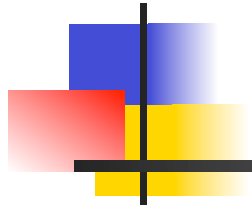


# Document Lifecycle Tutorial



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IETF 79  
Beijing, China  
7 November 2010



# Overview of This Tutorial

---

1. Where do RFCs come from?
2. Writing an Internet-Draft
  - Things to think about before writing your draft
  - Contents of an Internet-Draft
3. The lifecycle from Internet-Draft to RFC
4. Common questions and where to find more information

# 1. Where do RFCs come from?

---

4 document streams as defined in RFC 4844:

1. IETF

- Working Group
- AD-sponsored (aka Individual)

2. IAB

3. IRTF

4. Independent Submission

# RFC Categories



- RFC 2026 defines specification **maturity levels**:
  - Standards Track: **Proposed, Draft, Standard.**
  - Non-standards track: **Experimental, Informational, Historic.**
  - "Almost standard": **Best Current Practice.**
- Shown on RFC header as "**Category**:"
  - Except, one category "Standards Track" for PS, DS, S.
  - Often called "status".
- A published RFC can NEVER change, but its *category* can change (see rfc-index.txt).

# Streams in Relation to *Categories*

**IETF** IETF WG to *Standards Track*: Includes WG consensus, review in the IETF, IETF Last Call, and IESG approval

**IETF** IETF WG to *Experimental/Informational*: Includes WG consensus, review in the IETF, and IESG approval

**IETF** AD-sponsored to *Standards Track*: Includes review in the IETF, IETF Last Call, and IESG approval

**IETF** AD-sponsored to *Experimental/Informational*: Includes some form of review in the IETF and IESG approval

**IAB / IRTF** Documents for which special rules exist

**Independent** Via the ISE to *Experimental, Informational, or Historic*

[This list is paraphrased from RFC 3932, recently obsoleted by RFC 5742.]

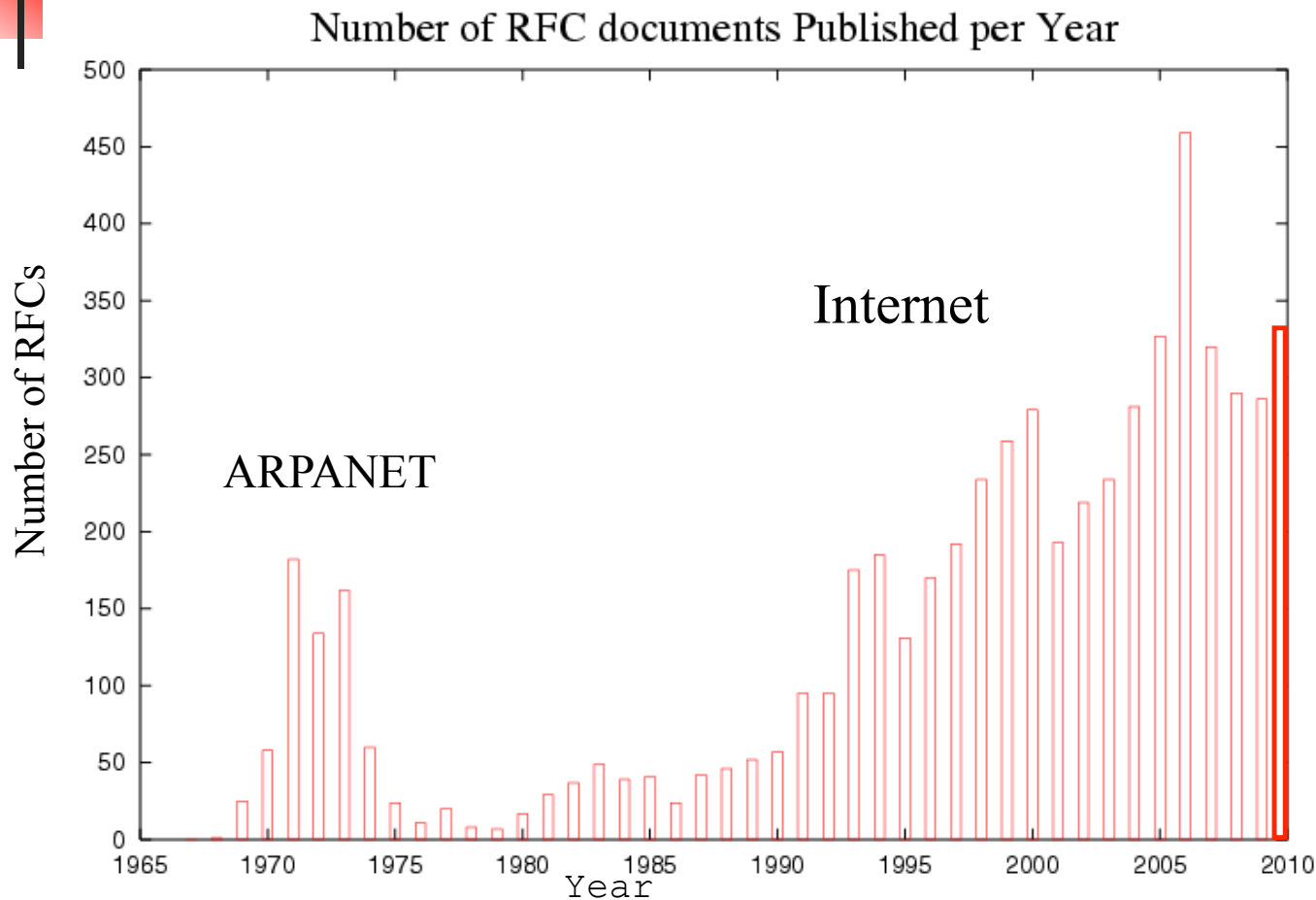
## AD-sponsored (Individual)

