

# Experience of Women Participating in the IETF

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## Introduction

The IETF Administration LLC (IETF LLC), in close cooperation with the IETF Secretariat and Chairs of Systems, initiated a project to perform research to understand the experiences of women participating in the Internet Engineering Task Force (IETF). The aim was to interview women in person at the IETF 117 meeting in San Francisco and get information pertaining to a range of experiences. For individuals who no longer attend the IETF or those who could not attend the IETF in person, remote interviews were accommodated.

An introduction between the IETF LLC legal counsel and the researcher was established prior to executing any interviews in case some conversations divulged issues that would require legal counsel to become involved. None of the discussions led to requiring legal counsel to be engaged.

The goal was to interview 20-30 individuals with a wide variety of demographic range that included: areas of focus and background (technical, policy, civil society, operational, academic, etc.), geographic and cultural background, length of engagement with the IETF, leadership tiers, and age range. The views of trans and non-binary people were also welcome, and any issues raised that would provide relevant information for this study are included in this report.

A total of 31 interviews were conducted.

While some interviewees had no issue with being identified as contributing to this study nor having any comments being attributed, there were some interviewees who wanted to keep their identities confidential. Due to the low percentage of women who do participate in the IETF and to preserve the privacy and anonymity of the individuals who did not want to be identified as contributing to this study, all of the comments and findings in this report have been anonymized.

## Methodology

Outreach for research participation was performed in the following manner:

- An email was sent to the Systems list 2 weeks prior to the start of IETF 117 to introduce the project and ask for volunteers to be interviewed.
- During the IETF 117 Monday morning Systems meeting there was a short introduction to the research project with requests for volunteers to be interviewed.
- Individual emails were sent to women registered for IETF 117 to introduce the project and request for volunteer participation.
- Individual outreach was conducted by the researcher and the LLC point of contact to women who in the recent past no longer attended the IETF.
- Interviewees made recommendations to reach out to specific individuals who no longer attended the IETF but would have some beneficial perspectives.

Most interviews were conducted in person at IETF 117 in San Francisco with a private room reserved for 1:1 conversation. For individuals who no longer attended the IETF or for those who could not attend the IETF in person, remote interviews were conducted via a Zoom call initiated by the interviewer. Interviews were conducted from July 22 – Aug 11, 2023.

All interviewees were offered the following confidentiality but could opt for stricter terms if that is what was required for their participation:

- All comments would be anonymized (name and affiliation removed).
- Comments and quotes might be included in a written report which would be made public unless the interviewee requests otherwise.
- Any specific identifying properties (names of third-parties, specific working groups (WGs), specific locations, etc.) would be anonymized unless otherwise agreed to.

All interviewees were asked to self-identify their employment background and reason for attending the IETF (whether related to technical, policy, civil society, operational, academic or other work) along with their age group, cultural background, and years of participation.

The interviews were conducted with discussions around the following topics:

- What they knew before they started participating.
- Their first impressions of the IETF.
- What they've encountered in their participation.
- Specific areas, situations, or even individuals of note.

- The impact of attending IETF on them and their work.
- Their analysis of their experiences and any issues they've encountered.
- Their view (if they have been participating long enough) on how things have changed over time for women participating.
- What they think can/should be done to change things to enable more women to participate in the IETF.

## Results

While some experiences varied there were a lot of common themes. Many individuals mentioned that gender alone did not play into the personal experience and that other diversity elements such as age, professional experience and cultural background factored into their experiences. This was a significant enough comment voiced by many participants that it should be taken into consideration when discussing diversity matters. Areas of diversity cannot be taken as individual elements and there are added complexities involved where multiple diversity elements will affect experiences.

