explicit in IEC process description but accepted to also be applicable.	—

IEEE 802	IEC TC65	Harmonization/ Exception needed
Wear your badges at all times in meeting areas <ul style="list-style-type: none"> – Help the hotel security staff improve the general security of the meeting rooms – PCs HAVE BEEN STOLEN at previous meetings – DO NOT assume that meeting areas are secure 	Applicable if badges are issued for a meeting.	—
Please observe proper decorum in meetings	Same	—

3.3 Access to Reflector and Web

[Table 44 shows the differences concerning Access to Reflector and Web.](#)

Table 4 – Differences concerning Access to Reflector and Web

IEEE 802	IEC TC65	Harmonization/ Exception needed
To subscribe to the 802.1 reflector, send an email to: ListServ@ieee.org with the following in the body of the message (do not include "<>"): subscribe stds-802-1-L <yourfirstname> <yourlastname> end	Only possible by applying for nomination as an expert through a national committee (NC). Once nominated, an expert can automatically access the project section of the Collaboration Platform without further action needed. C-Liaison members are entered by IEC CO staff without NC involvement.	— Convenor to copy all docs to both repositories.
Send IEEE 802.1 >> reflector messages to: stds-802-1- L@listserv.ieee.org	Use the Collaboration Platform to send a message to the IEC group.	— Convenor to copy all docs to both repositories.
WG web page URL for example: http://http://www.ieee802.org/1/	See IEC SC65C web page: http://www.iec.ch/sc65c	—
NOTE The Convenor can delegate copying docs.		

3.4 Private area

[Table 55 shows the differences concerning private area.](#)

Table 5 – Differences concerning Private area

IEEE 802	IEC TC65	Harmonization/ Exception needed
The private area is used to store the draft, and on an exception basis, other copyrighted material shared through a liaison. The password will be verbally announced during the meeting.	The equivalent is the Collaboration Platform. All Experts get an access code through their NC. The C-Liaison partners get it through the IEC CO staff.	— Convenor to copy all docs to both repositories.
NOTE The Convenor can delegate copying docs.		

3.5 Ground rules

[Table 66 shows the differences concerning ground rules.](#)

Table 6 – Differences concerning Ground rules

IEEE 802	IEC TC65	Harmonization/ Exception needed
<ul style="list-style-type: none"> • Based upon IEEE 802.1 Rules <ul style="list-style-type: none"> – Foundation based upon Robert's Rules of Order – Anyone in the room may speak – Anyone in the room may vote • RESPECT... give it, get it • NO product pitches • NO corporate pitches • NO prices!!! <ul style="list-style-type: none"> – This includes costs, ASPs, etc. no matter what the currency • NO restrictive notices 	<p>In IEC the "Robert's Rules of Order" are not mandatory but can be used. If not an equivalent method to achieve consensus is a must. All other bullets also apply in IEC.</p> <p>See code of conduct. https://www.iec.ch/basecamp/iec-code-conduct-technical-work</p> <p>IEC experts also need to comply with the IEC Copyright Policy. https://www.iec.ch/members_experts/refdocs/policy/IEC_copyright_policy_implementation_guidelines_2020.pdf</p>	—

3.6 Attendance

Table 77 shows the differences concerning attendance.

Table 7 – Differences concerning Attendance

IEEE 802	IEC TC65	Harmonization/ Exception needed
<p>Attendance record must be done twice:</p> <ol style="list-style-type: none"> 1. Electronically using IMAT and 2. Manually signed in an attendance list <p>The 75% attendance is needed to maintain the voting rights. Additional rules apply about substituting a plenary by an interim etc.</p>	<p>In IEC the Convenor (for WG meetings) or Secretary (for Plenary meetings) is responsible for recording the attendance. The voting rights of an NC are independent of the percentage of participation of individual experts. Active participation is only monitored to maintain P-membership of the NC, but not on individual level.</p>	—

3.7 Participation in IEEE 802 and IEC Meetings

Table 88 shows the differences concerning meetings.