## Independent

### Post as an Internet-Draft.

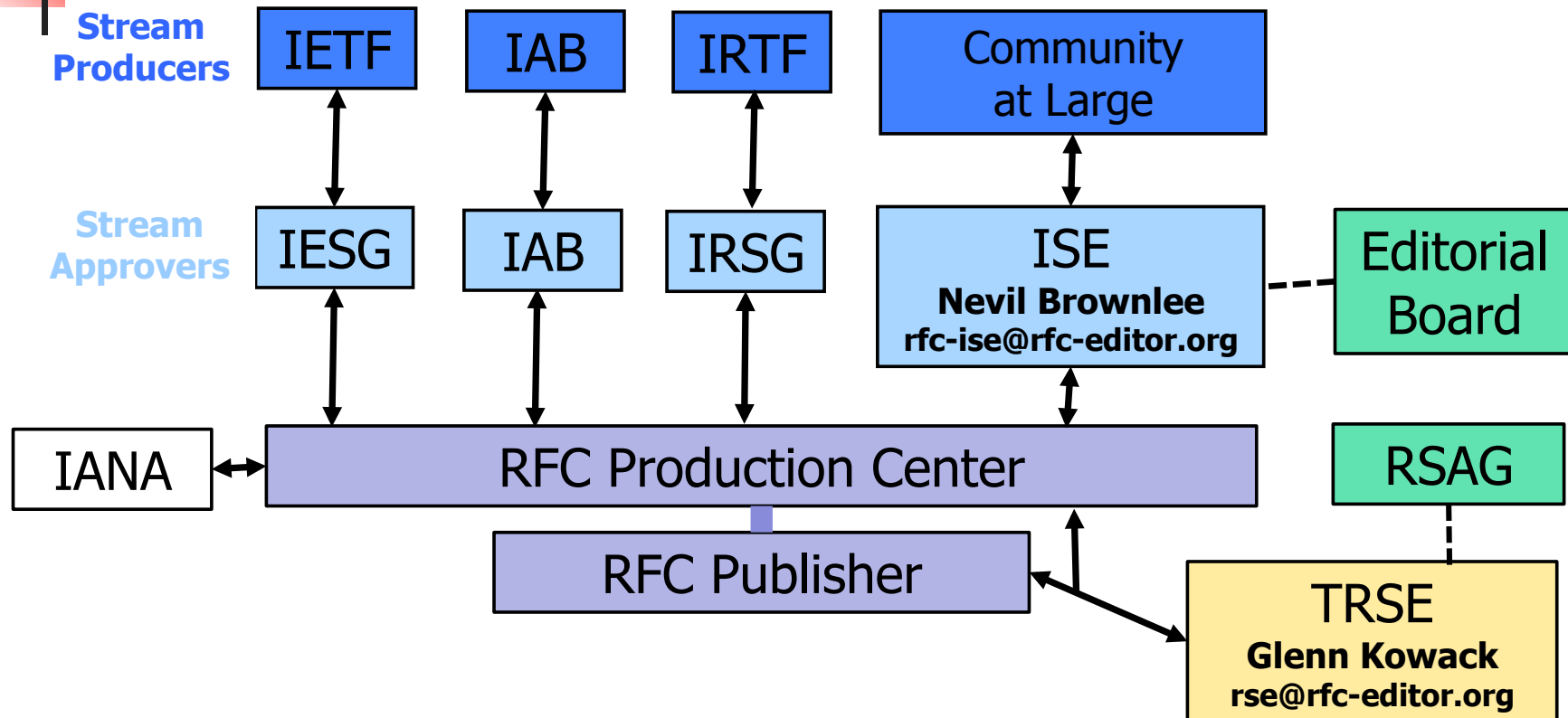
- Contact the relevant AD.
  - Standards Track, Experimental, or Informational category.
  - For the process, see <http://www.ietf.org/iesg/statement/ad-sponsoring-docs.html>
- Contact the Independent Submissions Editor ([rfc-ise@rfc-editor.org](mailto:rfc-ise@rfc-editor.org)).
  - Only Experimental, Informational, or Historic category.
  - ISE reviews and decides whether publication is appropriate.
  - Per RFC 5742, IESG reviews for conflict with any WG, makes publish/do-not-publish recommendation.
  - ISE has final decision, with advice from Editorial Board.
  - See [www.rfc-editor.org/indsubs.html](http://www.rfc-editor.org/indsubs.html) and RFC 4846.

# RFC Publication Rate



For more information on the RFC Series and its history, see the tutorial slides at [www.rfc-editor.org](http://www.rfc-editor.org)

# Implementing the RFC Editor Model (RFC 5620)



Adapted from RFC 5620, Figure 1: Ordinary RFC Series production and process





## RFC Editor Model Version 2

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- draft-kowack-rfc-editor-model-v2
- Revision of RFC 5620
- Recommendations by Glenn Kowack (TRSE)
- Presentation and Q&A at Monday plenary meeting
- Discuss on mailing list: [rfc-interest@rfc-editor.org](mailto:rfc-interest@rfc-editor.org)



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# Writing an Internet-Draft



- All RFCs start as an Internet-Draft.
- A well-formed RFC starts with a well-formed I-D.
  - <http://www.ietf.org/ID-Checklist.html> (aka ID-nits)
  - <http://tools.ietf.org/tools/idnits/> (online nits checker)
- Authoring tools
  - <http://www.rfc-editor.org/formatting.html>
  - <http://tools.ietf.org/inventory/author-tools>
  - More on this later.
- Submit using the I-D Submission Tool:  
<https://datatracker.ietf.org/idst/upload.cgi>



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# Change Control

---

- Who should have change control over your document?
  - The IETF has change control over all IETF documents (whether WG or AD-sponsored).
    - You may remain the editor of the document, but it will be your job to reflect IETF consensus
  - If you want to (or need to) retain change control, consider an RFC Editor independent submission
    - Still subject to review, but document does not need to reflect IETF consensus
    - Example: Informational publication of a proprietary protocol -- should be submitted to RFC Editor with name of company in title



# Copyrights and Patents

---

- Copyright issues
  - Specified in [RFC 5378 / BCP 78](#) “Rights Contributors Provide to the IETF Trust” (which obsoletes RFCs 3978 and 4748, and updates RFC 2026). See also <http://trustee.ietf.org/license-info>.
- Patent (“IPR”) issues
  - Specified in [RFC 3979 / BCP 79](#) “Intellectual Property Rights in IETF Technology” (updated by RFC 4879).
- Generally, you supply the correct boilerplate in the Internet-Draft, and the RFC Editor will supply the correct boilerplate in the RFC.



# Patents and IETF Documents

---

- Will the IETF publish standards that include patented technology?
  - Yes, but WGs may prefer non-patented technology
  - Licensing terms may affect WG acceptance and what implementations are available
- If you know of patented technology in your draft
  - Declare it immediately after publication
  - Carefully consider your patent terms

# Text Formatting Tools



---

- Author tools: [www.rfc-editor.org/formatting.html](http://www.rfc-editor.org/formatting.html)
  - xml2rfc
  - nroff
  - Microsoft word template (see RFC 5385)
  - LaTeX
- RFC Editor does final RFC formatting using venerable Unix tool nroff -ms.
- See also: <http://tools.ietf.org/inventory/author-tools>



# xml2rfc (<http://xml.resource.org>)



- The xml2rfc tool converts an XML source file to text, HTML, or nroff. RFC 2629 and its unofficial successor define the format.
- xml2rfc FAQ:  
<http://xml.resource.org/xml2rfcFAQ.html>
- XML templates are available from  
<http://tools.ietf.org/tools/templates>:
  1. For a generic I-D (e.g., draft-davies-template-bare.xml)
  2. For an I-D containing a MIB (e.g., mib-doc-template-xml.txt)