### Knowledge of IETF Prior to Participating

Individuals who had been engaged in Internet governance, technical implementation of RFCs, and Internet operational groups had the most awareness of the IETF prior to any personal engagement and felt they had a good understanding of the social culture and the behavioral norms. There were individuals who felt that their knowledge of the IETF was no different than the environment they were typically used to working in which was largely the technically focused community. Some individuals had the benefit of working with colleagues who had been IETF contributors and were given a background on the IETF based on their colleagues' experiences. This helped them feel that they were well informed of the process and how to engage.

One individual mentioned reading the recommended IETF preparatory materials, such as the 'Tao of the IETF'. However, they felt they were more prepared by also discussing how the IETF worked with their industry colleagues.

Most individuals who were aware of the IETF knew it wasn't a traditional type of conference where someone gives a talk and someone else gives a nice comment and then all leave. The IETF was generally portrayed as a place with argumentative behaviors where contributors have strong opinions and it's a conference to get things done.

Individuals who had followed and sometimes joined IETF mailing lists as observers prior to engaging in more active roles knew what the community was like from the mailing list discussions. This was often not a positive experience since many mailing lists had contentious discussions which were intimidating and off-putting.

Some individuals had no prior knowledge of the IETF but due to professional reasons were recommended to contribute to the IETF and get some work standardized and/or some protocol behavior modified as per IETF consensus. These individuals were told that 'the IETF is a contact sport' and that perseverance and persistence will be required.

Some individuals were told to 'be careful who you interact with since standards work and drinking culture require you to be on your guard'.

## Initial IETF Impressions

Initial IETF Impressions were quite varied and while some common themes emerged around areas of feeling overwhelmed, intimidated and excluded, there were many individuals who expressed an overall positive experience. Most of the positive experiences came from individuals who work in more technical areas, were familiar with the competition between vendors, and felt that tension is normal, expected and part of the culture. Extremely positive initial IETF impressions also came from individuals who had hands-on mentors helping them navigate initial IETF engagements, either on the mailing lists or the in-person meetings.

Many individuals who were more recent IETF contributors expressed a positive initial impression made from having working group meetings start with expressing the policies of the IETF and having some chairs explicitly voice 'be nice to each other'. These recent first time IETF attendees often had industry colleagues and teammates asking them during the meeting weeks if people were being nice to them. The positive experience was also attributed to the increased awareness of uncivil and abrasive behavior traditionally associated with the IETF and that efforts were being made to change that default behavior.

## Initial Impressions on How IETF Works

Many of the individuals expressed the words 'shellshocked' and 'overwhelmed' as their initial IETF impressions. Much of that was attributed to the plethora of working groups where work and discussions from different working groups overlapped and the sheer volume of work that was going on during the meeting, especially with hallway conversations. The work initially seemed chaotic and it was hard to discern what was important or not from the meeting discussions and mailing list comments. The feeling of being shellshocked was also attributed to the realization that the Internet gets built by having 'important decisions get made by people yelling at each other at the microphones'. There were 'very large working groups with very long mike lines where people were screaming and using lots of profanity' which was very intimidating.

Some individuals had been prepared for the IETF to be 'very American and old white guy heavy with positions in big companies' yet they were still surprised by the fact that the work they were trying to contribute to was dominated by a particular kind of generation and sex and nationality. A few individuals mentioned how surprised they

were that only a small concentration of individuals makes comments at the microphone during working group meetings or participated in mailing list discussions. Even more surprising to some individuals was that some contributors to the IETF seem to thrive in the contentious culture and don't want it to change.

For initial engagements with mailing lists, the tone of some mailing lists as being harsh and contentious was emphasized. The feeling of being overwhelmed from the mailing lists discussions was also attributed to missing past context that was sometimes alluded to in email threads and the pure volume of some mailing list discussions.

A comment was made about the structure of the email conversations where inline conversations often require responding to one person at a time rather than responding to a conversation. In email there is often the practice of replying to multiple people who have an opinion or comment rather than an issue. This was felt to be non-optimal and led to the impression of the IETF needing to utilize more modern methods of work to be more efficient and not as overwhelming.