Table 8 – Differences concerning Meetings

3.2

IEEE 802	IEC TC65	Harmonization/ Exception needed
<p>Participation in any IEEE 802 meeting (Sponsor, Sponsor subgroup, Working Group, Working Group subgroup, etc.) is on an individual basis (Latest revision of IEEE 802 LMSC Working Group Policies and Procedures: http://www.ieee802.org/devdocs.shtml)</p> <ul style="list-style-type: none"> Participants in the IEEE standards development individual process shall act based on their qualifications and experience. (https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1) 	<p>Participation in any IEC meeting (WG, PT, MT or adhoc) is based on nomination by National Committees (NC).</p> <p>According to the IEC rules (see http://www.iec.ch/standardsdev/resources/troles/expert/), nominated experts act in a personal capacity although it is recommended that they keep in close contact with the organization that has appointed them. It is therefore possible for experts to convey the position of their NCs, and that the ballot performed by the NCs is also influenced by the participating experts.</p>	<p>—</p> <p>A participant should decide before attending a meeting whether the person is an IEEE participant or an IEC participant because only one role per person can apply during a meeting.</p>
<ul style="list-style-type: none"> IEEE 802 Working Group membership is by individual; "Working Group members shall participate in the consensus process in a manner consistent with their professional expert opinion as individuals, and not as organizational representatives". (Subclause 4.2.1 "Establishment", of the IEEE 802 LMSC Working Group Policies and Procedures) 	See above.	<p>—</p> <p>See above.</p>
<ul style="list-style-type: none"> Participants have an obligation to act and vote as an individual and not under the direction of any other individual or group. A Participant's obligation to act and vote as an individual applies in all cases, regardless of any external commitments, agreements, contracts, or orders. 	See above.	<p>—</p> <p>See above.</p>
<ul style="list-style-type: none"> Participants shall not direct the actions or votes of any other member of an IEEE 802 Working Group or retaliate against any other member for their actions or votes within IEEE 802 Working Group meetings, see https://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf section 5.2.1.3 and the IEEE 802 LMSC Working Group Policies and Procedures, subclause 3.4.1 "Chair", list item x. By participating in IEEE 802 meetings, you accept these requirements. If you do not agree to these policies then you shall not participate. 	See above.	<p>—</p> <p>See above.</p>

3.8 IEEE and IEC high level structures

3.3

Table 9 shows the differences in the IEEE and IEC high level processes. Figure 9 shows the different high-level structures of IEEE and IEC.

Table 9 – Differences in the IEEE and IEC high level processes

IEEE 802	IEC TC65	Harmonization/ Exception needed
Voting is done by personal individuals that gained voting rights by participation in meetings.	At the working group level there is no voting, the Convenor has to evaluate the position of the NCs through the experts they nominated for participating in the WG/MT/PT/JWG.	<p>—</p> <p>IEEE 802 is based on a society sponsored basis and the IEC WG/MT/PT/JWG is based on NC based consensus.</p>

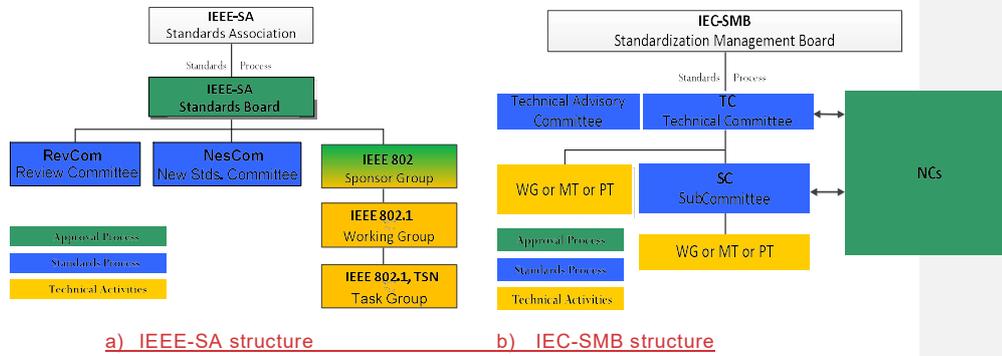


Figure 9 – IEEE and IEC high level structures

3.43.9 Bylaws and Rules

Table 10 shows Important Bylaws and Rules for the IEC/IEEE 60802 joint project. For other projects may additional or other documents apply, e.g. Guide on Safety (50 and 104, EC GUIDE 108:2019 , Edition 3.0 (2019-11-14) Guidelines for ensuring the coherency of IEC publications - Horizontal functions, horizontal publications and their application, ISO/IEC GUIDE 75:2006 Edition 1.0 (2006-11-14) Strategic principles for future IEC and ISO standardization in industrial automation).

Table 10 – Important Bylaws and Rules

IEEE 802	IEC TC65	Harmonization/ Exception needed
IEEE-SA Operations Manual http://standards.ieee.org/sa/sa-om.pdf	ISO/IEC Directives Part 1 plus IEC supplement [2]	—
IEEE-SA Standards Board Bylaws http://standards.ieee.org/guides/bylaws/sb-bylaws.pdf	ISO/IEC Directives Part 2 [3] IEC TC65 Strategic Business Plan	
IEEE-SA Standards Board Operations Manual http://standards.ieee.org/guides/opman/sb-om.pdf	IEC TC65 Good Working Practice	
IEEE 802 LAN/MAN Standards Committee (LMSC) Policies and Procedures http://standards.ieee.org/about/sasb/audcom/pnp/LMSC.pdf	Guidance on TC roles, see http://www.iec.ch/standardsdev/resources/tcroles/ publications and their application	
IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual http://www.ieee802.org/PNP/2010-07/IEEE_802_LMSC_OM_approved_100716.pdf	ISO/IEC GUIDE 75:2006 Edition 1.0 (2006-11-14) Strategic principles for future IEC and ISO standardization in industrial automation	
IEEE 802 LAN/MAN Standards Committee (LMSC) Working Group (WG) Policies and Procedures http://www.ieee802.org/PNP/2010-07/IEEE_802_LMSC_WG_PandP_approved_100716.pdf		

