REPORT: All-of-IETF Survey 2021

Introduction

This survey is the first time the IETF has attempted to survey everyone who in some form participates in the IETF, however limited their participation. The aim is to deliver these three outcomes:

1. A current size and demographic breakdown of the IETF community.
2. Data on IETF community views that can be used by IETF leadership in planning how to address the major strategic challenges facing the IETF.
3. The first step in a time series of data that can be used to assess the natural changes affecting the IETF and the effectiveness of major programs, organisational changes and leadership actions.

Key findings

A number of the key findings presented here are based on applying a value judgement to the results as explained in the section below on [Coding, coding means and applying a value judgement](), which gives ranks answers as very poor, poor, acceptable, good or excellent.

Organisation

The IETF mostly delivers its mission and principles

From [Q25]() we learn that the quality and relevance of RFCs is good whereas the focus on the most important work is minimally acceptable, and from [Q25]() and [Q27]() that the support for consensus is strong. [Q26]() and [Q27]() differ on the ability to share views, with it judged as minimally acceptable for the IETF in general but good for WGs.

IETF processes are mostly acceptable but major improvement is needed

[Q25]() tells us that IETF processes have minimally acceptable effectiveness and similarly [Q26]() tells us that the ease of finding information, understanding it and the quality of that information is acceptable. [Q27]() goes into more detail on WG processes and those mostly range from minimally acceptable to good.

The standout exception is the timely production of RFCs, judged as poor in both [Q25]() and [Q27]().

The IETF has an issue with mass communication and how (or why) to reach the full IETF community

From [Q21]() we learn that we have a bootstrapping problem with mass communication given the lack of knowledge about ietf-announce and a problem with its content for those that do. From [Q22]() we learn that alternative communication mechanisms to email announcements are much less preferred now, but are preferred by younger participants and will hence become more important over time as the older participants move on.

People

The IETF has a sense of community, but only just and not one that people can recommend

From [Q26]() we learn that a minimally acceptable number feel part of the community, feel treated the same as the rest of the community, feel that the IETF communicates

with them well and from Q27 that behaviour is minimally acceptable, contributions are valued and that WGs are a good use of time.

From Q10 we learn that people are unclear about what participation in the IETF actually means.

Q20 on how likely respondents are to recommend participation uses Net Promoter Score scoring and our result shows that the IETF has a poor score for promoters minus detractors of -24.31%.

The IETF has a big problem with gender, a smaller problem with regionality but no problem with age

From Q4 we learn that females make up between 10.7% and 9.2% of the IETF community, significantly lower than the percentage of the population or the percentage split of IT workers, and from Q11 and Q18 that this percentage has not grown in some time. We learn from Q18 that females are disproportionately deterred by the culture of the IETF, from Q26 that they are less likely to feel treated the same as the rest of the community as males and from Q27 that they are less likely to feel their contributions are valued and that the behaviour of other participants is acceptable.

From Q2 we learn that the US/Canada and Europe still dominate IETF participation and from Q11 that this is only slowly changing. Female representation from Europe and Africa is notably lower than from other regions

From Q3 we see a good age spread for participants. Q25, Q25 and Q27 show minor differences by age with some lower scores for the 18-24 age range but nothing more. Some people

Participation

The principle of people participating for the benefit of the Internet is true but not the strongest factor

RFC 3935[1] states that *our participants and our leadership are people who come to the IETF because they want to do work that furthers the IETF's mission of "making the Internet work better"* and this is partly supported by Q12 which puts "making the Internet work better" as the second highest reason and with high support. The highest reason is personal interest and the third is professional development, pointing at a much stronger personal benefit than otherwise understood.

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[1] https://www.rfc-editor.org/rfc/rfc3935.html

The foundations of people participating as individuals is very complex and only partly supported

RFC 2418[2] states that *participation is by individual technical contributors, rather than by formal representatives of organizations* and this is also partly supported by Q12 with only 30% reporting that they participate because their job requires them to, implying that the other 70% could choose not to.

The same question also tells us that 48% participate because their job allows them to, Q13 tells us that only 33% of all time spent on the IETF is personal time, and Q18 gives two of the top 3 reasons why people cease participating as work related. This indicates that people use their autonomy to choose what work they do (and possibly what employer they work for) to favour the IETF. What the survey did not address is what obligation they have to advocate for their employers interests if they choose to participate.

The two pillars of email and English have very strong support

From Q22 and Q24 we see high support for email announcements and mailing list interactions, significantly higher than the presented alternatives, and from Q23 email is the preferred method for providing feedback to IETF leadership. All three results have a tight clustering of support from all age groups, with support slightly stronger the older the respondent.

From Q5 we learn that the general skill with English is excellent and from Q26 that its individual suitability for full participation is also excellent. These are the only excellent scores in the whole survey.

Support for new modes of participation is limited and age dependent

From Q24 we learn that support for new modes of participation is limited in comparison to email and that there is a strong inverse correlation between age and strength of support. If we assume that strength of support will increase as older people cease participating and younger people join, it looks like it will be about 5-10 year for issue trackers to become mainstream and 20-30 years for instant messaging.

Environment

The IETF is a very important part of a well connected ecosystem

In Q28, which uses Net Promoter Score, we get a Great score for the number that think the IETF is important for the development of the Internet. From Q29 we learn that 44% of respondents participate in one or more other standards setting

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[2] https://www.rfc-editor.org/rfc/rfc2418.html

organisations and from Q30 that the IETF is rated very favourably in comparison to those other organisations.

Methodology

Survey design principles

The survey was designed and questions were constructed with the following principles in mind:

Return a representative sample of the wider IETF community

Previous surveys, such as post-meeting surveys or I-D authors surveys, have generally been targeted either directly or indirectly at those that are most active in the IETF. The intent of this survey was to reach as widely as possible in order to get a representative sample of the 56,000 mailing subscribers. This meant including direct questions about the level of participation and specific questions about non-participation.

Design for an international survey

The IETF community is global and the language was carefully chosen to ensure that all respondents interpret the questions easily and similarly through simple, direct and idiom-free language.

Maximise the number of responses

This principle influenced the question design in a number of ways, all of which aimed to reduce the cognitive load required to complete the survey.

The friction people feel with mandatory questions was largely eliminated by allowing them to skip almost all the questions. The only mandatory question was used for routing people to different sets of questions around participation and non-participation.

The problem this introduces is how to understand what it means when someone sees but skips a question. Is it that they do not wish to answer, or they do not care enough to answer or is it because none of the options apply to them.

For questions with a scale that includes a 'neutral' option, a 'No opinion' option was added to avoid people choosing the neutral option and distorting the results. Anyone one who skipped such a question is counted as also having no opinion.

For multiple choice questions, a "none of the above" option was not added as that option is not always obvious and instead it is assumed that anyone who did not answer the question did so because none of the options presented were relevant. This decision may be revisited in future surveys.

Ensure that the responses can be processed.

As this was going to 56,000+ email addresses it was expected that there would be thousands of responses and it simply would not be possible to process that number of free text answers so there are no free text boxes.

Prioritise questions that can be repeated every year

The intent is to repeat this survey every year at roughly the same time so that a trend can be seen over multiple years. This also means that there are no trend questions in the survey (e..g "Has community behaviour got better or worse over the last year?") as that is more accurate if derived from multi-year analysis because perception over a period of time differs so much from individual to individual.

Don't ask questions that are best answered by other means.

For example, we have some basic questions about mailing list subscriptions, but more accurate answers can be obtained from mailing list analysis. Similarly, it would be better to send each WG a survey than ask for information about specific WGs in this survey.

Distribution

To distribute this survey, an address list was created by amalgamating the membership lists of all active IETF mailing lists and de-duplicating for addresses using '+' notation. The resulting 56,517 addresses were silently subscribed to a mailing list with all members moderated to prevent unwanted use.

A pre-announcement[3] was sent to ietf-announce@ietf.org and then the invitation to participate[4] was sent to this list and distributed to all on 7 May 2021. A final reminder[5] email was sent to the mailing list on 13 May 2021.

Approximately 700 people unsubscribed and at least 600 addresses bounced. The unsubscribed addresses will be noted and added to a "do not contact" list for future iterations of this survey.

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[3] https://mailarchive.ietf.org/arch/msg/ietf-announce/mNiqq0NDuAvAOWbGzJU1zLayRY4/
[4] https://mailarchive.ietf.org/arch/msg/ietf-surveys/k0Z3Mdk53witIbdf97XxHtbp4Po/
[5] https://mailarchive.ietf.org/arch/msg/ietf-surveys/Ex7l8dwWjTobcgLP1eGQ05QmRmA/

Two respondents wrote that they subscribe to IETF lists with multiple email addresses using their own domain name and so had received multiple invitations. They were manually unsubscribed.

For analysing the survey, a population of 56,000 is used.

Data validation

The initial protection of the integrity of the data was left to the survey system, which was configured to detect bots and prevent repeated survey responses. After the survey the data was examined to identify obviously invalid survey responses and 5 were deleted as a result.

Analysis of results

Percentage analysis

Most of the question analysis displays the results as a percentage, with different forms of percentage used:

- **Percentage of survey respondents**. Used for questions where we need to include those people who did not answer the question in the results because their non-answer is meaningful. For example, for the questions about what other organisations participate in, we assume those that did not answer do not participate in any. This shows the number of responses to a particular option as a percentage of the total number of respondents to the survey (2039). These percentages will always add up to 100%.
- **Percentage of question respondents**. Used for questions where we are only interested in the views of those that responded to the question and we want to understand how each option compares to the total of those that responded, not relative to each other. For example, the question on whether or not people participate This shows the number of responses to a particular option as a percentage of the total number of respondents to this question. For multiple choice questions, these percentages will generally total to more than 100%.
- **Percentage of responses**. Used for multiple choice questions where we want to assign a fractional 'score' for each option selected by the same person to enable comparison between options. For example, with the question about types of employment, if someone ticks two options then we want that to count as one half of a vote for each option. This shows the number of responses to a particular option as a percentage of the total number of responses to the question. These percentages will always add up to 100%.

- **Others** There are a number that are derived from the total number of survey respondents and should be clear from the label.

Coding, coding means and applying a value judgement

A number of questions have categorical responses on a scale. For example, "Much more" through to "Much less". For the analysis, each response is assigned a code that is then used to calculate a mean between 1 and 5. These means can then be compared between questions and/or over time.

For some questions it is appropriate to apply a value judgement where we assume that we want as high a score as possible and therefore need to assess the value of a score. In those cases, while there's no hard and fast rule, a mean of 4.50 or above is sometimes considered excellent, 4.00 to 4.49 is good, 3.50 to 3.99 is minimally acceptable and below 3.50 is either poor or very poor if below 3.00

The codes are:

Quality	Quantity	Preference	Frequency	Code
Excellent	Much more	Strongly preferred	Almost always	5
Good	More	Preferred	Often	4
Average	About the same	Neutral	Sometimes	3
Poor	Less	Not preferred	Rarely	2
Terrible	Much less	Strongly not preferred	Almost never	1

Statistical significance

Only a limited number of significance comparisons have been performed due to the nature of the data:

- Comparison of means, using a public web service[6].
- Comparison of proportions using a public web service[7].

Charts

The chart types and settings have been chosen as follows:

- The scale for percentages is always 0%-100% except where the figures are quite small and that would make it difficult to read.

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[6] https://www.medcalc.org/calc/comparison_of_means.php
[7] https://www.socscistatistics.com/tests/ztest/default2.aspx

- Stacked bars are used where the answers are on a scale.
- As well as percentages, raw counts are shown so that the reader can calculate their own comparison tests and check the percentages.
- Some figures and headings have been omitted for space reasons and where meaningful those are referenced in the text. Any missing figures can be provided on demand.

Results and Analysis

Totals

~56,000[8] email addresses were successfully contacted and with a ~3.6% response rate, 2032 valid responses were received, giving a maximum margin of error of +/- 2.13%.

Question page: Demographics

These questions have been asked for the dual purpose of understanding the broad makeup of the IETF community, and how the views and experiences of the community differ by demographics as such differences may indicate problems that need addressing.

Only one of the questions was mandatory, "Do you participate in the IETF?" with the others all optional. For these optional questions a decision has to be made on what to do about those respondents who did not answer.   The number of respondents per question in this section was:

Question	Count	Proportion
Do you participate in the IETF?	2032	100.00%
In what region do you live?	2023	99.56%
How do you rate your skill with the English language?	2016	99.21%
What is your employment status and type of employer?	2010	98.92%
How old are you?	2001	98.47%
Do you have a Datatracker account?	2000	98.43%
What is your gender?	1990	97.93%

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[8] This is an approximation due to the complexity of processing email bounce messages.

Which of the following applies to you?	1654	81.40%
Which of the following general IETF mailing lists do you subscribe to?	1124	55.31%

With these very high response rates it is assumed, for all except two questions, that those who did not answer would have answered in the same proportions as those who did answer, and so these will be analysed using the percentage of question respondents. The two exceptions are:

- "Which of the following applies to you?". It is assumed that those who did not answer this did not think any applied to them. This will be analysed using the percentage of survey respondents.
- "What is your gender?". Some may consider this a personally sensitive question and so this will be analysed in a number of ways.

A note about participation and interaction
While respondents were asked to self-identify their participation status in Q10, the responses to Q7 show significantly different interpretations of 'participation' as hundreds have reported that they have never participated in the IETF, but then list multiple interactions where they have participated. Consequently, **participation status is not used for cross tabulating any question** Participation status was used to filter what questions were displayed during the survey and so these questions can only be presented as asked. However, analysis of the demographic questions shows no statistically significant difference in the answers given by participation status and so for the filtered questions, it can be assumed that the proportions would not be significantly different if all respondents had been asked. As participation status cannot be used for cross tabulation, a replacement indicator "Interaction status" has been derived from the data on self-reporting of interaction, with anyone who reported no interactions categorised as "Not interacted" and all others as " Interacted". There are 1654 respondents categorised as "Interacted" and 378 categorised as "Not interacted". Of those categorised as "Not interacted", 323 state that they have never participated in the IETF, 31 state that they currently participate and 24 state that they previously participated.

Q2. In what region do you live?

This question uses the standard IETF regions and is the same question asked in most of our other surveys, such as post-meeting surveys. It was asked of all 2032 survey respondents with 2023 responses.

Region	Percentage (count)
US, Canada	39.7% (806)
Europe	38.0% (773)
Asia	12.3% (250)
Australia, New Zealand, O..	3.1% (64)
Latin America (Mexico, Ce..	2.8% (56)
Africa	2.2% (44)
Middle East	1.5% (30)
Not answered	0.4% (9)

Percentage of survey respondents 📌

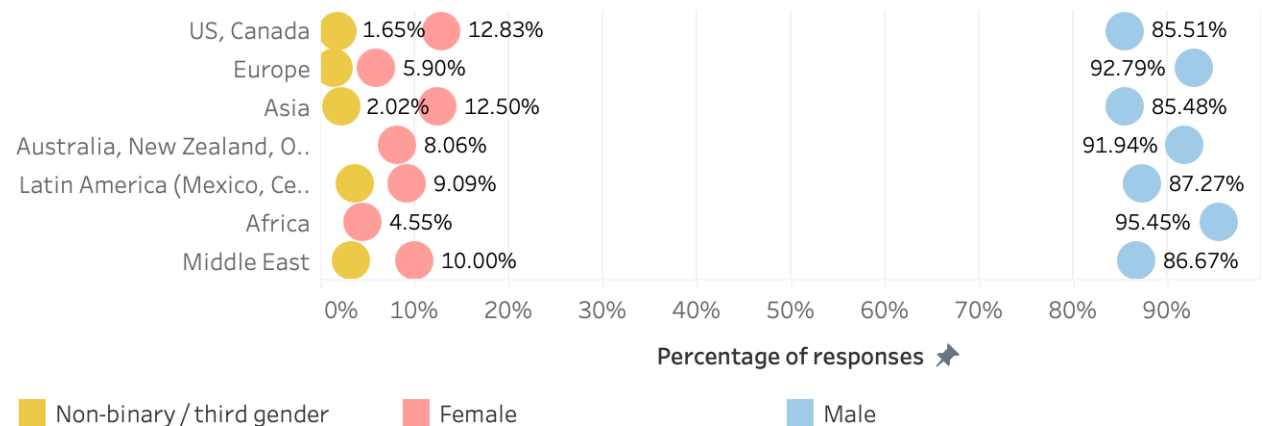| Region	Interacted	Not interacted
US, Canada	32.38% (658)	7.28% (148)
Europe	30.46% (619)	7.58% (154)
Asia	10.33% (210)	1.97% (40)
Australia, New Zealand, O..	2.51% (51)	0.64% (13)
Latin America (Mexico, Ce..	2.41% (49)	0.34% (7)
Africa	1.92% (39)	0.25% (5)
Middle East	1.18% (24)	0.30% (6)
Not answered	0.20% (4)	0.25% (5)

Percentage of survey respondents 📌   Percentage of survey respondents 📌

Cross tabulating by gender (Q4) and normalising:

Region	Non-binary / third gender	Female	Male
US, Canada	1.65%	12.83%	85.51%
Europe		5.90%	92.79%
Asia	2.02%	12.50%	85.48%
Australia, New Zealand, O..		8.06%	91.94%
Latin America (Mexico, Ce..		9.09%	87.27%
Africa		4.55%	95.45%
Middle East		10.00%	86.67%

Percentage of responses 📌

🟨 Non-binary / third gender   🟥 Female   🟦 Male

Commentary
1. The results match what we see in our post-meeting surveys.
2. There are notably fewer females participating from Europe and Africa in comparison to the other regions.
3. The cross tabulation by interaction status does not have any significant differences (sample only).

Q3. How old are you?

