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The RFC Series and RFC Editor

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Abstract

This document describes the framework for an RFC Series and an RFC Editor function that incorporate the principles of organized community involvement and accountability that has become necessary as the Internet technical community has grown, thereby enabling the RFC Series to continue to fulfill its mandate.

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1. Introduction

The first Request for Comments (RFC) document was published in April of 1969 as part of the effort to design and build what we now know of as the Internet. Since then, the RFC Series has been the archival series dedicated to documenting Internet technical specifications, including both general contributions from the Internet research and engineering community as well as standards documents.

As described in the history of the first 30 years of RFCs ([RFC2555]), the RFC Series was created for the purpose of capturing the research and engineering thought that underlie the design of (what we now know of as) the Internet. As the Internet Engineering Task Force (IETF) was formalized to carry out the discussion and documentation of Internet standards, IETF documents have become a large part (but not the entirety) of the RFC Series.

As the IETF has grown up and celebrated its own 20 years of history, its requirements for archival publication of its output have changed and become more rigorous. Perhaps most significantly, the IETF must be able to define (based on its own open consensus discussion processes and leadership directions) and implement adjustments to its publication processes.

At the same time, the Internet engineering and research community as a whole has grown and come to require more openness and accountability in all organizations supporting it. More than ever, this community needs an RFC Series that is supported (operationally and in terms of its principles) such that there is a balance of:

- expert implementation;
- clear management and direction -- for operations and evolution across the whole RFC Series (whether originating in the IETF or not); and
- appropriate community input into and review of activities.

Today, there is confusion and therefore sometimes tension over where and how to address RFC issues that are particular to contributing groups (e.g., the IETF, the Internet Architecture Board (IAB), or independent individuals). It isn’t clear where there should be community involvement versus RFC Editor control; depending on the issue, there might be more or less involvement from the IAB, the Internet Engineering Steering Group (IESG), or the community at large. There are similar issues with handling RFC Series-wide issues -- where to discuss and resolve them in a way that is balanced across the whole series.

For example, there are current discussions about Intellectual Property Rights (IPR) for IETF-generated documents, but it's not clear when or how to abstract the portions of those discussions that are relevant to the rest of the RFC Series. Discussions of labeling (of RFCs in general, IETF documents in particular, or some combination thereof) generally must be applied on an RFC Series-wide basis or not at all. Without an agreed-on framework for managing the RFC Series, it is difficult to have those discussions in a non-polarized fashion -- either the IETF dictating the reality of the rest of the RFC Series, or the RFC Series imposing undue restrictions on the IETF document series.

As part of its charter (see Appendix A), the IAB has a responsibility for the RFC Editor. Acknowledging the IETF's and the general Internet engineering and research community's evolving needs, the IAB would like to see a future for the RFC Series that continues to meet its original mandate of providing the archival series for the technical research and engineering documentation that describes the Internet.

With this document, the IAB provides the framework for the RFC Series and an RFC Editor function with the specific purpose of ensuring that the RFC Series is maintained and supported in ways that are consistent with the stated purpose of the RFC Series and the realities of today's Internet research and engineering community. The framework describes the existing "streams" of RFCs, draws a roadmap of existing process documents already defining the implementation, and provides clear direction of how to evolve this framework and its supporting pieces through discussion and future document revision.

Specifically, this document provides a brief charter for the RFC Series, describes the role of the RFC Editor, the IAB, and the IETF Administrative Support Activity (IASA) in a framework for managing the RFC Series, and discusses the streams of input to the RFC Series from the various constituencies it serves.

2. RFC Series Mission

The RFC Series is the archival series dedicated to documenting Internet technical specifications, including general contributions from the Internet research and engineering community as well as standards documents.

RFCs are available free of charge to anyone via the Internet.

3. Roles and Responsibilities

As this document sets out a revised framework for supporting the RFC Series mission, this section reviews the updated roles and responsibilities of the entities that have had, and will have, involvement in continued support of the mission.

