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**The IEEE 802 / IETF Relationship
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Abstract

This document describes the standardization collaboration between Project 802 of the Institute of Electrical and Electronic Engineers (IEEE 802) and the Internet Engineering Task Force (IETF). This document obsoletes [RFC 4441](#).

Status of this Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

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1. Introduction and Scope

This document provides non-normative guidance to aid in the understanding of collaboration on standards development between Project 802 of the Institute of Electrical and Electronics Engineers (IEEE) and the Internet Engineering Task Force (IETF) of the Internet Society (ISOC). Early identification of topics of mutual interest will allow for constructive efforts between the two organizations based on mutual respect and cooperation.

EDITOR'S NOTE: This version of the draft has references sections that are both incomplete and bogus - I'm showing most of the references as inline hyperlinks. I'll clean this up soon.

2. Guidance on Collaboration

This section describes how existing processes within the IETF and IEEE 802 may be used to enable collaboration between the organizations.

2.1. Organization, Participation and Membership

IEEE 802 and IETF are similar in some ways, but different in others. When working on projects that are of interest to both organizations, it's important to understand these similarities and differences.

2.1.1. IEEE 802 Organization, Participation and Membership

The IEEE Standards Association (IEEE-SA) is the standards setting body of the IEEE. The IEEE-SA Standards Board oversees the IEEE standards development process. IEEE 802 LAN/MAN Standards Committee is a sponsor developing standards for networking under the IEEE-SA Standards Board.

In IEEE 802, work is done in Working Groups operating under an Executive Committee. Most Working Groups have one or more Task Groups. A Task Group is responsible for a project or group of projects. Each Working Group is led by a Working Group Chair.

The Executive Committee is comprised of the Executive Committee Chair, Executive Committee Officers (e.g. Vice-Chairs, Secretaries, Treasurer) and Working Group Chairs.

A good place to to learn more is the IEEE 802 Home Page, at <http://www.ieee802.org/>. An IEEE 802 Orientation for new participants that gives an overview of IEEE 802 process is available from the home page.

The IEEE 802 Executive Committee and all Working Groups meet three times per year at plenary sessions. Plenary sessions are held in March, July and November. Most Working Groups hold interim meetings, usually in January, April and September. The meeting schedule can be found at <http://www.ieee802.org/meeting/index.html>.

A Study Group is a group formed to consider starting a new project and, if new work is found to be suitable, to develop an IEEE Project Authorization Request (PAR - similar in purpose to an IETF working group charter). A Study Group may operate under a Working Group or under the Executive Committee depending on whether the new work under consideration falls within the scope of an existing Working Group. Study Groups are expected to exist for a limited time, usually for one or two plenary cycles, and must be authorized to continue at each

plenary if they have not completed their work.

Participation in IEEE 802 Working Groups is at the level of individuals, i.e. participants are human beings and not companies, and is open. Individuals are required to declare their affiliation (i.e. any individual or entity that financially or materially supports the individual's participation in IEEE 802).

Working Groups maintain membership rosters, with voting membership attained on the basis of in-person meeting attendance. Retention of voting membership generally requires continued attendance and responsiveness to letter ballots. Voting membership allows one to vote on motions and on Working Group Ballots of drafts. All drafts are also balloted by a Sponsor Ballot pool before approval as standards. Joining a Sponsor Ballot pool does not require participation in meetings. One does not need to be a voter to comment on drafts and the Working Group is required to consider and respond to all comments submitted during Working Group and Sponsor ballots.

To foster ongoing communication between IEEE 802 and IETF, it is important to identify and establish contact points within each organization. Contact points on the IEEE side may include:

IEEE Working Group Chair: An IEEE Working Group chair is an individual who is assigned to lead the work of IEEE in a particular area. IEEE Working Group chairs are elected by the Working Group and confirmed by the Executive Committee for a 2 year term. Collaboration here is provides a stable contact point for work between the two organizations for a given topic.

IEEE Task Group (or Task Force) Chair: An IEEE Task Group chair is an individual who is assigned to lead the work on a specific project or group of projects within a Working Group. Task Group Chairs often serve for the duration of a project. Collaboration here is beneficial to ensure that work on a particular project is coordinated.

IEEE Study Group Chair: An IEEE Study Group Chair is an individual assigned to lead consideration of new work and development of an IEEE Project Authorization Request (PAR). Collaboration here is useful for providing input on the scope of new work and to begin coordination.