There were several comments where individuals felt that if IETF work engaged in non-technical contributions (such as policy and civil society) that there was a culture of the non-technical individuals having to defend their positions rather than being made to feel like they had a valuable viewpoint to contribute.

A few individuals felt that their first impression was much like being at any large technical conference with multiple parallel tracks. What was new and unexpected was that it was a working group and not a conference. Also, the humming to get working group rough consensus was thought to be a 'huh?' and 'interesting culture'.

## **Initial Impressions Regarding Personal Contributions**

A common theme was that there was a feeling of inadequacy and being too intimidated to contribute when first attending an IETF. A fear of being ridiculed for comments made at the microphone was voiced by many interviewees, both long-time attendees and more recent ones. For some individuals it took several years of attending IETFs before they got the nerve to speak up and contribute either on mailing lists or in working group meetings. Some individuals who did not speak up in public during their initial IETF meetings did speak privately to folks to get feedback on contributions they wanted to make.

Some individuals had initial impressions where they felt there were assumptions made on their positions on certain topics based on their background. This led to a more confrontational dialogue when discussing divergent views on a topic. It felt like a pushy and personal attack which was uncomfortable. Several individuals expressed that rather than having constructive conversations, the dialogues they were a part of felt more like an argument which was stressful.

Some initial experiences expressed from both long-time and short-time contributors included not being listened to and was attributed to not being part of some closed community in certain working groups or areas of work which was felt to not be open to

a new contributor's ideas. From contributors who did not have a deep technical background there was frustration expressed that people did not understand their point of view and were not willing to engage in meaningful discussions to understand another perspective. There was also a comment made where an initial experience led to the belief that leadership is not inclusive of ideas they don't like.

Experiences of virtual meetings exacerbated the feeling of not being heard when you did not get comments and feedback.

A few individuals felt that their contributions were immediately respected due to filling roles that were hard to fill and by providing meaningful contributions. The positive experiences included being engaged with smart, nice and friendly people — especially the working group chairs who helped new contributors in their working group by encouraging their contributions.

One interviewee expressed how valuable it was to see some experts participating in working groups where they are not always experts. This gave confidence that you don't need to be an expert in the field to have valuable input and helped the individual gain more confidence in their own initial contribution.

## **Initial Impressions with Mentorship Engagement**

Mentorship and having an individual who is already engaged and respected in the IETF shepherd a first timer engagement was often expressed as a reason for having a positive experience at the IETF and feeling welcome. This was true of individuals who had longtime engagement as well as more recent IETF participants. All of the individuals interviewed who had an initial positive IETF impression attributed it to having industry and/or corporate teammates who actively supported them in their initial IETF engagements, either by adding positive and constructive feedback on mailing list contributions or shepherding them around in their first in-person meeting.

In some larger corporations there is a company policy of 'no one goes alone' which helps newcomers to the IETF get the maximum benefit of initial engagements. Some companies have an internal IETF group with male and female participants where individuals could go to post questions to get a broader perspective. This provided positive feedback and support, and provides added encouragement to bring contributions to the IETF.

Having a mentor give an overview of existing drafts and what their status is in the newcomer's area of interest was stated as being extremely helpful in navigating work in some areas with a large number of documents.

Some individuals expressed gratitude to the IETF Working Group and Area Director (AD) leadership who were welcoming and expressed positive interest in their contributions. This greatly helped with a feeling of inclusion.

A few individuals mentioned the IETF mentor program and some negative experiences where the mentor never engaged during the week. The individuals felt very much alone

and sought out the Systems group or other industry colleagues to help them navigate and understand the IETF better.

## **Initial Impressions of Social Gatherings**

There were multiple experiences of feeling uncomfortable in social settings when attending initial IETF meetings. This was attributed to feeling like an outsider when many individuals knew each other and were not inclusive in discussions. Some individuals also expressed feeling uncomfortable since 'any woman is on guard with 900 men drinking alcohol'. No individual mentioned any explicit experience of harassment.