All attendees are expected to familiarize themselves with the Working Group Policies and Procedures at <http://1.ieee802.org/rules/> and at <https://www.iec.ch/IEC> before participating in a meeting and to act accordingly. By participating in a meeting, attendees agree to comply with all applicable laws and with the IEEE Codes of Ethics and Conduct and the IEC Code of conduct for technical work and all IEEE and IEC policies and procedures including, but not limited to, the IEEE and IEC Patent Policy and IEEE SA and IEC Copyright and Participation Policies as provided in <http://www.ieee802.org/1/files/public/templates/admin-TG-intro-0721-v01.pdf> and IEC Code of conduct for technical work | IEC, Copyright | IEC, IEC - Members & experts > Info: Patents > IEC Patent Declarations > Common patent policy for ITU-T / ITU-R / ISO / IEC.

3.10 Instructions for the WG Chair

Table 1144 shows the specifics of IEEE 802 and IEC TC65 about Instructions for the WG Chair.

Table 11 – Instructions for the WG Chair

IEEE 802	IEC TC65	Harmonization/ Exception needed
<p>The IEEE-SA strongly recommends that at each WG meeting the chair or a designee:</p> <ul style="list-style-type: none"> – Show slides #1 through #4 of the Introductory material – Advise the WG attendees that: <ul style="list-style-type: none"> • The IEEE's patent policy is described in Clause 6 of the <i>IEEE-SA Standards Board Bylaws</i>; • 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 the IEEE is not aware. Additionally, neither the 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: <ul style="list-style-type: none"> • 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 	<p>The patent policy of IEC is similar but do not require the Convenor to read the policy each time.</p> <p>Instead, it is mandatory to start all committee and WG meetings by highlighting the IEC Code of Conduct and reminding all participants of the expectation that they will respect and comply with it. This IEC Code of Conduct includes sections about patent and copyright policies.</p>	<p>—</p> <p>It does not harm the IEC people hearing the policy of IEEE.</p>

IEEE 802	IEC TC65	Harmonization/ Exception needed
<p>claim(s) to complete and submit a Letter of Assurance.</p> <ul style="list-style-type: none"> – It is recommended that the WG chair review the guidance in IEEE-SA Standards Board Operations Manual 6.3.5 and in FAQs 12 and 12a on inclusion of potential Essential Patent Claims by incorporation or by reference. <p>NOTE: WG includes Working Groups, Task Groups, and other standards-developing committees with a PAR approved by the IEEE-SA Standards Board.</p>		
<p>Other Guidelines for IEEE WG Meetings:</p> <ul style="list-style-type: none"> – 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, including licensing costs of essential patent claims, of different technical approaches may be discussed in standards development meetings. • Technical considerations remain 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. • ----- ----- <p>See IEEE-SA Standards Board Operations Manual, clause 5.3.10 and "Promoting Competition and Innovation: What You Need to Know about the IEEE Standards Association's Antitrust and Competition Policy" for more details.</p>	This also applies in IEC meetings (see IEC Code of Conduct)	— It does not harm the IEC people hearing the policy of IEEE.

3.53.11 Starting a new project

Table 1242 shows the specifics of IEEE 802 and IEC TC65 about starting a new project.

Table 12 – Starting a new project

IEEE 802	IEC TC65	Harmonization/ Exception needed
In IEEE 802.1 a new project can be started after presentations of a new work item in the TG and WG that results in sufficient WG interest (as indicated by a motion) to develop a PAR.	In IEC the management of a TC or SC can create Preliminary Work Items (PWIs) to investigate a potential NP and the associated scope and to draft a corresponding document before the official time line for a project is triggered.	—
In IEEE 802.1 a new project is started after a WG motion to develop a PAR has passed. The development of the new project is typically handled by a TG, but a SG may be created on an exceptional basis.	A potential PWI can be proposed during an IEC TC/SC plenary to advertise the potential project. The PWI can be approved by NCs either through a Resolution taken at a plenary meeting.	—