IEEE Liaisons: It may be beneficial to establish liaisons as additional contact points for specific topics of mutual interest. These contact points should be established early in the work effort. The IEEE and IETF projects may select the same individual as their contact point, but this is not required, so that two individuals each serve as contact points for one project participating in the liaison relationship.

Informal Contact points: Other informal contacts can provide useful collaboration points. These include project editors who are responsible for editing the drafts and work with the Task Group Chairs to lead tracking and resolution of issues. Joint members who are active in both the IEEE and IETF projects in an area can also aid in collaboration.

2.1.2. IETF Organization, Participation and Membership

In the IETF, work is done in working groups (WGs), mostly through open, public mailing lists rather than face-to-face meetings. WGs are organized into areas, each area being managed by two co-area directors. Collectively, the area directors comprise the Internet Engineering Steering Group (IESG).

IETF meets in plenary session three times per year. Some working groups have additional interim meetings, which may be either face-to-face or "virtual", but this is not true for most IETF working groups, at any given time. The goal is to do work on mailing lists, reserving face-to-face sessions for topics that have not been resolved through previous mailing list discussion. Information about plenary meetings is available at <http://www.ietf.org/meeting/upcoming.html>. Information about working group interim meetings is available on the IETF-Announce mailing list (see <http://www.ietf.org/list/announcement.html>) for archives and subscription information).

Participation in the IETF is open to anyone (technically, anyone with access to e-mail sufficient to allow subscription to one or more IETF mailing lists). All IETF participants act as individuals. There are a small number of IETF procedures that recognize organizations that may sponsor IETF participants, but these are organizational and do not apply to the standard specification process itself. There is no concept of "IETF membership".

A good place to to learn more is the IETF Home Page, at <http://www.ietf.org/>, and especially the "About the IETF" page at <http://www.ietf.org/about>, selectable from the IETF Home Page.

To foster ongoing communication between IEEE 802 and IETF, it is important to identify and establish contact points within each organization. Contact points on the IETF side may include:

IETF Area Director: An IETF area director is the individual responsible for overseeing a major focus of activity (an "Area"). These positions are relatively long-term (of several years) and offer the stability of contact points between the two organizations for a given topic.

IETF Working Group Chair: An IETF working group chair is an individual who is assigned to lead the work on a specific task within one particular area. These positions are working positions (of a year or more) that typically end when the work on a specific topic ends. Collaboration here is very beneficial to ensure the actual work gets done.

Other Contact Points: It may be beneficial to establish additional contact points for specific topics of mutual interest. These contact points should be established early in the work effort, and in some cases the contact point identified by each organization may be the same individual.

Note: The current list of IETF area directors and working group chairs can be found in the IETF working group charters, at <http://datatracker.ietf.org/wg/>.

2.1.3. Cultural Differences

It's worth noting that IEEE 802 and IETF have cultures that are similar, but not identical. Some of the differences include:

IEEE 802 Working Groups and IETF Working Groups: Both IEEE 802 and IETF use the term "Working group", but "working groups" means two very different things in the two organizations. IEEE 802 working groups are large, long-lived, and relatively broadly scoped. IEEE 802 working groups are more similar to IETF Areas than to IETF working groups, which tend to be short-lived and narrowly chartered.

Consensus and Rough Consensus: Both organizations make decisions based on consensus, but in the IETF, "consensus" means "rough consensus". In practice, this means that a large part of the community being asked needs to agree. Not everyone has to agree, but if you disagree, you'll need to convince other people of your point of view. If you're not able to do that, you'll be "in the rough" when "rough consensus" is declared.

Rough Consensus and Running Code: David Clark coined the phrase "we believe in rough consensus and running code" in 1992, to explain IETF culture. Although that's not always true today, the existence of "running code" as a proof of feasibility for a proposal often carries weight during technical discussions. IEEE 802 standards may be less amenable to one-off implementation, whether as hardware or as software.

Voting: Both organizations use voting as a decision-making tool, but IEEE 802 uses voting within working groups, while IETF working groups do not. The IESG does ballot documents when considering them for publication, and working group chairs may ask for a "show of hands" or "take a hum" to judge backing for a proposal, but IETF working groups don't vote.

Balance between mailing lists and meetings: Both organizations make use of mailing lists, but IETF working groups really can't get anything done without mailing lists, which is where work can continue between formal meetings. The IETF requires all decisions to be made (or, often in practice, confirmed) on mailing lists - final decisions aren't made in meetings. It's also worth noting that IETF working group sessions are much shorter than IEEE 802 working group sessions - it's not unusual for an IETF working group to meet once or twice in a plenary meeting, for a maximum of two and a half hours per session. Some working groups may not meet at all in plenary, and others may have a single one-hour session.

