

# Improving Deliberation and Dispute Resolution on the Web: Investigating Requests for Comment

1. Quantitative + Qualitative study of RfCs
2. System-building
3. My interests from here

# What are Requests for Comment (RfC)?

- [Requests for Comment \(RfC\)](#) is a system in Wikipedia for inviting new inputs to help resolve an ongoing content dispute.
- It sometimes requires a closing process in which a neutral editor flags the end of the dispute by writing a closing statement.
- The closing process is sometimes collaborative, but other discussions can remain stale without closures.

RfC that is closed. →  
The consensus is written  
in the closing statement.

## RfC on income inequality effects

*The following discussion is closed. **Please do not modify it.** Subsequent comments should be made on the appropriate discussion page. No further edits should be made to this discussion.*

Consensus was to "omit" the material due to concerns that it is off topic. [Morph](#) <sup>(talk)</sup> 14:31, 17 January 2014 (UTC)

Instead of edit-warring over this excerpt, we clearly need an RFC.

Inequality in land and income ownership is negatively correlated with subsequent economic growth. A strong demand for redistribution will occur in societies where a large section of the population does not have access to the productive resources of the economy. Rational voters must internalize such issues. (Alesina, Alberto (1994). "[Distributive Politics and Economic Growth](#)" <sup>(PDF)</sup>. *Quarterly Journal of Economics*. **109** (2): 465–90. doi:10.2307/2118470<sup>?</sup>. Retrieved 17 October 2013. Unknown parameter |coauthors= ignored (|author= suggested) (help); Unknown parameter |month= ignored (help)) High unemployment rates have a significant negative effect when interacting with increases in inequality. Increasing inequality harms growth in countries with high levels of urbanization. High and persistent unemployment also has a negative effect on subsequent long-run economic growth. Unemployment may seriously harm growth because it is a waste of resources, because it generates redistributive pressures and distortions, because it depreciates existing human capital and deters its accumulation, because it drives people to poverty, because it results in liquidity constraints that limit labor mobility, and because it erodes individual self-esteem and promotes social dislocation, unrest and conflict. Policies to control unemployment and reduce its inequality-associated effects can strengthen long-run growth. (Castells-Quintana, David (2012). "[Unemployment and long-run economic growth: The role of income inequality and urbanisation](#)" <sup>(PDF)</sup>. *Investigaciones Regionales*. **12** (24): 153–173. Retrieved 17 October 2013. Unknown parameter |coauthors= ignored (|author=

RfC: Images used for Planet Nine

(Notifying previously involved editors: Jehochman, prokaryotes, Serendipodous, Fut.Perf. ♂, Ephraim33, Nergaal, Neutron, Leitmotiv, Kheider, Wnt, Nowa, Itu, Smkolins, Tom Ruen and Jonathunder.)

I really think we need more input regarding the images used on this article. There have been a few previous discussions<sup>[1][2][3][4][5]</sup> but no clear consensus was demonstrated. I propose that we pool our collective opinions here and put things to a vote. Since there are 2 questionable images I'll split this into 2 subsections.

Artist's impression in the infobox

The infobox currently shows an artist's impression of Planet Nine (right), which appears to be closely based on [an image released by Caltech credited to R. Hurt \(IPAC\)](#)<sup>ⓘ</sup>. While artist's impressions may help to grab the reader's attention I do not think that it's becoming of an encyclopedia to reproduce them here and I propose that it be removed, or at the very least removed from the infobox. The only information it conveys are *basic assumptions*, which could easily mislead the reader. [A view of the Earth can be found here](#)<sup>ⓘ</sup> in which the planet's size and distance from the Sun is similarly *not* conveyed. Please bear in mind that even if you don't find the picture misleading, others undoubtedly will.