This question has never been asked before. It was asked of all 2032 survey respondents with 2001 responses.
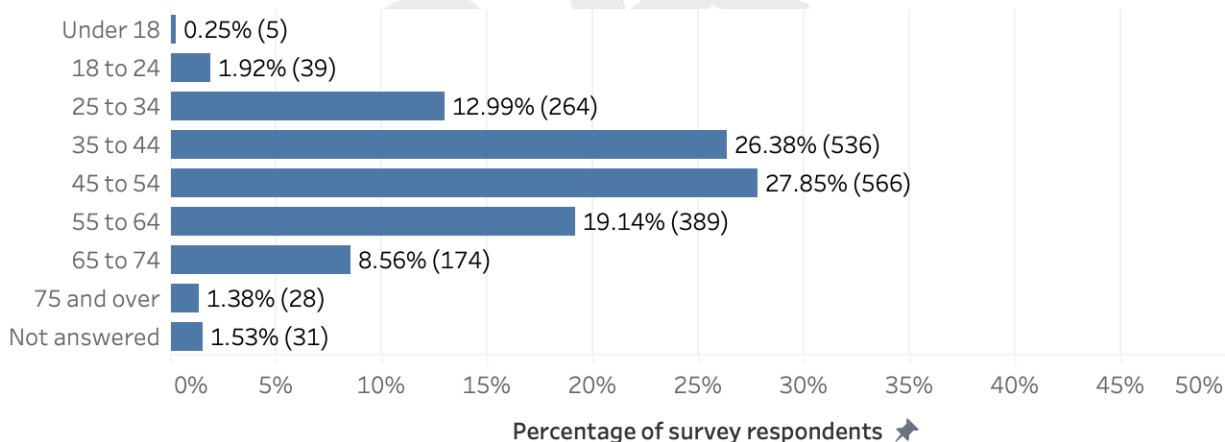
Cross tabulated by interaction status and shown as a percentage of question respondents:
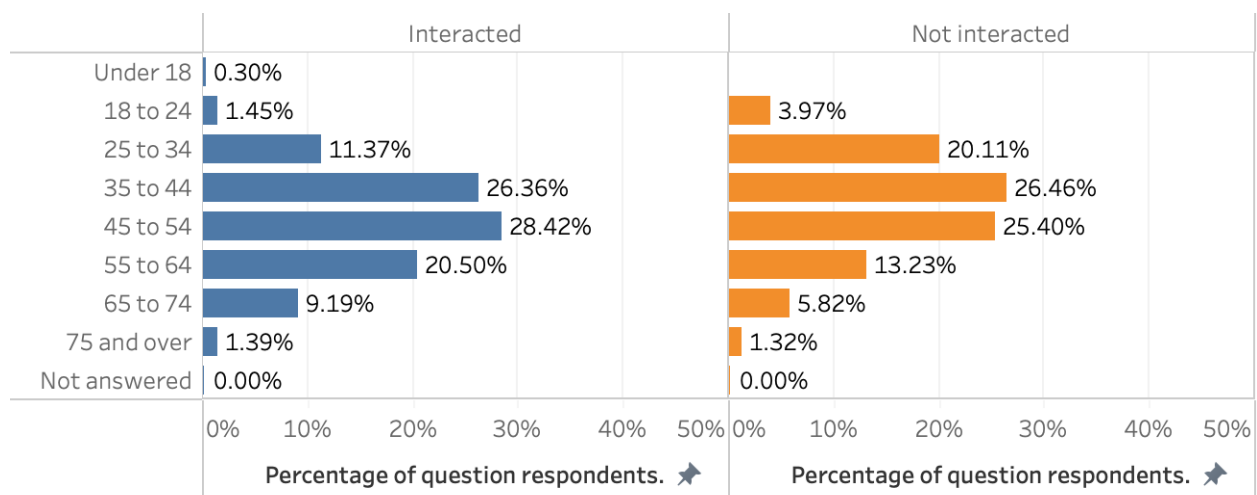
Commentary

4. 5 respondents declare themselves to be under 18. Extrapolating this percentage to the full population means up to ~135 IETF participants of a similar age range.
5. The median age range is "45 to 54" for those who have interacted and "35 to 44" for those that have not.
6. There are other two significant differences when cross tabulated by interaction status with those below 35 less likely to have interacted and those over 54 more likely to have.

Q4. What is your gender?

This question has never been asked before. It was asked of all 2032 survey respondents with 1990 responses. The totals using a percentage of survey respondents are:

Percentage of survey respondents 📌
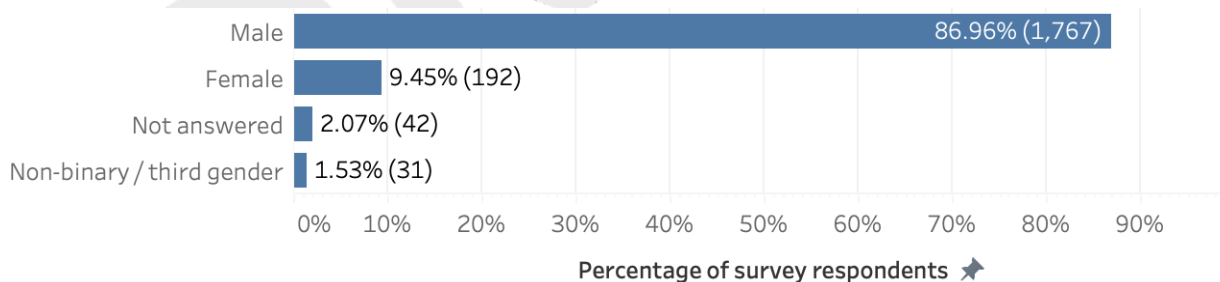
Extrapolating these percentages to the full population gives us:

Gender	Count	Proportion	Margin of Error	Max Pop	Mi Pop
Male	1767	86.96%	+/- 1.44%	49504	47891
Female	192	9.45%	+/- 1.25%	5992	4592
Non-binary / third gender	31	1.53%	+/- 0.52%	1148	566
Not answered	42	2.07%	+/- 0.61%	-	-

Cross tabulating this by interaction status and showing this as a percentage of question respondents:

Commentary

7. Clearly, the gender balance within the IETF community is significantly different from that in the general population and the IT profession[9], with women greatly under-represented.
8. There is no difference in gender proportions by interaction status.
9. In response to feedback, the wording of this question will be improved in future surveys, with "Man" replacing "Male" and "Woman" replacing "Female".
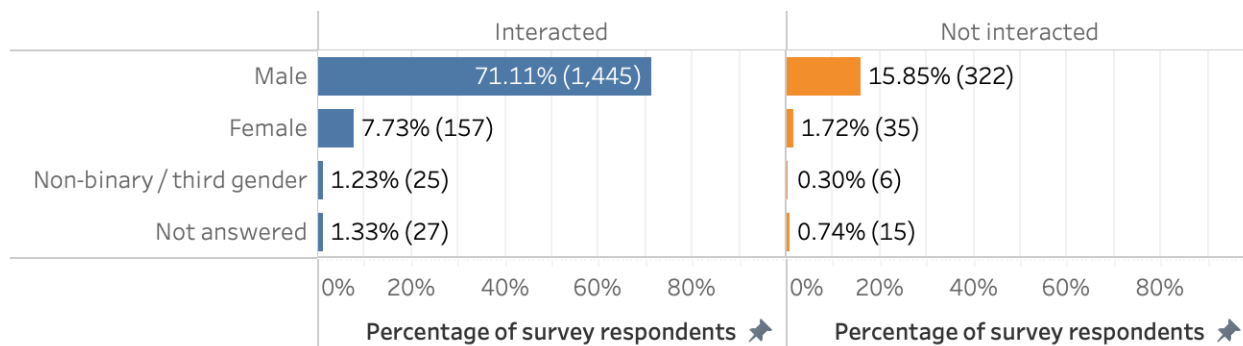
Q5. How do you rate your skill with the English language?

This question has never been asked before. It was asked of all 2032 survey respondents with 2016 responses. The missing figures in the chart below are - Terrible: 0.40% (8), Poor: 2.18% (44).
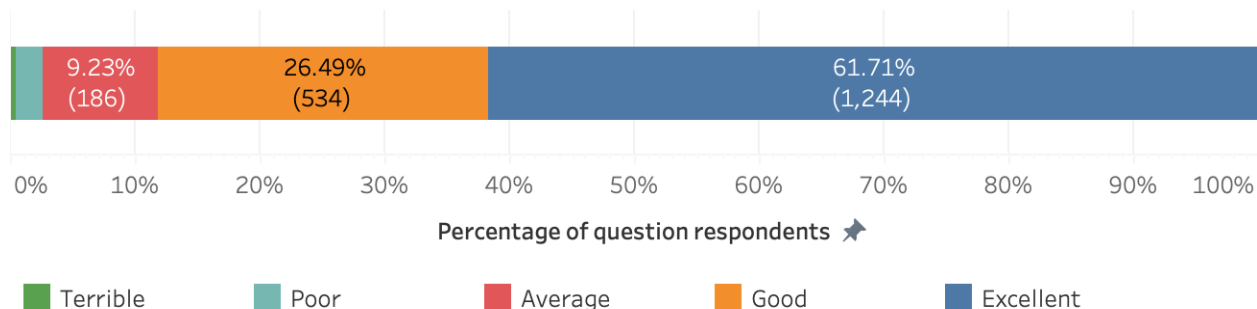
The coding mean is 4.47

Cross tabulating this by interaction status:

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[9] https://ncwit.org/resource/thefacts/

Commentary

10. The general skill with English is high with only 2.58% reporting terrible or poor English. This extrapolates to approximately ~1445 people.
11. There are no significant differences in skill with English between interaction statuses and therefore we can discount this as a reason for non-interaction for those who are subscribed to IETF mailing lists.

Q6. What is your employment status and type of employer? (check all that apply)
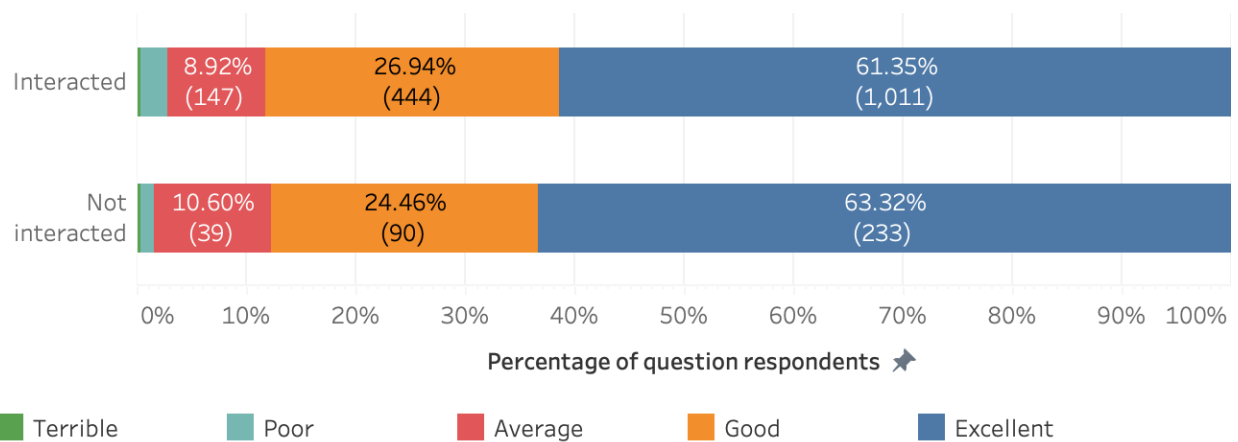
This question has never been asked before. It was asked of all 2032 survey respondents with 2010 responses. This was a multiple choice question and the answers are weighted, using a percentage of responses, so that a single response is weighted as 1.0, two responses are each weighted as 0.5, three at 0.33 each, and so on.

Cross tabulating this by interaction status gives:

	Interacted	Not interacted
Employee (Private sector)	43.80% (833)	47.18% (201)
Employee (Academia)	13.41% (255)	14.55% (62)
Employee (Civil society / not-for-profit)	10.62% (202)	9.39% (40)
Independent contractor	10.78% (205)	8.45% (36)
Business owner	10.30% (196)	7.04% (30)
Retired	5.57% (106)	3.99% (17)
Student	3.47% (66)	6.81% (29)
Unemployed	2.05% (39)	2.58% (11)
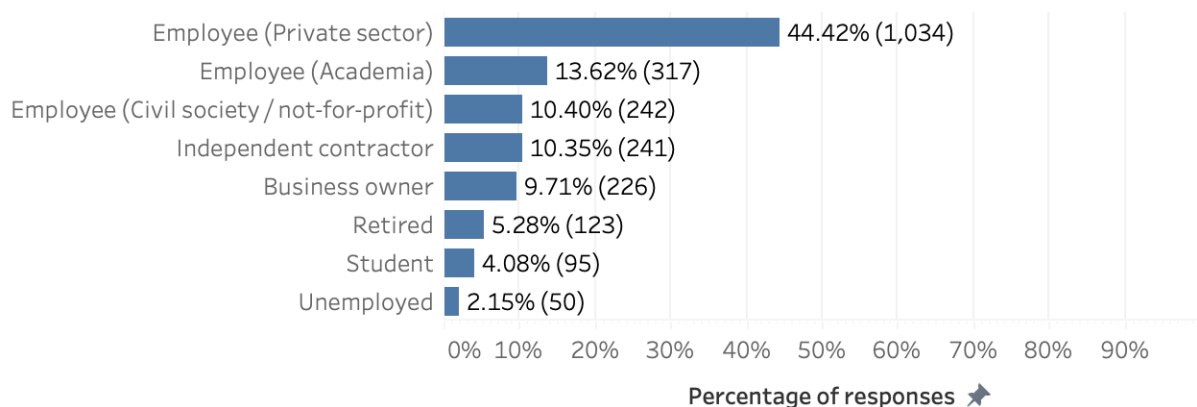
Percentage of responses   Percentage of responses
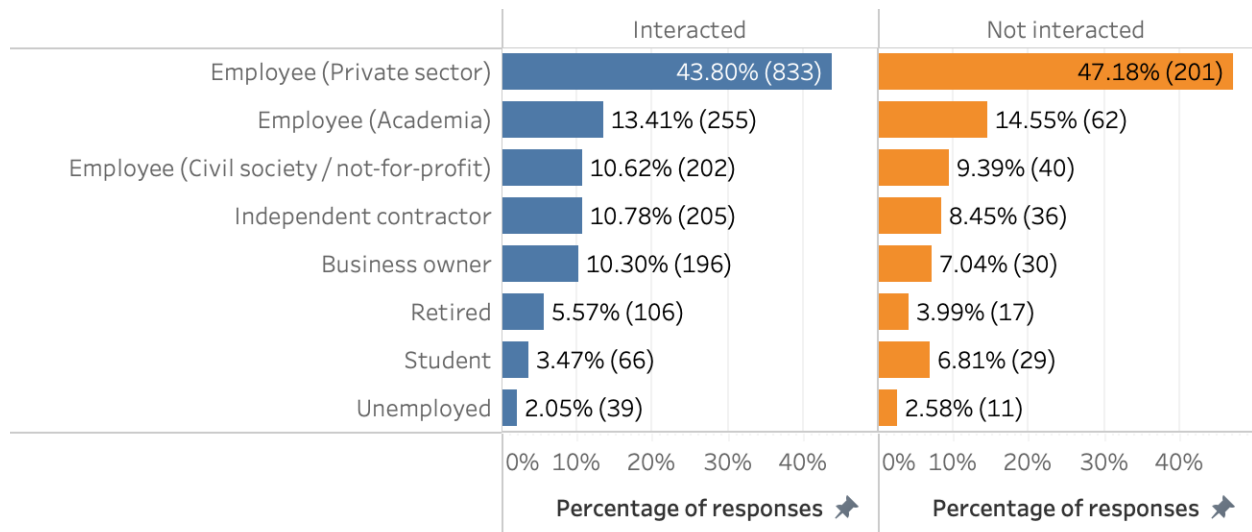
Commentary

12. The IETF is dominated by private sector employees.
13. The only significant difference in interaction status is for Students, where proportionally fewer interact than those in other forms of employment

Q7. Which of the following applies to you? (check all the apply)

This question is asked in each of our post-meeting surveys. It was asked of all 2032 survey respondents with 1654 responses and it is assumed that those who did not answer have not done any of these things.

Posted to an IETF mailing list	66.39% (1,349)
Attended an in-person IETF meeting	38.44% (781)
Attended an online IETF meeting	35.09% (713)
Authored an Internet-Draft	31.15% (633)
Authored an RFC	22.44% (456)
Posted to an IETF chat channel	14.96% (304)
Served in IETF leadership (IESG, IAB, LLC, IAOC, Trust)	4.82% (98)
Served on an IETF NomCom	4.23% (86)

Percentage of survey respondents
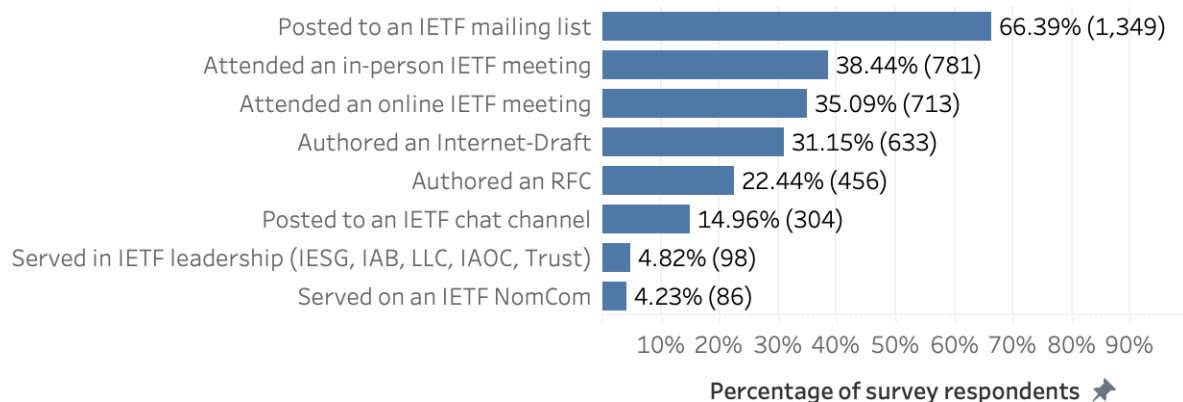
As noted earlier, cross tabulation by participation status (not interaction status) shows a problem:

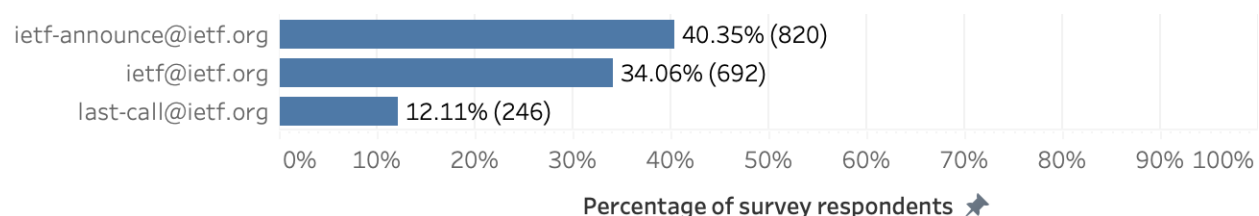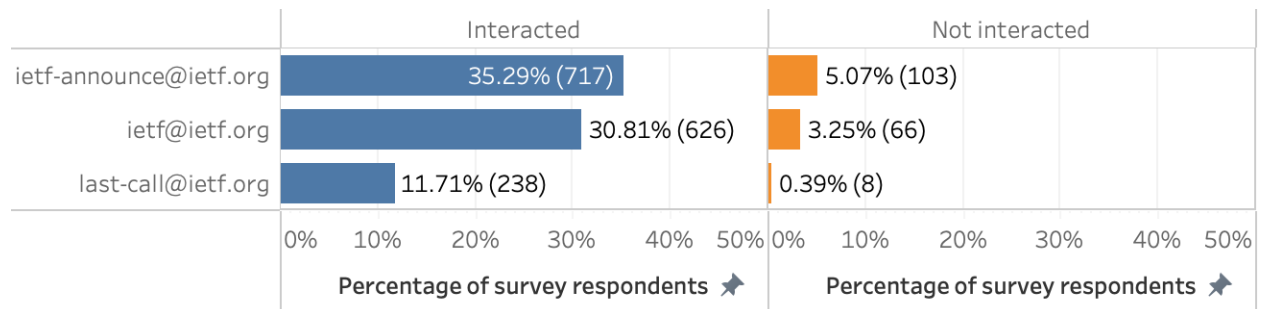|	I have never participated in the IETF	I have stopped participating in the IETF	I participate in the IETF
Posted to an IETF mailing list	14.71% (299)	17.42% (354)	34.25% (696)
Attended an in-person IETF meet..	1.62% (33)	12.84% (261)	23.97% (487)
Attended an online IETF meeting	4.08% (83)	5.61% (114)	25.39% (516)
Authored an Internet-Draft	1.67% (34)	8.37% (170)	21.11% (429)
Authored an RFC	0.98% (20)	5.71% (116)	15.75% (320)
Posted to an IETF chat channel	1.53% (31)	2.31% (47)	11.12% (226)
Served in IETF leadership (IESG, ..)	0.39% (8)	0.64% (13)	3.79% (77)
Served on an IETF NomCom	0.30% (6)	0.54% (11)	3.40% (69)
	10% 20% 30% 40%	10% 20% 30% 40%	10% 20% 30% 40%
	Percentage of survey res..	Percentage of survey res..	Percentage of survey res..