Interim meetings: Both organizations use interim meetings (between plenary meetings), but this is more common for IEEE 802 working groups than for IETF working groups, which schedule interim meetings on an as-needed basis. While the IETF interim meetings may be face-to-face or virtual, the IEEE 802 interim meetings are face-to-face only. Many IEEE 802 WGs hold regularly interim meetings three times a year in the middle of the intervals between the Plenary meetings. The schedules and location of these meetings are typically known many months in advance.

Remote participation: Because the IETF doesn't make decisions at face-to-face meetings, it's not strictly necessary to attend face-to-face meetings at all! Some significant contributors don't attend most face-to-face IETF meetings, although if you want to find collaborators on a proposal for new work, or solicit backing for your ideas, you'll probably find that easier in a face-to-face conversation,

often in a hallway and sometimes in a bar. IEEE 802 significant contributors almost always attend face-to-face meetings. Participation in IEEE 802 meetings is a condition for WG membership.

Working group autonomy: Both IEEE 802 and IETF allow working groups considerable autonomy (within the documented process) in getting work done. It's worth noting that there may be differences between two IEEE 802 working groups, or between two IETF working groups, in addition to differences between an IEEE 802 working group and an IETF working group.

2.2. Exchange of Information About Work Items

The following sections outline a process that can be used to enable each group to be informed about the other's active and proposed new work items.

2.2.1. How IEEE 802 is informed about active IETF work items

The responsibility is on individual IEEE 802 working groups to review the current IETF working groups to determine if there are any topics of mutual interest. Working group charters and active Internet-Drafts can be found on the IETF web site (<http://datatracker.ietf.org/wg/>). If an IEEE 802 working group identifies a common area of work, the IEEE 802 working group leadership should contact both the IETF working group chair and the area director(s) responsible. This may be accompanied by a formal liaison statement (see [Section 2.6.2](#)).

2.2.2. How IETF is informed about active IEEE 802 work items

IEEE Working Group status reports are published at the beginning and end of each plenary at <http://ieee802.org/minutes> on the IEEE 802 website. Each Working Group includes a list of their active projects and the status.

The charter of an IEEE 802 project is defined in an approved Project Authorization Request (PAR). PARs are accessible in IEEE Standards myProject, at <https://development.standards.ieee.org/my-site>. Access requires an IEEE web account which is free and has no membership requirement.

In myProject, a search on "View Active PARs" for 802 will bring up a list of all active IEEE 802 PARs.

The responsibility is on individual IETF working groups to periodically review the information on the IEEE 802 web site to

determine if there is work in progress of mutual interest.

If an IETF working group identifies a common area of work or a need for coordination, the working group leadership should contact the IEEE 802 Working Group chair and Task Group chair. This may be accompanied by a formal liaison statement (see [Section 2.6.2](#)).

2.2.3. How IEEE 802 is informed about proposed new IETF work items

The IETF maintains a mailing list for the distribution of proposed new work items among standards development organizations. Many such items can be identified in proposed Birds-of-a-Feather (BOF) sessions, as well as draft charters for working groups. The IETF forwards all such draft charters for all new and revised working groups and BOF session announcements to the IETF new-work mailing list. An IEEE 802 mailing list is subscribed to this list. Leadership of the IEEE working groups may subscribe to this IEEE 802 mailing list, which is maintained by the Executive Committee (EC).

Each IEEE 802 Working Group will delegate at least one expert to subscribe to this list and be ready to dispatch any information relevant for their activity. This will enable the IEEE 802 working groups to monitor the new work items for possible overlap or interest to their IEEE 802 working group. It is expected that this mailing list will see a few messages per month.

Each IEEE 802 working group chair, or designated representative, may provide comments on these charters by responding to the IESG mailing list at iesg@ietf.org clearly indicating their IEEE 802 position and the nature of their concern. Plain-text email is preferred on the IESG mailing list.

It should be noted that the IETF turnaround time for new working group charters can be as short as two weeks. As a result, the IETF Announce mailing list should be monitored consistently.

2.2.4. How IETF is informed about proposed new IEEE 802 work items

An IEEE project is initiated by approval of a Project Authorization Request (PAR) which includes a description of the scope of the work. Any IEEE 802 PARs which introduce new functionality are required to be available for review no less than 30 days prior to the Monday of the IEEE 802 plenary session where they will be considered.