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---

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## 4. Contents of an Internet-Draft

---

- Header
- Title
- Abstract
- Status of This Memo [boilerplate]
- Copyright Notice [See RFC 5378 and <http://trustee.ietf.org/license-info>]
- Table of Contents [not required for short docs]

---

- Body
  - IANA Considerations (RFC 5226)
  - Security Considerations (RFC 3552)
  - Internationalization Considerations (RFC 2277)

---

- Authors' Addresses

# Internet-Draft Header

**IETF PKIX WG**

**Internet Draft**

**Intended Status: Standards Track**

**Obsoletes: 3281 (once approved)**

**Expires: October 27, 2009**

**S. Farrell, Trinity College Dublin**

**R. Housley, Vigil Security**

**S. Turner, IECA**

**April 27, 2009**

**An Internet Attribute Certificate Profile for Authorization  
draft-ietf-pkix-3281update-05.txt**

## Helpful:

- Intended Status (Category)
- Updates, Obsoletes: relation to earlier RFCs (if any)

# RFC Header (as updated by RFC 5741)

Internet Engineering Task Force (IETF)  
Request for Comments: 5755  
Obsoletes: 3281  
Category: Standards Track  
ISSN: 2070-1721

S. Farrell  
Trinity College Dublin  
R. Housley  
Vigil Security  
S. Turner  
IECA  
January 2010

Corresponding RFC search result:

Number	Title	Author or Ed.	Date	Format	More Info (Obs&Upd)	Status
<a href="#">RFC5755</a>	An Internet Attribute Certificate Profile for Authorization	S. Farrell, R. Housley, S. Turner	January 2010	ASCII	Obsoletes <a href="#">RFC3281</a>	PROPOSED STANDARD

Here is post-publication metadata: **Obsoleted by, Updated by, or Errata**  
Also found on the info page ([www.rfc-editor.org/info/rfcXXXX](http://www.rfc-editor.org/info/rfcXXXX)) and [tools.ietf.org](http://tools.ietf.org) HTML versions.

# Sample Info Page ([www.rfc-editor.org/info/rfc4346](http://www.rfc-editor.org/info/rfc4346))

## RFC 4346

### "The Transport Layer Security (TLS) Protocol Version 1.1", April 2006

**Canonical URL:**

<http://www.rfc-editor.org/rfc/rfc4346.txt>

This document is also available in this non-normative format: [TXT.PDF](#).

**Status:**

PROPOSED STANDARD

**Obsoletes:**

[RFC 2246](#)

**Obsoleted by:**

[RFC 5246](#)

**Updated by:**

[RFC 4366](#), [RFC 4680](#), [RFC 4681](#), [RFC 5746](#)

**Authors:**

T. Dierks

E. Rescorla

**Stream:**

[IETF](#)

**Source:**

[tls \(sec\)](#)

Please refer [here](#) for any **errata** for this document. To submit a new errata report, go to the [main errata page](#).

Here is post-publication metadata: **Obsoleted by** and **Updated by**. Also found in the search results and tools.ietf.org HTML versions.

# Authors in Header



---

- Limited to lead authors, document editors.
- There must be very good reason to list more than 5.
- Each author in the header must give approval during AUTH48 review.
- Each author in the header should provide unambiguous contact information in the Authors' Addresses section.
- Other names can be included in Contributors and/or Acknowledgments sections.

# Titles



---

- Should be thoughtfully chosen
- No un-expanded abbreviations - except for very well-known ones (e.g., IP, TCP, HTTP, MIME, MPLS)
  - List available from <http://www.rfc-editor.org/styleguide.html>
- We like short, snappy titles, but sometimes we get titles like:
  - *"An alternative to XML Configuration Access Protocol (XCAP) for manipulating resource lists and authorization lists, Using HTTP extensions for Distributed Authoring and Versioning (DAV)"*



# Abstracts



- Carefully written for clarity (*HARD* to write!)
- No un-expanded abbreviations (again, except well-known)
- No citations
  - Use “RFC xxxx”, not “[RFCxxxx]” or “[5]”
- Less than 20 lines! Shorter is good.
- **Not a substitute for the Introduction;** redundancy is OK.
- We recommend starting with “This document...”



# Body of an Internet-Draft

---

- First section should generally be “1. Introduction”.
- Special sections that may appear:
  - Contributors, Acknowledgments
  - Internationalization Considerations
    - When needed -- see Section 6, RFC 2277/BCP 18.
- Sections that **MUST** appear:
  - IANA Considerations
  - Security Considerations
  - References (Normative and/or Informative)

# IANA Considerations Section



---

- What is an IANA Considerations section?
  - A guide to IANA on what actions will need to be performed
  - A confirmation if there are NO IANA actions
- Section is required in draft
  - But “No IANA Considerations” section will be removed by RFC Editor.



## Why is this section important?

---

- Forces the authors to 'think' if anything should be requested from IANA
- A clear IANA Considerations section will allow the IANA to process the IANA Actions more quickly
- Establishes documented procedures

## What should be included in the IANA Considerations section?



---

- What actions is the document requesting of IANA
- Individual number or name registrations
- New registries (number or name spaces)
- Registration procedures for new registries
- Reference changes to existing registrations

BE CLEAR AND DESCRIPTIVE IN YOUR INSTRUCTIONS  
(IANA is not the expert for your name or number space)



# Review of IANA Considerations

---

- IANA Consideration sections are reviewed before the document is published as an RFC
  - During IETF Last Call
  - During IESG Evaluation
  - IANA will also review your section at any time by request
- If you do not have an IC section or if your IC section is not complete, your document will not move forward



## How IANA and RFC Editor work together

---

- After the document is approved, IANA performs any required actions.
- IANA formally communicates with the RFC Editor when the actions are complete and details what they were.
- IANA uses a placeholder for the RFC number in the registries.
- RFC Editor notifies IANA of any changes.
- Upon publication, RFC Editor notifies IANA of the RFC number so that it is updated.



## Where to get help on writing this section

---

- See RFC 5226, “Guidelines for Writing an IANA Considerations Section in RFCs”
- Look at existing registries for examples
- Ask IANA
  - Available at the IANA booth at IETF meetings
  - Send an e-mail [[iana@iana.org](mailto:iana@iana.org)] or [[michelle.cotton@icann.org](mailto:michelle.cotton@icann.org)]





# Security Considerations Section

---

- Security Considerations section **required** in every RFC.
- See [RFC 3552](#): “Guidelines for Writing RFC Text on Security Considerations”
- Important!

# References



---

- Normative vs. Informative
  - Normative refs can hold up publication.
- Citations and references must match.
- Handy files of RFC reference entries:
  - <ftp://ftp.rfc-editor.org/in-notes/rfc-ref.txt>
  - For xml2rfc: <http://xml.resource.org/public/rfc/bibxml/>
- Include draft strings of any I-Ds.



