



# **ICANN Remote Participation Hub Technical Documentation**

Updated: 2014-08-15

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## Remote Participation

In order for groups of individuals to remotely participate in the ICANN meeting, there are certain technical requirements that must be met to ensure a non-disruptive and trouble-free meeting experience.

This document outlines the proper configuration for remote groups for both the broadcast and interactive hubs of all sizes to connect with the ICANN meeting location.

## Bandwidth

Adequate and good quality wired bandwidth is extremely important in order to have audio, video and presentations properly shared in both directions. You will also likely need to provide Wi-Fi Internet access to your participants.

A good rule of thumb is that you will need 2Mbps for the audio, video and presentations, plus at least 256kbps per participant. For example, if you have 10 participants, you should ensure that you have approximately 5Mbps available in the meeting room. 30 Participants would require nearly 10Mbps, etc.

You should also confirm that the latency to your Internet provider's gateway is acceptable (<30ms), the jitter is low (<10ms) and the packet loss is low (<2%). Using the two following links from the venue's Internet connection can test these options:

1. Adobe Connect Connection Test:

<http://tinyurl.com/icannACtest>

2. VoIP Test:

[http://www.whichvoip.com/voip/speed\\_test/ppspeed.html](http://www.whichvoip.com/voip/speed_test/ppspeed.html)

Most hotels and meeting venues do not have appropriate bandwidth. The connection should be checked well ahead of your scheduled meeting to ensure there is enough bandwidth during the time period in which you will be joining meetings. Don't rely on bandwidth measured in a hotel at noon vs. 9pm, as the hotel's Internet access will have dramatically higher utilization in the morning and evenings. Business centers, meeting facilities or other locations may have different peak times. You should ask your venue or ISP for details.

Using a wired Ethernet connection for the computers that will be used for audio, video and presentations is highly recommended. This will reduce issues related to poor Wi-Fi installations. You should also turn off the Wi-Fi radio on these computers to ensure the Ethernet connection is utilized.

### Physical Room Layout

The layout of the meeting room is important in order for everyone to actively participate in the meeting. It is suggested that you keep the following points in mind when selecting and setting up the venue:

1. Allow for plenty of time to set up and test the equipment prior to your first meeting.
2. Each attendee will need at least one power port. You should request information from the venue's engineering staff on how to not overload the electrical circuits. Remember that laptop computers can draw up to 2 Amps at 120v (or 1 Amp at 240v) when charging their batteries, so plan for this in your power budget.
3. Heating and cooling can be a major factor. Make sure you know where the thermostat is or who to ask in order to adjust it. If you will be in the location overnight due to an overseas meeting, keep in mind that some offices and venues shut down the heating or cooling systems at night and you should check this prior to the event. Also take note that projectors and TVs can add to the room's heat.
4. Take note of the location and quantity of the power and network connection points.
5. An example layout for up to 10 individuals is in Appendix A or to support more people, a layout for up to 150 people is in Appendix B.

## Audio

A sound system that is properly sized to the audience you expect is important. This will allow everyone to hear the local and remote audiences, speakers and presenters.

If you are expecting a large audience, you should consider using a robust audio system that includes the following:

1. One or more wired or wireless microphones. Microphones with on/off switches have been found to work the best, as they don't require adjusting the audio mixer each time they need to be used.

One audio mixer with at least one auxiliary bus and one main bus. The Auxiliary 1 bus will be used to create a "mix minus" for the Hub feed so that feedback does not occur. For more information on Mix Minus see <http://en.wikipedia.org/wiki/Mix-minus>, <http://www.ibroadcastnetwork.org/blog/understanding-aux-sends-for-mix-minus> or a how-to video at <http://www.youtube.com/watch?v=FkOu7I952TE>.

2. Speakers and amplifiers as appropriate for the room.
3. One computer to run the Hub feed using Skype, Facetime, Google Hangouts, etc.
4. Appropriate cables to attach all of the above together that includes:
  - o 1/8" stereo phono to 1/4" or XLR Male cables.
  - o 25' XLR Male to Female cables to attach the microphone(s) to the mixer and the mixer to the speakers or amplifiers.
5. A qualified technical person to install and operate the above equipment throughout the duration of the meeting.

Our suggested audio block diagram is in Appendix C.

## Video

A video feed is available in some rooms. You may be able to access this video feed by using the Adobe Connect link listed on the meeting webpage and displaying the feed in full-screen to a projector or plasma.

You will need a dedicated computer to display this feed in full screen mode (multiple full-screen displays will not work with the Adobe Connect software).

Remember to use Ethernet and not Wi-Fi in order to ensure the best possible connection for this computer.

## Presentations

Presentations are shared from within Adobe Connect and can be displayed in a similar manor to the video feeds above. You may display the presentation in full screen on a separate monitor or projector than the video feed. If you will be displaying the presentation in full screen mode, you will need to use a separate computer than the video feed computer above.

Remember to use Ethernet and not Wi-Fi in order to ensure the best possible connection for this computer.