While the newcomer dinner and newcomer training was felt to be useful, there were still gaps to know how to effectively engage in meetings.

The Systems meetings were mentioned by several individuals as being a useful group to connect with where initial impressions of the IETF had a more positive impact by connecting with other women and seeing that some women also held leadership positions at the IETF that they could in future strive towards.

## **Participation Encounters (Specific Areas, Situations, Individuals of Note)**

Most of the encounters discussed were positive and had common themes of receiving support from prominent IETF members and IETF leadership who helped build confidence of the interviewee efforts at the IETF and ensured their contributions were acknowledged.

The IETF was definitely deemed to be a meritocracy by several individuals who found that once they had the confidence to engage in discussions they found that they had several positive encounters in an environment where initially it had seemed very off-putting.

All negative encounters were due to inappropriate behavior, either from communication tone and professional engagement perspective, or an intrusion into personal space.

### **Positive Encounters**

There were many individuals who had positive situations they brought forth which related to prominent IETF contributors, Working Group chairs and Area Directors who supported their work and gave them significant guidance on moving work forward. It was felt that many were generous with their time. This helped to make them feel comfortable and welcomed.

Some individuals who had taken on new leadership roles during their IETF tenure expressed gratitude for co-chairs and Area Directors who were helpful in navigating the process and providing support.

One individual stressed the mentorship she received from a long-time IETF member who emphasized to her that the IETF is a community where you have to be part of the community since people want to feel like contributors are in it for the long term. You don't just do your work but also help others where you can.

Encounters with the Systems program was mentioned by several individuals as being positive and providing role models for leadership positions at the IETF.

Several individuals had encounters which related to discovering that positions that they initially thought to be controversial actually were not. While active engagement had taken some time for a few individuals, they had experiences of being positively surprised once they engaged in conversations and email threads. One individual mentioned that 'when I took the leap to take part in the conversations in person or in email, I found you can have a dialogue with them'. For another individual it had taken years to engage since the environment was seen as off-putting, but once she stepped in, she found it wasn't as difficult to engage as originally perceived.

## **Negative Encounters**

Many individuals spoke of encounters observed where IETF behavior has been very combative and aggressive during working group discussions, which makes it harder to go up to the microphone and contribute since there is fear of getting shouted at. No one interviewed had personal experience of being shouted at but many said it took a lot of courage to get up and speak, or they just resorted to contributing via mailing lists. Several individuals mentioned that these observed aggressive encounters triggered other diversity elements. These can factor into how they as an individual respond (or shy away from) discussion, and relate to cultural norms or an upbringing where you wait for your turn to speak. In some more aggressive dialogue encounters, waiting for your turn to speak means you never get a voice.

Situations were brought forth where the women felt that response to their comments and contributions have been dismissive and some to the extent of being demeaning or nasty. Mansplaining encounters were also mentioned where men attempted to help the individual understand what she got wrong when in reality the men did not comprehend her view. Some women felt patronized when having professional discussions.

Some women brought up encounters where they felt that they were excluded from work because they were not in the right group to be included in sideline hallway conversations or the so-called Bar BOFs. A few individuals mentioned that they have had some negative encounters with both women and men which related to being excluded from discussions.

A few individuals brought up situations where their work was sidelined or sidestepped when creating new IETF initiatives or working group drafts. For some scenarios mentioned, significant contributions were not acknowledged. In these cases, the women had written drafts which were later usurped by other drafts without referencing the previous work or even acknowledging that the initial work existed. For one of the



situations mentioned, there was a prominent male advocate who would stand up and speak on the woman's behalf to mention her work which was both encouraging and helped make her feel valued. One individual made the observation that, 'Men have a lot of confidence and think nothing of self-promotion. Women stop to think and wonder if they should be first author.'