**Propose** the complete removal of artist's impression. Sorry. nagualdesign 03:43, 4 February 2016 (UTC)

Plenty of artist's impressions are in infoboxes in this encyclopedia. There is no rational reason for its removal. The only issue I have with it is that it is unclear where the Sun is, and how far away it is. Serendipodous 08:07, 4 February 2016 (UTC)

File:Planet-Nine-in-Outer-Space-artistic-depiction.jpg  
An artist's impression of Planet Nine

← Unclosed

RFC on income inequality effects

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Should that be included in the Economic effects/Income inequality section? EllenCT <sup>(talk)</sup> 02:25, 2 January 2014 (UTC)

Survey

- Support** inclusion of the passage as a separate paragraph, to explain why income equality is a positive economic effect. EllenCT <sup>(talk)</sup> 02:25, 2 January 2014 (UTC)
- Omit** the paragraph in its entirety, as it does not even approach the subject of taxation, progressive or otherwise. Obviously off-topic and superfluous. Roccodrift <sup>(talk)</sup> 02:29, 2 January 2014 (UTC)

Closed →

# Research Questions

- How can we build a tool that can make timely recommendations to an ongoing dispute to increase the chance of it to become resolved? The tool spits out recommendations like..
  - Invite more expertised participants.
  - Change the discussion structure.
- Do people actually change minds during online deliberative discussions? If not, how can we make a better environment so people can have a chance to reach a better consensus through reasonable persuasion?

# Assumptions

- Here we assume that the unclosed RfCs remaining stale are a bad sign for the Wikipedia community since they end up with no resolution.
- Thus, we try to improve the chances of an RfC to become closed.
- The tool we envision to build will therefore predict the chances of an ongoing RfC to become closed and make recommendations based off it.

# Main Contributions

- Created a novel dataset of 7,316 Request for Comments (RfC) from 4,996 Wikipedia pages.
- Analyzed the dataset to earn insights about the RfC process using various techniques including machine learning.
- Interview top RfC participants extracted from the dataset to understand tensions existing in the RfC process.
- Designed and implemented a voting feature in Wikum, a tool for summarizing online threads, in order to make it easier for editors to collaboratively close the RfCs.

# **Quantitative + Qualitative study of RfCs**

# 1. Which factors lead to an RfC closure?(quantitative study)

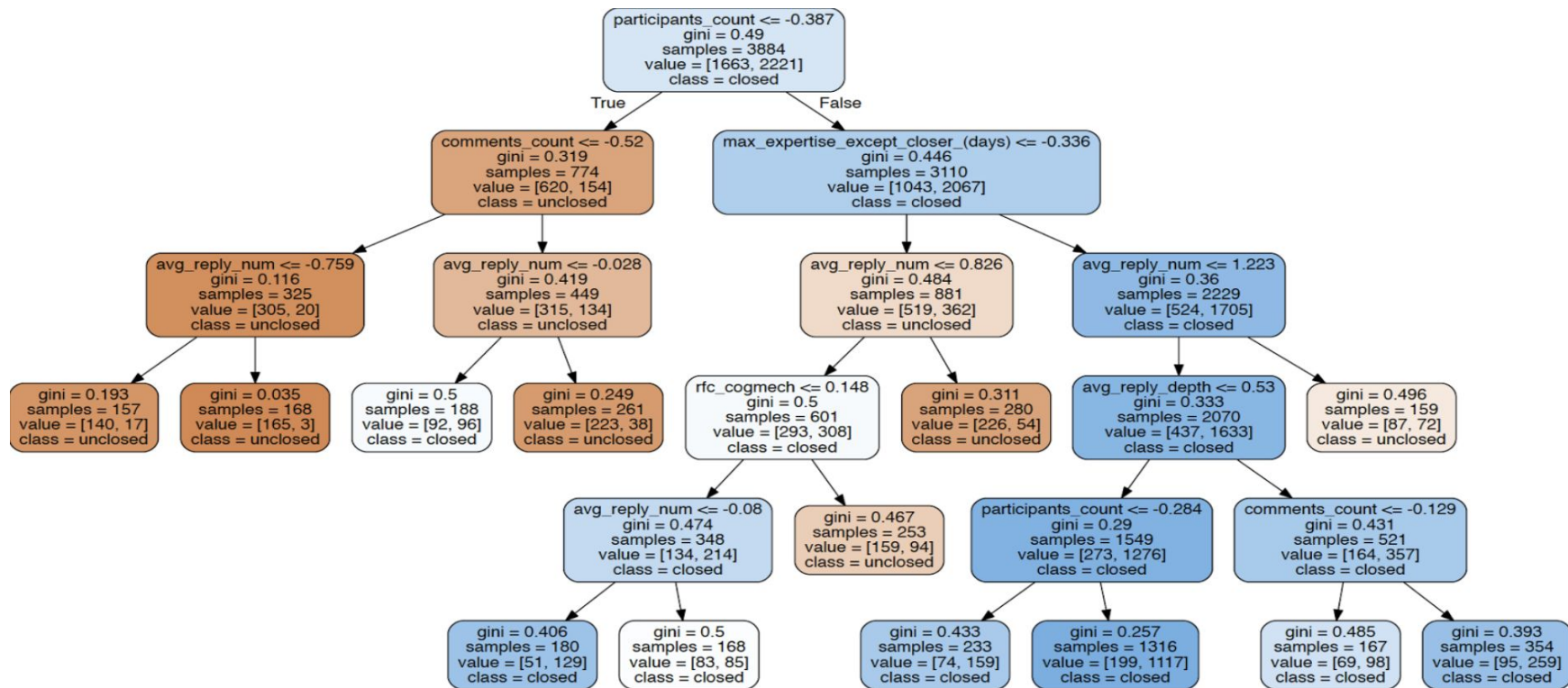
- **Baseline: 0.5668**, Train / test = 60 / 40, 10-fold cross validation, repeating 50 times, averaging the results
- Logistic Regression (LR), Adaptive Boosted Decision Trees (ADT), Random Forests (RF), and Support Vector Machines (SVM) with radial-basis function kernel (C=1, gamma=1/6)