# Writing the body of your draft

---

- Editorial guidelines
- Formal languages and MIBs

## Primary Sources:

### 1. Internet-Draft Guidelines:

<http://www.ietf.org/id-info/guidelines.html>

### 2. RFC Style Guide:

<http://www.rfc-editor.org/styleguide.html>



# Writing Internet-Drafts

---

- Primary goal: **clear, unambiguous technical prose.**
- Think about internally consistent usage:
  - Use the same terminology and notation throughout.
    - If you choose “4-bit”, don’t switch to “four-bit”.
  - Expand each abbreviation at first use.
  - See the abbreviations and terms lists available from <http://www.rfc-editor.org/styleguide.html>



# Grammar Tips

---

- Avoid passive voice (backwards sentences).
  - “In this section, the network interface is described.”  
vs. “This section describes the network interface.”
- Some Protocol Engineers over-capitalize Nouns.
- “which” vs. “that”  
For example:
  - (non-restrictive which: all RST attacks rely on brute-force)
  - It should be noted that RST attacks, **which** rely on brute-force, are relatively easy to detect at the TCP layer.
  - (restrictive that: only \*some\* RST attacks rely on brute-force)
  - It should be noted that RST attacks **that** rely on brute-force are relatively easy to detect at the TCP layer.



# Punctuation Conventions

---

- A comma before the last item of a series:
  - “TCP service is reliable, ordered, and full-duplex”
  - Avoids ambiguities, clearly shows parallelism.
- Punctuation outside quote marks:  
“This is a sentence”{.|?|!}
  - To avoid computer language ambiguities.

# Use of Formal Languages



---

- Formal languages and pseudo-code can be useful as an aid in explanations, although English remains the primary method of describing protocols.
- Pseudo-code judged on the basis of clarity. See IESG's guidance: <http://www.ietf.org/IESG/STATEMENTS/pseudo-code-in-specs.txt>
- Formal Languages (e.g., ABNF, XML, MIBs)
  - Requires a normative reference to language specification
  - RFC Editor will run verifier
  - See list of verification tools: <http://tools.ietf.org/inventory/verif-tools>

# MIB RFCs: A Special Case



- MIB references
  - O&M Web Site at [www.ops.ietf.org/](http://www.ops.ietf.org/)
  - MIB doctors at [www.ops.ietf.org/mib-doctors.html](http://www.ops.ietf.org/mib-doctors.html)
  - MIB Review: See RFC 4181, BCP 111: "Guidelines for Authors and Reviewers of MIB Documents"
- Tools
  - <http://www.ops.ietf.org/mib-review-tools.html>
  - smilint at [www.ibr.cs.tu-bs.de/projects/libsmi/](http://www.ibr.cs.tu-bs.de/projects/libsmi/)
  - SMICng at [www.snmpinfo.com/](http://www.snmpinfo.com/)
- MIB boilerplate
  - The Internet-Standard Management Framework:  
[www.ops.ietf.org/mib-boilerplate.html](http://www.ops.ietf.org/mib-boilerplate.html)
  - Security Considerations: [www.ops.ietf.org/mib-security.html](http://www.ops.ietf.org/mib-security.html)





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# IETF Document Lifecycle

WG documents go through the WG process...

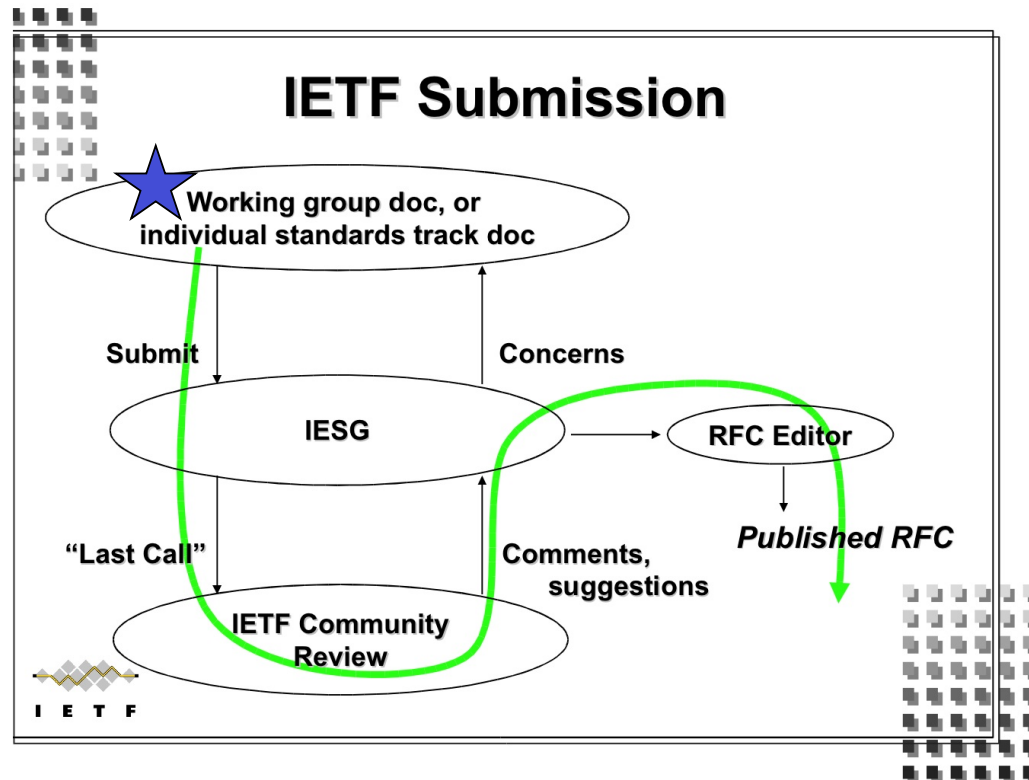


Diagram taken from Scott Bradner's Newcomer's Tutorial



# Steps in the WG process

---

- Initial Submission
- Author Refinement
- WG Acceptance
- Editor Selection
- WG Refinement
- WG Last Call
- WG Request to Publish



# Steps in the WG process

---

- Initial Submission
  - Original idea or issue is submitted to the WG
    - May be done via mailing list or at a meeting
    - Should become an Internet-Draft (or part of one)
  - Chairs will reject submissions that don't fit within the WG charter, in chair judgment
    - May refer submission to more appropriate groups or areas
  - Chairs should reject submissions that aren't relevant or don't meet minimal quality requirements
    - There is no admission control on IETF Internet-Drafts
  - Rejections can be appealed



# Steps in the WG process

---

- Author Refinement
  - Idea is more fully documented or refined based on feedback
    - May be done by the person who originally submitted the idea/issue, or by others
    - May be done by individual, ad hoc group or more formal design team
  - Change control lies with author(s) during this phase