3.1. RFC Editor

Originally, there was a single person acting as editor of the RFC Series (the RFC Editor). The task has grown, and the work now requires the organized activity of several experts, so there are RFC Editors, or an RFC Editor organization. In time, there may be multiple organizations working together to undertake the work required by the RFC Series. For simplicity's sake, and without attempting to predict how the role might be subdivided among them, this document refers to this collection of experts and organizations as the "RFC Editor".

The RFC Editor is an expert technical editor and series editor, acting to support the mission of the RFC Series. As such, the RFC Editor is the implementer handling the editorial management of the RFC Series, in accordance with the defined processes. In addition, the RFC Editor is expected to be the expert and prime mover in discussions about policies for editing, publishing, and archiving RFCs.

3.2. IAB

In this model, the role of the IAB is to ensure that the RFC Series mission is being appropriately fulfilled for the whole community for which it was created. The IAB does not, organizationally, have comprehensive publishing or editorial expertise. Therefore, the role of the IAB as put forward in this document is focused on ensuring that principles are met, the appropriate bodies and communities are duly informed and consulted, and the RFC Editor has what it needs in order to execute on the material that is in their mandate.

It is the responsibility of the IAB to approve the appointment of the RFC Editor and to approve the general policy followed by the RFC Editor.

3.3. Operational Oversight

The IETF Administrative Support Activity (BCP 101, [BCP101]) was created to provide administrative support for the IETF, the IAB, and the Internet Research Task Force (IRTF). In its role of supporting

the IAB, the IASA is tasked with providing the funding for and operational oversight of the RFC Editor.

The IAOC (IETF Administrative Oversight Committee) is the oversight board of the IASA, and the IAD (IETF Administrative Director) is the chief actor for the IASA.

The IAOC works with the IAB to identify suitable persons or entities to fulfill the mandate of the RFC Editor.

The IAOC establishes appropriate contractual agreements with the selected persons or entities to carry out the work that will satisfy the technical publication requirements defined for the various RFC input streams (see Section 5.2). The IAOC may define additional operational requirements and policies for management purposes to meet the requirements defined by the various communities.

In accordance with BCP 101, the IAOC provides oversight of the operation of the RFC Editor activity based on the established agreements.

3.4. Policy Oversight

The IAB monitors the effectiveness of the policies in force and their implementation to ensure that the RFC Editor activity meets the editorial management and document publication needs as referenced in this document. In the event of serious non-conformance, the IAB, either on its own initiative or at the request of the IAOC, may require the IAOC to vary or terminate and renegotiate the arrangements for the RFC Editor activity.

4. Framework

With the RFC Series mission outlined above, this document describes a framework for supporting

- the operational implementation of the RFC Series,

based on

- public process and definition documents,

for which there are

- clear responsibilities and mechanisms for update and change.

Generally speaking, the RFC Editor is responsible for the operational implementation of the RFC Series. As outlined in Section 3.3, the IAD provides the oversight of this operational role.

The process and definition documents are detailed below, including responsibility for the individual process documents (maintenance and update). The RFC Editor works with the appropriate community to ensure that the process documents reflect current requirements. The IAB is charged with the role of verifying that appropriate community input has been sought and that any changes appropriately account for community requirements.

There are 3 categories of activity, and a 4th category of series-wide rules and guidelines, described for implementing the RFC Series to support its mission:

- Approval of documents.
- Editing, processing, and publication of documents.
- Archiving and indexing the documents and making them accessible.
- Series rules and guidelines.

4.1. Document Approval

The RFC Series mission implicitly requires that documents be reviewed and approved for acceptance into the series.

4.1.1. Definition

Section 5.1 describes the different streams of documents that are put to the RFC Editor for publication as RFCs today. While there may be general policies for approval of documents as RFCs (to ensure the coherence of the RFC Series), there are also policies defined for the approval of documents in each stream. Generally speaking, there is a different approving body for each stream. The current definitions are catalogued in Section 5.1.