IEEE 802	IEC TC65	Harmonization/ Exception needed
	or via a Questionnaire (requiring simple majority vote of the P-members). The PWI will be then officially created in the program of work and managed by the TC/SC.	
<p>The 802 Executive committee (EC) occasionally will form the Study Group (SG) under the WG to create the PAR and CSD PAR & CSD approval is by the WG but is circulated beforehand to all 802 WGs for comments. Comments of the 802 WGs can come until 3 days in advance of the closing plenary, so that the comment resolution can be integrated before the closing plenary of the WG on Thursday afternoon.</p> <p>The WG shall vote on the PAR and CSD. If one of these multiple motions fails, then rest in peace. The PAR shall also be approved by the 802 EC and confirmed by the NESCOM and approved by the IEEE SASB.</p>	<p>A NC or Secretary can launch a New Work Item Proposal (NP) along with at least an outline of the intended document. This is circulated to the NCs for a 12 week vote. In exceptional cases, the committee can decide to shorten the ballot to 8 weeks.</p> <p>The proposer should nominate a Convenor/project leader and the location and date of the first meeting</p> <p>An NC can nominate experts as part of their vote. A project is approved if it gets a 2/3 majority of the P-members AND if experts are nominated by a minimum of 5 NCs having voted positive. These NCs may nominated "missing" experts up to 4 weeks after the end of the voting period to fulfil this second criteria.</p> <p>The Secretary must send out a report of the vote (RVN) with the comments list within 4 weeks. If the comment resolution needs to be discussed by the new group, then a revision of the RVN with comment resolution shall be circulated later.</p> <p>An approved project will be assigned either to a Project Team or a Working Group (existing one or newly created).</p> <p>It is recommended that IEC working groups be reasonably limited in size. The technical committee or subcommittee may therefore decide upon the maximum number of experts appointed by each P-member and liaison organizations.</p>	<p>—</p> <p>In case of TSN profile, an approved project was already established. A Questionnaire (Q) was circulated by the Secretary to ask the NCs about approval for the change to create a joint group with IEEE 802.1 with extended voting rights of IEEE 802.3. Since no objections were raised by NCs within 6 weeks, the Secretary circulated the corresponding report (RQ) to inform the NCs about the changes.</p> <p>The participants of the joint group contain members nominated by IEC NCs or C-Liaison partners, and individual members of IEEE 802.1. Therefore, the joint group could have a large number of experts participating in meetings (Called sessions in IEEE 802).</p> <p>The joint project can have different names and organizational hooks. The IEEE 802.1 decided to create a project under the TG TSN and the IEC organized the work first as a Project team (PT), then as a dedicated 65C/WG18.</p>
<p>The PAR is assigned to a TG can start their drafting work on the next interim after the plenary. The WG chair appoints the TG chair.</p>	<p>The Group can start if the NP was voted with a 2/3 majority and at least 5 experts from 5 different NCs are nominated at the date proposed by the NP.</p> <p>NOTE: The number of nominated experts depends on the TC/SC.</p> <p>The Convenor of a WG/PT/MT is proposed by the proposer of the project and appointed by the SC/TC chair and Secretary.</p>	<p>—</p> <p>To start the joint group both IEEE 802.1 and IEC SC65C shall agree to work on the joint document.</p> <p>The convenor/chair could be nominated by both as one person or that IEC and IEEE are nominating different persons so that the two are co-convenors.</p>

3-63.12 Liaison partner

Table 1343 shows the specifics of IEEE 802 and IEC TC65 about liaison partnership.

Table 13 – Liaison partnership

IEEE 802	IEC TC65	Harmonization/ Exception needed
Liaison officials are individuals designated by the Working Group Chair who provide liaisons with other Working Groups or standards bodies. Liaisons can ask for getting drafts under development.	In order to be effective, liaison shall operate in both directions, with suitable reciprocal arrangements. In IEC Category C liaisons shall be submitted for approval first to NCs of the TC/SC, then to the Standardization Management Board (SMB) by the committee Secretary, with a clear indication of the WG/PT/MT concerned. In IEC, a C-liaison may also submit a PAS, but cannot propose new work items. Liaisons partners have full access to all documents including drafts.	— The establishment of a Liaison partnership should be announced to the joint partner organization. If common drafts are released to Liaison partners, that should be announced to the joint partner organization.

3.73.13 Drafting a document

Table 1444 shows the specifics of IEEE 802 and IEC TC65 about drafting a document.