# Steps in the WG process

---

- WG Acceptance

- For a document to become a WG work item, it must:
  - Fit within the WG charter (in the opinion of the chairs)
  - Have significant support from the working group, including:
    - People with expertise in all applicable areas who are willing to invest time to review the document, provide feedback, etc.
    - Current or probable implementers, if applicable
  - Be accepted as a work item by a rough consensus of the WG
    - Should reflect WG belief that the document is taking the correct approach and would be a good starting place for a WG product
  - Have corresponding goals/milestones in the charter
    - Goals/milestones approved by the Area Directors
    - Adopting a specific draft is not approved by Area Directors



# Steps in the WG process

---

- Editor Selection
  - Editor(s) will be selected by the WG chairs
    - Usually one or more of the original authors – but not always
    - Must be willing to set aside personal technical agendas and change the document based solely on WG consensus
    - Must have the time and interest to drive the work to completion in a timely manner
  - Make this decision explicitly, not by default!
    - Some people are concept people, some are detail people
    - Some people start strong, some people finish strong
    - Some people have changes in life circumstances



# Steps in the WG process

---

- WG Refinement
  - Document updated based on WG consensus
    - All technical issues and proposed changes MUST be openly discussed on the list and/or in meetings
    - All changes must be proposed to the mailing list
      - Complex changes should be proposed in separate IDs
    - The WG has change control during this phase
      - Changes are only made based on WG consensus
      - During this phase, silence will often indicate consent





# Steps in the WG process

---

- WG Last Call
  - Generally the final check that the WG has rough consensus to advance the document to the IESG
    - The WG believes that this document is technically sound
    - The WG believes that this document is useful
    - The WG believes that this document is ready to go to the IESG
  - A disturbingly large number of people wait until WGLC to read drafts!



# Steps in the WG process

---

- WG Last Call

- The document must be reviewed and actively supported by a significant number of people, including experts in all applicable areas
  - ... or it should not be sent to the IESG
- Silence does NOT indicate consent during this phase
- Why would we want to waste IESG time on a document that we can't be bothered to review ourselves?



# Has anyone else read the draft?

---

- Standards Track documents reflect IETF views
  - Not just a working group's view
- Standards Track protocols run on the Internet
- Avoid the group-think trap
  - Ask "Who else should be reading this draft?"
  - Your ADs are good sources of potential reviewers
- Don't wait until the last minute to share
  - Prevent the "last-minute surprise"
- Some "last-minute surprise" examples
  - Discovering that no one plans to implement the new spec
  - Discovering that the security mechanism does not meet current requirements
  - Learning that work overlaps or conflicts with work in other WGs

# IETF Document Lifecycle

When ready, documents are submitted to the IESG for approval...

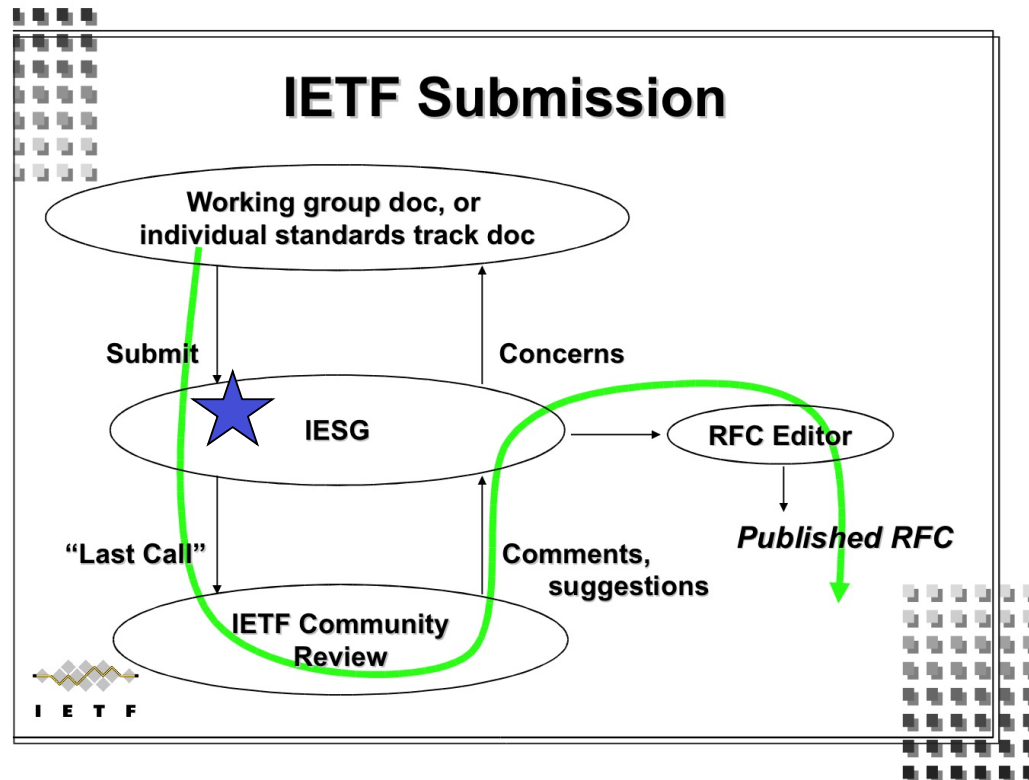


Diagram taken from Scott Bradner's Newcomer's Tutorial



# Document Shepherding

---

- Must be one Shepherd for every draft to be published
  - Usually a WG chair for a WG document
- Provide the PROTO write-up as the request to your AD for publication
  - RFC 4858: Document Shepherding from Working Group Last Call to Publication
- During AD evaluation, manage discussion between editors, WG, and AD
- During IETF Last Call, follow up on feedback and comments
- During IETF Last Call, follow up on all IESG feedback
- Follow up on all IANA and RFC Editor requests



# IESG review, early steps

---

- Document Shepherd sends a Publication Request to the IESG, including a PROTO write-up
- After Publication Request, status of the document can be found in the Internet-Draft Tracker
  - <https://datatracker.ietf.org/doc/>
- Before moving to next steps, your AD must approve the document
  - May include review by area directorate(s) or other experts
  - Sometimes the AD asks for a revision to clear his/her own objections before advancing

# IETF Document Lifecycle

AD sends  
Standards Track  
or individual  
documents for  
full IETF  
Review...