IEEE considers Five Criteria when deciding whether to approve new work: Broad Market Potential, Compatibility, Distinct Identity, Technical Feasibility and Economic Feasibility. The criteria are defined in the IEEE 802 LAN/MAN Standards Committee (LMSC) Operations

Manual. The PARs are accompanied by responses on the 5 Criteria.

Each Area Director shall ensure that at least one person is designated to periodically review relevant PAR and 5 Criteria information to determine if there is proposed work of mutual interest.

Any comments on proposed PARs should be submitted to the Working Group chair and copied to the Executive Committee chair by e-mail not later than 5:00 PM Tuesday of the plenary session (in the time zone where the plenary is located).

2.2.5. Other Mechanisms for Coordination

From time to time, IEEE 802 and IETF may agree to use additional mechanisms for coordination between the two groups.

Examples of such mechanism are periodic conference calls between the representatives of the IETF and IEEE 802 leadership teams, and working documents that list the areas of shared interests between the two organizations, status and action items relative to these areas. At the time of writing, such a document was maintained and included about 20 topics being actively discussed, with more expected. Such documentation helps focusing on principles and not trying to design a complete process for each topic.

2.3. Document Access

During the course of IEEE 802 and IETF collaboration, it is important to share internal documents among the technical working groups. In addition, draft standards, Internet Drafts, and RFCs may also be distributed.

2.3.1. IEEE 802 Documentation System

Each IEEE 802 standardization project is assigned to a Working Group (WG) for development. In IEEE 802, the working methods of the WGs vary in detail. The documentation system is one area in which WG operations differ, based on varying needs and traditions. In some cases, the WGs assign the core development to a subgroup (typically known as a Task Group or Task Force), and the documentation procedures may vary among the subgroups as well. Prior to project authorization, or on topics not directly related to development of a standard, the WG may consider and develop documents itself, or using other subgroups (standing committees, ad hocs, etc.).

IEEE 802 also supports Technical Advisory Groups (TAGs) that conduct business and develop documents, although not standards. References

here to WGs apply to TAGs as well.

In addition to allowing IETF participants to access documentation resources within IEEE 802, IEEE 802 can also make selected IEEE 802 documents at any stage of development available to the IETF by attaching them to a formal liaison statement. Although a communication can point to a URL where a non-ASCII document (e.g., Word) can be downloaded, attachments in proprietary formats to an IETF mailing list are discouraged.

2.3.1.1. The role of the IEEE 802 Documentation System in document development

In general, development of standards is IEEE 802 is contribution-driven. Content toward draft standards is submitted to WGs by individual participants, or groups of participants. Content toward other group documents (such as, for example, external communication statements or foundation documents underlying a draft standard) might also be contribution-driven. At some point, the group assembles contributed material to develop group documents, and revision takes place within group meetings or by assignment to editors. For the most part, the contributions toward discussion as well as the group documents (including minutes and other reports) are openly available to the public.

2.3.1.2. Access to internal IEEE 802 Working Group Documents

Many IEEE 802 groups use a documentation system provided by IEEE and known as "Mentor". The list of these groups is available at the IEEE 802 Mentor Home Page: <https://mentor.ieee.org/802>". Mentor has some particularly notable aspects:

EDITOR'S NOTE: We had a suggestion to trim some of this information. Pat to consider and provide revised text.

1. The documentation system is structured and ordered, with documentation tags and unique numbering and revisioning.
2. On-line documentation is available.
3. Generally speaking, the archives are publicly and freely available.
4. Limited search functionality is provided, and publicly-available search engines index the data.
5. The ability to submit documents to Mentor is limited but is generally available to any interested party. An IEEE Account is

required but can be easily and freely established using the IEEE Account Request page, at http://www.ieee.org/go/create_web_account. If submission is protected, the privilege can be requested via the Mentor system (using the "Join group" link on each WG Mentor page) and would typically be granted by the WG documentation manager in a manual approval.

6. Submitted documents are immediately available to the general public at the same instant they become available for consideration by the group.

In most cases, WGs that use the Mentor system use it exclusively, so that any substantive document will be available through the system. In a few cases (for example, the IEEE 802 Executive Committee), document distribution is by multiple means (including an email reflector), so it may be difficult to compile a complete set of documents.

Some WGs do not use the Mentor system. In this case, documents are nevertheless generally publically available and indexed. Typically, the index may be presented via a human-managed web site. In such cases, the contributions may be submitted via email to a document manager, so they may not be immediately available to the public. For WGs not using the Mentor system, it should be relatively straightforward to find documents of interest by reviewing the group's main web page. These web page addresses follow this convention: the IEEE 802.1 main web page is at <http://ieee802.org/1>, while the IEEE 802.11 main web page is at <http://ieee802.org/11> - in other words, the one-digit or two-digit numerical designation for the WG or TAG appears as the "path" in the URL.

