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Handling of Internet Drafts by IETF Working Groups
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Abstract

The productive output of an IETF working group is documents, as mandated by the working group's charter. When a working group is ready to develop a particular document, the most common mechanism is for it to "adopt" an existing document as a starting point. The document that a working group adopts and then develops further is based on initial input at varying levels of maturity. An initial working group draft might be a document already in wide use, or it might be a blank sheet, wholly created by the working group, or it might represent any level of maturity in between. This document discusses how a working group typically handles the formal documents that it targets for publication.

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1. Introduction

The productive output of an IETF working group is documents, as mandated by the working group's charter. Working groups develop these documents based on initial input of varying levels of maturity. An initial working group draft might be a document already in wide use, or it might be a blank sheet, wholly created by the working group, or it might represent any level of maturity in between. This document discusses how a working group typically handles the formal documents that it targets for publication. The discussion applies only to the IETF and does not cover IRTF groups, where practices vary widely.

Within the general constraints of formal IETF process and the specific constraints of a working group's charter, there can be considerable freedom in the adoption and development of drafts. As with most IETF activities, the ultimate arbiter of such choices is working group agreement, within the constraints of its charter. As

with most working group management, this agreement might be explicit or implicit, depending upon the efficiencies that the group deems appropriate.

NOTE: This draft is intentionally non-normative. It is meant as a guide to common practice, rather than as a formal definition of what is permissible.

1.1. What is a Working Group Draft?

Working Group drafts are documents that are subject to IETF Working Group revision control, with advancement for publication as an RFC requiring rough consensus in the working group and then in the broader IETF. Creation or adoption of a draft by a working group -- as well as substantive changes to the document -- need to represent working group rough consensus.

Documents under development in the IETF community are distributed as Internet Drafts (I-D) [RFC2026], [ID-Info]. Working groups use this mechanism for producing their official output, per Section 7.2 of [RFC2418] and Section 6.3 of [Tao]. The common convention for identifying an I-D formally under the ownership of a working group is by the inclusion of "ietf" in the second field of the I-D filename and the working group name in the third field, per Section 7 of [ID-Guidelines]. That is:

draft-ietf-<wgname>-...

In contrast, individual submissions are drafts being created and pursued outside of a working group, although a working group might choose to adopt the draft later, as discussed below. Anyone is free to create an individual submission at any time. Such documents are typically distinguished through the use of the author/editor's last name, in the style of:

draft-<lastname>-...

(Also see Section 5.1 for an elaboration on this naming.)

Responsibility for direct revision of a working group I-D is assigned to its editors and authors. See Section 3 for discussion about their selection and role.

1.2. Working Group Authority and Consensus

A premise of the IETF is that, within a working group, it is the working group itself that has final authority over the content of its documents, within the constraints of the working group's charter. No

individual has special authority for the content. The chairs assign document authors/editors and can formulate design teams, but the content of working group documents is always, ultimately, subject to working group approval. Approval is described in terms of the IETF's "rough consensus" construct, which is the prime example of the IETF's preference for pragmatics over niceties. Unanimous agreement is always desirable, but more approximate (rough) agreement will suffice, as long as it is clear and strong.

Other than for selection of document authors/editors, as discussed in Section 3, working group decision-making about document management is subject to normal IETF rough consensus rules. Useful descriptions of this process for a working group are in Section 3.3 of [RFC2418] and Section 4.2 of [Tao]. Discussion of the nature of rough consensus can be found in [Consensus].

In terms of the IETF's formal rough consensus processes, the working group explicitly develops, modifies, reviews, and approves document content, according to overt rough consensus. For difficult topics and/or difficult working group dynamics, this laborious process really is essential. Its diligence validates progress at each step along the way. However working groups often handle simpler matters more simply, such as allowing a Chair to assert the likely agreement and then merely call for objections. Ultimately, the mode of working group decision making is determined by the comfort and engagement of the working group with the way the decisions are being made.