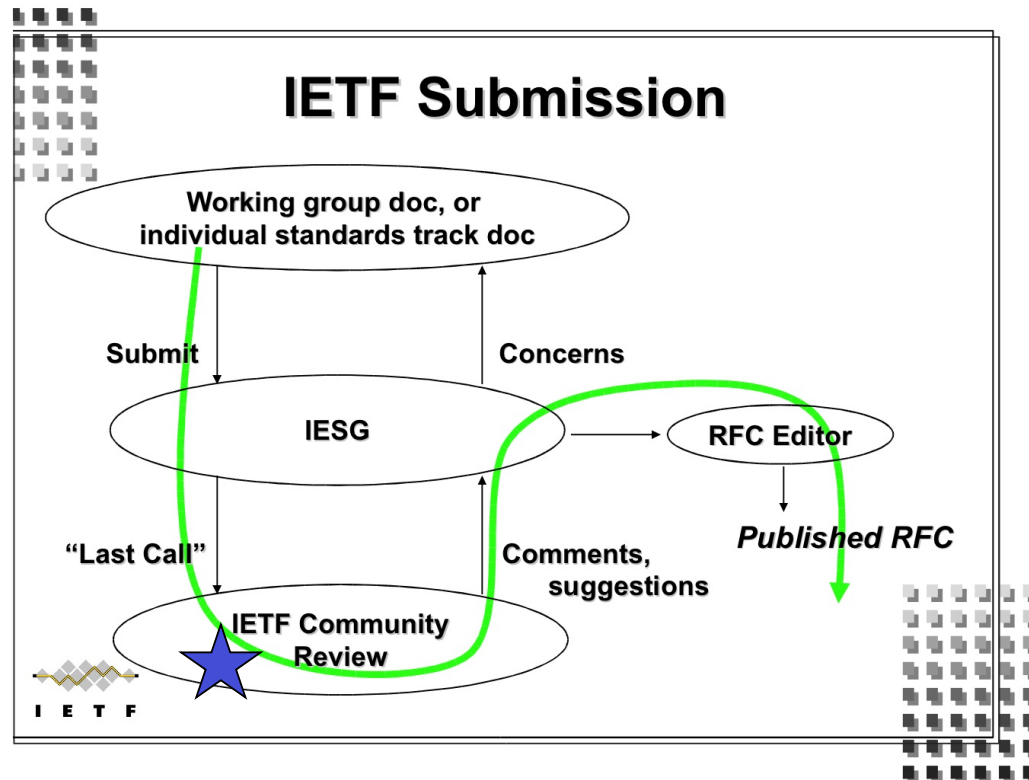


Diagram taken from Scott Bradner's Newcomer's Tutorial



# IETF Last Call

---

- After the AD approves the document, he/she may send the document for a final IETF review called “IETF Last Call” (IETF LC)
- Length of the IETF LC depends on document type and history
  - All Standards Track and BCP documents go to IETF LC
    - AD-sponsored individual submissions have a 4-week IETF LC
    - WG documents have a 2-week IETF LC
  - AD may choose to send informational or experimental documents for an IETF LC
    - Key architecture or framework documents
- During IETF LC, individuals, cross-area review teams and directorates will review the document
  - All comments must be addressed before the document advances



# IETF Document Lifecycle

Document is reviewed and approved by the full IESG...

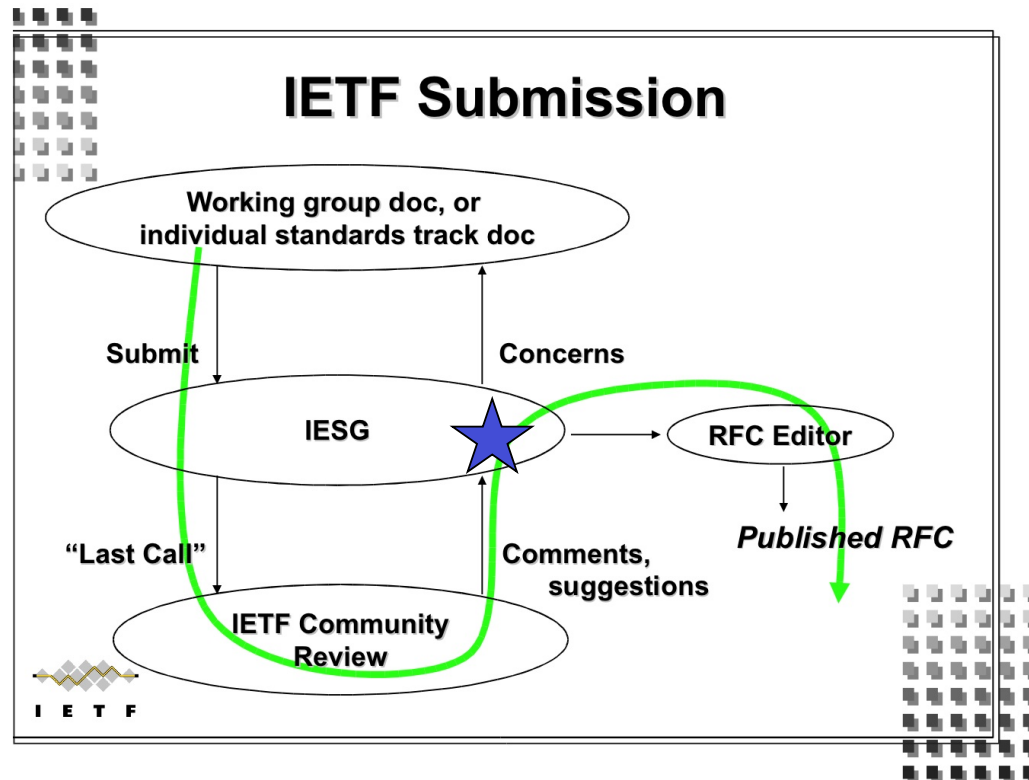


Diagram taken from Scott Bradner's Newcomer's Tutorial



# IESG review, later steps

---

- Directorate Reviews
  - Many ADs/Areas have directorates that they use to review documents before approval
    - MIB Doctors, Security Directorate, Gen ART, etc.
  - If these reviews were not completed during IETF LC, they may be done now
- Official IANA Review
  - Looks at IANA Considerations to figure out the namespaces that will need to be IANA managed and/or additional entries in existing namespaces