In some cases, links to documents may be available only by reviewing the WG or subgroup meeting minutes.

2.3.1.3. Submission of Contributions to IEEE 802 Working Groups

IEEE 802 Working Groups are open to contribution. In many cases, a WG or subgroup will issue a call for contributions with a specific technical solicitation, including deadlines and submission instructions. Some groups maintain specific submission procedures and specify a contribution cover sheet to clarify the status of the contribution.

2.3.1.4. Access to IEEE 802 Working Group Drafts

The IEEE owns the copyright to draft standards developed within IEEE standardization projects. As a result, such drafts are never made

publicly available. The IEEE-SA grants permission for an IEEE draft standard to be distributed without charge to the participants for that IEEE standards development project. Typically, such distribution is on the Internet under password protection, with the password provided to members of the participating WG. Requests to the relevant WG chair for access to a draft for purposes of participation in the project are typically granted.

2.3.1.5. Access to IEEE 802 Standards

IEEE standards, once approved, are published and made available for sale. They can be purchased from the IEEE Standards Store, at <http://www.techstreet.com/ieeegate.html>. They are also available from other outlets, including the IEEE Xplore digital library, at <http://ieeexplore.ieee.org>.

The Get IEEE 802 program, at <http://standards.ieee.org/about/get>, grants public access to download individual IEEE 802 standards at no charge. IEEE 802 standards are added to the Get IEEE 802 program six months after publication.

2.3.2. Access to IETF Documents

IETF Internet-Drafts may be located using IETF "Datatracker" interface at <https://datatracker.ietf.org>, or via the IETF tools site at <http://tools.ietf.org>. RFCs may be located at either of the above, or at via the RFC Editor site at <http://www.rfc-editor.org>.

It should be recognized that the official/authoritative versions of all IETF documents are in ASCII.

2.4. Participation in Document Review and Approval

EDITOR'S NOTE: we discussed moving part of this section to Expert Review. That's not a small change, so I'll wait until people have a chance to think about it, before proposing text.

During the course of IEEE 802 and IETF collaboration, it is important for technical experts to review documents of mutual interest and, when appropriate, to provide review comments to the approving body as the document moves through the approval process.

2.4.1. IEEE 802 draft review and balloting processes and opportunities for IETF participation

IEEE 802 drafts are reviewed and balloted at multiple stages in the draft. Any ballot comments received from non-voters before the close of the ballot are required to be considered in the comment resolution

process.

IEEE 802 draft reviews and ballots sometimes produce a large volume of comments. In order to handle them efficiently, spreadsheets or a comment database tool are used. It is highly recommended that balloters and others submitting comments do so with a file that can be imported into these tools. A file with the correct format is normally referenced in the ballot announcement or can be obtained from the Editor, Task Group Chair or Working Group Chair responsible for the project. Comments on a draft should be copied to the Editor, Task Group Chair and Working Group Chair.

2.4.1.1. Task Group Review

During draft development, informal task group reviews (task group ballots) are conducted. Though these are called "ballots" by some Working Groups, the focus is on collecting and resolving comments on the draft rather than on trying to achieve a specific voting result.

2.4.1.2. Working Group ballot

Once the draft is substantially complete, Working Group ballots are conducted. Working Group voting members are entitled and required to vote in Working Group ballots. Any disapprove votes are required to be accompanied by comments that indicate what the objection is and a proposed resolution. Approve votes may also be accompanied by comments. The comments submitted with a disapprove vote may be marked to indicate which comments "be satisfied" to change the vote.

Initial Working Group ballots are at least 30 days. Recirculation ballots to review draft changes and comment resolutions are at least 10 days.

2.4.1.3. Sponsor Ballot

When a draft has successfully completed Working Group ballot, it proceeds to Sponsor ballot. One may participate in IEEE 802 Sponsor Ballots with an individual membership in the IEEE Standards Association (IEEE-SA) or by paying a per-ballot fee. (See IEEE-SA membership.) Participants are also required to state their affiliation and the category of their relationship to the scope of the standards activity (e.g. producer, user, general interest).

Note to the reader: The yearly cost of membership in the IEEE-SA is generally about the same or less as the per-ballot fee, so it is generally more economical to join the IEEE-SA.