4.1.2. Operational Implementation

Each stream has its own documented approval process. The RFC Editor is responsible for the approval of documents in one of the streams (Independent Submission stream, see Section 5.1.4) and works with the other approving bodies to ensure smooth passage of approved documents into the next phases, ultimately to publication and archiving as an RFC.

4.1.3. Process Change

From time to time, it may be necessary to change the approval processes for any given stream, or even add or remove streams. This may occur when the RFC Editor, the IAB, the body responsible for a given stream of documents, or the community determines that there are issues to be resolved in general for RFC approval or for per-stream approval processes.

In this framework, the general approach is that the IAB will work with the RFC Editor and other parties to get community input and it will verify that any changes appropriately account for community requirements.

4.1.4. Existing Approval Process Documents

The existing documents describing the approval processes for each stream are detailed in Section 5.1.

4.2. Editing, Processing, and Publication of Documents

Producing and maintaining a coherent, well-edited document series requires specialized skills and subject matter expertise. This is the domain of the RFC Editor. Nevertheless, the community served by the RFC Series and the communities served by the individual streams of RFCs have requirements that help define the nature of the series.

4.2.1. Definition

General and stream-specific requirements for the RFC Series are documented in community-approved documents (catalogued in Section 5.2 below).

Any specific interfaces, numbers, or concrete values required to make the requirements operational are the subject of agreements between the IASA and the RFC Editor (e.g., contracts, statements of work, service level agreements, etc).

4.2.2. Operational Implementation

The RFC Editor is responsible for ensuring that editing, processing, and publication of RFCs are carried out in a way that is consistent with the requirements laid out in the appropriate documents. The RFC Editor works with the IASA to provide regular reporting and feedback on these operations.

4.2.3. Process Change

From time to time, it may be necessary to change the requirements for any given stream, or the RFC Series in general. This may occur when the RFC Editor, the IAB, the approval body for a given stream of documents, or the community determines that there are issues to be resolved in general for RFCs or for per-stream requirements.

In this model, the general approach is that the IAB will work with the RFC Editor to get community input and it will approve changes by validating appropriate consideration of community requirements.

4.2.4. Existing Process Documents

Documents describing existing requirements for the streams are detailed in Section 5.2.

4.3. Archiving, Indexing, and Accessibility

The activities of archiving, indexing, and making accessible the RFC Series can be informed by specific subject matter expertise in general document series editing. It is also important that they are informed by requirements from the whole community. As long as the RFC Series is to remain coherent, there should be uniform archiving and indexing of RFCs across all streams and a common method of accessing the resulting documents.

4.3.1. Definition

In principle, there should be a community consensus document describing the archiving, indexing, and accessibility requirements for the RFC Series. In practice, we continue with the archive as built by the capable RFC Editors since the series' inception.

Any specific concrete requirements for the archive, index, and accessibility operations are the subject of agreements between the IASA and the RFC Editor (e.g., contracts, statements of work, service level agreements, etc).

4.3.2. Operational Implementation

The RFC Editor is responsible for ensuring that the RFC archive and index are maintained appropriately and that the resulting documents are made available to anybody wishing to access them via the Internet. The RFC Editor works with the IASA for regular reporting and feedback.

4.3.3. Process Change

Should there be a community move to propose changes to the requirements for the RFC archive and index or accessibility, the IAB will work with the RFC Editor to get community input and it will approve changes by validating appropriate consideration of community requirements.

4.3.4. Existing Process Documents

There are no applicable process documents.

4.4. Series-Wide Guidelines and Rules

The RFC Series style and content can be shaped by subject matter expertise in document series editing. They are also informed by requirements by the using community. As long as the RFC Series is to remain coherent, there should be uniform style and content for RFCs across all streams. This includes, but is not limited to, acceptable language, use of references, and copyright rules.

4.4.1. Definition

In principle, there should be a community consensus document (or set of documents) describing the content requirements for the RFC Series. In practice, some do exist, though some need reviewing and more may be needed over time.

