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Authors:	M. Kühlewind <i>Ericsson</i>	M. Duke <i>Google</i>

# RFC 9400

## Guidelines for the Organization of Fully Online Meetings

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### Abstract

This document provides guidelines for the planning and organization of fully online meetings, regarding the number, length, and composition of sessions on the meeting agenda. These guidelines are based on the experience gained by holding online meetings during the COVID-19 pandemic in 2020 and 2021.

### Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

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## 1. Introduction

In 2020, the COVID-19 pandemic forced the IETF to convert all its plenary meetings to online-only events. This document records the experience gained by holding plenary meetings fully online and proposes guidelines based on this experience. In general, participant surveys indicated satisfaction with the organization of these meetings.

Although these guidelines reflect lessons learned in 2020 and 2021, the IETF is encouraged to continue to experiment with the format and agenda of fully online meetings, using this document as a baseline.

Hybrid meetings (meaning meetings that have large remote participation but also onsite participation) are out of scope. However, some of the experience gained from fully online meetings might also provide input for decisions regarding the organization of hybrid meetings.

### 1.1. Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

This document uses the term "plenary meeting" for the whole IETF meeting that covers the IETF meeting week; this term is used to distinguish the plenary meeting from other IETF meetings like "interim meetings". The term "administrative plenary" is used for the respective session during the IETF meeting week that is usually hosted on Wednesday.

## 2. Some History

When the World Health Organization (WHO) declared a worldwide pandemic in March 2020, the IETF canceled its plenary meeting and organized an online replacement in less than 2 weeks. For this first online-only meeting, the agenda was reduced to a set of sessions that benefited most from cross-area participation, like BoFs, first-time meetings of new working groups, and dispatch sessions. It also included the administrative plenary to preserve the official handover procedures that occur at March IETF meetings, as described in [RFC8713].

With a reduced agenda, the meeting format was two sessions (about 4 hours) per day with a maximum of two parallel tracks. Other working group meetings were scheduled as interims over the following 6 weeks. The IESG published a purely advisory recommended schedule [INTERIM-SCHEDULE] to reduce conflicts among those interims.

While satisfaction was high right after the meeting [IETF107-FEEDBACK], some participants later indicated in mailing list discussions that the period of intensive interims had a greater impact on their calendar than a single plenary meeting week, and in some meetings participation was reduced. Those interims tended to occur at times convenient for the bulk of participants, which was convenient for most but could exclude those in less common time zones.

For the remainder of 2020 and 2021, the online schedule was switched back to be similar to an in-person meeting (1- to 2-hour slots and eight or nine parallel tracks). However, each day was limited to 5-6 hours in recognition that remote participation is more tiring.

All fully online meetings followed the time zone of the planned in-person meeting location. As a 6-hour agenda has some flexibility regarding the start time while still fitting within a previously used 8-hour in-person agenda, the start time was approximately noon, with adjustments of an hour or so to mitigate the impact of early morning hours in time zones with many participants. As selection of in-person meeting sites was consistent with the 1-1-1 guideline as documented in [RFC8719], this approach was intended to share the burden across all common geographies roughly equally.

## 3. Guidelines for Online Meeting Planning

### 3.1. Time Zone Selection

The following algorithm was not used in 2020 or 2021, but it enables most participants to avoid late-night sessions in two out of every three fully online IETF plenary meetings. Basically, every fully online meeting is for two regions of the three regions described in [RFC8719], with one being roughly after sunrise and the other around sundown. This has the trade-off that the third region is in the middle of night.

The times are also seasonally adjusted to leverage differentials in Daylight Saving Time. These time slots are as follows, in UTC, based on the Daylight Saving Practices at the time of publication:

Name	Times (Northern Summer)	Times (Northern Winter)
North America Night	0500-1100 UTC	0600-1200 UTC
Asia Night	1300-1900 UTC	1400-2000 UTC
Europe Night	2200-0400 UTC	2200-0400 UTC

*Table 1*

Note that the "Europe Night" slot covers the "early morning" slot for Asia where most countries do not have Daylight Saving Time.

If Daylight Saving Practices change -- this change is under consideration in multiple countries at the time of publication -- this table may need adjustment.

The intent of rotating between these three slots is to scatter meetings throughout the course of the global day, to maximize the ease of participants so that no attendee has to be consistently inconvenienced, regardless of their location and what time of day is optimal for their schedule. However, as participation is distributed globally, it needs to be acknowledged that restricting the scheme to three regions observes the intent of [RFC8719] but does not achieve the goal of two non-late-night sessions for all participants equally.