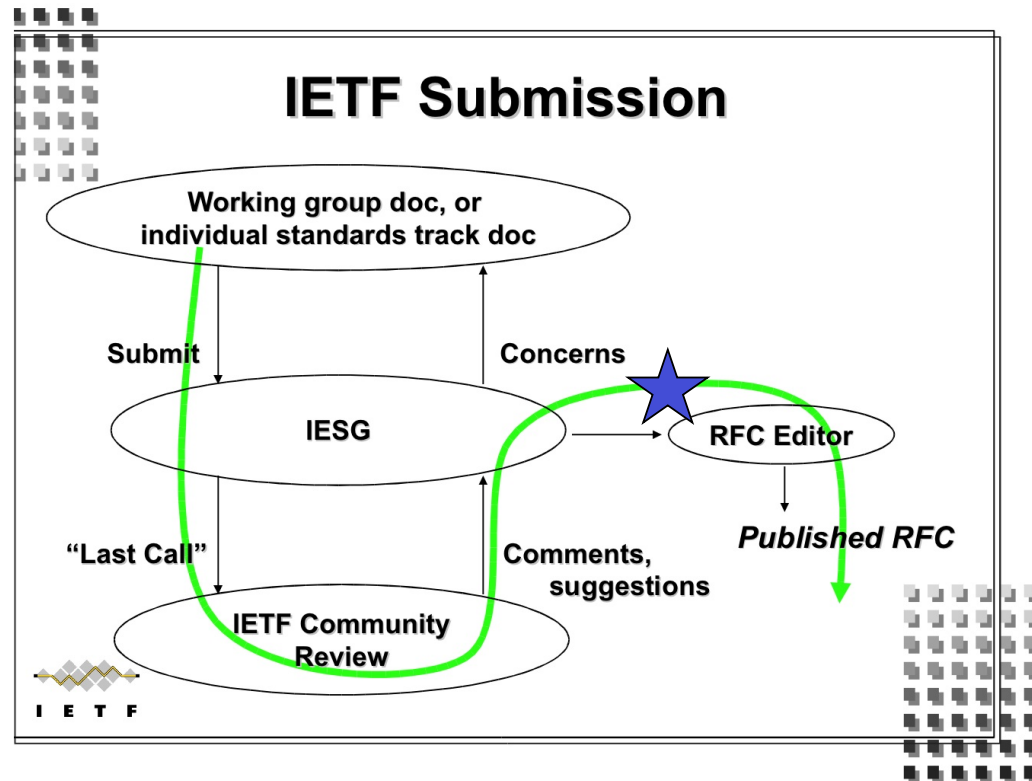
## IESG cross-discipline review

---

- Takes IETF Last Call comments into account
- Can decide to pass document on for publication
- Makes final decision on document track/status
- Can send document back to WG with comments and “DISCUSS” issues that must be resolved before the document proceeds to RFC
  - <http://www.ietf.org/u/ietfchair/discuss-criteria.html>
- If you negotiate significant changes with the IESG, please show them to your WG before RFC publication!

# IETF Document Lifecycle

After your document has been approved by the IESG...





# RFC Editor Publication Process

---

- IESG approval -> your document is added to the queue
- Step 1: Send your source file.
  - questions from the RFC Editor
- Step 2: Answer questions.
  - AUTH48 notification with a pointer to the edited version
- Step 3: Review your document carefully and send changes / approvals for publication.
- Step 4: See your document progress.
- Step 5: Publication!

# Step 1: Send your source file.



From: rfc-editor@rfc-editor.org

Subject: [RFC State] <draft-ietf-wg-topic-05> has been added to RFC Editor database.

- Your document has been added to the queue ([www.rfc-editor.org/queue2.html](http://www.rfc-editor.org/queue2.html)).
- Please send us your nroff or XML source file.
  - Let us know if there are any changes between the version you send and the IESG-approved version.
- If you don't have one, don't worry, we will use the Internet-Draft text to create an nroff file.

## Step 2: Answer questions.



From: rfc-editor@rfc-editor.org or \*@amsl.com

Subject: draft-ietf-wg-topic-05

- Please reply to questions about your draft. Typically, these questions are about
  - missing citations
    - Ex: [RFC4301] appears as a normative reference, where would you like to cite it in the text?
  - inconsistent terminology
    - Ex: Which form of the term should be used throughout?  
RESTART Flag / Re-Start flag / Restart Flag
  - unclear sentences

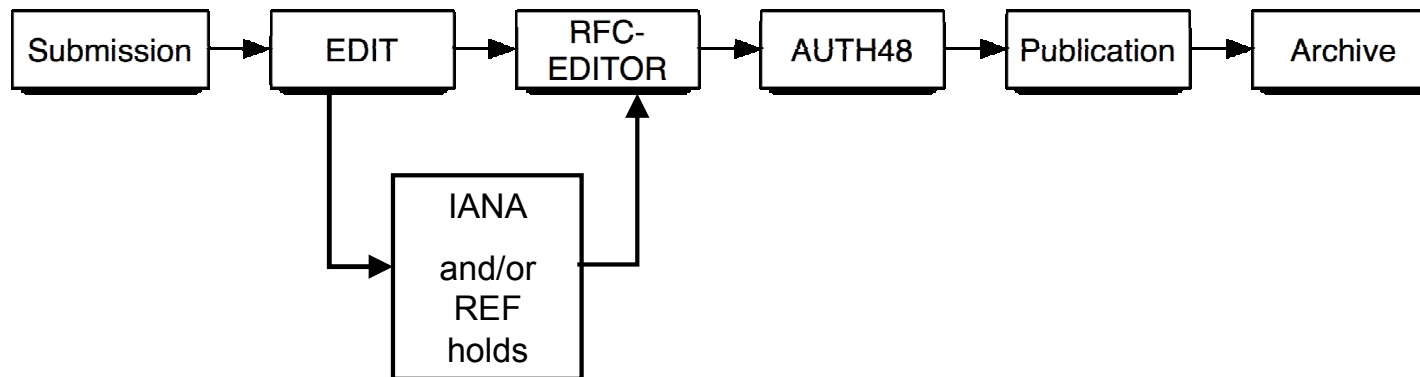
## Step 3: See your document progress.



From: rfc-editor@rfc-editor.org

Subject: [RFC State] <draft-ietf-wg-topic-05> has changed state

### Basic Process



Also, you can check <http://www.rfc-editor.org/queue2.html>





# More details on queue states

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- Normative References
  - Set of RFCs linked by normative refs must be published simultaneously : Shown as “clusters”.
  - Two hold points:
    - MISSREF state: a doc with norm. ref to a doc not yet received by RFC Editor.
    - REF state: a doc that is edited but waiting for dependent docs to be edited.
- IANA
  - Acts on IANA Considerations section (as discussed earlier).
  - Creates new registries and assigns numbers.

## Step 4: Review your document carefully.



From: rfc-editor@rfc-editor.org

Subject: AUTH48 [SG]: RFC 4999 <draft-ietf-wg-topic-05>

- This is your chance to review the edited version.
- We send pointers to the txt and diff files
  - and the XML file (when AUTH48 in XML)
- Submit changes by sending OLD/NEW text or indicating global changes.
  - Insert directly into the XML file (when AUTH48 in XML)
- Each author listed on the first page must send their approval before the document is published.