Table 14 – Drafting a document

IEEE 802	IEC TC65	Harmonization/ Exception needed
The TG works on the first draft D1.0. The TG ballot period is 4 weeks. The commenting phase can be repeated.	The Group works on the first draft. The first draft can be a Document for Comment (DC) (6 weeks circulation) or a Committee Draft (CD) circulated to the NCs for 16, 12 or 8 weeks. The commenting phase can be repeated.	— The joint group starts to draft a joint document using WORD2010 or newer. The ISO/IEC directives Part 2 apply with the exceptions given in http://www.iec.ch/standardsdev/resources/draftingpublications/writing_formatting/IEC_template/ieee_std_exts.htm concerning the Header/Footer and Foreword.
<u>Minor expansion or technical changes in the scope shall be fixed by a PAR modification process.</u>	<u>If there is consensus that a scope requires expansion or significant technical changes, this shall be confirmed by committee decision with a 2/3rd majority.</u>	— <u>After a successful PAR modification process with minor changes, the agreed revised scope should be in IEC:</u> - <u>mentioned in the form of the next stage e.g. CD, CDV, FDIS;</u> - <u>circulated as a Q.</u> - <u>Mentioned in the next IEC TC/SC Plenary report of the group</u>
<u>Even in TF and TG, and WG ballots it is mandatory in IEEE 802 to use the "Comment Resolution Tool". It is not mandatory in IEEE SA, see IEEE Standards Association - Comment Resolution Tool, where it "can be used".</u>	<u>In IEC a WORD-based Template shall be used.</u>	<u>To present during the meetings the incoming comments and to draft the comment resolution, the editor of a project can use:</u> <u>1) the IEC Template and import the IEEE comments by losing the "Required" information of the commenter (only relevant during SA-Ballot).. The editor can import the results in the IEEE "Comment Resolution Tool" and publish the file in the IEEE project server, after the meeting;</u> <u>2) the IEEE "Comment Resolution Tool" and import the IEC comments from the template and at the end of the comment resolution work to fill the WORD template with exported comment resolutions.</u>
There are a lot of more detailed differences in the style Guides and processes. See Clause 2 how to solve these differences.		

3.83.14 Collecting fees to attend a joint meeting

Table 1545 shows the specifics of IEEE 802 and IEC TC65 about collecting fees to attend a joint meeting.

Table 15 – Collecting fees to attend a joint meeting

IEEE 802	IEC TC65	Harmonization/ Exception needed
It is usual in IEEE 802 interim and plenary meetings to collect money for paying the meeting venue, organizing WiFi access, refreshments, etc.	In IEC it is prohibited to collect money for paying the meeting venue. Common ISO/IEC Directives: (Part 1, 4.1) "National Bodies are reminded that they are not permitted to charge delegates/ experts any sort of participation fee; nor require accommodations at specific hotels or hotel rates for any meetings of technical committees, subcommittees, working groups, maintenance and project teams. The basic meeting facilities shall be funded entirely by resources from a NB and/or voluntary sponsors. For more information in IEC, see Meeting Guide (http://www.iec.ch/members_experts/refdocs/iec/IEC_Meeting_Guide_2012.pdf) and for ISO see, Annex SF for further details"	IEEE 802 management will grant permission to some IEC experts to get an exemption to pay a meeting fee if the JWG is meeting together with an IEEE 802 plenary or an interim. It would be beneficial for the organization of the JWG to use the IEEE 802 staff organized meetings, for example to collect money for additional services like refreshments, lunch, or a social event, if IEC people wish to jointly have this service. Note that after more than one year of experiences with the joint project sessions, nobody from IEC complained yet about having to pay a meeting fee as usual for IEEE 802 participants. No exemption needed to be considered, but the possibility needs to remain because of IEC rules.

3.93.15 Terminology

[Table 1646](#) shows the specifics of IEEE 802 and IEC TC65 about terminology.

Table 16 – Terminology

IEEE 802	IEC TC65	Harmonization/ Exception needed
Session: one or more days of coming together face to face to hold several meetings or adhoc. Meeting: coming together for a couple of hours during a day of a session. Some WGs strictly organize a day by dividing the day in 4 elements: am1, (coffee break), am2, (lunch break), pm1, (coffee break), and pm2. Also evening meetings can be scheduled after a short for dinner. Since CORONA these can also be virtual.	Meeting: one or more days of coming together face to face or virtual.	—

3.403.16 Documents repositories

[Table 1747](#) shows the specifics of IEEE 802 and IEC TC65 about documents repositories.

Table 17 – Documents repositories

IEEE 802	IEC TC65	Harmonization/ Exception needed
The IEEE 802.1 web site allows to store documents in a public or a restricted member area.	The Collaboration Platform is a restricted member area. The semi-public area is the web site of the 65C committee also called "dashboard", see e.g. for 65C: http://www.iec.ch/sc65c , but it is only intended for official documents (NP, RVN, CD,...)	— Convenor of the JWG to duplicate relevant documents to the different document repositories.

3.143.17 Conclusion

All identified differences between IEC and IEEE processes in Clause 3 can be resolved by the convenor/chair and the Editor, for example to drop and fill the IEEE 802 commenting tool and

circulate the WORD commenting form for IEC. See also the description in Clause 2. The differences on meeting fees are described in 3.14 and possible solutions for IEEE 802 plenary and interim meetings are given in 2.3.3.3.