3.1.1. Guidelines for Selection

The IETF **SHOULD** select a start time from these three choices based on the prior three meetings. The following table covers all permutations of previous meetings held in person in Region A, B, or C or remotely in the nights of one of those regions.

Three Meetings Ago	Two Meetings Ago	Last Meeting	Online Selection
Any	Any	In-Person A	A Night
Any	Online A Night	Online B Night	C Night
Online A Night	In-Person B	Online B Night	C Night
In-Person A	In-Person B	Online B Night	A Night
In-Person A	In-Person A	Online A Night	See below
Online A Night	Online B Night	Online C Night	A Night

Table 2

This table follows two basic guidelines:

- 1) Whenever a fully online meeting follows an in-person meeting, the online meeting time is used that most disadvantages the participants in the time zone where the in-person meeting was held.
- 2) If multiple fully online meetings follow each other, the time zone selection should be rotated based on the most recent time zones in which the in-person meetings were held.

The final case occurs in the rare event that back-to-back in-person plenary meetings occur in the same region. In this case, find the most recent meeting that was in neither 'A' (if in person) nor 'A Night' (if fully online). If this meeting was in person in region 'B', then the next meeting should be in 'B Night'. If it was remote in 'B Night', the next meeting should be in 'C Night'.

3.2. Number of Days and Total Hours per Day

By 2021, fully online meetings were consistently held over 5 days with roughly 6-hour meeting days. The day with the administrative plenary, which concludes with multiple open mic sessions, sometimes exceeded this limit.

Six hours of online meetings, with two 30-minute breaks, was a compromise between the physical limits of attending an online meeting in an inconvenient time zone and the demand for many sessions with a manageable number of conflicts. The IETF 109 feedback [[IETF109-SURVEY](#)] indicated broad satisfaction with a 5-day meeting but only medium satisfaction with the overall length of each day.

The IETF did not seriously consider extending sessions into the weekend before or after the main meeting week, although at IETF 108 and subsequent meetings the Hackathon occupied the entire week before (see [[RFC9311](#)]).

### 3.3. Session/Break Length

For fully online meetings, there are typically fewer sessions per day than for in-person meetings, to keep the overall meeting day to roughly 6 hours. With fewer sessions, chairs were offered only two options for session length (instead of three).

IETF 108, based on an indicated preference of the community, scheduled 50- and 100-minute slots, with 10-minute breaks, in order to keep the overall day length at 5 hours. This resulted in many sessions going over time, which indicated that 10 minutes for breaks is not practical.

The survey after IETF 109 [[IETF109-SURVEY](#)] showed high satisfaction with 60/120-minute session lengths and 30-minute breaks, and a significant improvement in satisfaction over IETF 108.

The longer breaks, while extending the day, provided adequate time for meals, exercise, and "hallway" conversations using online tools.

### 3.4. Number of Parallel Tracks

In-person meetings are limited in the number of parallel tracks by the number of meeting rooms, but online meetings are not. However, more parallel tracks would increase the number of possible agenda conflicts.

If the total number of requested sessions exceeds the capacity of the usual eight parallel tracks, it is possible for a fully online meeting to simply use more tracks. If the number and length of meeting days are seen as fixed, this decision is implicitly made by the working group chairs requesting a certain number of sessions and length.

IETF 111 used nine parallel tracks for some of the sessions and experienced slightly more conflicts in the agenda-scheduling process, though there was no statistically significant increase in dissatisfaction about conflicts in the survey [[IETF111-SURVEY](#)].

The IESG encouraged working group chairs to limit their session requests and use interim meetings aggressively for focused work.

## 4. Additional Considerations and Recommendations

### 4.1. Full vs. Limited Agenda (and Interim Meetings)

The IETF 108 meeting survey [[IETF108-SURVEY](#)] asked about the structure of that meeting (full meeting) compared to that of IETF 107, which hosted only a limited set of sessions followed by interims in the weeks after. The structure of IETF 108 was preferred by 82%. Respondents valued cross-participation and an intensive meeting week for maintaining project momentum.

Furthermore, a well-defined meeting time, rather than spreading many interims over the whole year, can make deconflicting with other non-IETF meetings easier.

However, interim meetings can also help to reduce scheduling conflicts during an IETF week and allow for a more optimal time slot for the key participants. While interim meetings are less likely to attract people with casual interest, they provide a good opportunity for the most active participants of a group to have detailed technical discussions and solve recorded issues efficiently.

### 4.2. Flexibility of Time Usage

This document recommends further experiments with reducing conflicts by leveraging the increased flexibility of the online format.

An in-person meeting must fit all sessions into an acceptable length for international travel (usually roughly a week), but online meetings do not have that constraint.

