2018 Self-Review – RFC Production Center

The overarching goal of the RPC staff remains producing high-quality RFCs in a timely manner. We also work with the RFC Series Editor to define and prioritize additional goals. 2018 was a year in which the RPC found itself weighing the core goal of document production against paving the way for a successful transition to the XMLv3 format era and other requests. In addition to processing and publishing documents, the RPC was tasked with testing v3-related tools and our environment to determine support for the new formats, drafting a transition plan, and creating a high-level procedures manual. Further, id2xml was adopted into the editorial process.

Originally, the goals for 2018 were to focus solely on v3-related format work and document processing. However, as is typical, other projects were requested throughout the year. Some projects were prioritized, such as testing GitHub use during AUTH48, checking the format of YANG modules, and making errata available in a machine-readable format.

This self-review will discuss the queue throughput rates and other significant 2018 goals, identify other areas in which the RPC has made significant progress, and examine challenges and areas for improvement.

Editing and Publishing RFCs

The updated Service Level Agreement (SLA) went into effect in 2016. As a reminder, the SLA is defined as follows:

- **Tier 1:** When there is a normal amount of input, the SLA is 67% of documents published within the period have an RFC Editor-controlled time that adds up to six weeks or fewer. Where 'normal' is defined as less than 1950 Pages gone to EDIT (PGTE).
- **Tier 2:** When there is a moderate burst in the amount of input, then the SLA shifts to 50% of documents published within the period have an RFC Editor-controlled time that adds up to 12 weeks or fewer within the given quarter or the subsequent quarter. Where a 'moderate' burst is defined as 1950 – 3072 (inclusive) Pages gone to EDIT (PGTE).
- **Tier 3:** When there is a large burst in the amount of input, then the SLA must be discussed and renegotiated. Where 'large' burst is defined as greater than 3072 Pages gone to EDIT (PGTE).

Of the RFCs published in 2018, 47% had an RET of 6 weeks or less, and 98% had an RET of 12 weeks or less. See Figure 1.

233 Internet-Drafts (I-Ds) were submitted to the RPC for publication and Pages Gone to EDIT (PGTE) was 6663. On the publication side, 208 RFCs (5631 pages) were published. Compared with 2017, submissions were down 12%, but PGTE was 20% higher, which implies slightly larger documents. Publications were down about 20%. See Figure 2 for details.

The number of RFCs associated with a cluster remains pretty constant over the last 4 years at around 35%. (A cluster is a group of documents that must be published together; for the full definition, see https://www.rfc-editor.org/about/clusters/.)

PGTE increased significantly in Q4; we believe this is the start of the surge typically associated with AD changeover in March. With four ADs stepping down, we expect the surge to be quite significant.

	2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Submissions								
Pages	2150	1093	1114	1735	2427	1999	1308	1390
Docs	101	52	49	65	77	58	46	52
PGTE	1981	1134	1018	1389	2133	1852	1022	1656
Publications								
Pages	2326	1720	1430	1113	1933	967	1417	1314
Docs	90	64	59	50	66	42	57	43
Docs met SLA								
SLA Tier 1	60	37	45	44	54	13	11	19
	67%	58%	76%	88%	82%	31%	19%	44%
SLA Tier 2	89	62(*)	59	50	66	42(*)	54	42
	99%	97%	100%	100%	100%	100%	95%	98%