Commentary

14. There are clearly some very different interpretations of the word 'participation' given that so many have had some form of interaction that would be hard to describe otherwise and yet they consider themselves to have never participated. With data like this, the participation status cannot be considered reliable. Future surveys will re-examine how to ask this question or if the interaction measure should be relied on instead.

Q8. Which of the following general IETF mailing lists do you subscribe to?

This question was asked of all 2032 survey respondents with 1124 responses and it is assumed that those who did not answer are not subscribed to any of these lists.

ietf-announce@ietf.org	40.35% (820)
ietf@ietf.org	34.06% (692)
last-call@ietf.org	12.11% (246)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Percentage of survey respondents

	Interacted	Not interacted
ietf-announce@ietf.org	35.29% (717)	5.07% (103)
ietf@ietf.org	30.81% (626)	3.25% (66)
last-call@ietf.org	11.71% (238)	0.39% (8)

Percentage of survey respondents 📌   Percentage of survey respondents 📌

The approximate number of subscribers to each list at the time of the survey was:

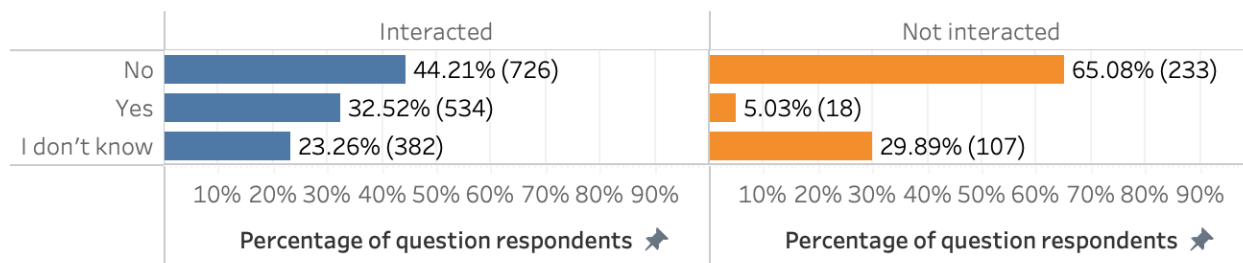| List	Subscribers	Proportion Surveyed
ietf-announce@ietf.org	~2950	~30%
ietf@ietf.org	~1750	~40%
last-call@ietf.org	~1400	~18%

Commentary

15. The ietf-announce mailing list is the key communication mechanism of the IETF but only a small percentage of the IETF community subscribes to it, and only a tiny percentage of those that do not interact with the IETF.
16. Subscribers to the key cross-community mailing lists are over-represented in respondents implying that those who subscribe to one or more of these lists are more likely to engage in the IETF through such mechanisms as this survey.

Q9. Do you have an IETF Datatracker account (https://datatracker.ietf.org)?

This question was asked of all 2032 survey respondents with 2000 responses. The total number of datatracker accounts is 6748.

No	47.95% (959)
Yes	27.60% (552)
I don't know	24.45% (489)

Percentage of question respondents 📌

	Interacted		Not interacted	
No		44.21% (726)		65.08% (233)
Yes		32.52% (534)		5.03% (18)
I don't know		23.26% (382)		29.89% (107)

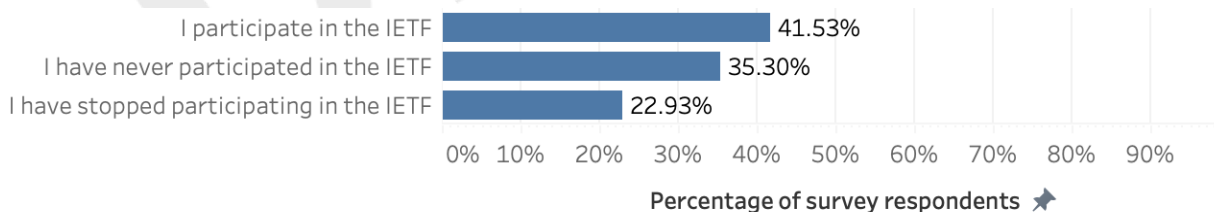Percentage of question respondents 📌   Percentage of question respondents 📌
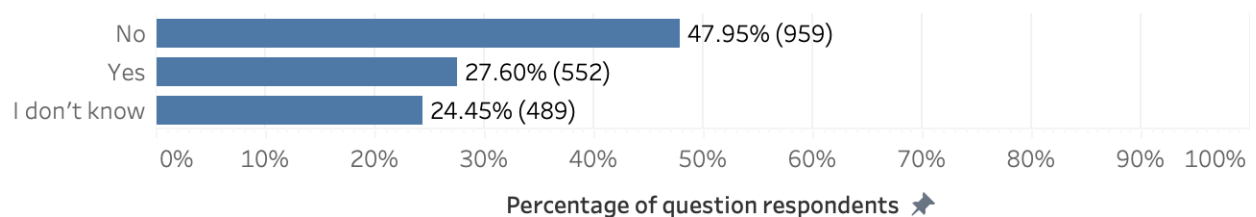
Commentary

17. Having a Datatracker account appears to correlate strongly with interaction.
18. Future versions of this survey will incorporate this question into Q7.

Q10. *Do you participate in the IETF? (this question cannot be skipped)

This was the one mandatory question in the survey. NOTE, as explained above, the results for this question are highly problematic and should not be considered reliable.

I participate in the IETF	41.53%
I have never participated in the IETF	35.30%
I have stopped participating in the IETF	22.93%

Percentage of survey respondents 📌

Commentary

19. There are many people subscribed to IETF mailing lists, almost 60% of total subscribers, who do not regard themselves as participating in the IETF.
20. Given the confusion regarding what is meant by participation (see Q7) this question will need to be asked differently in future.

# Question page: Participation

These questions were intended to help understand community participation in more depth and just how much is involved in participation as well as understanding plans for future participation and feelings about their participation..

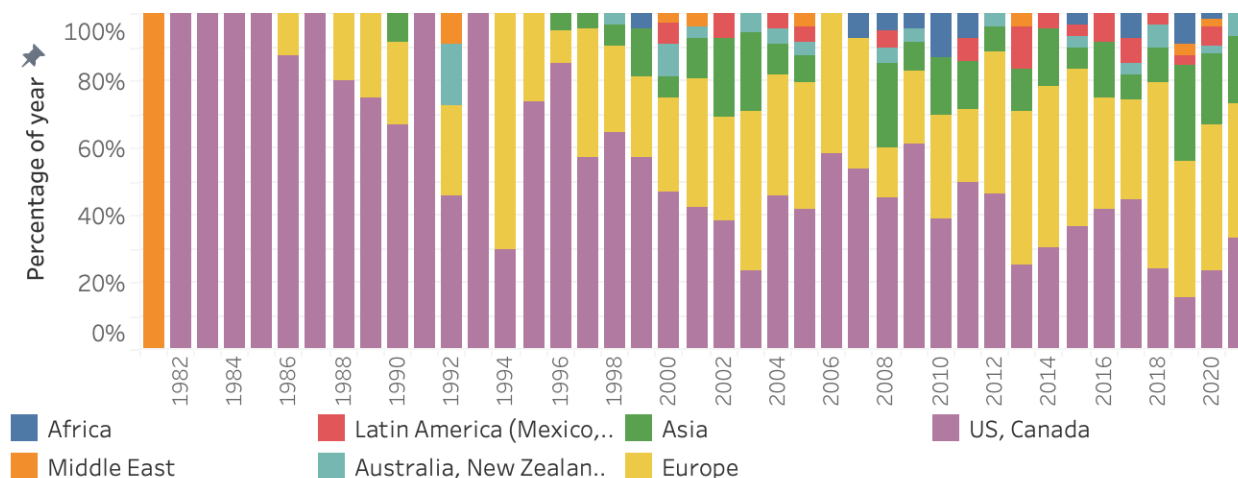## Q11. In what year did you first participate in the IETF?

This question was only asked of the 1313 people who responded in Q10 that they currently or previously participated in the IETF. 729 responses were received. Note that the first unlabelled year is 1978 not 1979.
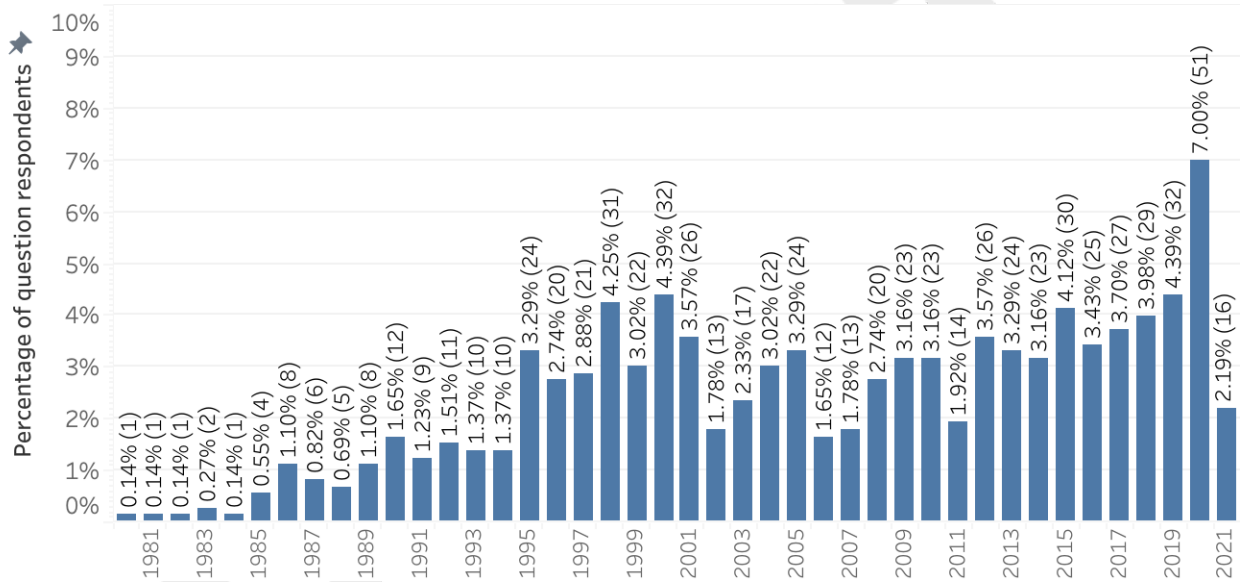
Cross tabulated with gender and normalised:
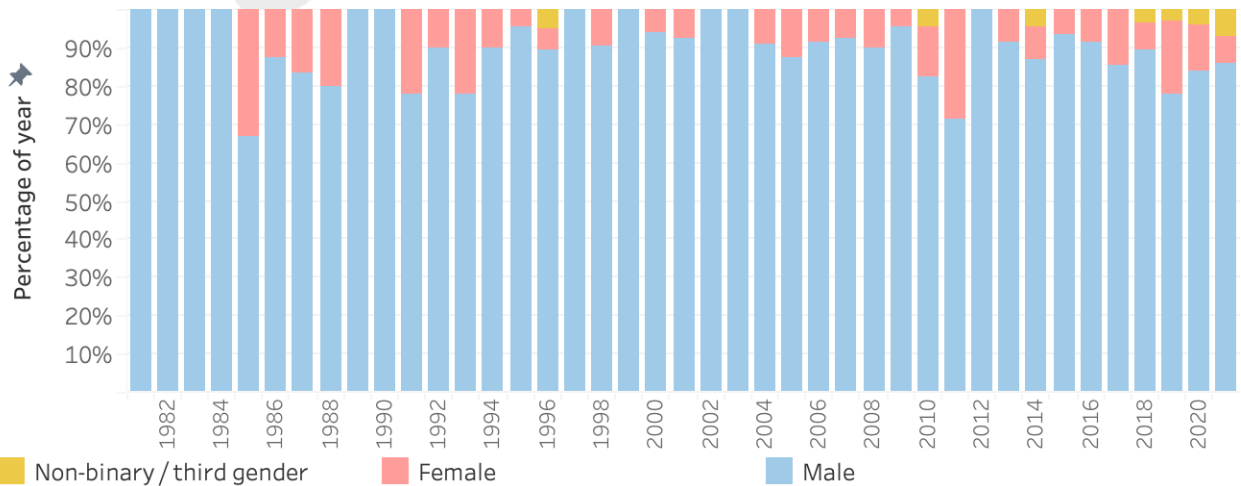
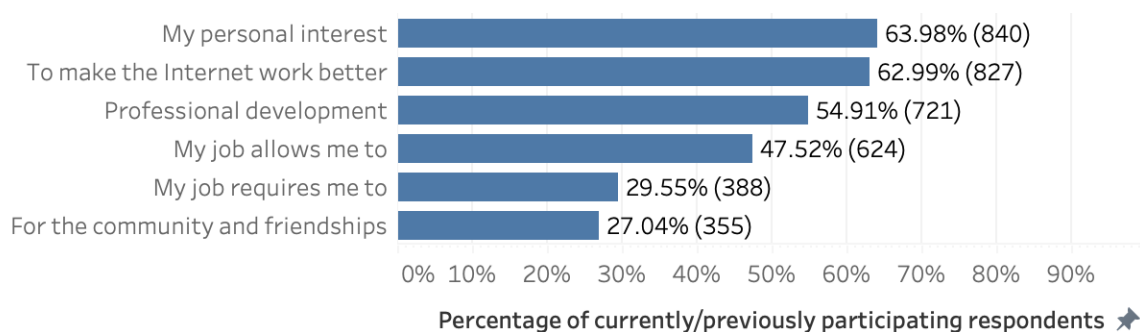Cross tabulated with region and normalised:

Commentary

21. Concerns about low levels of new participants seem unfounded, with new participants joining every year with a sustained high level for the last nine years.

22. The gender cross tabulation shows no change for many years. See also Q18 for leavers.

23. The region cross tabulation shows the history of when Europe started to participate and then the other regions and the slow reduction of the US/Canada as a percentage of participants.

Q12. Why [do/did] you participate in the IETF? (check all that apply)

This question was only asked of the 1313 people who responded in Q10 that they currently or previously participated in the IETF, with the wording adjusted accordingly. 1199 responded.

My personal interest — 63.98% (840)
To make the Internet work better — 62.99% (827)
Professional development — 54.91% (721)
My job allows me to — 47.52% (624)
My job requires me to — 29.55% (388)
For the community and friendships — 27.04% (355)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%

Percentage of currently/previously participating respondents 📌
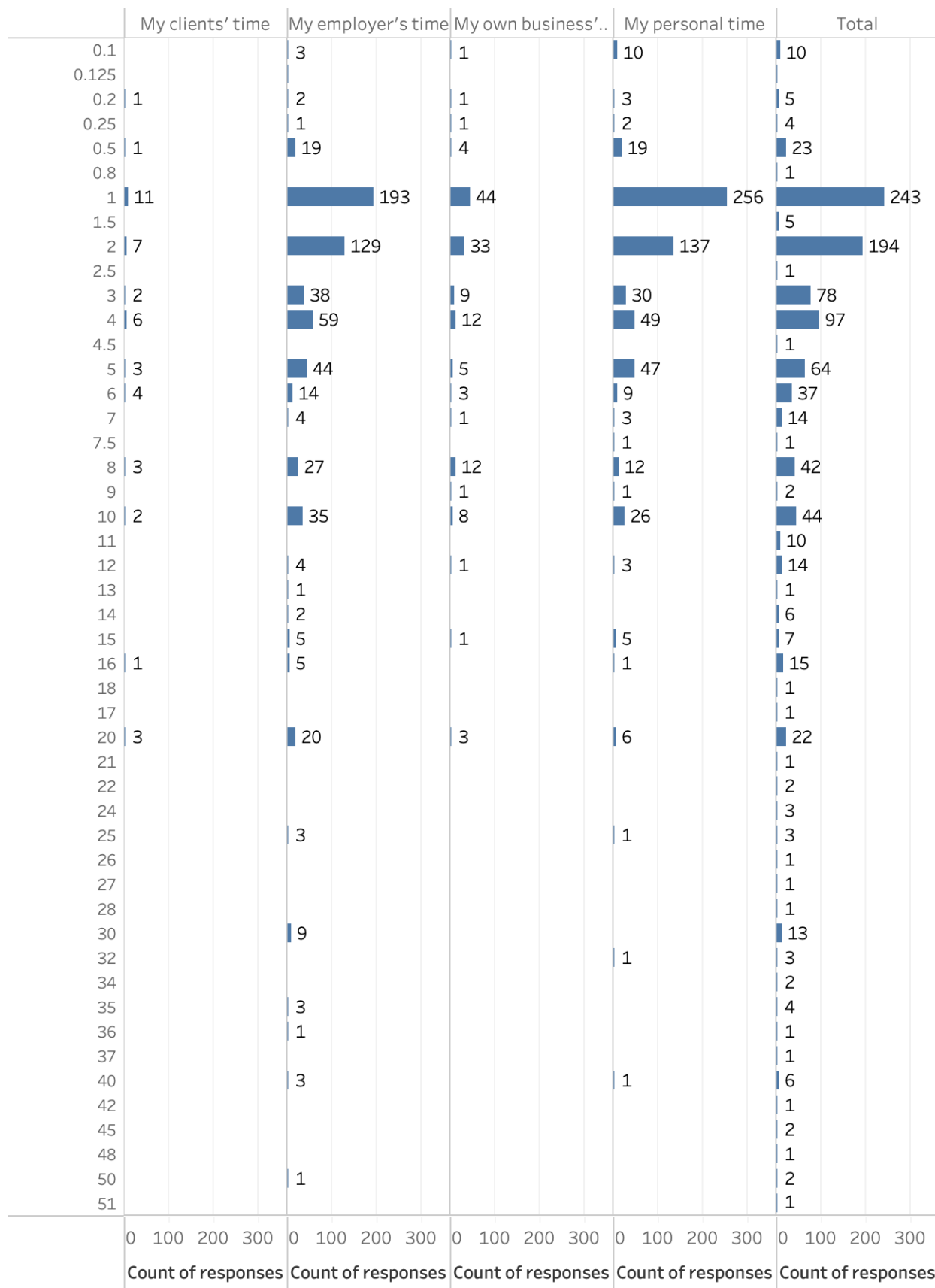
Commentary

24. The high level of responses suggests that the options presented were the right ones to ask.

25. Cross tabulation by age, gender and region (none shown) show no significant differences.

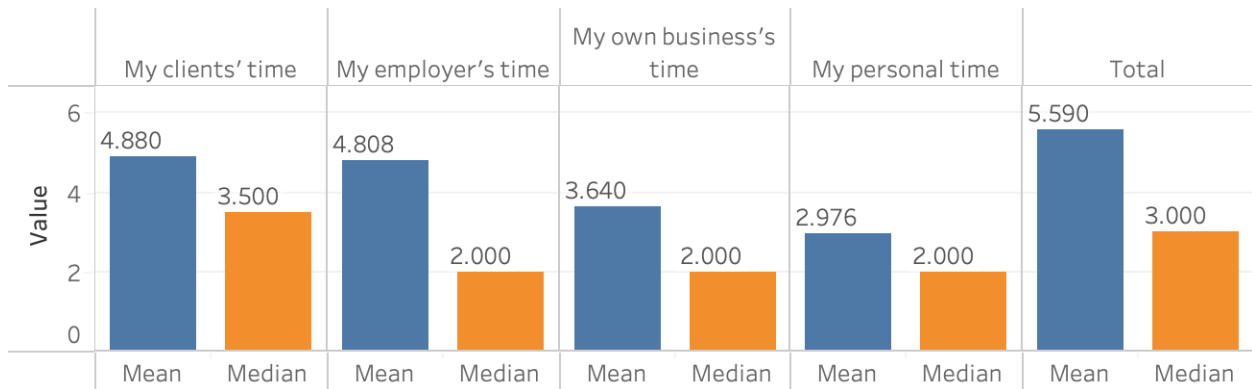## Q13. On average, how many hours per week [do/did] you spend on IETF activities?