4.4.2. Operational Implementation

The RFC Editor is responsible for ensuring that the RFC Series guidelines are upheld within the RFC Series.

4.4.3. Process Change

When additions or changes are needed to series-wide definitions, the IAB will work with the RFC Editor and stream stakeholders to get community input and review. The IAB will approve changes by validating appropriate consideration of community requirements.

4.4.4. Existing Process Documents

Existing series-wide rules and guidelines documents include:

- Instructions to RFC Authors (RFC 2223 [RFC2223], [RFC2223BIS])
- Copyright and intellectual property rules (RFC 3978 [RFC3978] and RFC 4748 [RFC4748])

- Normative references (RFC 3967 [RFC3967] and RFC 4897 [RFC4897])

5. RFC Streams

Various contributors provide input to the RFC Series. These contributors come from several different communities, each with its own defined process for approving documents that will be published by the RFC Editor. This is nothing new; however, over time the various communities and document requirements have grown and separated. In order to promote harmony in discussing the collective set of requirements, it is useful to recognize each in their own space -- and they are referred to here as "streams".

Note that by identifying separate streams, there is no intention of dividing them or undermining their management as one series. Rather, the opposite is true -- by clarifying the constituent parts, it is easier to make them work together without the friction that sometimes arises when discussing various requirements.

The subsections below identify the streams that exist today. There is no immediate expectation of new streams being created and it is preferable that new streams NOT be created. Creation of streams and all policies surrounding general changes to the RFC Series are discussed above in Section 4.

5.1. RFC Approval Processes

Processes for approval of documents (or requirements) for each stream are defined by the community that defines the stream. The IAB is charged with the role of verifying that appropriate community input has been sought and that the changes are consistent with the RFC Series mission and this overall framework.

The RFC Editor is expected to publish all documents passed to it after appropriate review and approval in one of the identified streams.

5.1.1. IETF Document Stream

The IETF document stream includes IETF WG documents as well as "individual submissions" sponsored by an IESG area director. Any document being published as part of the IETF standards process must follow this stream -- no other stream can approve Standards-Track or Best Current Practice (BCP) RFCs.

Approval of documents in the IETF stream is defined by

- the IETF standards process (RFC 2026 [RFC2026] and its successors).

- the IESG process for sponsoring individual submissions [SPONSOR]).

Changes to the approval process for this stream are made by updating the IETF standards process documents.

5.1.2. IAB Document Stream

The IAB defines the processes by which it approves documents in its stream. Consistent with the above, any documents that the IAB wishes to publish as part of the IETF Standards Track (Standards or BCPs) are subject to the approval processes referred to in Section 5.1.1.

The review and approval process for documents in the IAB stream is described in

- the IAB process for review and approval of its documents (RFC 4845 [RFC4845]).

5.1.3. IRTF Document Stream

The IRTF is chartered as an activity of the IAB. With the approval of the IAB, the IRTF may publish and update a process for publication of its own, non-IETF Standards-Track, documents.

The review and approval process for documents in the IRTF stream is described in

- IRTF Research Group RFCs [IRTF-DOCS].

5.1.4. Independent Submission Stream

The RFC Series has always served a broader Internet technical community than the IETF. The "Independent Submission" stream is defined to provide review and (possible) approval of documents that are outside the scope of the streams identified above.

Generally speaking, approval of documents in this stream falls under the purview of the RFC Editor, and the RFC Editor seeks input to its review from the IESG.

The process for reviewing and approving documents in the Independent Submission stream is defined by

- Independent Submissions to the RFC Editor (RFC 4846 [RFC4846]).
- The IESG and RFC Editor Documents: Procedures (RFC 3932 [RFC3932]).

5.2. RFC Technical Publication Requirements

The Internet engineering and research community has not only grown, it has become more diverse, and sometimes more demanding. The IETF, as a standards-developing organization, has publication requirements that extend beyond those of an academic journal. The IAB does not have the same interdependence with IANA assignments as the IETF stream does. Therefore, there is the need to both codify the publishing requirements of each stream, and endeavor to harmonize them to the extent that is reasonable.