One individual discussed a situation where she observed a very good woman chair get talked over and bullied and pushed to do one thing or another. This situation had her questioning whether she herself would want to step up into any leadership positions since she felt that women who are chairing need to be even better than men since they get more flack and get questioned more.

## **Personal Space and Anti-Harassment**

While none of the individuals brought up situations where they themselves felt harassed or unsafe there was mention of hearing stories of individuals that have felt that way, especially during social events where alcohol was involved. Personal encounters divulged did mention scenarios where men were too touchy and invaded personal space which felt 'creepy'.

An encounter highlighted was when someone in a very busy hallway asked them if they had experienced any harassment. While they had not, it raised the question of discretion for a very sensitive topic where timing and environment matter and ensuring that anyone who does feel harassed has a safe place to bring any issues forth.

## **Analysis on How Being a Woman Has Had an Impact on Experience**

Many individuals expressed that there were other elements that factored into having an impact on their IETF experience and that the impact cannot only be focused on being a woman. The added elements mentioned by varying individuals included age, being a non-native English speaker, physical height, and cultural/religious background.

Quite a few women mentioned the impact of gender stereotypes where they felt that they needed to work harder to be respected and that even if they were technical, they were perceived not to be and were often the recipients of mansplaining. One individual was told not to take things too personally — she was taking some things harder because she was a female. These experiences often led to a sense of insecurity and hesitancy in contributing to conversations, or just downright exasperation for being treated differently than the men were.

Some of the analysis that women in leadership roles shared were specific to gender related leadership stereotypes where their style was vocalized to be 'abrasive' or 'demure but firm' which they just did not know quite what to do with.

Some women vocalized the need to modify their personality to participate and be heard. Mostly the changes were to be more abrasive and confrontational which was not their usual way of handling confrontation and, while effective, they felt uncomfortable

having to do so. However, one person included in her analysis that changing personas is normal in different contexts since often you may have a different persona for your professional and personal life and perhaps even one in different cultural settings (when you are in the country of your birth vs. America, where there are different accepted behaviors).

Many individuals vocalized the importance of seeing women speak up at the microphone and having female co-chairs, ADs and board members. One individual specifically mentioned that she sometimes feels like an object at the IETF but that having mentors and role models gives her confidence that women can make a difference and can achieve leadership roles.

A few women felt victimized by not having their work get credited or being acknowledged as an author. There was some discussion on needing to come up with strategies to ensure that women don't just get tapped to do support work but instead get recognized and credited for their contributions.

A few individuals mentioned that they have not noticed anything out of the ordinary for themselves and that 'no one has been dismissive and nothing has been out of line'. For them, 'everything has been normal and others don't care who you are — they just care about what you know and bring to the table for contributions'. One individual did include in her analysis that she did not notice any specific impact due to being a female but noted that she had a strong working relationship with people with shared objectives and that they were all men.

One individual noted a positive impact for her being that you get remembered more since there are so few women.

A few individuals voiced feelings of not having anyone to relate to during off-times since conversations and activities were more geared towards topics men preferred. This had them not be as social and engaging during social events. These individuals felt it was just a reality when choosing a technical field. One individual mentioned feeling uncomfortable at social events where men are drinking heavily since it makes her feel unsafe.

## Impact of IETF to Professional and Personal Goals

Contributing and being part of the IETF had a significant positive impact on all individuals in their professional and personal goals.

From a professional perspective the positive impacts voiced included:

- Collaboration with like-minded individuals to determine protocol gaps which eventually results in building better products and solutions.
- Decreasing the time to implement solutions, which is helpful to business.
- Improving policy advocacy from a totally different context.

- Increasing legitimacy and authority within professional environments by knowing the right arguments to make.
- Elevated career possibilities due to the networking and relationships built.
- Job responsibilities crafted out for the particular space the individual was engaged with in the IETF.
- Greater support from employers who valued the broader perspective brought back to the organization.
- Elevated recognition by peers and a distinct change in how they are perceived as an engineer.
- Making a broader impact in their organization and creating more scalable solutions.
- Bringing better decision making to the organization by providing more cross-functional context to discussions.