Therefore, it would be possible to keep most regular working group sessions within the usual 5 main meeting days but have some of the more conflicted sessions in other dedicated time slots. As the Hackathon for fully online meetings is usually held in the week before the online plenary meeting [[RFC9311](#)], that week is already a highly active week for many IETF participants and might provide an opportunity to schedule a few selected sessions.

This might work especially well for sessions that are of high interest to a large part of the community, such as BoFs and dispatch meetings, and therefore hard to schedule during the main IETF week.

At IETF 112, the IESG ran an experiment where the administrative plenary was scheduled on the Wednesday before the official session week. The experiment report [[IETF112-EXPERIMENT](#)] found that it led to a reduction in scheduling conflicts but also a slight drop in attendance of the administrative plenary, partly due to insufficient awareness.

### 4.3. Inclusivity and Socializing

Participation in the fully online meetings in 2021 was high and had a stable per-country distribution, even though time zones were rotated. This indicates that online meetings support a more consistent geographic distribution of participants than in-person meetings, where participation often fluctuates based on the location.

However, online meetings do not provide an equivalent opportunity to socialize. Despite significant investment in tools to foster hallway conversations, many did not use those tools, whether due to ignorance of them, dislike of the tools, or a preference for other activities at home (including sleep and food) over hallway interactions.

There was a decrease in submissions of new (-00) Internet-Drafts during 2020 and 2021, although the overall number of draft submissions remained stable; this decrease in new submissions might have resulted from the loss of these interactions. Informal conversations might be important to inspire new work.

### 4.4. Experiments

This document recommends further experiments with the meeting structure. Often, only practical experience can answer open questions. A given meeting **SHOULD** only experiment with one major change at a time in order to be able to assess the outcome correctly. Furthermore, the IESG **SHOULD** announce any such experiment well in advance, so people can adjust to changes and potentially provide feedback.

### 4.5. IANA Considerations

This document has no IANA actions.

### 4.6. Security Considerations

This document has no security considerations.

## 5. References

### 5.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.



- [RFC8719] Krishnan, S., "High-Level Guidance for the Meeting Policy of the IETF", BCP 226, RFC 8719, DOI 10.17487/RFC8719, February 2020, <<https://www.rfc-editor.org/info/rfc8719>>.

## 5.2. Informative References

- [IETF107-FEEDBACK] Daley, J., "IETF 107 Virtual Meeting Survey", 17 April 2020, <<https://www.ietf.org/media/documents/ietf-107-survey-results.pdf>>.
- [IETF108-SURVEY] Daley, J., "IETF 108 Meeting Survey", 13 August 2020, <<https://www.ietf.org/blog/ietf-108-meeting-survey/>>.
- [IETF109-SURVEY] Daley, J., "IETF 109 Post-Meeting Survey", 7 December 2020, <<https://www.ietf.org/blog/ietf-109-post-meeting-survey/>>.
- [IETF111-SURVEY] Daley, J., "IETF 111 post-meeting survey", 23 August 2021, <<https://www.ietf.org/blog/ietf-111-post-meeting-survey/>>.
- [IETF112-EXPERIMENT] IESG, "IETF 112 Plenary Experiment Evaluation", 4 February 2022, <<https://www.ietf.org/blog/ietf112-plenary-experiment-evaluation/>>.
- [INTERIM-SCHEDULE] Cooper, A., "Subject: Post-IETF-107 Recommended Virtual Interim Schedule", message to the Working Group Chairs mailing list, 13 March 2020, <[https://mailarchive.ietf.org/arch/msg/wgchairs/l382SqKVH0TzFw9kIYl2boM6\\_c/](https://mailarchive.ietf.org/arch/msg/wgchairs/l382SqKVH0TzFw9kIYl2boM6_c/)>.
- [RFC8713] Kucherawy, M., Ed., Hinden, R., Ed., and J. Livingood, Ed., "IAB, IESG, IETF Trust, and IETF LLC Selection, Confirmation, and Recall Process: Operation of the IETF Nominating and Recall Committees", BCP 10, RFC 8713, DOI 10.17487/RFC8713, February 2020, <<https://www.rfc-editor.org/info/rfc8713>>.
- [RFC9311] Eckel, C., "Running an IETF Hackathon", RFC 9311, DOI 10.17487/RFC9311, September 2022, <<https://www.rfc-editor.org/info/rfc9311>>.

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## Authors' Addresses

**Mirja Kühlewind**

Ericsson

Email: [mirja.kuehlewind@ericsson.com](mailto:mirja.kuehlewind@ericsson.com)

**Martin Duke**

Google

Email: [martin.h.duke@gmail.com](mailto:martin.h.duke@gmail.com)