At times, a document author/editor can appear to have considerable authority over content, but this is (merely) for efficiency. That is, the chairs can permit authors and editors to proceed with an implied (default) working group agreement, as long as the working group is comfortable with that mode. Of course the benefit in the mode is efficiency, but its risk is failure to retain or verify actual consensus among the working group participants. When a working group is operating in the mode of active, direct author/editor content development, an easy validation method is simply to have chairs query the working group when a new document version appears, asking for comments and concerns.

In general when it is not completely obvious what the opinion of the working group is, working group chairs can poll the working group to find out. As with any other consensus question, the form in which it is asked can make a difference. In particular, a general 'yes/no' question often is not as helpful as asking supporters and detractors of a draft -- or of the decision under consideration -- to provide their reasons, not merely their preferences. In effect, this treats the matter of consensus as an on-going discussion. Ideally the

discussion can produce changes in the document or in participant views, or both.

1.3. Questions Considered in This Document

The purpose of this document is to discuss the criteria and sequence typically followed when adopting and developing a formal IETF working group document. Therefore, this document considers the following questions that are particularly relevant to working group chairs who are charged with running the process:

* How do working group chairs decide which drafts to adopt and when?
* Is it necessary to poll the working group explicitly, and what does a working group poll look like?
* How do working group chairs make the decision?
* What are the process steps the working group will choose to use, for an I-D to become a WG I-D?
* Are there any special cases?
* Can a document be created as a WG I-D from scratch?
* How can competing drafts be handled?
* Can an Individual I-D be under the care of a WG?
* Can a WG I-D become an Individual I-D?

2. Adoption Sequence

2.1. Common Steps

When there is interest in adopting a document as a new working group document, the chairs often:

1. Remind current draft owners that they are transferring change control for the document to the IETF. (This is a particularly significant point for a document covered by proprietary interests, which typically entails a negotiation between the current owners and the IETF, including a formal agreement.)

2. Check for known IPR that needs to be disclosed, using some technique like those described in [RFC6702]

3. Obtain working group rough consensus.

4. Choose document editors.

5. Chairs instruct authors to post WG I-D.

6. Chairs approve posting.[Approval]

7. Chairs ensure that the non-working group version of the draft is marked as being replaced by this working group version.

8. Everyone enjoys the ensuing working group discussion...

2.2. Criteria for Adoption

No formal specification for working group 'adoption' of a draft exists; the current document is meant to provide a description of common activities for this, but again note that it is not normative.

There are some basic considerations when deciding to adopt a draft:

* Is there a charter milestone that explicitly calls for such a document?

* Is the topic of the I-D within scope for the working group?

* Is the purpose of the draft sufficiently clear?

* Does the document provide an acceptable platform for continued effort by the working group?

* What are the process or technical objections to adoption of the draft?

* Is the draft likely to be completed in a timely manner?

* Does the intended status of the document seem reasonable to the working group?

* If not already in scope, is a simple modification to the charter feasible and warranted?

* Does the draft carry known intellectual property rights issues?

* Is there strong working group support for working on the draft?

Adoption has some basic pragmatics:

Rough consensus: Working group agreement to adopt is not required to be unanimous. [RFC2418]

Initial, not final: The writing quality is not required to be ready-for-publication, although writing quality can be a problem and does need explicit attention; although not mandatory, it is good practice to check whether a new working group draft passes [IDNITS].

Adoption, not approval: The document is not required to already contain a complete and/or sufficient solution, although of course this can be helpful. Equally, adoption by a working group does not guarantee publication of the document as an RFC.

Group, not chairs: Concerning the draft, the position of the working group chairs has no special authority, except to assess working group consensus.

REMINDER: Once a working group adopts a draft, the document is owned by the working group and can be changed however the working group decides, within the bounds of IETF process and the working group charter. Absent explicit agreement, adopting a document does not automatically mean that the working group has agreed to all of its content. So a working group (or its charter) might explicitly dictate the basis for retaining, removing or modifying some or all of a draft's content, technical details, or the like. However in the absence of such constraints, it is worth having the adoption process include a sub-process of gathering working group concerns about the existing draft and flagging them explicitly.

3. Authors/Editors

Document authors/editors are chosen by the working group chairs. Authors are described in Section 6.3 of [RFC2418]. Authors and editors are described in [RFC-Auth-Ed].