participants_count,	0.231429	sum_participant_edit_count	0.02648	rfc_incl	0.016354	two_weeks_recent_rev_count	0.007319
max_expertise_except_closer_(days)	0.142774	rfc_positive	0.024583	initiator_edit_count	0.015802	one_week_recent_rev_count	0.006138
avg_reply_num	0.076779	rfc_affect	0.024422	weighted_reciprocity	0.014729	rfc_negative	0.005761
comments_count	0.038736	rfc_percept	0.023326	initiator_expertise_(days)	0.013669	rfc_swear	0.004837
avg_reply_depth	0.03856	avg_participant_edit_count	0.022529	rfc_i	0.012965	two_months_recent_rev_count	0.004462
rfc_cogmech	0.036369	revision_count_before_rfc	0.018646	rfc_anger	0.011539	article_character_count	0.003794
rfc_hostile	0.031209	avg_expertise_except_closer	0.018632	rfc_insight	0.010896	article_word_count	0.003369
sum_expertise_except_closer	0.027798	rfc_tentative	0.017407	new_participant_ratio	0.009833	one_month_recent_rev_count	0.002864
sd_expertise_except_closer	0.026815	rfc_excl	0.01637	rfc_certain	0.008531	initiator_revision_before_rfc_count	0.0024
						three_weeks_recent_rev_count	0.001875

- **Attention RfC is receiving** (number of participant, comments), **maximum expertise of participant** (excluding closer if closed), **structure of discussion** (average reply number, average reply depth), **tones (cogmech, hostile)** are helpful for predicting RfC closure (classification) with relatively high accuracy compared to baseline.



# 1. Which factors lead to an RfC closure? (quantitative study)



Closed ones tend to.....

- participants\_count ↑, max\_expertise\_except\_closer ↑
- avg\_reply\_num ↓, avg\_reply\_depth ↓

# 1. Which factors lead to an RfC closure? (quantitative study)

- Overall accuracy is about 77% (baseline: 55.8%)
- RF has slightly highest accuracy
- Based on the features that are filtered out

	logreg	adt	rf	svm_rbf	dc_tree
accuracy	0.759846	0.784942	0.785035	0.776062	0.748919
f1	0.796333	0.819332	0.822512	0.815756	0.788688
precision	0.766709	0.782043	0.773146	0.764286	0.754031
recall	0.828338	0.860354	0.878801	0.874659	0.826689
roc_auc	0.749285	0.773314	0.770577	0.760859	0.736928

## 2. What are some problems existing in unclosed RfCs? (qualitative study)

### A.Reasons that are explicitly mentioned in the RfCs observed

#### 1.Initiator's fault

- Initiator was not clear with the wording of the request.
- Initiator's opening statement is biased (e.g. [canvassing](#)).
- RfC was inappropriate in the first place. Should have used another procedure.
- Initiator is a person who keeps bringing up issues (e.g. [forum shopping](#)). ⇒ Editors comment that the RfC is unnecessary.