Annex A

List of Acronyms

Acronym	Meaning	Source
CC	Compilation of Comments on CD	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.5 [2]
CD	Committee draft	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.5 [2]
CDV	Committee Draft for Vote	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.6 [2]
CFI	Call for Interest	IEEE 802.3
CSD	Criteria for standards development	IEEE 802 LAN/MAN Standards Committee (LMSC) Operations Manual, Clause 14
DC	Document for comment	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.2 [2]
EC	Executive committee	IEEE 802
FDIS	Final draft international standard	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.7 [2]
IEC	International electrotechnical commission	IEC, see www.IEC.ch
IEC CO	IEC central office	IEC staff
IEEE	Institute of Electrical and Electronics Engineers	IEEE, see www.IEEE.org
IEEE-SA	Standards association	IEEE, see https://standards.ieee.org/develop/balloting-standard/balloting.html
IEEE-SA ballot	IEEE-SA SA BALLOTING PROCESS (formerly called Sponsor ballot)	IEEE, see https://standards.ieee.org/develop/balloting-standard/balloting.html
INF	Document for information	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021
IS	International Standard	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.8 [2]
JWG	Joint working group (different project process compared to a <i>Joint Project</i>)	IEC, IEEE, Guide to IEC/IEEE Cooperation
LMSC	LAN/MAN Standards Committee	IEEE
MEC	Mandatory editorial coordination	IEEE, see https://standards.ieee.org/faqs/coordination.html
MT	Maintenance team	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021 [2]
NB	National Bodies	IEC, see ISO/IEC Directives, Part 1:2021 [2]
NC	National committee	IEC, see IEC Technical Committees & Subcommittees
NesCom	New standards committee	IEEE, see IEEE-SA Standards Board: NesCom
NP	New work item proposal	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.3 [2]
PAR	Project authorization request	IEEE SA
PAS	Publicly Available Specifications	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 3.2 [2]
PDF	Adobe file format	Adobe
PPUB	Publication issued	IEC, ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.8 [2]
preCDV	Draft CDV before it will be circulated to the NC	IEC

Acronym	Meaning	Source
PT	Project team	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 1.12 [2]
PWI	Preliminary Work Item	IEC, ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.2 [2]
Q	Questionnaire	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021 [2]
RevCom	Standards review committee	IEEE, see IEEE-SA Standards Board: RevCom
RIP	Rest in Peace	IEEE 802.3
RQ	Report on Questionnaire	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021 [2]
RR	Review report	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021 [2]
RVC	Report of Voting on CDV	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.6 [2]
RVD	Report of Voting on FDIS	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.7 [2]
RVN	Result of Voting on an NP	IEC, see ISO/IEC Directives, Part 1:2021 + IEC Supplement:2021, 2.3 [2]
SASB	IEEE SA Standards Board	IEEE
SC	Subcommittee	IEC, see IEC Technical Committees & Subcommittees
SG	Study Group	IEEE 802.3
SMB	Standardization management board	IEC, see https://www.iec.ch/dyn/www/f?p=103:47:0:::FSP_ORG_ID,FSP_LANG_ID:3228,25
TC	Technical committee	IEC, see IEC Technical Committees & Subcommittees
TG	Task group (called Task Force in IEEE 802.3)	IEEE 802.1
TSN	Time sensitive networking	IEEE 802.1, see IEEE802.1 TSN web site
WG	Working group	IEC, IEEE
TF	Task Force	IEEE 802.3

Annex B

General terms and numbering translated to the specific project 60802

B.1 General

[Table B.1](#)~~Table B.4~~ shows the equivalents of general terms to specific terms for the IEC/IEEE 60802 joint project.

Table B.1 – General terms translated to the specific project 60802

General term	IEC/IEEE 60802 term	Alternate term	Comment
	CSD		Only known in IEEE 802.1
	IEEE 802 EC		No equivalent in a single IEEE WG
Convenor	Convenor/chair of IEC/IEEE 60802 Joint Project	Convenor/co-convenor of IEC/IEEE JWG#	
Director			
Draft Document	Draft IEC/IEEE 60802 document		
Editor	Editor of the IEC/IEEE 60802 Joint Project		
IEC TDM	Technical Department Manager		
IEC TO	IEC Technical Officer		
IEC/IEEE Cooperation Project	IEC/IEEE 60802 Joint Project		
IEEE contact	IEEE contact		IEEE contact for IEC matters
IEEE participants	IEEE 802.1 and IEEE 802.3 participants		
IEEE TG	IEEE 802.1 TSN TG		The host of the IEC/IEEE 60802 joint project in IEEE; could also be a WG or TF
IEEE TG-ballot	IEEE 802.1 TG-ballot	IEEE 802.1 TSN TG-ballot; IEEE draft for comment	Commenting of a draft standard (w/o ballot) before WG ballot.
IEEE WG	IEEE 802.1		One of the IEEE 802 WGs
IEEE WG-ballot	IEEE 802.1 WG-ballot	IEEE 802.3 WG-ballot	WG-ballot
Secretary	IEC SC65C secretary	IEC TC# secretary	Secretary of a TC or SC
the IEC TC/SC	the IEC SC65C		A specific TC or SC