Another positive impact was specific to improving leadership skills by realizing that being confident is as important as knowing your stuff. When observing how someone fought back when their ideas were shot down, it was useful to see that the argument was not directed at the person but rather at finding the weakness in a debate and where logical goes to illogical. The individual felt this was invaluable to her as a female leader.

One individual voiced that when some conversations got into technical details that people were working on it was overwhelming and she had no idea what they were saying. However, she found it interesting to learn what other people were working on and, even if she was not processing everything completely, it was usually a good introduction to later go back and reread drafts which helped to have a better understanding of it. Participating in the IETF gave her more insights and elevated her overall knowledge.

There were also several positive impacts mentioned specifically to personal goals:

- Gives legitimacy and is a badge of honor which builds self-confidence.
- Learned a lot and made lifelong friends and mentors.
- Working with smart people is a motivator to push herself and continually get better.
- Feels more impactful and it feels good to have left a mark on the Internet.
- Having a better perspective after seeing how situations are navigated when you have people on spectrum or are not socialized to behave like others behave.
- Access to the best and brightest who helped their personal growth by helping them grow ideas and partnerships and advocate for themselves.

## Views on Changes Over Time

A subset of individuals were recent IETF attendees and felt that they did not have a perspective to offer on changes over time. One individual who was a longtime IETF contributor did not think anything had changed much. However, most individuals interviewed had participated in more than 3 IETF meetings and offered multiple perspectives of the changes over time they had observed. These are categorized into the following areas:

- *Diversity Awareness and Inclusion* to cover awareness raising and inclusion efforts which have resulted in changes over time.
- *Initiatives For Increased Participation* which discussed views on varying initiatives the IETF has taken to help with contributor diversity.
- *Behavior and Tone* which brought forth how the culture at the IETF has changed over time.

## Diversity Awareness and Inclusion

Multiple individuals who have attended the IETF for several years felt that there were more women participating in the IETF and that there is more diversity. Some women felt that this was due to the diversity inclusion efforts that started in 2012. A few individuals noted the increased focus on open dialogue regarding diversity and inclusion and trying to bring in more contributors from different segments of society.

The distinction was made that female participation over time had a dependency on specific areas of focus since in some areas there was no growth. The observation was made that the closer you were to hardware, the more male dominated the contributions were. The more you move up and into applications and UI, the more you see women. As this is true across the technical industry, this would also reflect the areas the IETF is focused on. Also, having more women attendees over time was attributed to new human rights and research groups where women did not necessarily have a technical background but were more policy focused. It was felt that these multifaceted contributions were not valued at the IETF and there was a question whether, over time, these contributions would be more valued even though they are not technical.

One individual expressed wanting to see more tangible and measurable change since she felt that the narrative about the IETF being more inclusive was mostly talk without necessarily much overall change. A gap in the research done so far was pointed out – the research has left out the metric of ascertaining how many women have attended the IETF but no longer contribute. Knowing the reasons why these women stopped contributing to the IETF was felt to be useful information.

An observation was made that there were now more new female co-chairs. Having relatively new and young chairs appointed to co-chair with an experienced IETFer was voiced to be a good model to keep using. It would enable more women to establish leadership positions at the IETF.

A few individuals noted that the IETF has begun to reflect a larger change in tech which is more inclusive but has not really embraced it.

## **Initiatives For Increased Participation**

Over time there had been varying initiatives for newcomers where, by default, a subset of the target audience were women. Newcomer tutorials were created to enable new attendees to more quickly understand how the IETF works and for them to participate in the IETF. A fellowship program, which no longer exists, was created for technical folks in development countries. It was felt that these initiatives to increase diverse IETF participation had over time helped to increase female contributors to the IETF.