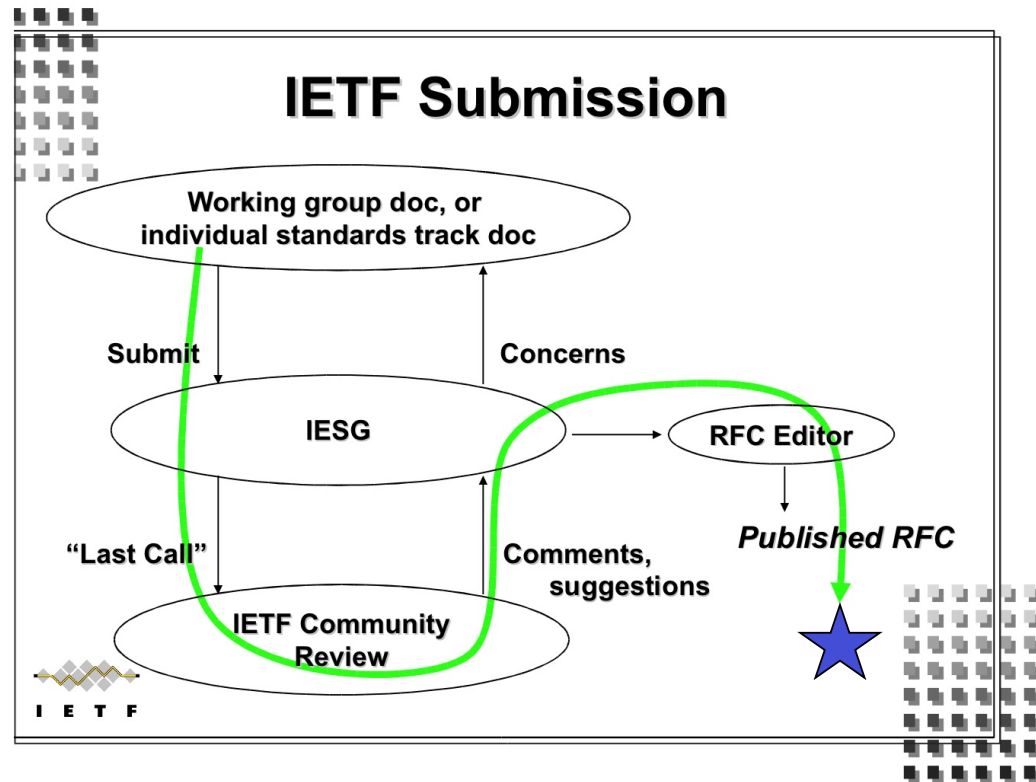
## More about AUTH48: Final Author Review

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- Last-minute editorial changes allowed, but should not be substantive or too extensive.
  - Else, we request approval from the Area Director.
- This process can involve a fair amount of work & time
  - AT LEAST 48 hours!
  - Each listed author approves the document before publication. Approvals are tracked on AUTH48 page (link from the queue page).
  - Authors should take it seriously - review the entire document, not just the diffs.
  - Your last chance to avoid enrollment in the *Errata Hall of Infamy!*

# IETF Document Lifecycle

Congratulations!  
Your document  
is now an RFC...





## Step 5: Publication!

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- Announcement sent to lists:  
[ietf-announce@ietf.org](mailto:ietf-announce@ietf.org) and [rfc-dist@rfc-editor.org](mailto:rfc-dist@rfc-editor.org)
- Canonical URI:  
<http://www.rfc-editor.org/rfc/rfcXXXX.txt>
- Also available here:  
<ftp://ftp.rfc-editor.org/in-notes/rfcXXXX.txt>
- Mirrored at IETF site and other sites.
- NROFF and XML source files archived for later revisions.



# Errors in RFCs

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[www.rfc-editor.org/errata.php](http://www.rfc-editor.org/errata.php)

- A list of technical and editorial errors that have been reported to the RFC Editor.
- Errata status indicates whether it is Reported (not yet reviewed), Verified, Rejected, or Held for Document Update.
- The RFC Editor search engine results contain hyperlinks to errata, when present.
- How to report errata
  - Use the online form available from the errata page.
- ADs are the verifiers of errata in IETF stream RFCs.



# Hints to Authors

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- Read your I-D carefully **before** submission, as you would read the final document in AUTH48!
- If your I-D is in the queue, and you see typos or have a new email address, send us an email.
- Craft title, abstract, and introduction carefully.
- Avoid gratuitous use of RFC 2119 requirement words (MUST, etc.). If you do use them, add a normative reference to RFC 2119.
- Don't use numeric citations (unless you submit an XML file).
- Remember that your document should be understandable by people who are not deep experts in the subject matter.



# Overview of This Tutorial

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1. Where do RFCs come from?
2. Writing an Internet-Draft
  - Things to think about before writing your draft
  - Contents of an Internet-Draft
3. The lifecycle from Internet-Draft to RFC
4. Common questions and where to find more information





## Q: Why hasn't my draft been published as an RFC?

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A: You can check the state of your document on [www.rfc-editor.org/queue2.html](http://www.rfc-editor.org/queue2.html)

- "IANA" indicates waiting on IANA considerations
- "REF" indicates there are normative references. These lead to clusters of documents: click the cluster number on the queue page to see details.

For example: [\[C92\]](#)

- "[AUTH48](#)" indicates each author must send final approval of the document. Follow the link for the detailed status.

For example: [AUTH48 status page](#)



Q: What if one of the authors cannot be located during AUTH48?

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A: You have several options:

- An AD can approve the document in place of the unavailable author. See <http://www.ietf.org/iesg/statement/auth48.html>
- The author can be moved to a Contributors or Acknowledgments section.

## Q: What about April 1st RFCs?

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- April 1st RFCs: Jon Postel's playful side
  - A little humorous self-parody is a good thing...
  - Most, but not all, April 1st RFCs are satirical documents.
    - We expect you can tell the difference ;-)
- April 1 submissions are reviewed for cleverness, humor, and topical relation to IETF themes.
  - Avian Carriers is famous (RFC 1149)
  - Evil Bit is a favorite (RFC 3514)
- Send submissions to the RFC Editor.



# The IETF Web Site & IETF Tools

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<http://www.ietf.org>

- Working Group charters, mailing lists
- Meeting agendas and proceedings
- I-D Submission and I-D Tracker
- IESG actions

<http://tools.ietf.org>

- Tools for preparing drafts, viewing drafts, communicating, following IETF meetings



# The RFC Editor Web Site

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<http://www.rfc-editor.org>

- Search engines for RFCs, Internet-Drafts
- RFC publication queue
- Master index of RFCs
  - <ftp://ftp.rfc-editor.org/in-notes/rfc-index.txt>, .xml
- “Official Internet Protocols Standards” list
- Policy changes, news, FAQs, and more
- Errata look-up and reporting
- Tutorial slides



# Thank you

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- Questions? Comments?
- Ask us now!
- IETF 79: Stop by the RFC Editor or IANA Desks.
- RFC Editor Interest List: [rfc-interest@rfc-editor.org](mailto:rfc-interest@rfc-editor.org)
- Contact us later:
  - Alice Hagens, RFC Production Center, [rfc-editor@rfc-editor.org](mailto:rfc-editor@rfc-editor.org)
  - Margaret Wasserman, [mrw@lilacglade.org](mailto:mrw@lilacglade.org)