B.2 Numbering scheme

IEC/IEEE 60802 Joint Project used the numbering beginning with 1.0. As the IEC circulated a draft in the original NP before the joint project was established, the [Table B.2](#)~~Table B.2~~ shows the equivalent numbers and dates until this document was published.

Table B.2 – Numbering of IEC CD and IEEE TG documents

IEEE TG	IEEE Doc	IEC CD	IEC document #	Dates
—	PAR CSD	1	65C/875/NP [4] (including draft document),	2017-03-24 to 2017-06-16
			65C/896/RVN [5]	2017-07-14
1.0	TG ballot	1	65C/949/CD [12],	2019-01-25 to 2019-03-22
			IEC -65C/964A/CC [13]	2019-06-07
1.1	TG ballot	2	65C/987/CD [14],	2019-09-20 to 2019-11-15
			65C/994A/CC [15]	2020-06-19
1.2	TG ballot	3	65C/1037/CD [16],	2020-06-19 to 2020-08-14
			65C/1056/CC [19]	2020-09-04
1.3	TG ballot	4	65C/1116/CD [21]	2021-08-27 to 2021-10-22
			65C/1135/CC [22]	2021-10-29
2.01.4	1st initial WG ballot	5	65C/1251/CD [23]	2023-03-17 to -05-12
			65C/1264/CC	2023-06-16
			65C/1264a/CC [24]	2023-07-21
2.12-0	2nd initial WG ballot	65	65C/1273/CD [25]	2023-10-06 to -12-01
			65C/1289/CC [26]	2023-12-15
2.22.1	1st Recirc	CDV	=	2024-02-22 to -03-09
2.32.2	2nd Recirc		65C/1289a/CC [26]	Planned/Achieved Dates see 60802 timeline
3.0	IEEE SA ballot		65C/...../CDV	Planned/Achieved Dates see 60802 timeline
3.1	1st Recirc		=	Planned/Achieved Dates see 60802 timeline
3.2	2nd Recirc		=	Planned/Achieved Dates see 60802 timeline
4.0	RevComm	FDIS	65C/...../FDIS 65C/...../RVD	Planned/Achieved Dates see 60802 timeline
Publication of IEC/IEEE 60802				

Table B.3B3 shows the evolution of the PAR in IEEE for the 60802 joint project.

Table B.3 – PAR in IEEE for the 60802 joint project

PAR	Approval Date	Changes	
<u>Initial PAR</u>	<u>IEEE SASB approved the project in May 2018</u>	=	
<u>PAR extension</u>	<u>????</u>	<u>Extend the publication date to be ????</u>	
<u>1st PAR modification</u>	<u>20 Sep 2022</u>	<u>Scope This standard document defines time-sensitive networking profiles for industrial automation. The profiles select features, options, configurations, defaults, protocols, and procedures of bridges, end</u>	

		<p><u>stations, and LANs to build industrial automation networks. This document also specifies YANG modules defining read-only information available online and offline as a digital data sheet.</u></p> <p><u>Publication Date set from 2022 to 2024</u></p>	
<u>2nd PAR modification</u>	<u>21 Sep 2023</u>	<p><u>Scope: This document defines time-sensitive networking profiles for industrial automation. The profiles select features, options, configurations, defaults, protocols, and procedures of bridges, end stations, and LANs to build industrial automation networks. This document also specifies YANG modules defining read-only information available online and offline as a digital data sheet. This document also specifies YANG modules for remote procedure calls and actions to address requirements arising from industrial automation networks.</u></p> <p><u>Publication Date set from 2024 to 2025</u></p>	