This question was asked of all 2032 respondents, with 1213 responses.

This needs to be analysed in two ways. The first is by the type of time (clients', employer's, business, personal) to understand who is paying for time spent on IETF activities and the second is by individual, to see how many hours in total people spend on IETF activities:

In the following chart, multiple values all < 0.1 have been excluded as too small to be credible and cluttering the view.   In addition responses of 0 have been excluded so that this analysis answers how much time is spent by those that spend time. Two respondents entered 100 hours for personal time but the rest of their responses appear genuine and so these have been edited to 10 as a mistake is assumed.

	My clients' time	My employer's time	My own business'..	My personal time	Total
0.1		3	1	10	10
0.125					
0.2	1	2	1	3	5
0.25		1	1	2	4
0.5	1	19	4	19	23
0.8					1
1	11	193	44	256	243
1.5					5
2	7	129	33	137	194
2.5					1
3	2	38	9	30	78
4	6	59	12	49	97
4.5					1
5	3	44	5	47	64
6	4	14	3	9	37
7		4	1	3	14
7.5				1	1
8	3	27	12	12	42
9			1	1	2
10	2	35	8	26	44
11					10
12		4	1	3	14
13		1			1
14		2			6
15		5	1	5	7
16	1	5		1	15
18					1
17					1
20	3	20	3	6	22
21					1
22					2
24					3
25		3		1	3
26					1
27					1
28					1
30		9			13
32				1	3
34					2
35		3			4
36		1			1
37					1
40		3		1	6
42					1
45					2
48					1
50		1			2
51					1

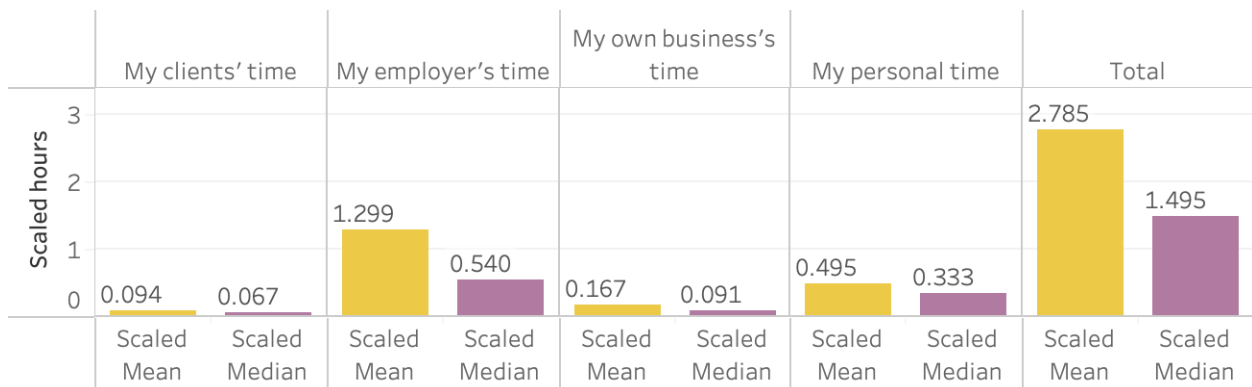| Count of responses | Count of responses | Count of responses | Count of responses | Count of responses |

Looking at the mean and median:

However, if we look at the total reported hours by type of time, these medians and means may be misleading
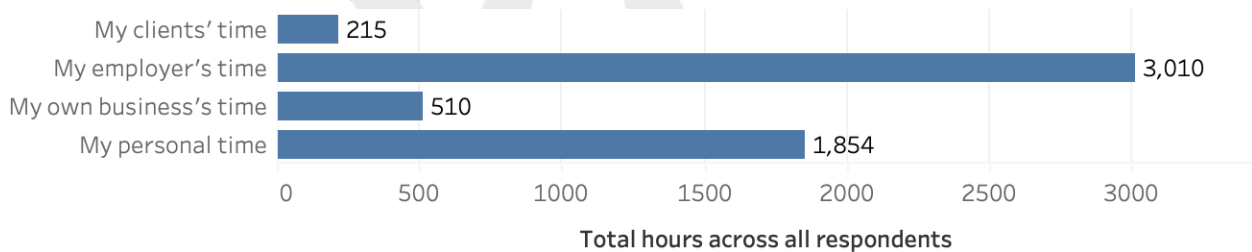
The means and medians scaled by the totals provide a better picture:
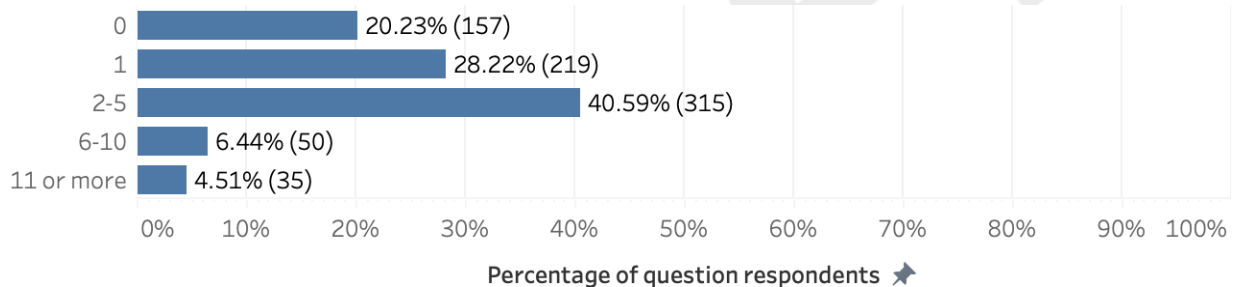

Commentary

26. The median time spent on IETF activities is relatively low at just three hours per week.

27. There may be one or two people who genuinely spend more than 50 hours per week on IETF activities but those are not shown to avoid introducing other incorrect data.

28. Time paid for by employers accounts for almost 50% of all time spent on IETF
activities.

Q14. How many mailing lists do you actively participate in?

This question was only asked of the 846 who responded in Q10 that they currently
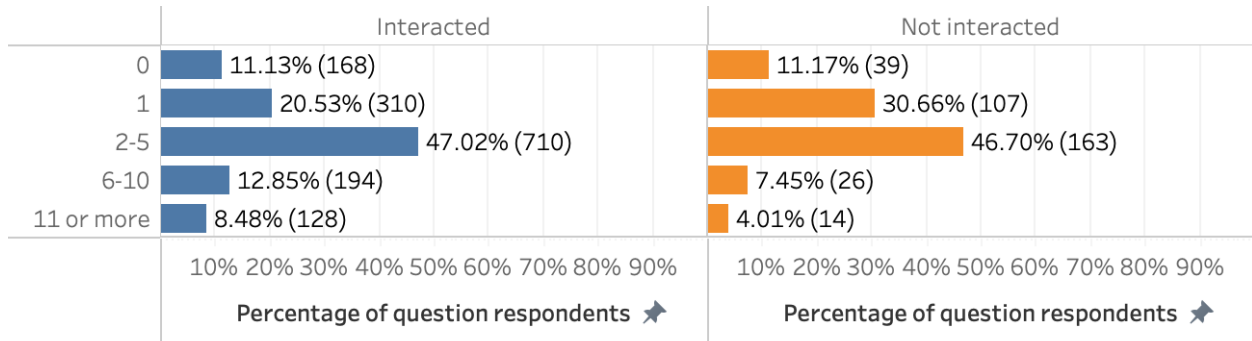participate in the IETF, with 776 answering.

Response	Percentage (count)
0	20.23% (157)
1	28.22% (219)
2-5	40.59% (315)
6-10	6.44% (50)
11 or more	4.51% (35)

Percentage of question respondents

Commentary

29. 28% participate in only one mailing list, indicating that they participate in the
IETF for a single subject. It is not clear if the size of this grouping has been
recognised before and further work is required to understand if they have
specific needs in terms of documentation or engagement.

Q15. How many mailing lists do you just monitor without actively participating?

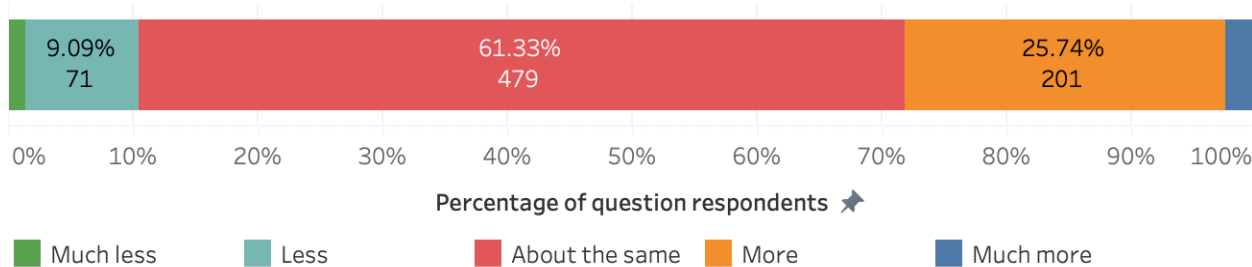This question was asked of all 2032 respondents with 1859 responses.

Response	Percentage (count)
0	11.14% (207)
1	22.43% (417)
2-5	46.96% (873)
6-10	11.83% (220)
11 or more	7.64% (142)

Percentage of question respondents

	Interacted		Not interacted
0	11.13% (168)		11.17% (39)
1	20.53% (310)		30.66% (107)
2-5	47.02% (710)		46.70% (163)
6-10	12.85% (194)		7.45% (26)
11 or more	8.48% (128)		4.01% (14)

Percentage of question respondents 🖈   Percentage of question respondents 🖈
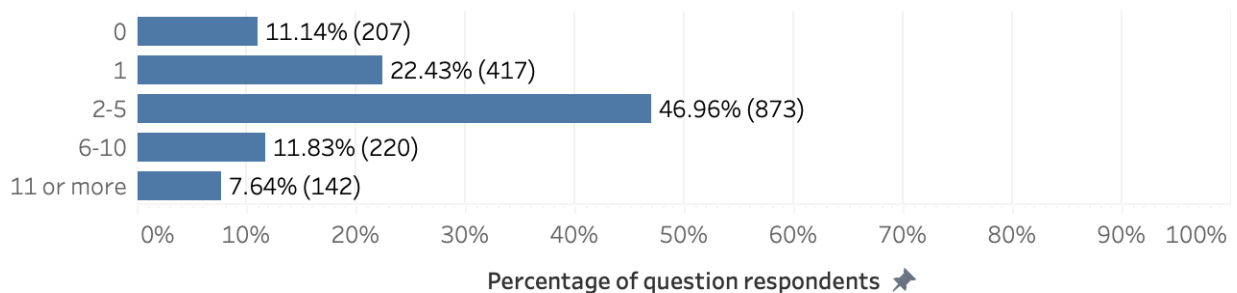
Commentary

30. It is perhaps surprising that almost 90% monitor one or more mailing lists (66% 2 or more) without participating. It would be useful to explore this in future to understand more about why that is and if this can be made easier.

31. The level of monitoring is almost as high among those who have not interacted as those who have, with former monitoring slightly fewer lists.

Q16. Over the next year do you expect to spend more or less time on IETF activities?

This question was only asked of the 846 who responded in Q10 that they currently participate in the IETF, with 781 answering. The missing figures are for Much less 1.41% (11) and Much more 2.43% (19).

| 9.09% 71 | 61.33% 479 | 25.74% 201 | |

Percentage of question respondents 🖈

🟩 Much less   🟦 Less   🟥 About the same   🟧 More   🟦 Much more

The coding mean is 3.19

Commentary

32. The difference between those who answered more or much more and those who answered less or much less is +17.67%, indicating overall growth in time spent on IETF activities.

Q17. In what year did you cease participating in the IETF?

This question was only asked of the 467 who responded in Q10 that they have stopped participating in the IETF, with 367 responding.
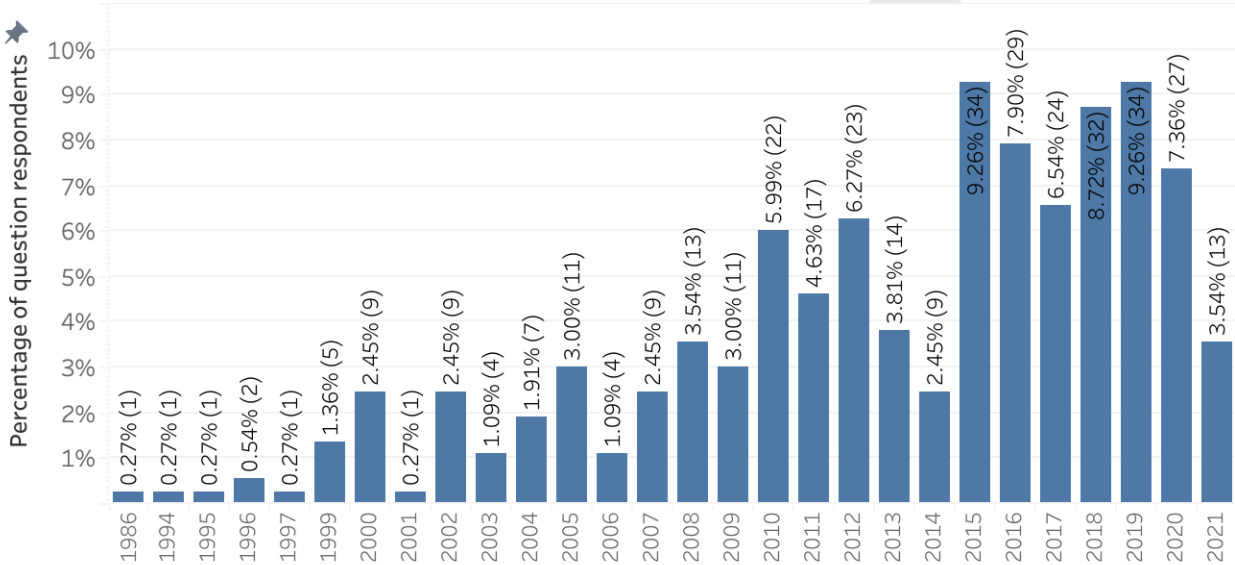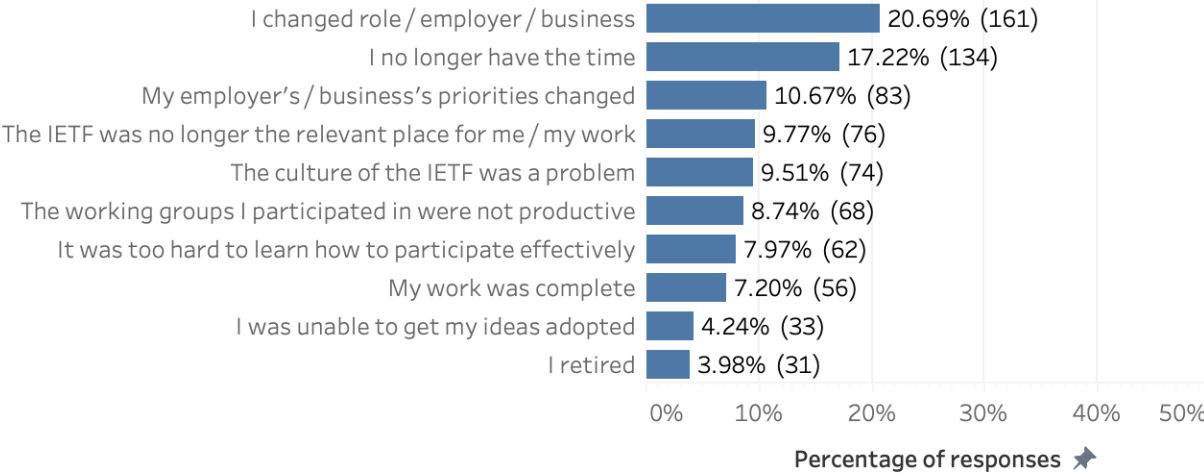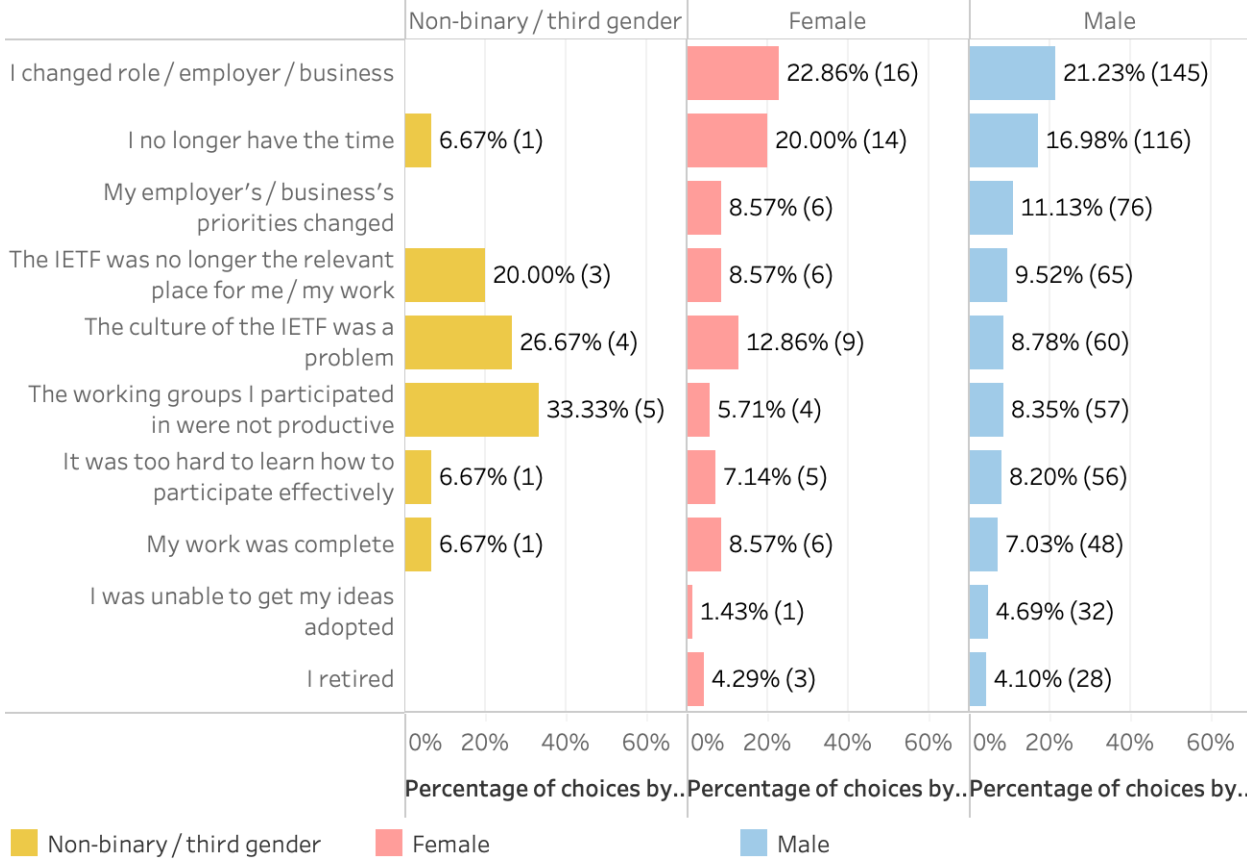

Commentary

33. The problem of how people interpreted 'participation' affects this question considerably and the data should not be considered reliable.
34. If this question has been interpreted correctly, then it shows that some people continue to observe the IETF through mailing list subscriptions for many years after they cease participation.
35. Cross tabulation with gender and region (neither shown) show, since 2005, similar proportions ceasing participation for each.