Information about IEEE-SA membership can be found at

<http://standards.ieee.org/membership/>

Sponsor ballot is a public review. An invitation is sent to any parties known to be interested in the subject matter of the ballot. One can indicate interest in IEEE myProject. An IEEE web account freely available, and is required for login. To select interest areas, go to the Projects tab and select Manage Activity Profile and check any areas of interest. IEEE 802 projects are under Computer Society; LAN/MAN Standards Committee.

The Sponsor Ballot pool is formed from those that accept the invitation during the invitation period.

Editor's note: add URL for myProject is development.standards.ieee.org to references.

Any "disapprove" votes are required to be accompanied by comments that indicate what the objection is, along with a proposed resolution. Approve votes may also be accompanied by comments. The comments submitted with a disapprove vote may be marked to indicate which comments need to "be satisfied" for the commenter to change the vote from "disapprove".

Initial Sponsor ballot are open for at least 30 days. Recirculation ballots to review draft changes and proposed comment resolutions are at least 10 days.

Editor's note: check that all groups accept the same file format and try to find a place to post a blank .CSV file for download. Pat's action

2.4.2. IETF draft review and balloting processes and opportunities for IEEE 802 participation

The IETF Working Group Process is defined in [BCP-25](#). The overall IETF standards process is defined in [BCP-9](#).

As noted in <cultdiff>, IETF working groups do not "ballot", but the IESG does, as part of considering documents for approval.

Technical contributions are welcome at any point in the IETF document review and approval process, but there are some points where contribution is more likely to be effective.

1. When a working group is considering adoption of an individual draft. Adoption is often signaled on the working group's mailing list.

2. When a working group issues a "Working Group Last Call" ("WGLC") for a draft. Although this is not a mandatory step in the document review and approval process for Internet-Drafts, most IETF working groups do issue WGLCs for most working group documents. WGLC would be signaled on the working group's mailing list.
3. When the Internet Engineering Steering Group issues an "IETF Last Call" ("Last Call") for a draft. This is similar in spirit to WGLC, but is a request for review and approval that is addressed to the larger IETF community. IETF Last Call is signaled on the IETF-Announce Mailing List, and comments and feedback are ordinarily directed to the IETF Discussion Mailing List.

In practice, earlier input is more likely to be effective input. IEEE 802 participants who are interested in work within the IETF should be monitoring that work and providing input long before Working Group Last Calls and IETF Last Calls, for best results.

Some IETF working group charters direct the working group to communicate with relevant IEEE 802 task groups.

2.5. Expert Review Processes

With the number of areas of cooperation between IEEE 802 and IETF increasing, the document review process has extended beyond the traditional subjects of SMI MIB modules and AAA described in [[RFC4441](#)]. The IESG members use expert reviews as a means to solicit the opinion of specialized experts on specific aspects of documents in IESG review (examples include security, MIB doctors, or congestion management reviews). Area Directors may also require expert reviews from IEEE 802 or IEEE 802 Working Groups when it becomes clear that the Internet-Draft has implications for some area of IEEE 802's responsibility and expertise.

IETF participants can comment as part of the IEEE 802 ballot process, regardless of their voting status within IEEE 802. Comments must be composed in the format specified for the ballot, and submitted by the ballot deadline.

2.6. Liaison Officials/Liaison Managers and Liaison Statements

EDITOR'S NOTE: This section is written mostly from an IETF perspective. If there are helpful things to say about IEEE 802 liaison processes, that would be great to add. :-)

Both IEEE 802 and IETF work best when people participate directly in work of mutual interest, but that's not always possible, and

individuals speaking as individuals may not provide effective communication between the two SDOs. From time to time, it may be appropriate for a technical body in one SDO to communicate as a body with a technical body in the other SDO. This section describes the mechanisms used to provide formal communication between the two organizations, should that become necessary.

The Internet Architecture Board (IAB) is responsible for liaison relationship oversight for the IETF.

The reader should note that the role of a liaison official (called a "Liaison Manager" in the IETF) in both IEEE 802 and IETF is not to "speak for" the appointing organization. A liaison official is most helpful in insuring that neither organization is surprised by what's happening in the other organization, helping to identify the right people to be talking to in each organization, and making sure that formal liaison statements don't "get lost" between the two organizations. The IAB's guidance to liaison managers is available in <http://tools.ietf.org/html/rfc4691>.

2.6.1. Liaison Officials/Liaison Managers

The IAB appoints IETF Liaison Managers using the process described in <http://tools.ietf.org/html/rfc4052>. The current list of the IETF's liaison relationships, and the liaison officials responsible for each of these relationships is available at <http://www.ietf.org/liaison/managers.html>.