NOTE: In this document, the terms 'author' and 'editor' are meant interchangeably. Within the IETF the distinction between an 'editor' and an 'editor' is, at best, subjective. A simplistic rule of thumb is that editors tend to do the mechanics of incorporating working group detail, whereas authors tend to create the detail, subject to working group approval. That is, one role

is more active with the content and the other is more passive. It is a responsibility of the working group chairs to ensure that document authors make modifications in accord with working group rough consensus. Authors/editors are solely chosen by the chairs -- although the views of the working group should be considered -- and are subject to replacement for a variety of reasons, as the chairs see fit.

For existing documents that are being adopted by a working group, there is a special challenge in the selection of document editors: The document has already had editors. So the question is whether the same people are appropriate for continuing the task? Sometimes the answer is yes, but this is not automatic. The process within an IETF working group can be quite different from the process that created previous versions. This well might make it appropriate to select one or more new editors, either as additions to the editor team or as primary pen-holders (effectively re-classifying the previous team as co-authors).

If the original editors are to continue in their role, the chairs might want to ensure that the editors understand IETF working group process; it is likely to be quite different from the process that developed earlier versions of the document. If additional or new editors are assigned, the transition can be discussed, including its reasons; this is best done as soon as possible.

4. Document History and Stability

Working group charters sometimes specify an initial set of existing documents to use as a basis of the working group's activities. That 'basis' can vary considerably, from simple input to working group discussion, all the way to an advanced draft adopted by the working group and subject only to minimal changes. The role of a document should be explicitly stated in the charter.

Within the scope of its charter, a working group is free to create new documents. It is not required that all drafts start as the effort of an individual. Of course the criteria for brand new documents are likely to be the same as for those imported into the working group with the additional and obvious requirement that the working group chairs will need to appoint authors/editors before any work can progress. Note that from time to time a working group will form a design team to produce the first version of a working group draft. Design teams are discussed in Section 6.5 of [RFC2418].

Work that is brought to the IETF has different levels of completeness and maturity, and different timings for having achieved those levels.

When the IETF charters a group and includes existing material, the charter can cast the role of that material in very different ways:

* It can treat it as no more than a set of ideas, to be used or ignored;

* It can treat it as a basic design, with all of the actual details still fluid;

* It can treat it as a rough draft, subject to extensive revision;

* It can treat it as a solid specification that merely needs review, refinement and maybe enhancement;

* It can treat it as a deployed technology that is best served by trying to protect its installed base, but with some tolerance for changes that affect interoperability;

* It can treat it as a deployed technology for which protecting the installed base is essential, including retention of core interoperability.

These suggest a wide range of possible constraints on working group effort. Technology is brought to the IETF at different points of maturity along its lifecycle and the nature of the technology can have widely varying utility in developing an Internet standard.

When technology is brand new, with at most some prototypes done as proofs of concept, then significant changes to the specification will not necessarily add much to the development and deployment costs. However when the technology is already part of a mature and extensive operational deployment, incompatible changes are likely to be problematic for that market, which can hinder adoption of the changes. For example, immediately after the development investment is made -- and especially when there has been considerable initial deployment -- but still room for quite a bit more -- the installed and potential base might not take kindly to disruptive standards work that undermines their recent investment.

Conversely, even a deployed technology with a solid base might be inappropriate to deploy at Internet scale, and while a document specifying such a technology might serve as a good starting point on which to base a new specification, undermining of the deployed base might be completely appropriate.

In reflecting upon the basis for adopting an existing draft and the way it will be used by the working group, it is important to consider the document's place in its lifecycle, the needs of any installed base, and the applicability of the draft's technology, when deciding on the constraints to impose on document development. It will all depend on the constraints of the charter and the analysis of the working group.

5. Some Issues for Consideration

5.1. Individual I-Ds Under WG Care

Sometimes, a working group facilitates a draft, but does not own it or formally adopt it. These are "individual" drafts [Individual].

As noted in Section 1.1 and reinforced in [ID-Guidelines], the convention for identifying an I-D formally under the ownership of a working group is by following the naming convention:

draft-ietf-<wgname>-...