Therefore, it is expected that the community of effort behind each document stream will outline their technical publication requirements.

As part of the RFC Editor oversight, the IAB must agree that the requirements are consistent with and implementable as part of the RFC Editor activity.

5.2.1. IETF Documents

The requirements for this stream are defined in RFC 4714 [RFC4714].

5.2.2. IAB Documents

Although they were developed for the IETF standards process, the IAB will identify the applicable requirements in RFC 4714 for its stream.

If the IAB elects to define other requirements, they should deviate minimally from those (in an effort to keep the collective technical publication requirements reasonably managed by one technical publisher).

5.2.3. IRTF Documents

Although they were developed for the IETF standards process, the IRTF will identify the applicable requirements in RFC 4714 for its stream.

If the IRTF elects to define other requirements, they should deviate minimally from those (in an effort to keep the collective technical

publication requirements reasonably managed by one technical publisher).

5.2.4. Independent Submissions

Although they were developed for the IETF standards process, the RFC Editor will identify the applicable requirements in RFC 4714 for its stream.

If the RFC Editor elects to define other requirements, they should deviate minimally from those (in an effort to keep the collective technical publication requirements reasonably managed by one technical publisher).

6. Security Considerations

The processes for the publication of documents must prevent the introduction of unapproved changes. Since the RFC Editor maintains the index of publications, sufficient security must be in place to prevent these published documents from being changed by external parties. The archive of RFC documents, any source documents needed to recreate the RFC documents, and any associated original documents (such as lists of errata, tools, and, for some early items, non-machine readable originals) need to be secured against failure of the storage medium and other similar disasters.

7. IAB Members at the Time of Approval

Bernard Aboba
Loa Andersson
Brian Carpenter
Leslie Daigle
Elwyn Davies
Kevin Fall
Olaf Kolkman
Kurtis Lindqvist
David Meyer
David Oran
Eric Rescorla
Dave Thaler
Lixia Zhang

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Appendix A. A Retrospective of IAB Charters and RFC Editor

With this document, the IAB's role with respect to the RFC Series and the RFC Editor is being adjusted to work more directly with the RFC Editor and provide oversight to ensure the RFC Series mission principles and communities' input are addressed appropriately.

This section provides an overview of the role of the IAB with respect to the RFC Editor as it has been presented in IAB Charter RFCs dating back to 1992. The point of this section is that the IAB's role has historically been substantive -- whether it is supposed to be directly responsible for the RFC Series' editorial management (circa 1992, Appendix A.1), or appointment of the RFC Editor organization and approval of general policy (circa 2000, Appendix A.3).

A.1. 1992

[RFC1358] says:

> [The IAB's] responsibilities shall include:
> [...]
> (2) The editorial management and publication of the Request for Comments (RFC) document series, which constitutes the archival publication series for Internet Standards and related contributions by the Internet research and engineering community.

A.2. 1994

[RFC1601] says:

> [The IAB's] responsibilities under this charter include:
>
> (d) RFC Series and IANA
>
> The IAB is responsible for editorial management and publication of the Request for Comments (RFC) document series, and for administration of the various Internet assigned numbers.

which it elaborates as

> 2.4 RFC Series and Assigned Numbers
>
> The RFC Series constitutes the archival publication channel for Internet Standards and for other contributions by the Internet research and engineering community. The IAB shall select an RFC Editor, who shall be responsible for the editorial management and publication of the RFC Series.

A.3. 2000

[IABCHARTER], which is the most recent IAB Charter document, says:

> (d) RFC Series and IANA
>
> The RFC Editor executes editorial management and publication of the IETF "Request for Comment" (RFC) document series, which is the permanent document repository of the IETF. The RFC Series constitutes the archival publication channel for Internet Standards and for other contributions by the Internet research and engineering community. RFCs are available free of charge to anyone via the Internet. The IAB must approve the appointment of an organization to act as RFC Editor and the general policy followed by the RFC Editor.

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