2.6.2. Liaison Statements

The IETF process for sending and receiving liaison statements is defined at <http://tools.ietf.org/html/rfc4053>.

3. Mailing Lists

All IETF working groups and all IEEE 802 Working Groups have associated mailing lists. Most IEEE 802 Task Groups also have mailing lists, but in some cases, e.g. the IEEE 802.1 Working Group, the Working Group mailing list is used for any Task Group matters.

In the IETF, the mailing list is the primary vehicle for discussion and decision-making. It is recommended that IEEE 802 experts interested in particular IETF working group topics subscribe to and participate in these lists. IETF WG mailing lists are open to all subscribers. The IETF working group mailing list subscription and archive information are noted in each working group's charter page.

In IEEE 802, mailing lists are typically used for meeting logistics, ballot announcements, reports and some technical discussion. Most decision making is at meetings, but in cases where a decision is needed between meetings, it may be done over the mailing list. Most technical discussion occurs at meetings and by generating comments on drafts which are compiled with responses in comment resolution documents.

Most IEEE 802 mailing lists are open to all subscribers. For the few IEEE 802 mailing lists that are not open, please see the working group chair to arrange for access to the mailing list.

4. Cross-Referencing Documents in IEEE 802 and IETF

IETF and IEEE 802 each recognize the standards defined by the other and therefore do not have issues with cross-referencing each other's standards.

IETF specifications may reference IEEE 802 work in progress, but these references would be labeled as "Work in Progress", and if the references are Normative, this would block publication of the referring specification until the reference is available in a stable form.

IEEE standards may reference non-expired Internet-Drafts, but this should be avoided if at all possible.

EDITOR'S NOTE: The plan used to be that IETF Internet-Drafts expired after 6 months, AND WERE NO LONGER RETRIEVABLE - but now, expired drafts are still available without a subpoena. Do we think Internet-Drafts now qualify for IEEE 802 use? We'll talk ...

When an IEEE Standard is revised, it normally retains the same number and the date is updated. Therefore, IEEE Standards are dated with the year of approval, e.g IEEE Std 802.1Q-2011. There are two ways of referencing IEEE Standards: undated and dated references. IEEE practice allows undated reference to be used when referencing a whole standard. An undated reference indicates that the most recent version of the standard should be used. A dated reference refers to a specific revision of an IEEE standard. Since clauses, subclauses, tables, figures, etc. may be renumbered when a standard is revised, a dated reference should be used when citing specific items in a standard.

Informative references in IEEE Standards are placed in a bibliography, so may point to either approved IETF standards or IETF Internet-Drafts, if necessary.

5. Protocol Parameter Allocation

Both IEEE 802 and IETF maintain registries of assigned protocol parameters, and some protocol parameters assigned in one organization are of interest to the other organization. This section describes the way each organization registers protocol parameters.

5.1. IANA

The IETF uses the Internet Assigned Numbering Authority (IANA) as a central authority that administers registries for protocol parameter allocations. The overarching document describing this is [RFC 5226](#). [RFC 5342](#) discusses use of IEEE 802-specific IANA parameters in IETF protocols and specifies IANA considerations for allocation of code points under the IANA OUI (Organizationally Unique Identifier).

5.2. IEEE Registration Authority

EDITOR'S NOTE: This section is focused on one (important) specific example - we need text that describes the RAC and general operation first. We have asked Glenn Parson to provide text here.

EtherType Allocation - The IEEE Registration Authority (IEEE RA) assigns Ethertypes with oversight from the IEEE Registration Authority Committee (IEEE RAC). (See <http://standards.ieee.org/develop/regauth/ethertype/>.) Some IETF protocol specification make use of Ethertypes. All EtherType requests are subject to review by a consultant to the IEEE RA followed by IEEE RAC confirmation.

Since Ethertypes are a fairly scarce resource, the IEEE RAC will not assign a new EtherType to a new IETF protocol specification until the IESG has approved the protocol specification for publication as an RFC. In exceptional cases, the IEEE RA is willing to consider "early allocation" of an EtherType for an IETF protocol that is still under development as long as the request comes from, and has been vetted by, the IESG.

To let the IEEE RAC know that the IESG has approved the request for an Ethernet assignment for an IETF protocol, all future requests for assignment of Ethertypes for IETF protocols will be made by the IESG.

Note that playpen Ethertypes have been assigned in IEEE 802 [1] for use during protocol development and experimentation.