Annex C

History of this document

Revision	Author/Contributor	Status	Comment	Date
rev0	Ludwig Winkel/ Ludwig Winkel	Early Draft	Initial version	2017-09-06
rev1	Ludwig Winkel/Tony Capel	Early Draft		2017-09-28
rev2	Ludwig Winkel/Rudy Belliardi, Jodi Haasz	Early Draft		
rev3			Not circulated	
rev4	Glenn Parson/Jodi Haasz., Janos Farkas	Early Draft		2017-10-27
rev5	Ludwig Winkel/ Ludwig Winkel	Stable Draft	Improvements	2017-11-08
rev6	Ludwig Winkel/ Ludwig Winkel	Stable Draft	Editorials	2018-01-24
Rev7	Ludwig Winkel/ Ludwig Winkel	Revised Draft	Polishing and added Liaison	2019-07-23
Rev8	Ludwig Winkel/ Ludwig Winkel	Revised Draft	Improvements, just an interim revision	2019-11-11
Rev9	Ludwig Winkel/ Jody Haasz/ Stephen Dutnall	Revised Draft	Improvements, updates	2020-08-07
Rev10	Results of the calls with IEC and IEEE staff and IEEE 802. 1and IEC SC65C management	Draft Final 1.0	Improvements, updates	2021-11-07
Rev 10a	Result of a further review	Final 1.0	Improvements, updates	2021-11-08
Rev 10b	Ludwig Winkel, Review document		Improvements, updates	2024-02-14
Rev 11	Result of the review, Jodi Haasz/ Stephen Dutnall, SC65C mgt, IEEE 802.1 Mgt	1.0		

Changes in rev 5 versus rev 4 done by Ludwig:

1. Clause 1: replace the URL by a ref to the Bibliography, so that IEC as well as IEEE sources could be mentioned.
2. Add "Bibliography at the end of the document with references.
3. Clause 1: Add the rationale for FDIS doing after SA-sponsor ballot is finished.
4. Fig 1: Right side deleted "D-Liaison". Wording of the box down.
5. Fig 2: Changed in the IEC part the acronym of comment disposition document from RVC to CC.
6. Edits

Changes in rev 6 versus rev 5 done by Ludwig:

1. Replaced RR by Q and RQ in 4.1.
2. Added acronym RQ in list of acronyms in Annex A.

Changes in rev 7 versus rev 6 done by Ludwig:

1. More information about comment resolution process.
2. Added information about Liaison partnership.

3. Observation regarding meeting fee.

Changes in Rev9 (rev8 was an interim revision) done by Ludwig with contributions from Jodi Haasz (IEEE) and Stephen Dutnall (IEC):

- Stephe's comments to rev8, see email from 2019-11-19.
- Jodi's comments to rev8, see email from 2019-10-07.

Changes in Rev10a done by Ludwig with contributions from IEC and IEEE staff and IEEE 802.1 and IEC SC65C Management:

- IEC CO does not touch the Draft Document before CDV is circulated.
- Improvements on the CDV process so that IEEE MEC also is involved.
- Making the processes and terms generic with a translation list to IEC/IEEE 60802, see new Annex B.
- Comments and corrections from IEC SC65C officers

Changes in Rev 11 (rev10b) done by Ludwig with contributions from IEC and IEEE staff and IEEE 802.1 and IEC SC65C Management:

- Added Figure 14 and Figure 22 to show the differences in the organizational possibilities of a Dual Logo Standard.
- Updated and the ref to .
- Editorial improvements, e.g.
- Change IEC CO to IEC secretariat.
- Changed Secretary to "Secretary of the IEC TC/SC" to be clear versus IEC secretariat.
- Added details in 2.4.6 concerning comment resolution differences in IEEE and IEC.
- Added more details on differences in drafting, see Table 1414.
- Updated Table B.2 Table B.2. Added PAR history.
- Updated Annex C.
- Updated Bibliography

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- [2] ISO/IEC Directives, Part 1:2023¹ + IEC Supplement:2022¹, <available at https://www.iec.ch/members_experts/refdocs/>
- [3] ISO/IEC Directives, Part 2:2021, <available at https://www.iec.ch/members_experts/refdocs/>
- [4] 65C/875/NP, Industrial communication networks – Profiles – Part 6: Time sensitive networking profile for industrial use based on IEEE 802.1 and IEEE 802.3 <available at http://www.iec.ch/cgi-bin/restricted/getfile.pl/65C_875e_NP.pdf?dir=65C&format=pdf&type=_NP&file=875e.pdf (restricted access)>; circulation dates: 2017-03-24 to 2017-06-16
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- [9] IEEE 802.1 PAR for 60802
- [10] IEEE 802.1 CSD for 60802 ...
- [11] IEC/IEEE 60802, *Time-sensitive networking profile for industrial automation*
- [12] 65C/949/CD, First CD of the joint IEC/IEEE 60802 project; circulation dates: 2019-01-25 to 2019-03-22
- [13] 65C/964A/CC, Comment resolution to 65C/949/CD; circulation date: 2019-06-07
- [14] 65C/987/CD, Second CD of the joint IEC/IEEE 60802ED1 project; circulation dates: 2019-09-20 to 2019-11-15
- [15] 65C/994A/CC, Revised Compilation of Comments on 65C/987/CD - IEC 60802 ED1: Time-sensitive networking profile for industrial automation; circulation date: 2020-06-19
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