Q18. Why did you cease participating in the IETF? (check all that apply)

This question was only asked of the 467 who responded in Q10 that they have stopped participating in the IETF, with 403 responding. This chart uses a percentage of responses in order to properly compare the various reasons against each other.

The gender breakdown of respondents is: Male 87.79% (683), Female 9.00% (70), Non-binary/third gender 1.93% (15), Not answered 1.28% (10)

Cross tabulated by gender and normalised by gender:

	Non-binary / third gender	Female	Male
I changed role / employer / business		22.86% (16)	21.23% (145)
I no longer have the time	6.67% (1)	20.00% (14)	16.98% (116)
My employer's / business's priorities changed		8.57% (6)	11.13% (76)
The IETF was no longer the relevant place for me / my work	20.00% (3)	8.57% (6)	9.52% (65)
The culture of the IETF was a problem	26.67% (4)	12.86% (9)	8.78% (60)
The working groups I participated in were not productive	33.33% (5)	5.71% (4)	8.35% (57)
It was too hard to learn how to participate effectively	6.67% (1)	7.14% (5)	8.20% (56)
My work was complete	6.67% (1)	8.57% (6)	7.03% (48)
I was unable to get my ideas adopted		1.43% (1)	4.69% (32)
I retired		4.29% (3)	4.10% (28)

0% 20% 40% 60%   0% 20% 40% 60%   0% 20% 40% 60%

Percentage of choices by.. Percentage of choices by.. Percentage of choices by..

■ Non-binary / third gender   ■ Female   ■ Male

Commentary

36. The problem of how people interpreted 'participation' affects this question considerably and the data should not be considered reliable.
37. The gender breakdown of those leaving matches the current breakdown of IETF participants from Q4, so no gender leaves disproportionately to the others, though the number of non-binary/third gender respondents is too small for reliable analysis.
38. Employers allowing or supporting participation is the largest single reason, and at 31.26% in total, is close to the 29.55% from Q12 who participate because their work requires them to.
39. Taken together, the things that are within the control of the IETF to fix, culture, productivity and learning to participate, account for 26.22% of reasons for leaving.
40. The personal culture of the IETF disproportionately pushes away females compared to males while other factors have less of an impact.
41. An inability to get ideas adopted disproportionately pushes away males in comparison to females while other factors have less of an impact.

Q19. How likely are you to participate in the IETF at some point in the future?

This question was only asked of those who responded in Q10 that they stopped participating or have never participated in the IETF. Of the 1186 asked, 1090 responded. The question was asked on a scale of 0-10 with 10 being more likely.
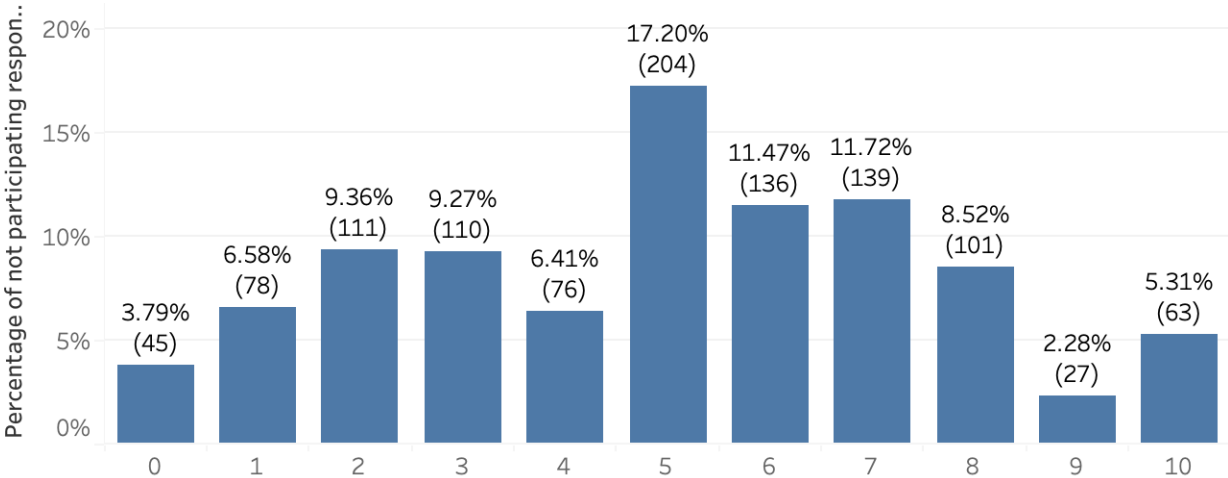
The mean is 4.98

Commentary

42. This result may be affected by the problem of how people interpreted 'participation'.
43. Aside from the bump at one end and a slight dip in the middle, this is close to a normal distribution and so may not tell us anything useful.

Q20. How likely are you to recommend IETF participation to a friend or colleague?

This question was asked of all 2032 respondents with 1844 responding. The question was asked on a scale of 0-10.
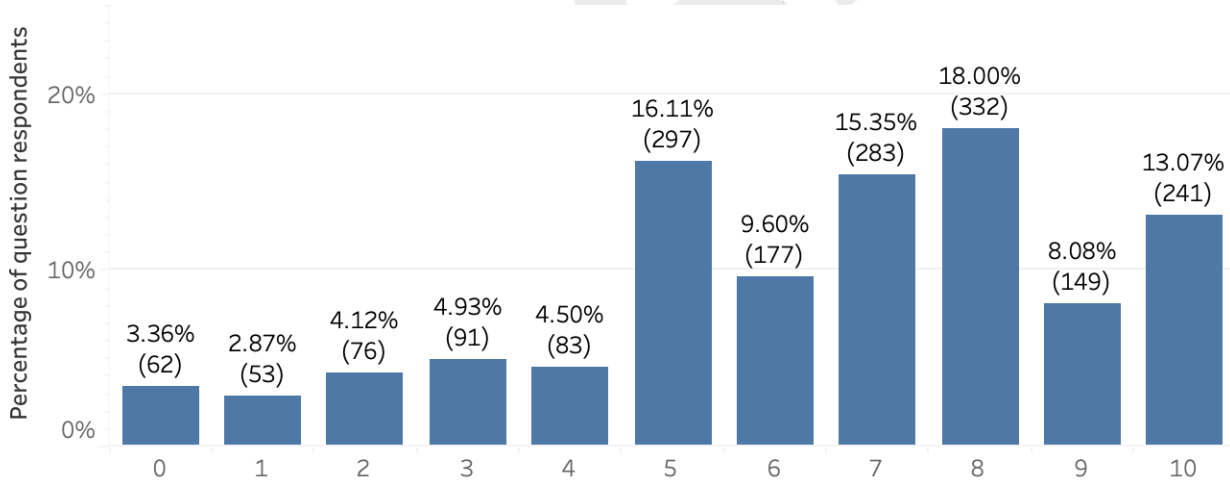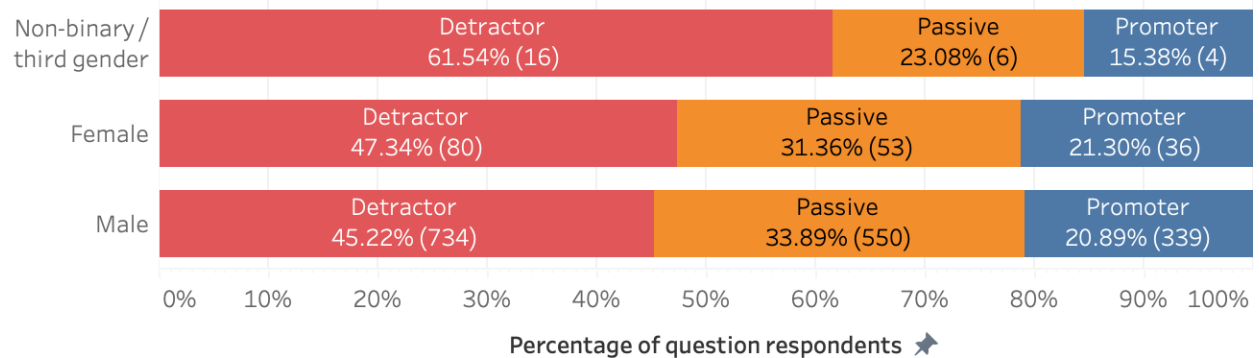

Using standard NPS[10] (Net Promoter Score) scoring (0-6 for detractor, 7-8 for passive and 9-10 for promoter) gives:
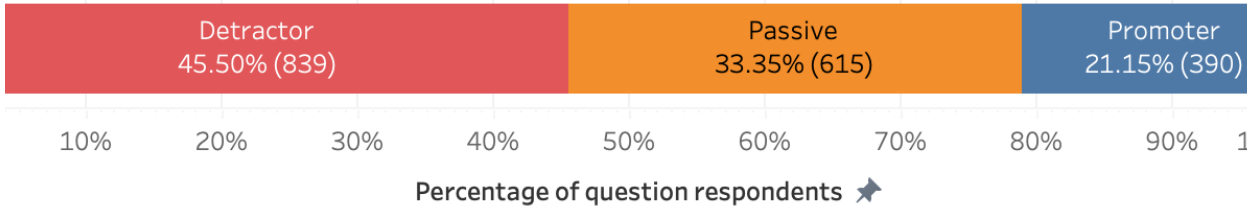
Cross tabulating this by gender:

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[10] https://hbr.org/2003/12/the-one-number-you-need-to-grow

The mean is 6.37.

Commentary

44. In standard NPS scoring and interpretation, this is a terrible result as Promoters minus Detractors are negative (-24.31%). A good score would be 0-30, Great 30-70 and Excellent 70+. More work is needed to understand why.
45. Non-binary/third gender respondents are less likely to recommend the IETF than other genders.

Question page: Preferences

Q21. Why don't you subscribe to ietf-announce@ietf.org (the general announcement list)? (check all that apply)

This question was only asked of the 1212 respondents who do not subscribe to ietf-announce, with 1053 responding.
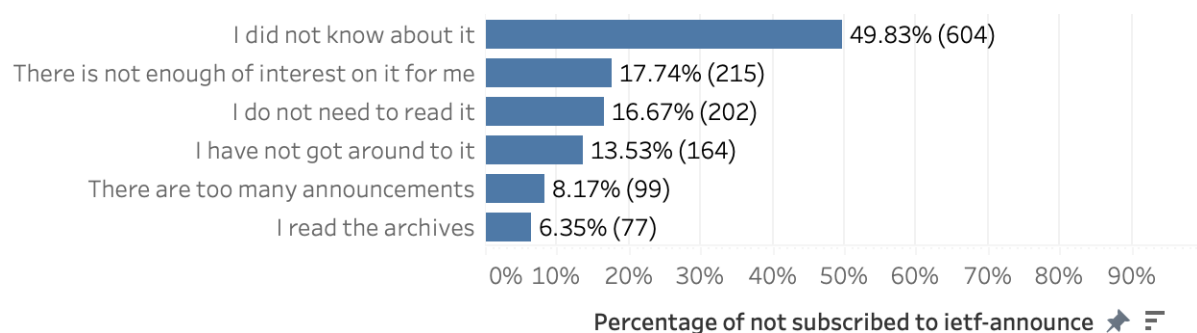
Commentary

46. More work is needed to understand why people do not know about it, but the most likely reason is the large number of people that interact with the IETF in a very narrow fashion such as just one mailing list.

47. Over 26% of respondents appear to have a problem with the content.

Q22. How do you prefer to be informed of IETF activities?

This question was asked of all 2032 survey respondents with 1775 responding. The coding means are:
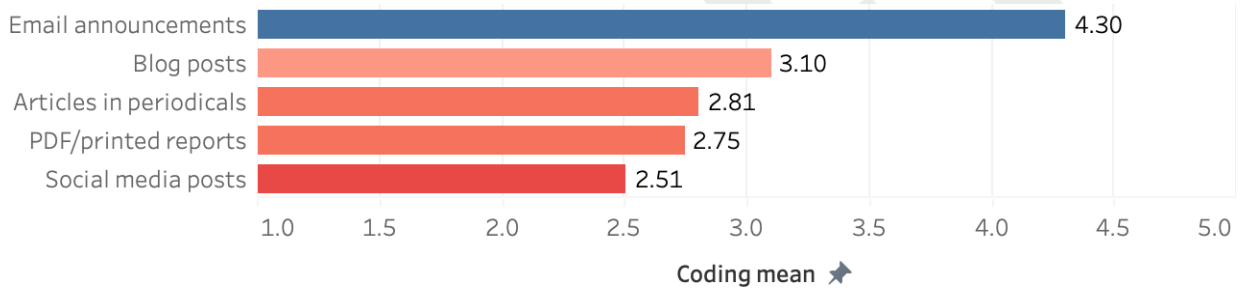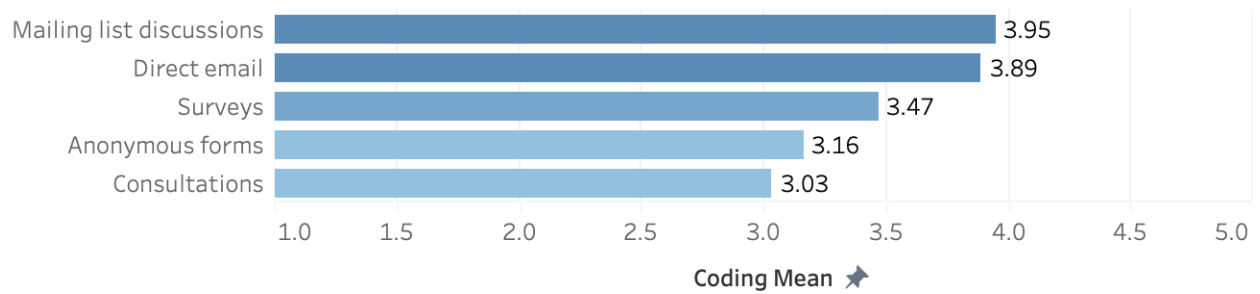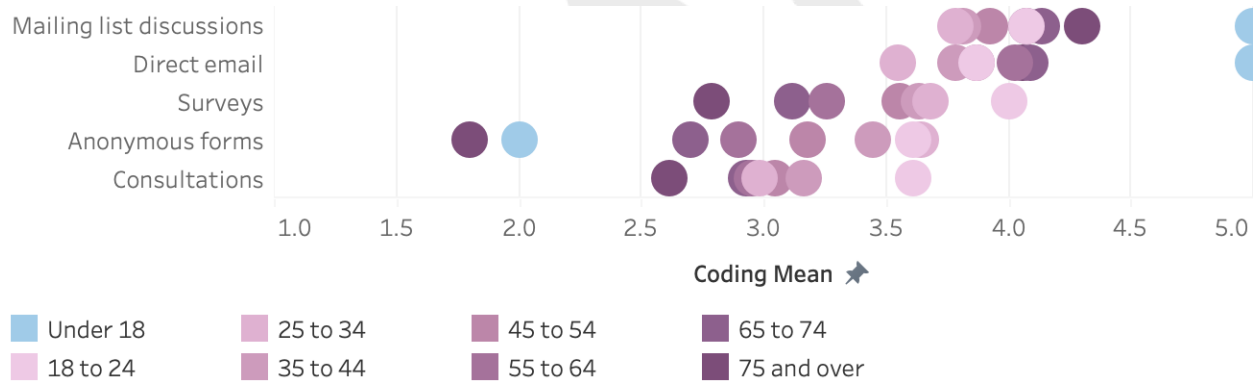

Cross tabulated with age:
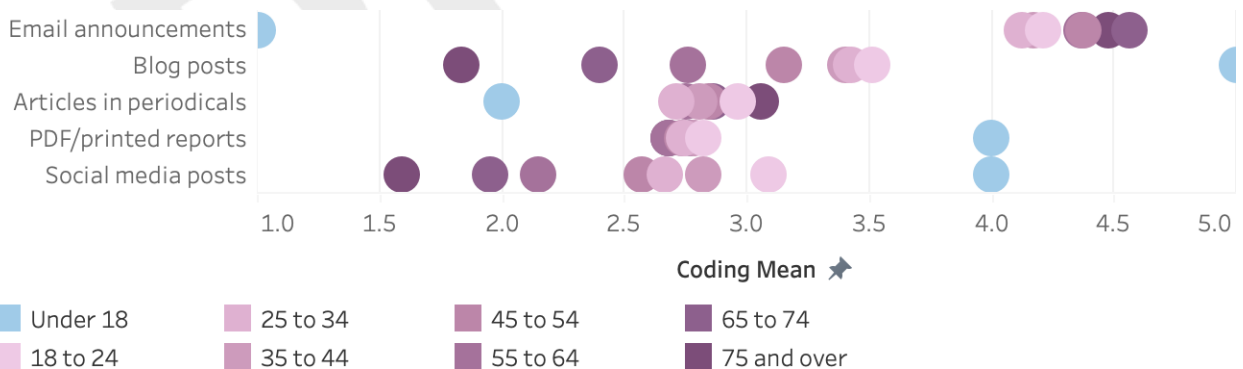
Commentary

48. The IETF community strongly prefers the push mechanism of email rather than any of the pull mechanisms.
49. Of the pull mechanisms, blog posts are preferred.
50. For blog posts and social media posts, preferences are very closely aligned with age with people preferring them less the older they are.