[1] IEEE Std 802a-2003 (Amendment to IEEE Std 802-2001). IEEE standard for Local and Metropolitan Area Networks: Overview and Architecture -- Amendment 1: Ethertypes for Prototype and Vendor-

Specific Protocol Development.

While a fee is normally charged by IEEE 802 for the allocation of an EtherType, IEEE 802 will consider waiving the fee for allocations relating to an IETF standards track document, based on a request from the IESG.

5.3. IEEE Registration at IEEE working group level

Need text here - don't need to say much about this, but do need to say that these registrations exist.

5.4. Pointers to Additional Useful Information

This section provides pointers to additional useful information for participants in IEEE 802 and IETF.

5.4.1. IEEE 802 Information that may be useful to IETF participants

IEEE Home Page: <http://ieee802.org/>

IEEE 802 policies and procedures: <http://ieee802.org/devdocs.shtml>

5.4.2. IETF Information that may be of use to IEEE 802 participants

Information on IETF procedures may be found in the documents in the informative references, and URLs below.

Note: RFCs do not change after they are published. Rather, they are either obsoleted or updated by other RFCs. Such updates are tracked in the rfc-index.txt file.

Current list and status of all IETF RFCs:
<ftp://ftp.ietf.org/rfc/rfc-index.txt>

Current list and description of all IETF Internet-Drafts:
<ftp://ftp.ietf.org/internet-drafts/1id-abstracts.txt>

Current list of IETF working groups and their Charters:
<http://www.ietf.org/dyn/wg/charter.html> (includes area directors and chair contacts, mailing list information, etc.)

Current list of registered BOFs: <http://trac.tools.ietf.org/bof/trac/>

RFC Editor pages about publishing RFCs:
<http://www.rfc-editor.org/index.html> (including available tools and lots of guidance) <http://www.rfc-editor.org/pubprocess.html> is particularly helpful.

Current list of liaison statements:

<https://datatracker.ietf.org/liaison/>

IETF Intellectual Property Rights Policy and Notices:

<http://www.ietf.org/ipr/>

The Tao of the IETF: <http://www.ietf.org/tao.html> (A Novice's Guide to the Internet Engineering Task Force)

6. IANA Considerations

This document requests no actions by IANA.

7. Security Considerations

Documents that describe cooperation procedures, like this one, have no direct Internet security implications.

8. Acknowledgements

This document borrows massive amounts of text, including much of its structure, from [[RFC6756](#)]. Additional text was borrowed from [[RFC4441](#)]. We are grateful to the authors and editors of both these predecessor documents.

This document was assembled by a drafting team of participants from both IEEE 802 and IETF. The drafting team members were Dan Romascanu, Dorothy Stanley, Eric Gray, Patricia Thaler, Roger Marks, Ross Callon, Spencer Dawkins, and Subir Das.

We also thank Bernard Aboba for providing review comments.

9. References

9.1. Normative References

- [RFC5226] Narten, T. and H. Alvestrand, "Guidelines for Writing an IANA Considerations Section in RFCs", [BCP 26](#), [RFC 5226](#), May 2008.
- [RFC6756] Trowbridge, S., Lear, E., Fishman, G., and S. Bradner, "Internet Engineering Task Force and International Telecommunication Union - Telecommunication Standardization Sector Collaboration Guidelines", [RFC 6756](#), September 2012.

9.2. Informative References

- [RFC4441] Aboba, B., "The IEEE 802/IETF Relationship", [RFC 4441](#), March 2006.

[Appendix A](#). Current examples of this relationship

[A.1](#). MIB Review

Historically the MIB modules for IEEE 802.1 and IEEE 802.3 were developed in the IETF Bridge MIB and Hub MIB Working Groups respectively. With travel budgets under pressure, it has become increasingly difficult for companies to fund employees to attend both IEEE 802 and IETF meetings. As a result, an alternative was found to past arrangements that involved chartering MIB work items within an IETF WG by transferring the work to IEEE 802 with expert support for MIB review from the IETF. In order to encourage wider review of MIBs developed by IEEE 802 WGs, it is recommended that MIB modules developed in IEEE 802 follow the MIB guidelines [[RFC4181](#)]. An IEEE 802 group may request assignment of a 'MIB Doctor' to assist in a MIB review by contacting the IETF Operations and Management Area Director.

By standardizing IEEE 802 MIBs only within IEEE 802 while utilizing the SNMP quality control process, the IETF and IEEE 802 seek to ensure quality while decreasing overhead. The process of transfer of the MIB work from the IETF to IEEE 802 is documented in [[RFC4663](#)] and in [I-D ETHERNET-MIB-TRANSFER].

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