The usefulness of the Systers group was mentioned several times and all views reflected a positive change over time. The Systers morphed from being an ad-hoc meetup with random folks to a much more structured and organized networking event for women and non-binary folks. Institutional support today was felt to be very positive for the Systers.

Several women voice how onsite childcare has been an improvement and has enabled them to participate in person more often. Great support was also mentioned while on maternity leave and it was felt that some men are more supportive and helpful to bear the brunt of some tasks until the new mother was able to take on a more active role again.

Equity of leadership was seen as not being addressed over time and it was suggested that this could be a growth area.

Hybrid meetings were mentioned by a few individuals as being an improvement and a productive way for women to contribute, especially those who had family care constraints and could more easily contribute virtually. IETF was seen to be one of the better conferences in terms of not being a second class citizen when participating remotely. You could even chair remotely.

## **Behavior and Tone**

Many individuals felt that the overall culture at the IETF was slowly getting better and that some areas that historically have been contentious have become more respectful in tone. This was attributed by some to be due to having a code of conduct, an ombudsteam, and the Note Well which is read at the start of each working group session. However, it was felt by a few women that there are still some negative behaviors that are tolerated and sometimes this even comes from IETF leadership. Some other women felt that bad behavior was not tolerated anymore and that if chairs were not handling it, then the AD would stand up and not allow bullying. Some areas have become better at learning to control and shut down faster any contentious behavior.

One individual observed that mailing lists can be more problematic than actual face-to-face meetings when it comes to tone and online behavior.

A few women voiced that the leadership was still very white and very male, and that the same people get recycled to leadership positions.

One individual noted that there was an improvement over time in getting better at noticing social ineptitude versus rude behavior.

A few women expressed missing the old IETF because men are now so cautious and they would prefer honesty over politeness. However, they did also mention that having worked in the technical industry for a long time they felt they had thicker skins and the self-confidence to handle any attack as long as it wasn't ad hominem and personal.

## Suggestions for Enhancing Experience of Women Attending IETF

Several suggestions were made on how experiences of women attending the IETF can be enhanced and to ensure that women continue to participate.

### Mentorship

Multiple individuals mentioned the importance and incredible value of mentorship programs and how important it is not to feel isolated. One individual mentioned how overwhelmed she was by the amount of mail on the attendee list and had missed seeing information on mentoring. Suggestions for enhancing the mentorship programs were:

- Make the mentorship program more prominent on the website or as part of the registration process.
- Check in with guides and their mentees to ensure new folks do not feel uncomfortable if the guide/mentor does not show up.
- Have younger and less experienced individuals work with senior people, since it is typically a long-term effort to help mentor and shepherd.

### Initiatives

Many individuals suggested promoting outreach initiatives to universities, industry, and other forums. The suggestions were:

- Have leadership go to organizations and events where female participation is common, such as the Grace Hopper event, to promote the IETF.
- Provide some kind of template on how to create a proposal for managers to showcase the work being done by an individual and continue getting budget and approval to get the organization to approve continuing contribution.
- Work with industry employee resource groups (ERGs) which are employee-led groups that are focused on particular characteristics (i.e. women, religion, etc. ) and encourage IETF participation.

- Create initiatives to work with university programs to make female engineers aware of the IETF, for example the Society for Women Engineers (SWE).
- Work with universities and industry to create programs to enable more women to attend the IETF.
- Follow up with companies on whether the woman who is coming will get sent again.

Some suggestions were made that pertained to financial support initiatives or lowering the financial outlay for in-person participation:

- Utilize scholarship and fellowship programs that work with other organizations and replicate what can work for the IETF. This would also tackle diversity more holistically.
- Provide more scholarship opportunities since men are usually selected over women to attend the IETF (which also ties into working with universities and industry to create programs to enable more women to attend the IETF).
- Provide guidance on less expensive hotels to signal that in-person meetings aren't just designed for corporate high budget travelers.
- Continuing the childcare programs since it lessens the burden of cost to single parents who already incur added costs by traveling with their child to the in-person meetings.