Note: "(*)" indicates when Tier 2 is being applied in the "subsequent quarter" as mentioned above.
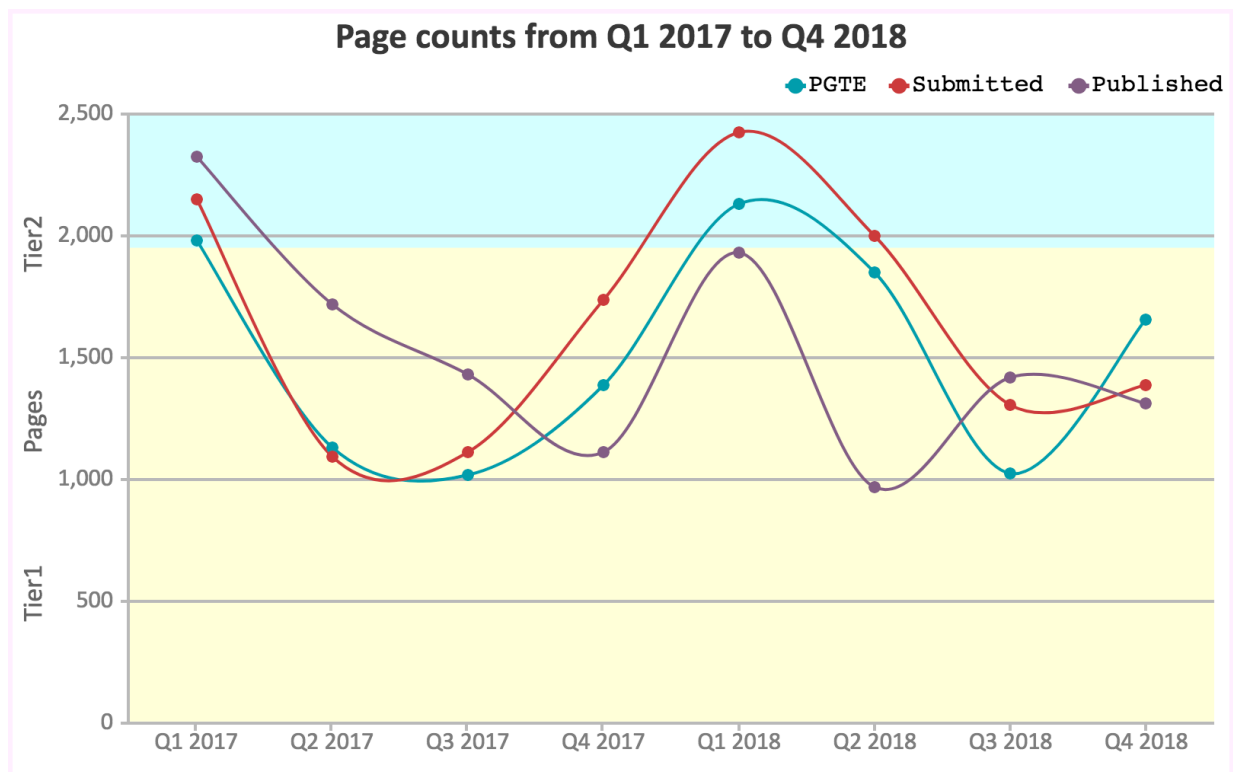
Figure 1: SLA Summary

Figure 2: Page Counts Submitted, Moved to EDIT, and Published by Quarter

Here are some of the kind words we received from the authors while processing their documents:

[Redacted]

Areas of Advancement

In addition to processing and publishing documents, the RPC was tasked with testing v3-related tools and our environment to determine support for the new formats, drafting a transition plan, and creating a high-level procedures manual. Further, id2xml was adopted into the editorial process. More details on the format work are included below.

Even though the v3-related workload was high, the RPC also addressed other requests such as developing and implementing an experimental process for AUTH48 using GitHub, checking the format of YANG modules (so well-formed modules are available to IANA for posting), and making errata available in a machine-readable format per a request from the IESG and the RSE. A JSON file was created after discussion with Adam Roach.

Format Work
While the primary goal of the RPC is to edit and publish RFCs, the editors shifted quite a bit of their workload to all things v3-related to help pave the way for a successful transition to the v3 format in 2019.

- **id2xml**
  Several editors have been trained on id2xml, and it is now being used in production in cases in which no source file is submitted (i.e., an XML source file is created instead of an NROFF source file).

- **xmldiff, svgcheck, rfclint**
  A few members of the editorial team tested the tools and reported issues to the developers. Internal notes were drafted to later help our staff learn the new tools.

- **xml2rfc v3 → .txt / .html / .pdf**
  Editors performed initial reviews of v3 output files and reported issues to the developer. This step required converting xmlv2 to xmlv3, and then running xml2rfc on xmlv3 to (hopefully) get and review the various output formats. Internal notes were drafted to later help our staff learn the new tools.

- **UTF-8**
  In 2017, the RPC tested their systems, tools, and environment to understand where updates were needed to handle UTF-8. The systems and environment were updated to allow UTF-8.