Q23. How [do/did] you prefer to provide feedback to the IETF leadership and decision makers?
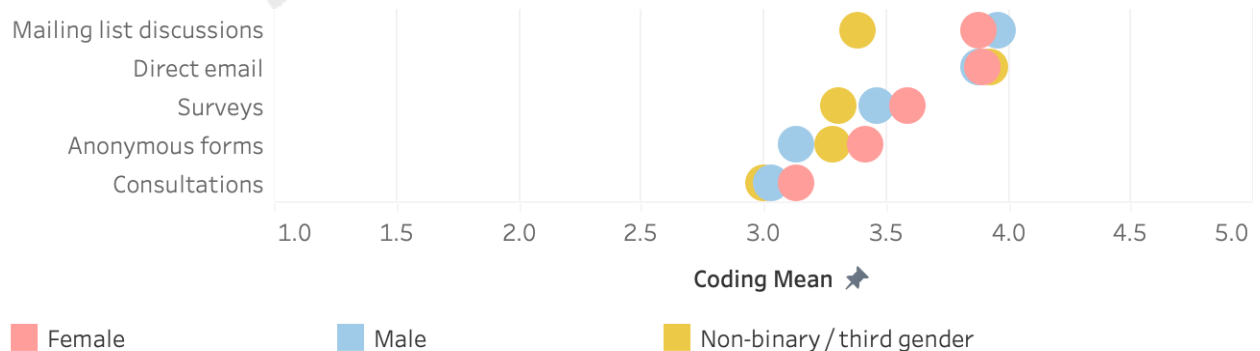
This question was not asked of those that responded in Q10 that they have never participated in the IETF. Of the 1313 asked, 1094 responded.

Cross tabulated with age:
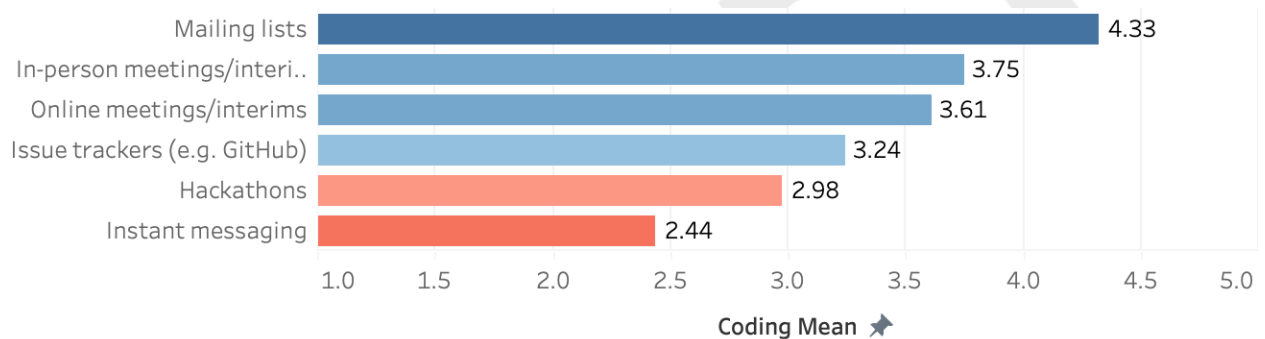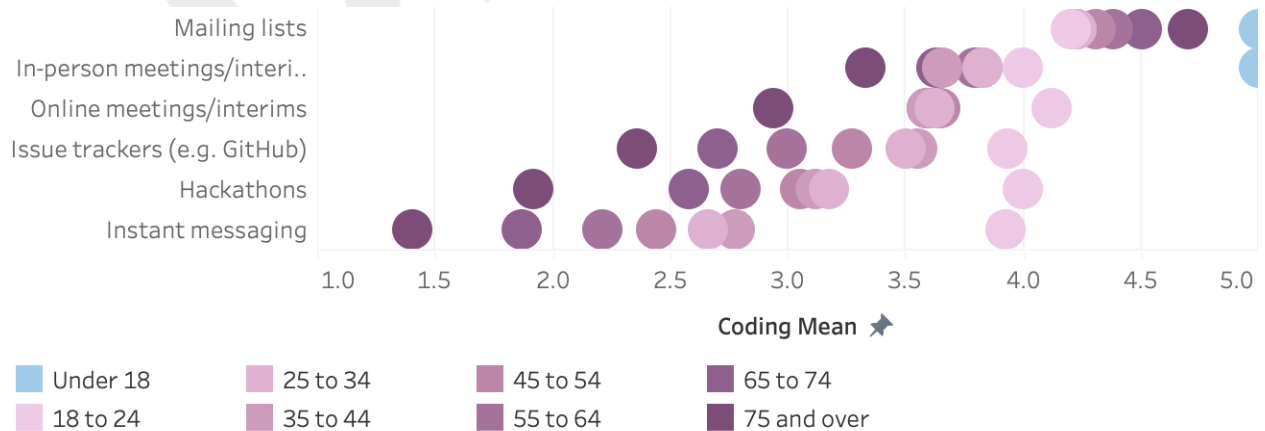

Cross tabulated with gender:

Commentary

51. The IETF community strongly prefers email, either directly or on mailing lists.
52. Anonymous forms and consultation are not much preferred.
53. In general, the older a respondent, the less they prefer one-way mechanisms that do not allow for discourse.
54. Females have a stronger preference for anonymous feedback mechanisms than males.
55. Non-binary/third gender respondents have a significantly lower preference for mailing lists and surveys.

Q24. How [do/did] you prefer to participate in the discussions and decisions of the IETF?
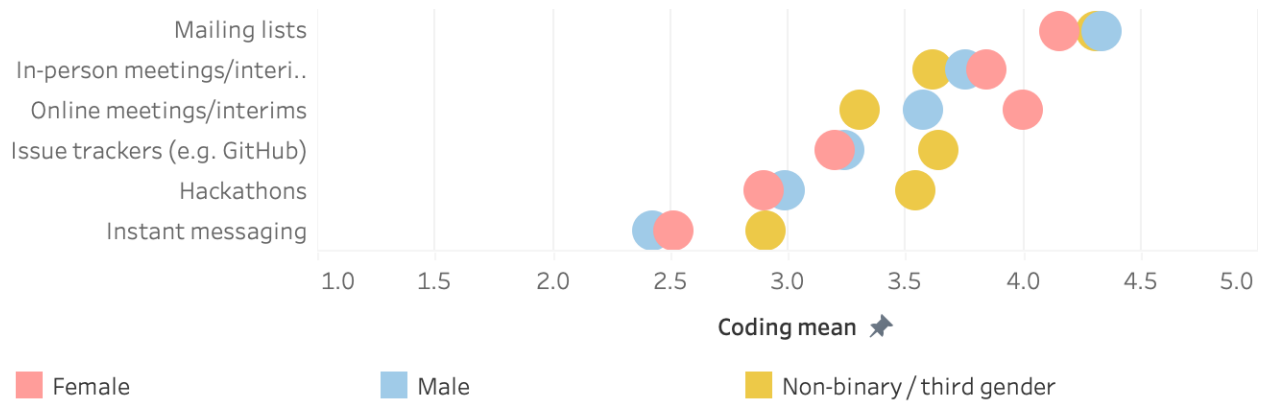
This question was not asked of those that responded in Q10 that they have never participated in the IETF. Of the 1313 asked, 1135 responded.
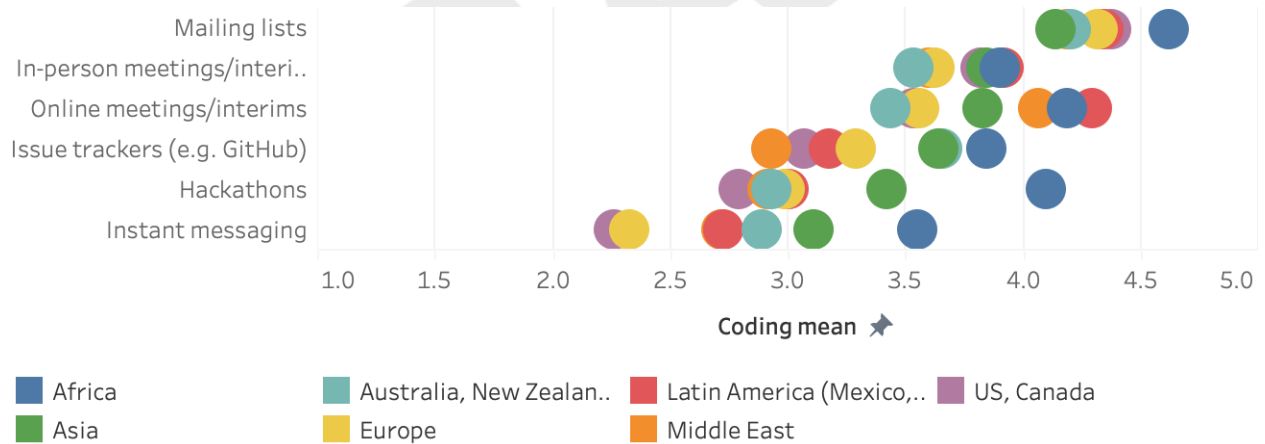

Cross tabulated with age:

Cross tabulated with gender:

Cross tabulated with region:

Commentary

56. In case more was needed, here is further evidence that the IETF community strongly prefers email.

57. An individual's preference for all of these participation mechanisms is strongly correlated with age. For all except mailing lists, the older the respondent the more likely they do not prefer that participation mechanism.

58. There is a very strong aversion to instant messaging.

Question page: Perceptions

Q25. How true are the following statements about the work of the IETF?

This question was asked of all 2023 survey respondents with 1654 responding. First the coding means, where the higher the number, the more often the IETF does this, according to the question respondents.
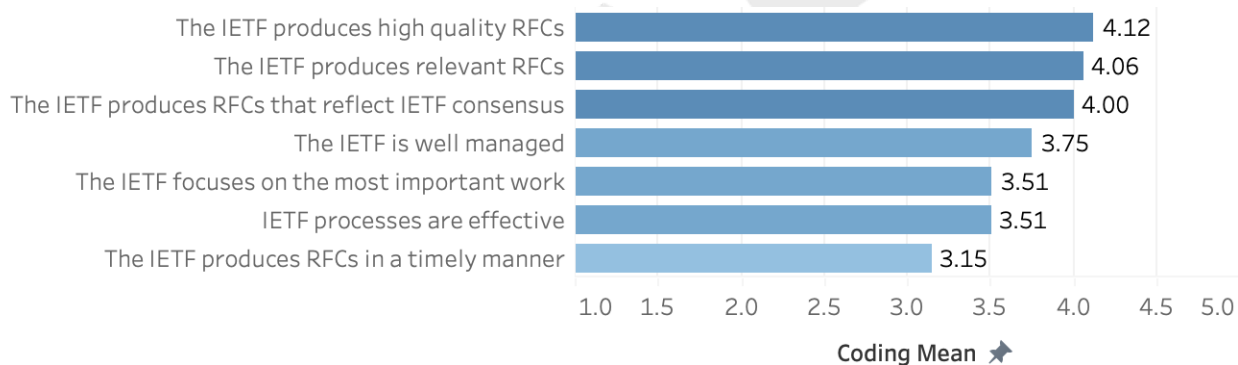
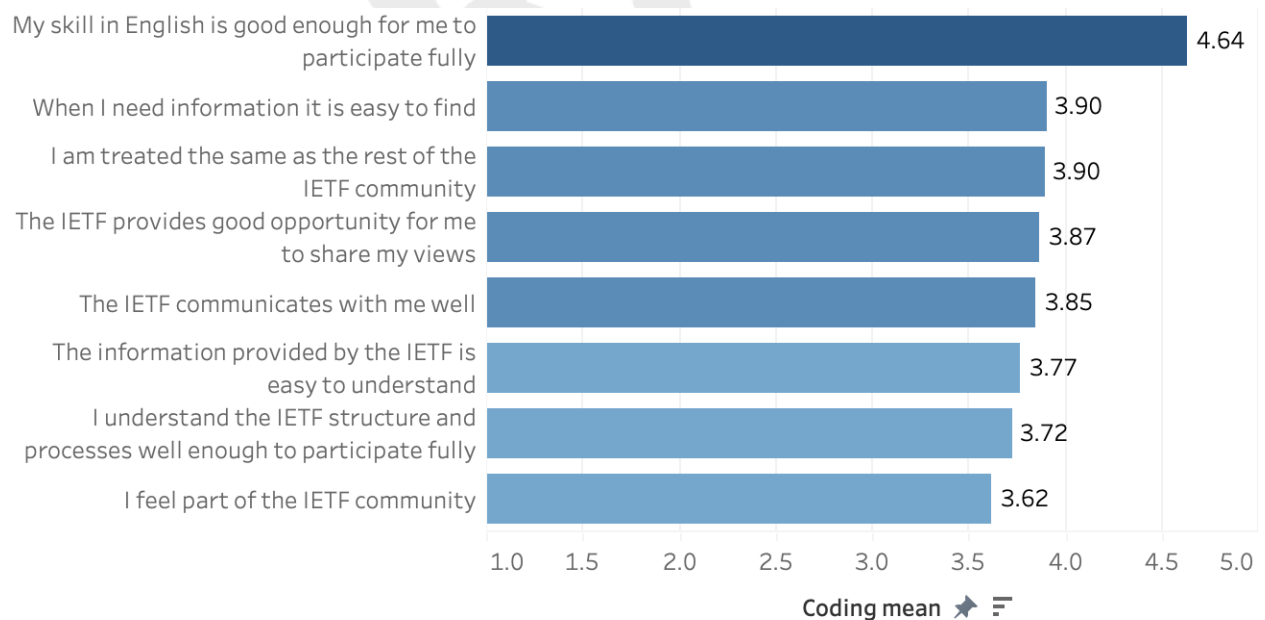
Cross tabulating the coding means by interaction status:
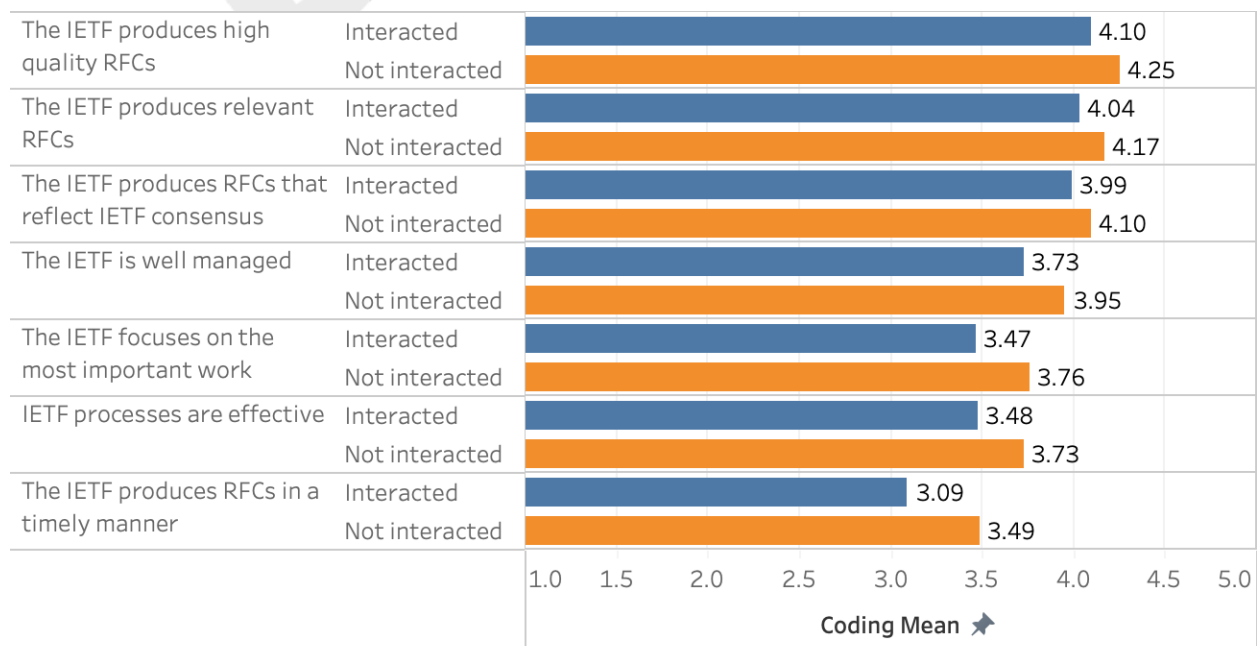
Commentary

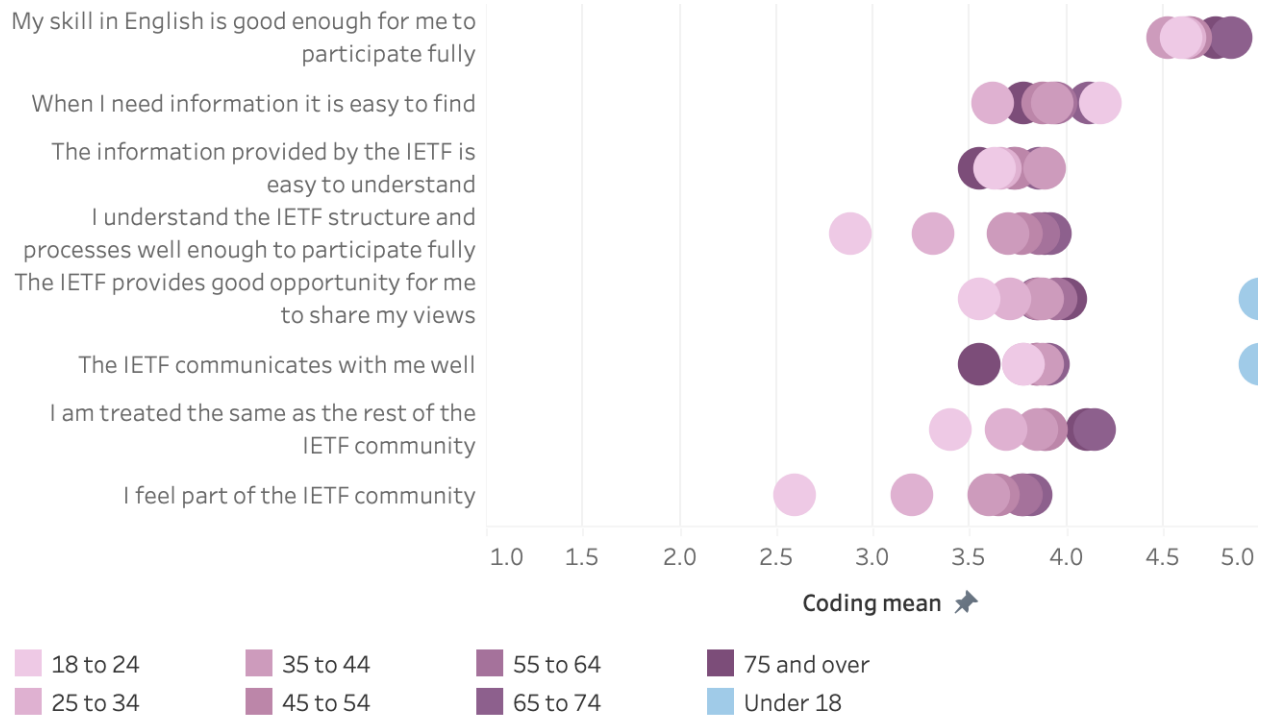59. The coding means for the quality and relevance of RFCs is in the good range.