By contrast, documents that are still under the control of their authors are known as "individual" I-Ds. When these documents are intended for consideration by a specific working group, the convention is that the document uses the naming convention as follows where the second element is the last name of one of the principal authors.

draft-<lastname>-<wgname>...

Having the working group name following the personal name allows tools to associate these drafts with the working group, even though the filename identifies them as the work of individuals.

The working group can choose to apply any of its normal, internal working group process management mechanisms to an Individual I-D. However matters of ownership, working group final approval, and the like are all subject to negotiation amongst the document authors, working group and area directors.

This is a rare situation and working group chairs can be assured that the Area Directors will want to understand why the document could not be adopted and owned by the working group.

5.2. WG Drafts Can become Individual Drafts

A working group is not obligated to retain documents it has adopted. Sometimes working group efforts conclude that a draft is no longer appropriate for working group effort. If a working group drops a draft then anyone is permitted to pursue it as an Individual or Independent Submission, subject to the document's existing copyright constraints.

5.3. Competing Drafts

Engineering for interesting topics often produces competing, interesting proposals. The reasons can be technical aesthetics, engineering tradeoffs, architectural differences, company economics and the like. Although it is far more comfortable to entertain only one proposal, a working group is free to pursue more than one. Often this is necessary until a clear preference develops. Sometimes, multiple versions are formally published, absent consensus among the alternatives.

It is appealing to ask authors of competing proposals to find a way to merge their work. Where it makes sense to do this, it can produce a single, strong specification. The detailed discussions to merge are often better held in a design team than amidst the dynamics of an open working group mailing list. The working group has ultimate authority over any decisions, but it is not required that it be involved in all the discussions.

On the other hand, some differences cannot be resolved and attempting a merge can produce a weaker result. An example of this problem of conflicting design goals is discussed in [Heli-Sub], noting:

> "Helicopters are great, and so are submarines. The problem is that if you try to build one vehicle to perform two fundamentally different jobs, you're going to get a vehicle that does neither job well."

Various management efforts can facilitate the handling of competing proposals. Some examples include:

* Develop a requirements document that is independent of specific proposals; this can highlight features that are deemed essential, from those that are of secondary importance, and facilitate a discussion about features without reference to specific proposals.

* Develop a comparison table of the proposals; this can aid understanding of their differences.

* Discuss the relative importance and effects of having one proposal, versus multiple; this can focus people's efforts at compromise and encourage a willingness to choose a single proposal.

The problem of competing drafts can be particularly painful when it arises in either of two circumstances:

* If a second proposal appears as a new draft, just as the chairs were ready to poll the working group on adoption of the draft containing the first proposal, then the authors of the first proposal could feel affronted. It does not follow that the second draft was written to be difficult or derail the first: it might even include better ideas. So it is best not to disregard it. However, automatically asking the authors to merge their work will not necessarily produce a more solid solution and will not guarantee faster progress. This situation will be a judgement call in each case, and it might help to ask the working group for their opinion: shall the working group adopt one document as a starting point and fold in the ideas from the second under the control of consensus, or shall the working group wait until the authors of both documents have reached agreement?

* If the working group has already adopted an I-D on a specific topic, the posting of a new individual I-D on the same topic could be seen as an attack on the working group processes or decisions. However, posting an I-D is often a good way to put new ideas into concrete form, for public consideration and discussion. The working group chairs will want to encourage the working group to consider the new proposal. Shall it be adopted and entirely replace the current working group draft? Shall the new ideas be incorporated into the work of the working group through the normal editorial process? Shall the working group adopt a second competing solution? Or shall the new draft be rejected and not adopted by the working group?

6. Security Considerations

Beyond the credibility of the IETF, this document raises no security concerns.

7. Acknowledgements

This draft was developed from an IETF tutorial given by A. Farrel. L. Anderson contributed useful comments.

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Appendix A. IANA Considerations

There are no requests for IANA.

The RFC Editor should remove this section.

Appendix B. Acknowledgements

This document was based on a presentation made at an IETF Working Group Chairs lunch. [Farrel-Chairs])

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