- **v3-related Programming**
  Programming work continued to handle v3-related changes, which include significant updates to the database, the errata system, and the related scripts that generate things such as the RFC info pages, RFC indexes, and search results.   In addition, because of the increased number of files associated with each RFC, our internal directory structure and the related scripts are being updated. Much of this work has been completed, but there is still quite a bit of work required before we can begin to publish the outputs of XMLv3.

- **v3-related Updates to the RFC Editor Style Guide**
  The v3 era will have an effect on the RFC Style Guide. Additional guidance is required regarding new features that are being added to RFCs, for example, where UTF-8 will be allowed, how/where features such as bold will be allowed, how to handle full- and half-width UTF-8 characters, etc. The RPC continues to discuss various issues specific to v3 with the RSE so that an update can be released closer to the time v3 will be put into production.

Other Updates

In addition to managing the editing queue and the v3-related work, the RPC responded to other requests. For example, a couple of tasks are described in more detail here.

In response to a request from an IESG member, the RPC and RSE worked with the requesting party to develop an experimental AUTH48 process using GitHub. We had to create a process and learn how to use the tool (unfortunately, the GitHub overview provided to our team by Paul Hoffman in 2017 did not prepare us for the actual use of GitHub as part of the editorial process.)

This turned out to be a major undertaking, not only because the document was over 150 pages, but our staff was expected to learn the tool while moving the document through AUTH48. Overall, this process was quite difficult (likely on both ends) but it was also a learning experience. We now have some internal user tips and an updated suggested process for when the experiment is continued.

In the end, after spending about 8 weeks in AUTH48, this document was published as RFC 8446 in August 2018.

The IESG is interested in creating a version of the RFCs that include errata folded in to highlight errata and to have a "correct" version of the RFC available. After a pretty successful trial run with the data available from the RFC Editor's errata pages https://www.rfc-editor.org/errata.php, we were asked to provide the errata in a machine-readable format. We scoped the project, created requirements for the programmer, and worked with the requesting party to ensure the output would meet their needs.

Other completed programming and IT tasks for the RPC include the following (in addition to the v3-related items discussed above):

- updated the database to track id2xml files
- highlighted errata on the search results page per user request
- updated the Erratum ID to be a link in the errata "Full Record" view; each Erratum ID is a link to the individual erratum (as requested by Martin Thomson)
- updated our system to handle the merging of ospf and isis into the lsr wg
- inserted a math problem to errata submission to help avoid empty or bogus submissions
- updated permissions on files to make them more secure
- created an internal page to reassign RFCs to a different area (for errata purposes)
- added a new state to the queue for use in the v3 era; this state will be used when a document is held because of a tooling issue

Areas for Improvement

The RPC editors will continue familiarizing ourselves with the v3 vocabulary and reviewing our processes while working with the v3 tools to better understand how the procedures need to be updated (and simplified where possible). We will discuss updates based on community feedback once the tools have been implemented. In addition, we will work on documenting tips for authors.

We will look at ways to modernize the AUTH48 process.

We are not sure GitHub will come into play in 2019, but a better understanding of how GitHub works is probably necessary at some point. While publishing RFCs and successfully transitioning to xmlv3 are the top priorities, gaining more familiarity with GitHub seems necessary, especially because the IETF has created a working group "to provide both process and tooling support for working groups that choose to adopt the practices." With the IETF looking to adopt more uniform GitHub practices, we expect familiarity with GitHub to be beneficial.

What's on the Horizon

In 2019, while continuing to edit and publish high-quality RFCs, we working toward a smooth transition to xml2rfc v3. This includes working hard to learn the xml2rfc v3 vocabulary, becoming more familiar with UTF-8 characters in RFCs, continuing to test the v3 format tools, reporting and tracking bugs, evolving and implementing the transition plan, and implementing processes that ensure easy AUTH48 reviews and efficient turn-around times. We expect the workload related to the format transition to xml2rfcv3 to be significant in 2019. As transition is expected to take place in 2019, we intend to use the funds budgeted for transitional staff to help alleviate the load associated with the v3 transition.

AMS and the RPC staff are dedicated to continuing to provide the Internet Community with first-rate editorial and publication services as well as excellent customer service. 2019 is going to be the RPC's most challenging and exciting year as we work toward a seamless transition to v3 publication formats while minimizing the impact on the community and queue processing times. We are looking forward to the challenge.