60. The coding mean for the timeliness of RFCs is very low in comparison to the others, and even more so when looking only at those that have interacted with the IETF.
61. Those who have not interacted with the IETF have a consistently better assessment of it than those who have.
62. Cross tabulation by age, gender and region (none shown) show no significant differences.

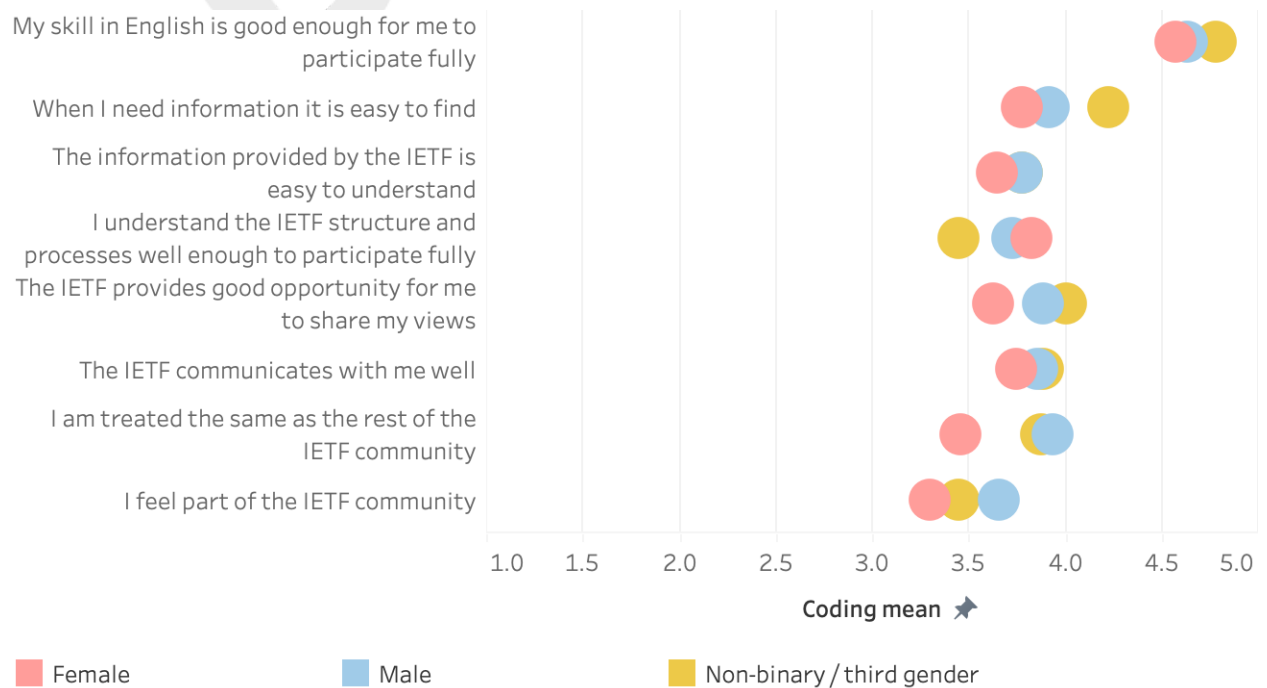## Q26. How true are the following statements about your participation in the IETF?

This question was only asked of the 846 who responded in Q10 that they currently participate in the IETF, with 726 answering. First the coding means:

Statement	Coding mean
My skill in English is good enough for me to participate fully	4.64
When I need information it is easy to find	3.90
I am treated the same as the rest of the IETF community	3.90
The IETF provides good opportunity for me to share my views	3.87
The IETF communicates with me well	3.85
The information provided by the IETF is easy to understand	3.77
I understand the IETF structure and processes well enough to participate fully	3.72
I feel part of the IETF community	3.62

Cross tabulated with age:

Age chart legend:
- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 and over
- Under 18

Cross tabulated with gender:

Gender chart legend:
- Female
- Male
- Non-binary / third gender

Cross tabulated with region:

Commentary

63. Taken together with the answer to Q5, we can be confident that there is not a large group of people trying to participate in the IETF but struggling to do so because of their skill in English.
64. Females have a significantly lower coding mean for feeling as if they are treated the same as rest of the IETF community compared to males and non-binary/third gender participants.
65. Younger people (18-24 and 25-34) understand the IETF less than the older generations and feel less a part of the IETF community.
66. There are a number of statements where the answers from those based in Latin America are significantly lower than those for the other regions. The number of respondents (19) is large enough for this to be significant.

Q27. How true are the following statements about the IETF working groups (WGs) that you participate in?

This question was only asked of the 846 who responded in Q10 that they currently participate in the IETF, with 680 answering.

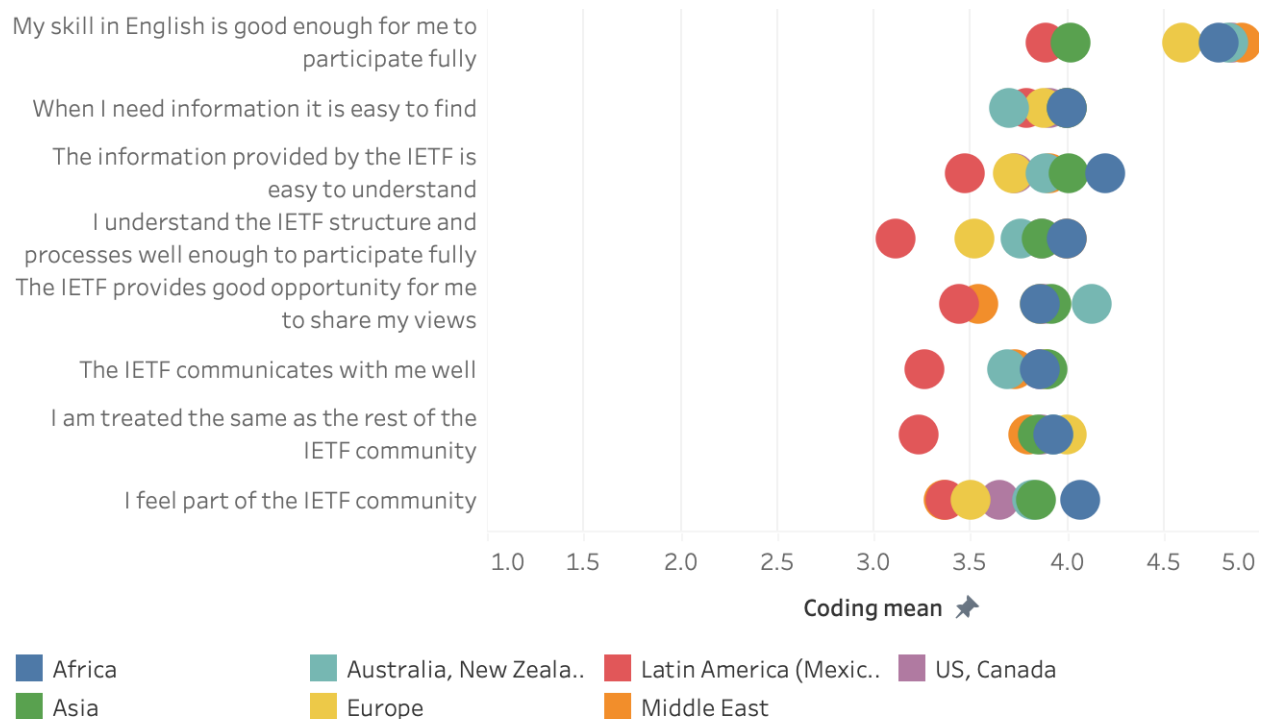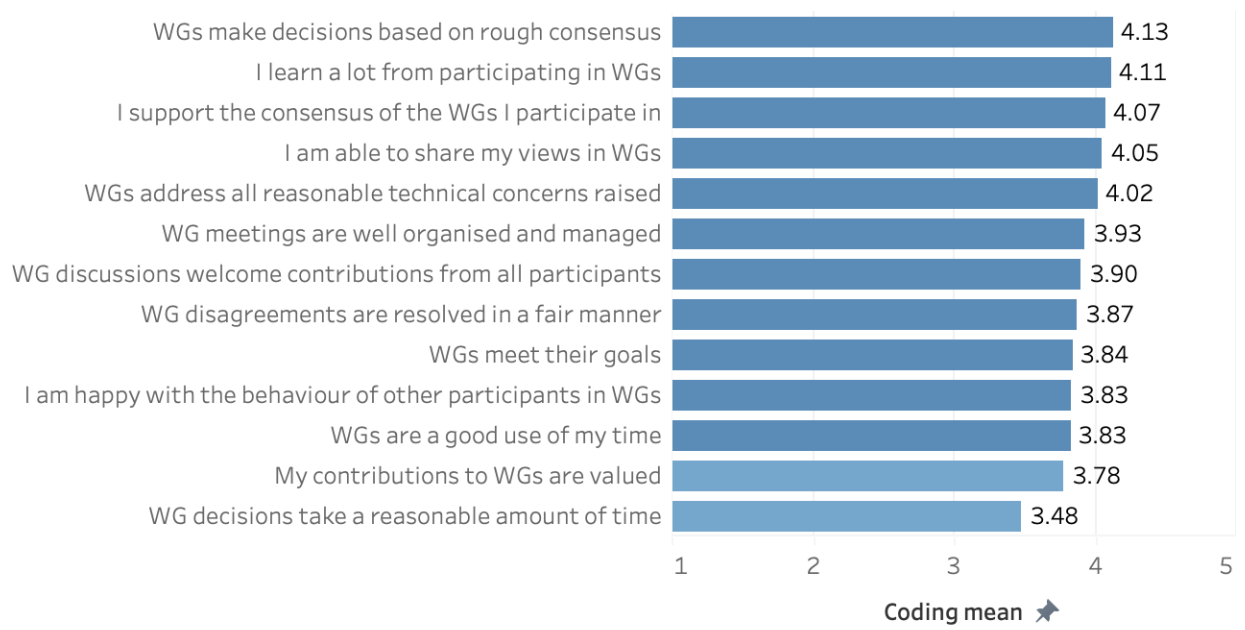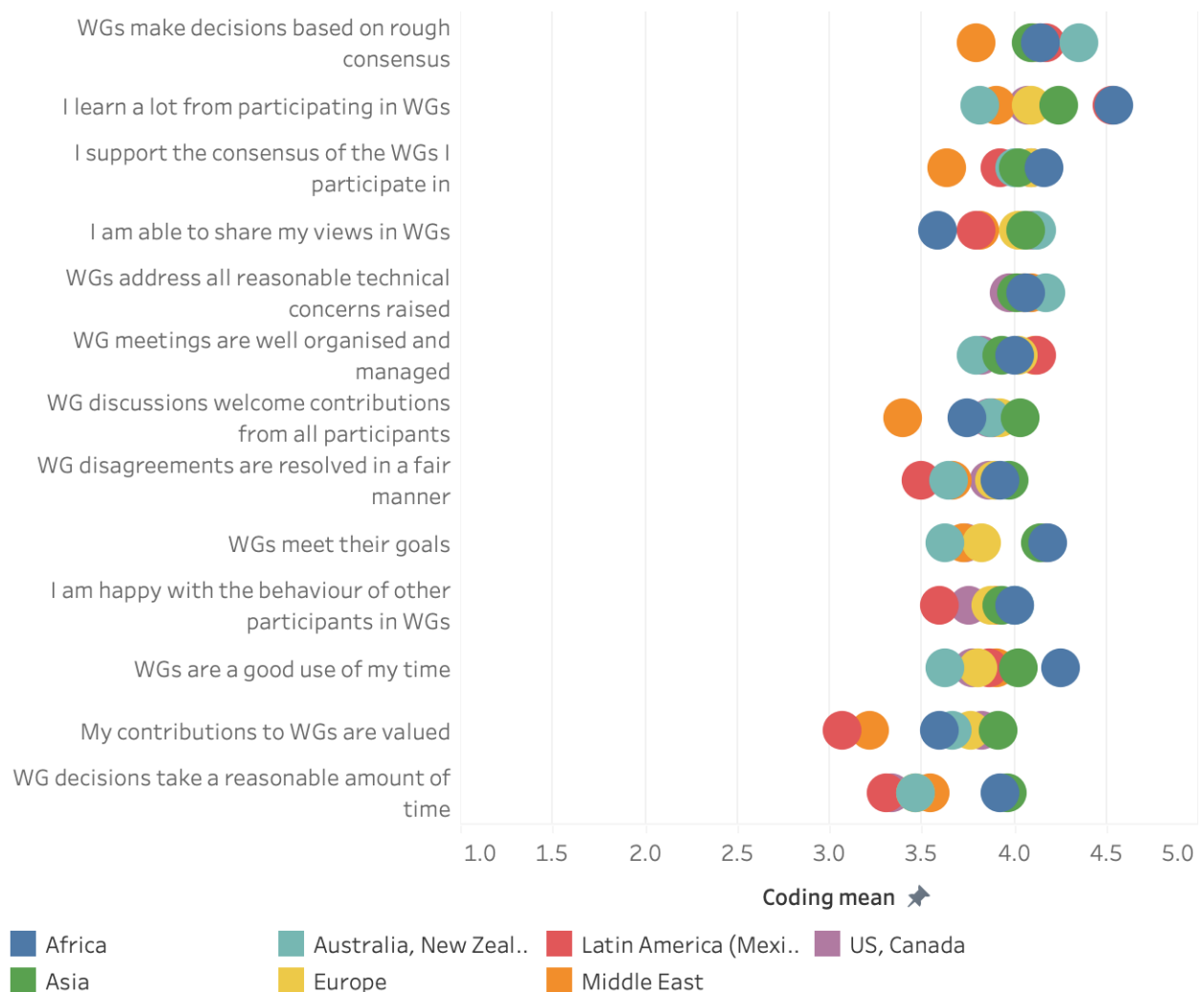|	
WGs make decisions based on rough consensus	4.13
I learn a lot from participating in WGs	4.11
I support the consensus of the WGs I participate in	4.07
I am able to share my views in WGs	4.05
WGs address all reasonable technical concerns raised	4.02
WG meetings are well organised and managed	3.93
WG discussions welcome contributions from all participants	3.90
WG disagreements are resolved in a fair manner	3.87
WGs meet their goals	3.84
I am happy with the behaviour of other participants in WGs	3.83
WGs are a good use of my time	3.83
My contributions to WGs are valued	3.78
WG decisions take a reasonable amount of time	3.48

Coding mean 📌

Cross tabulating with gender:

WGs make decisions based on rough consensus

I learn a lot from participating in WGs

I support the consensus of the WGs I participate in

I am able to share my views in WGs

WGs address all reasonable technical concerns raised

WG meetings are well organised and managed

WG discussions welcome contributions from all participants

WG disagreements are resolved in a fair manner

WGs meet their goals

I am happy with the behaviour of other participants in WGs

WGs are a good use of my time

My contributions to WGs are valued

WG decisions take a reasonable amount of time

Coding mean

| Female | Male | Non-binary / third gender |

Cross tabulating by region:

Legend:
■ Africa   ■ Australia, New Zeal..   ■ Latin America (Mexi..   ■ US, Canada
■ Asia   ■ Europe   ■ Middle East

Commentary

67. These results strongly support the claim that the IETF operates on consensus with "rough consensus" perhaps less rough than the word suggests.

68. Again, the time it takes to come to a conclusion, in this case WG decisions, scores lowest.

69. The score for the personal focused question of sharing views scores notably higher than the other personal focused questions of being welcomed, resolving disagreements, behaviour and contributions being valued, suggesting that the IETF has prioritised consensus and free expression over the impact of free expression.

70. Females in particular score WGs lower in multiple areas including the personal focused questions.

71. Cross tabulation by age (not shown) shows some areas where the 18-24 age range score WGs higher but no other differences.
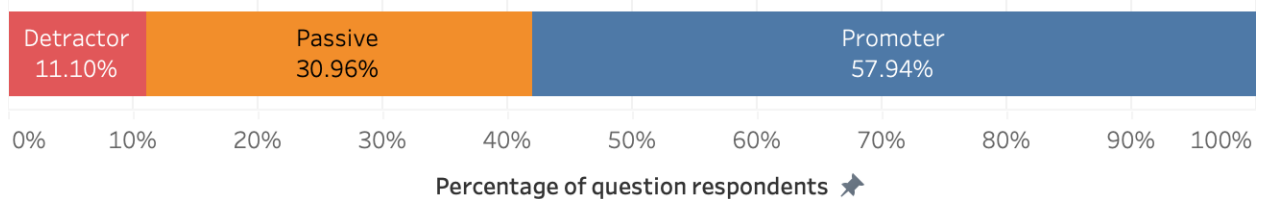
Q28. How important is the IETF for the development of the Internet?

This question was asked of all 2032 survey respondents, with 1738 responding. This question was asked on a scale of 0-10.
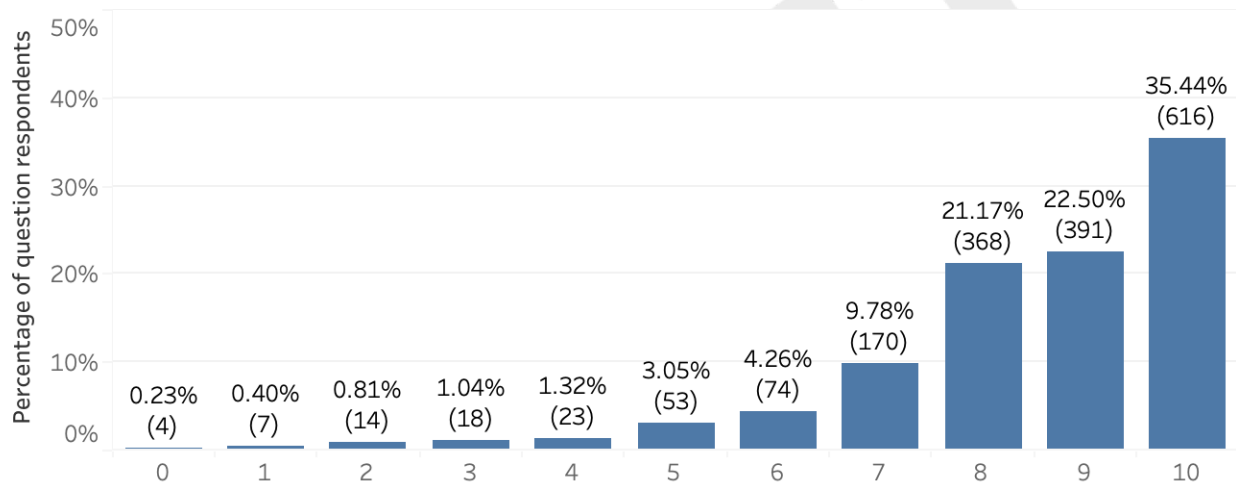
The coding mean is 8.46.