#### 2.Participants (that are familiar with the topic, including the initiator)' fault: Bickering

Participants' bickering makes the overall **structure** and **content** hard for the new participants to read and comment.

#### 3.Other editors did not think there is a problem in the first place

No problem with the initiating statement and no bickering exists, but initial participants respond that what the initiator brings up is not much of a problem.

#### 4.Absolute consensus

A participant just writes down the visible consensus and takes the RfC tag off. ⇒ Some interviewees said this can be a good thing.

## 2. What are some problems existing in unclosed RfCs? (qualitative study)

### **B. Other reasons that are just assumed from the shape of the discussion:**

- Discussion that has no comment or small number of comments
- Discussion that is long, with most of them not new inputs

### **1. A topic that is unpopular**

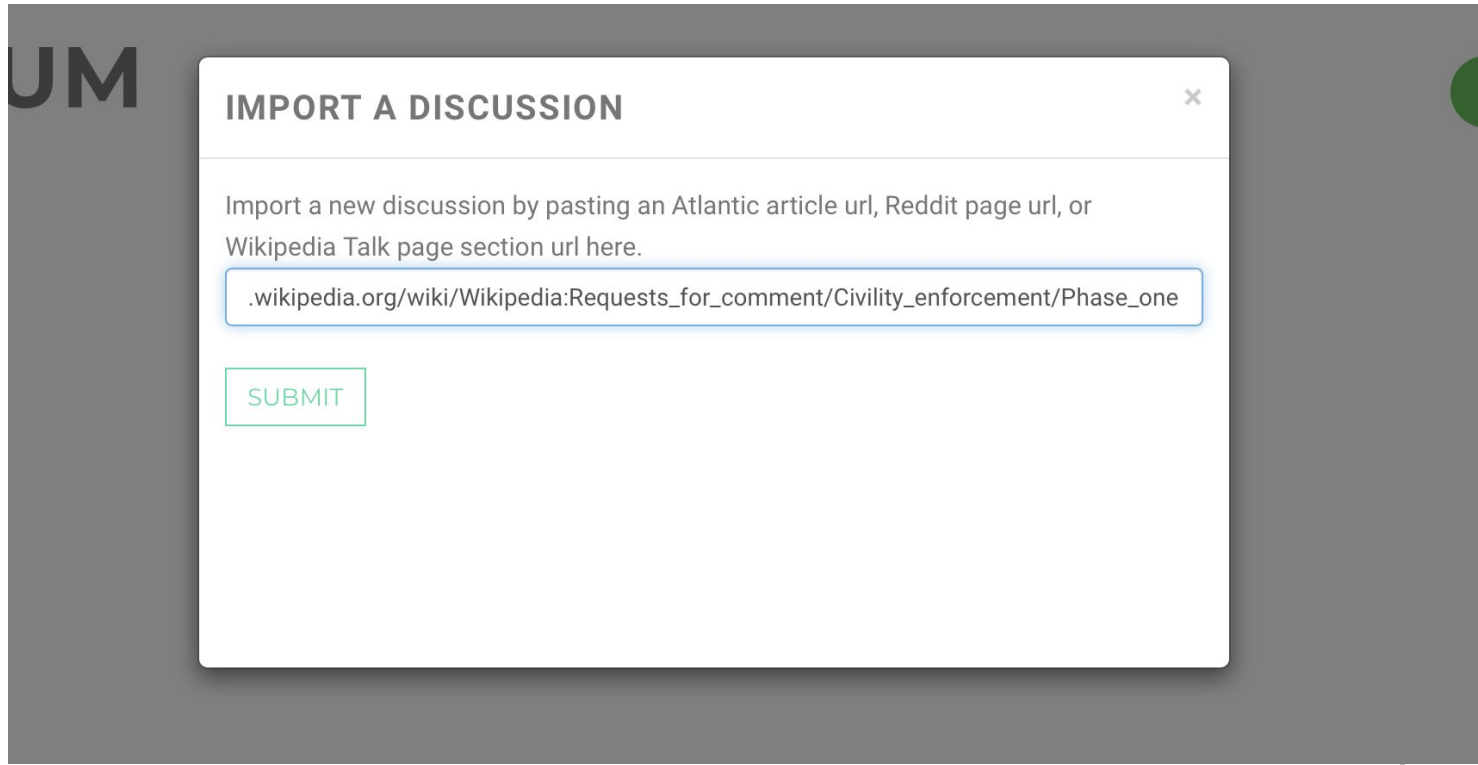
**2. Not controversial enough** ==> Voting structure exists but pretty obvious what the consensus is.