New research initiatives were also suggested since relying on surveys and mailing list feedback where only English is utilized can create a language barrier. Also, while this current research was felt to be a good start, there should be added investigations. The specific suggestions were:

- Research that does not only use English for feedback should be investigated.
- Added research should be performed to really understand the problem of why there are so few female participants. After a 3-5 year range they may drop out and it would be useful to know why these women stop participating.
- Research past contributions from women at the IETF and create a historical report to highlight these contributions.
- Research how you get diversity in volunteer efforts.

## **Systems Program**

There were multiple women who felt that the Systems program gave them a feeling of belonging and they would like to see the program continue and possibly expand what it is doing. A suggestion was made to have a Systems technical session so that the individuals participating could all share what they were working on. This might also act as an ice-breaker so that if some individuals have the same interests it would give them something to talk about. Another suggestion was to have Systems collaborate with the Guides program at the IETF.

## Training and Awareness

One suggestion was made for enhancing the newcomer experience by creating added training to help navigate how to join meetings and what systems to use for what. Any documentation that was found online seemed too high level to be practical.

A few suggestions were also made that pertained to continued awareness raising regarding professional behavior and discourse. Since the IETF has taken on new emerging areas of work, there is expertise that is not as technical and contentious issues should be resolved without feeling like someone is personally attacked. Training on cultural norms and respectfully resolving contentious issues was suggested for at least IETF leadership roles.

## Anti-Harassment

The IETF should be a safe space for people to participate in and there needs to be a better process to lodge any significant harassment complaints. Currently, the Ombudsteam has liaisons into other parts of the IETF organization, which presents a problem when a complainant wants to make a statement about someone that is part of the liaison chain. A suggestion was made to create a more HR focused structure and create better anonymity and privacy for harassment discussions.

## Leadership

A few suggestions were made that pertain to the topic of leadership:

- Create term limits for WG chairs and other leadership to create more opportunities for new individuals to attain these positions.
- Create better training for leadership roles along with more opportunity. Many females do not think they are qualified to be an Area Director and if they do not get selected after an initial try they may just figure why bother.
- More women in leadership positions is a good first step but IETF must be careful not to put too much responsibility on one individual woman just due to diversity aspects since that can be stressful to fill the obligation.

## Governance and Process

There were some suggestions that pertained to IETF governance and processes. One individual felt that the culture is systematically broken and as long as meritocracy is the basis of the organizational culture then they weren't sure anything could be done to be more inclusive, of gender or otherwise. Others suggested the following:

- Have stronger moderation on IETF email lists and chat channels to avoid confrontational dialogue.
- Create guidelines and protocol for who gets credit for document content and authorship order.



- Ensure that everyone's comments are documented and all are addressed in a written tracker since mailing list comments are NOT all captured. Then, someone's comments on the mailing list can be tracked which can provide an equal playing field and acknowledgment for all contributions.
- Conduct policies cannot be subject to community consensus. Loud folks may be the objectors and conduct violators—suggestion was to create community buy-in but not consensus.

## Social Events

Some women made suggestions pertaining to social events:

- Enable more social events that do not revolve around drinking since some women do not feel safe around an environment where men are drinking.
- Encourage more openness and inclusiveness for smaller social events which are invite only.

## Conclusion

This report is the results of 31 conversations and provides a variety of different views to understand the experiences of women participating in the IETF. Only the results of the discussions have been provided without any attempt to analyze the results of the discussion.

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## About the author

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Merike has been a contributor to the IETF since 1992 working in a multitude of areas, including network management, routing, IPv6, DNS and security. From 2000-2003 she served as the co-chair of the IPPM working group.

Merike earned a MSEE from George Washington University and a BSEE from Rutgers University.