As this is asked on a scale of 0-10 we can analyse using NPS:

Commentary
72. This is a strong result. Using NPS scoring, Promoter - Detractor is +48.84%, in the middle of the 'Great' range of 30-70.
73. This result contrasts with the result of Q20 "How likely are you to recommend IETF participation to a friend or colleague?", suggesting that the IETF has significant potential that respondents do not think is being met.

Question page: Related organisations

This final page had a small number of questions to help understand the interconnectedness of the IETF community, and by proxy the IETF, and how the IETF is perceived to compare to other organisations.

Q29. Which other standards setting organisations do you participate in? (check all that apply)
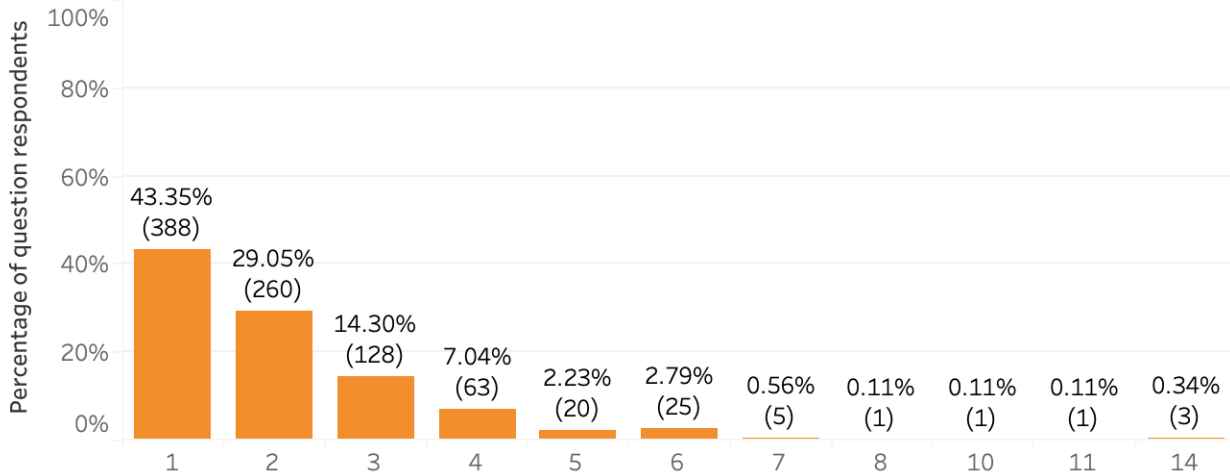
This question was asked of all 2032 survey respondents, with 895 responses.
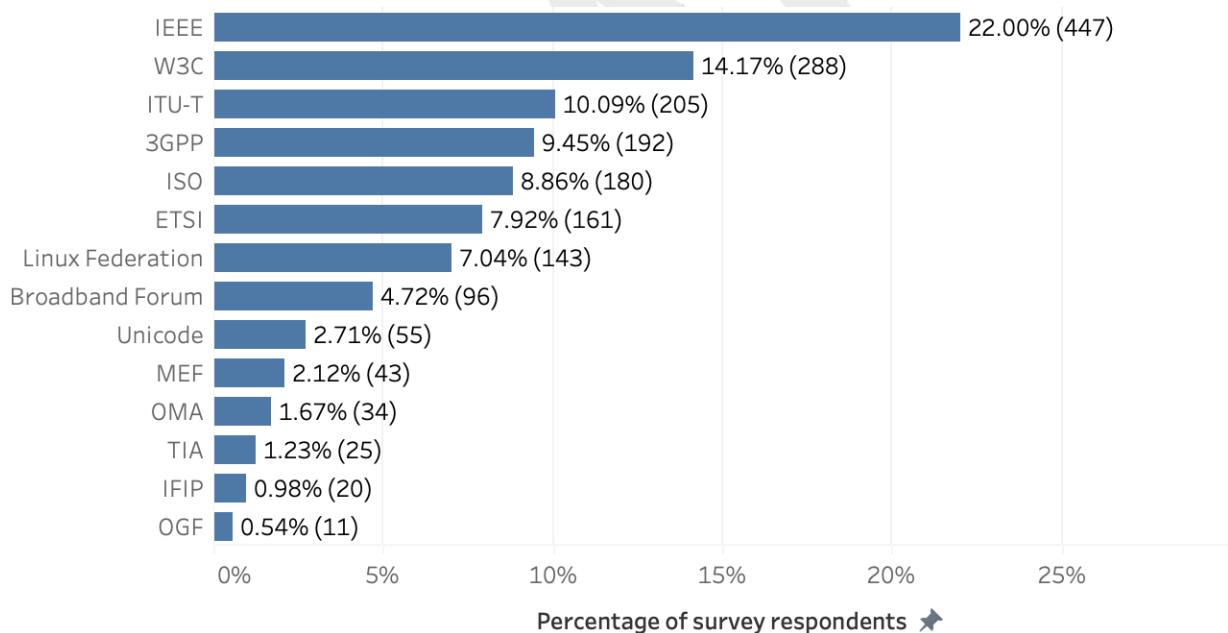
A frequency distribution shows how many respondents participate in X other standards setting organisations:
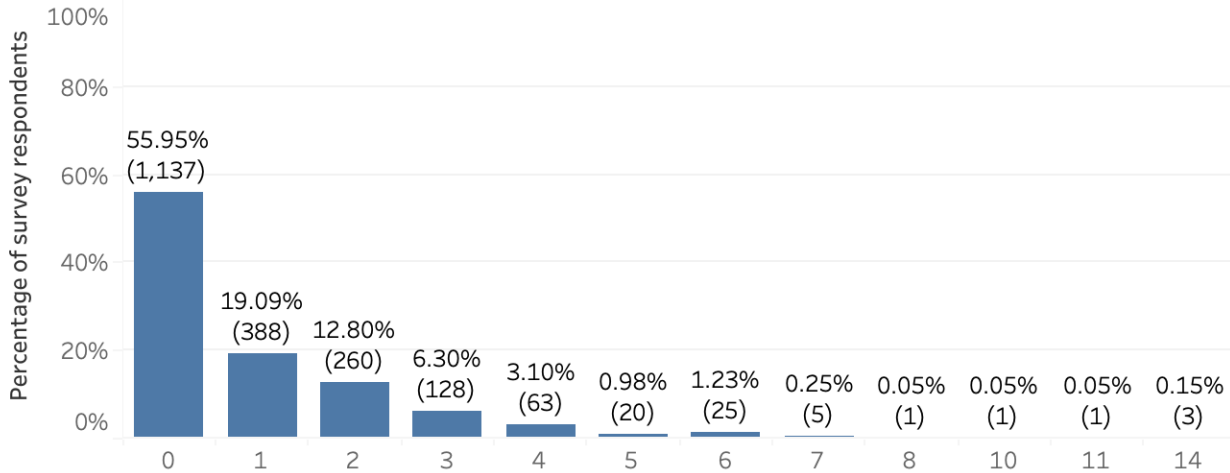
Looking solely at those that answered that they participate in one or more other standards setting organisations and calculating the percentages accordingly:
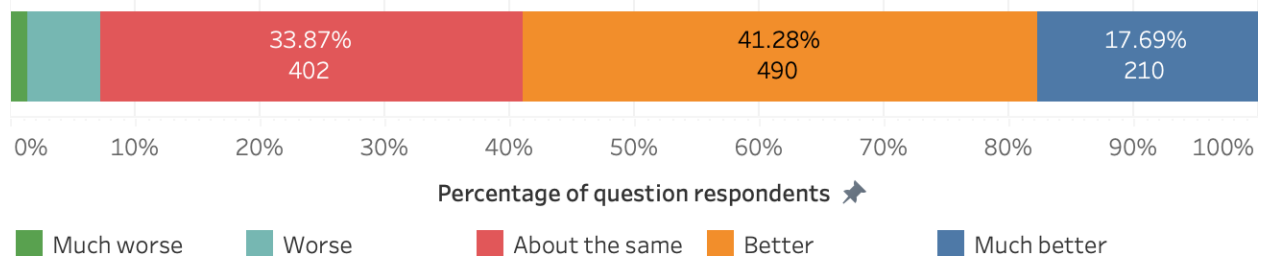

Commentary

74. The 895 who selected one or more other standards setting organisations represent 44.05% of the total number of survey respondents with a margin of error of 2.12%. This shows significant interconnectedness between standards setting organisations.

75. In future versions of this survey "Linux Federation" will be corrected to "Linux Foundation".

Q30. How well do you think the IETF compares to other standards settings organisations?

This question was asked of all 2032 survey respondents, with 1187 responses. The missing figures are Much worse 1.35% (16) and Worse 5.81% (69).

| | 33.87% 402 | 41.28% 490 | 17.69% 210 |

Percentage of question respondents

■ Much worse   ■ Worse   ■ About the same   ■ Better   ■ Much better

The coding mean is 3.68

Repeating the analysis only for those who indicated that they participate in at least one SDO produces an identical coding mean of 3.68

Commentary

76. A majority of 58.97% rate the IETF better or much better than other standards setting organisations and only 7.16% rate it worse or much worse. Positive minus negative gives +51.8%, a strong result.
77. This result should be useful when this survey is repeated and a times series is developed, or if other SDOs ask a similar question and the results can be compared.

Q31. Which other Internet organisations do you participate in? (check all that apply)
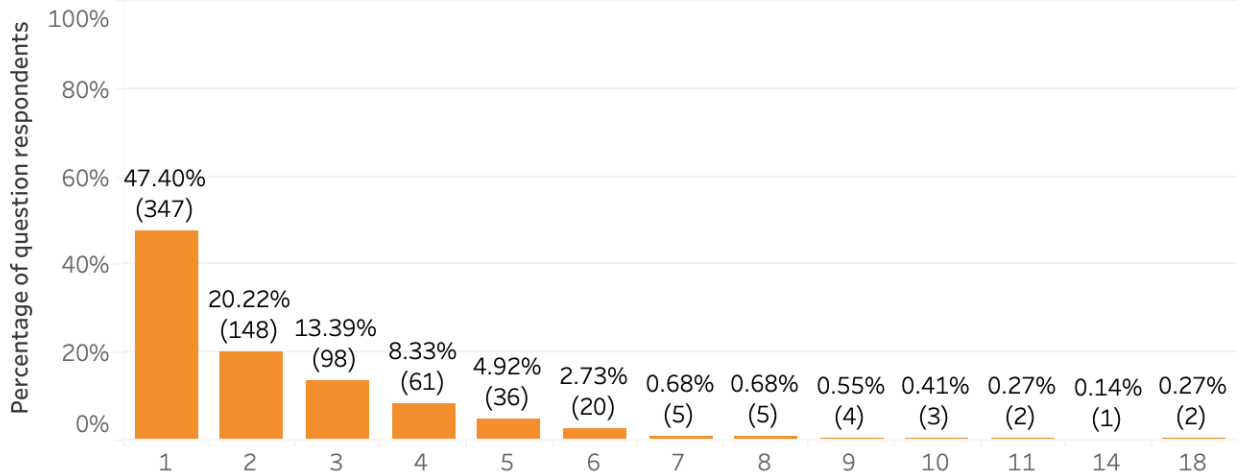
This question was asked of all 2032 survey respondents, with 732 responses.
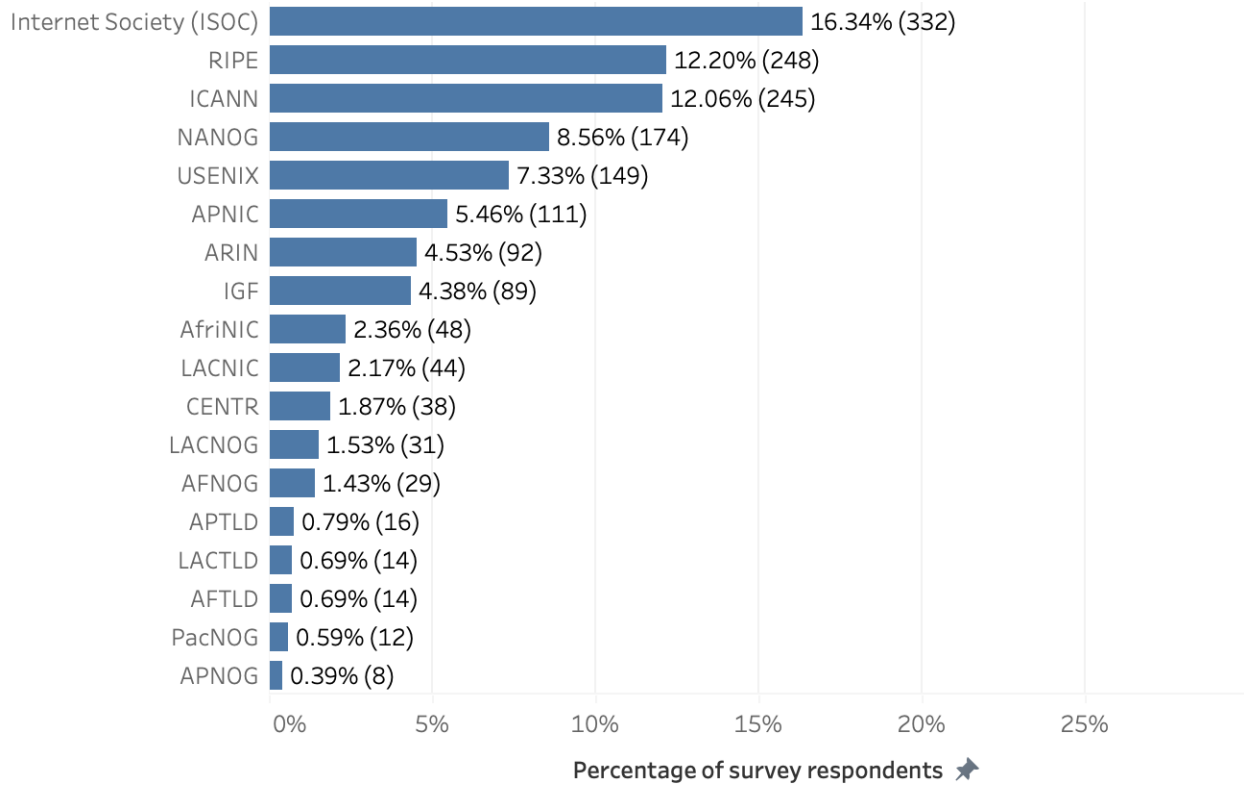
A frequency distribution shows how many respondents participate in X other Internet organisations:
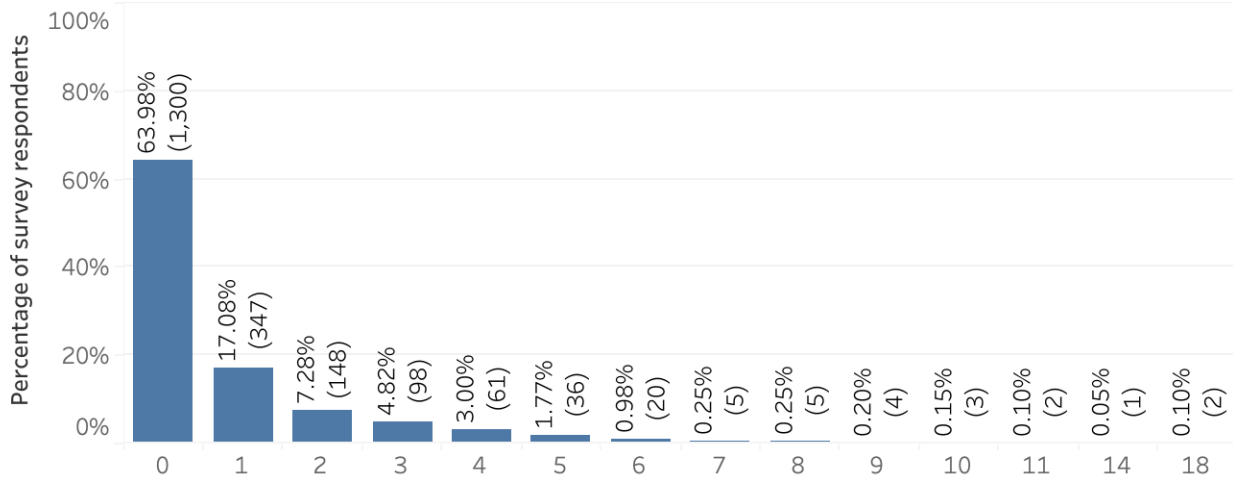
Looking solely at those that answered that they participate in one or more other Internet organisations and calculating the percentages accordingly:
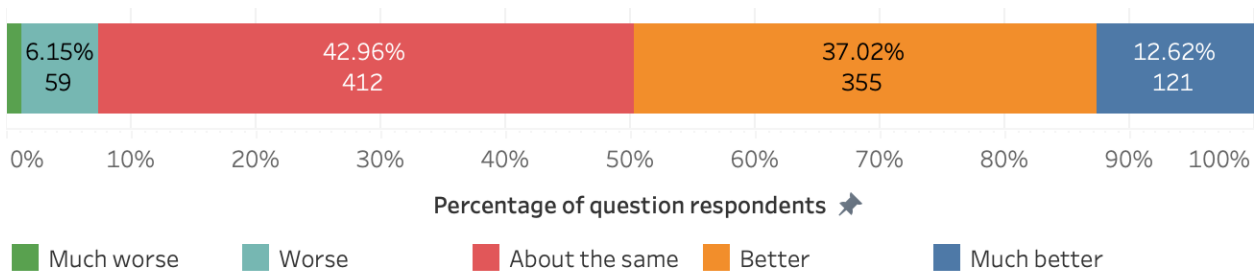
Commentary

78. Not unsurprisingly given the history, there is a strong tie-in between the IETF community and the Internet Society.
79. As might be expected from the answers to Q1 "What region do you live in?" the participation in European/North American organizations is higher than that of other regions.

Q32. How well do you think the IETF compares to other Internet organisations?

This question was asked of all 2032 survey respondents, with 959 responses. The missing figures are: Much worse 1.25% (12).

The coding mean is 3.54

Repeating the analysis only for those who indicated that they participate in another Internet Organisation produces an almost identical coding mean of 3.54.

Commentary

80. Slightly less than the majority of respondents, 49.64% rate the IETF better or much better than other Internet organisations and only 7.40% rate it worse or much worse. Positive minus negative gives a result of +42.24, a strong result.

Next steps

The results of this survey will be used by the IESG and IETF LLC over the next year as they plan and carry out their work. In particular, the survey will be regularly referenced in decision making to ensure a data-driven approach is taken that emphasises addressing areas that the evidence shows are high priority concerns reducing time spent on those the evidence shows are not actually concerns.

One action that has already been taken is to add a sign-up link to ietf-announce to the mailing list welcome email.

This survey will be repeated annually, with some adjustments, in order to build up a time series of data and to see whether the high priority concerns are being addressed. It is likely that some cleaning up of mailing lists will be undertaken before then, leading to a small total population and more accurate results.

Finally, thank you to all those who took part in this survey and provided us with such valuable feedback. Please raise any questions or feedback on the admin-discuss@ietf.org mailing list.

Lars Eggert   Jay Daley
IETF Chair   IETF Executive Director
chair@ietf.org   exec-director@ietf.org