# **System-building**

# System-building aspect

- Contributions:
  - Fixed the codebase of Wikum so it can import Request for Comments properly
  - Implemented a voting feature in Wikum so editors can more effectively close contentious RfCs
- Acquired skills:
  - Django - web framework
  - Celery - distributed task queue
  - RabbitMQ - open source message broker

# System-building aspect



UM

## IMPORT A DISCUSSION

Import a new discussion by pasting an Atlantic article url, Reddit page url, or Wikipedia Talk page section url here.

SUBMIT

# System-building aspect

2% of this page summarized

WIKUM

Overall

Subtree

Summary

Edit History

Filter by tag

SORT ALL BY - ID

Highlight text

GET NEXT PAGE OF COMMENTS >>

ABOUT

CONTACT

LOGIN

SIGN UP

Talk:Planet Nine/Archive 4 - RfC: Images used for Planet Nine

EDIT ACCESS

## RFC: IMAGES USED FOR PLANET NINE

(Notifying previously involved editors: [Jehochman](#), [prokaryotes](#), [Serendipodous](#), [Fut.Perf.](#), [Ephraim33](#), [Nergaal](#), [Neutron](#), [Leitmotiv](#), [Kheider](#), [Wnt](#), [Nowa](#), [Itu](#), [Smkolins](#), [Tom Ruen](#) and [Jonathunder](#).)

I really think we need more input regarding the images used on this article. There have been a few previous discussions<sup>[1][2][3][4][5]</sup> but no clear consensus was demonstrated. I propose that we pool our collective opinions here and put things to a vote. Since there are 2 questionable images I'll split this into 2 subsections.

Summarize Comment Tag Comment Mark Unimportant Show Hidden Comments

COMMENT BY NAGUALDESIGN

## ARTIST'S IMPRESSION IN THE INFOBOX

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# System-building aspect

## WIKUM

Overall

Subtree

Summary

Edit History

er by tag

hlight text

SORT ALL BY - # LIKES▼

Language ▼

Is Fermented Tea Making People Feel Enlightened Because of ... Alcohol?

EDIT ACCESS

### SUMMARY OF COMMENT BY DISQUS\_SJTSIXSRYG (2 LIKES)

There's good data on this already that the author did not reference.

"The outcome of this study included a study from my group which tested more than 100 samples, and found the majority contained more than just a trace of alcohol -- some products in excess of 2% alcohol by volume." [\[#41748\]](#)

1 0 | [View Original Comment](#) | [Edit Comment Summary](#) | [Delete Comment Summary](#)

[Tag Comment](#) [Mark Unimportant](#)

### COMMENT BY DISQUS\_2WZLUGNNEF (2 LIKES)

Funny thing is, Listerine mouth wash is about 12% alcohol.

[Tag Comment](#) [Mark Unimportant](#)

My interests from here

# 1. Pair people or use voluntary crowdsourcing to bridge differing opinions on the web

- What if we pair individuals or establish teams from different political ideologies real-time?
- Or use voluntary crowdsourcing to present different views to an individual?

- ❖ Republican vs Democrat
- ❖ Disabled vs Undisabled
- ❖ Women vs Men
- ❖ ....

## 2. Study and understand misogyny in online discussions.

- How can we reduce crimes against women? How can we change the conceptions of people on women?
- Possible datasets:
  - South Korea
    - Kangnam Murder Case  
[https://en.wikipedia.org/wiki/Seocho-dong\\_public\\_toilet\\_murder\\_case](https://en.wikipedia.org/wiki/Seocho-dong_public_toilet_murder_case)
  - U.S.
    - #MeToo

### 3. Experiment with and learn from more diverse datasets (regarding diversity and accessibility)

- Are there different communities that each race or sex tends to participate in? If so, how about comparing those communities?
- Who actually spends much time on social media? Do people who are relatively poor have time and energy to comment on news?
- A comparative study on different datasets regarding country and culture?

Reinecke, K., & Gajos, K. Z. (2015, February). LabintheWild: Conducting large-scale online experiments with uncompensated samples. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing* (pp. 1364-1378). ACM.