## Tips and Suggestions

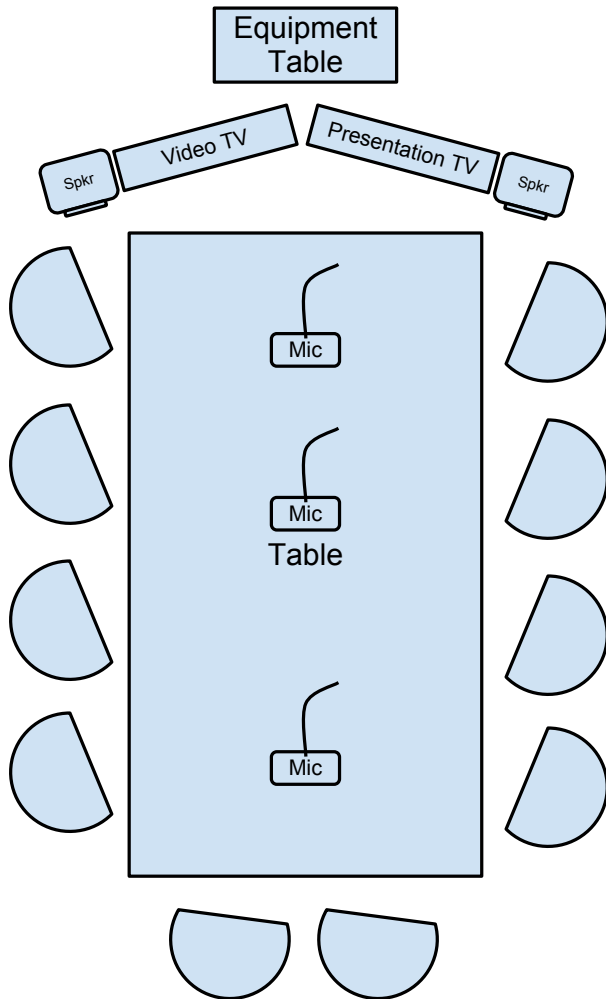
1. You must mute or turn down the volume on any computers that individuals at the table are using. If they were to join the Adobe Connect room, it could cause an echo that will loop back to the remote meeting.
2. You must have a qualified audio engineer to assist with the setup and operation of this equipment. Not having a knowledgeable engineer on-site is a recipe for disaster.
3. Test early and test often. Make sure that you test your equipment at the beginning of each day. Plan on at least one hour to test and fine-tune the audio connections prior to your scheduled meetings.

## Help

For help or guidance with your individual setup, please contact [cory@icann.org](mailto:cory@icann.org) via email or Skype.

### Appendix A

Example remote participation design for 10.



#### **Suggested Equipment**

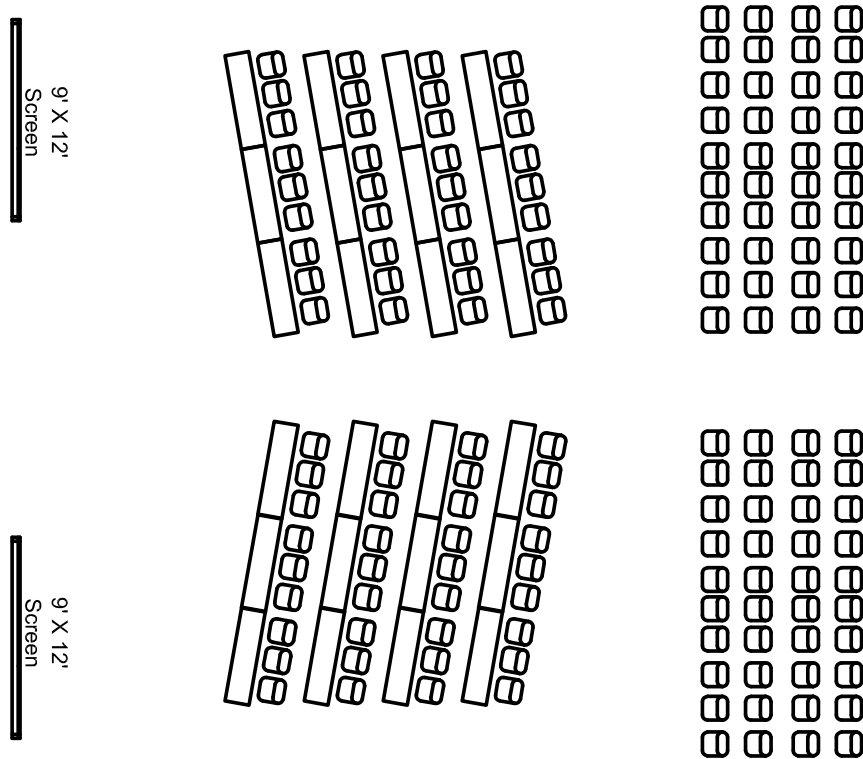
- 1 Plasma/LCD/LED TV's
- 1 Computer to run Adobe Connect for presentation sharing
- 1 camera
- 1 Small mixer
- 2 Amplified Speakers
- 3 Microphones
- Cables as necessary to connect devices

***Bi-directional hubs will also require the following additional equipment:***

- 1 Computer to run bi-directional audio/video*
- 1 Plasma/LCD/LED TV's*

## Appendix B

Example remote participation design for 150



### **Suggested Equipment**

- 1 Screens
- 1 Projector
- 1 Computer to run Adobe Connect for presentation sharing
- 1 Camera
- 1 Mixer
- 2 Amplified Speakers
- 2 Wired or Wireless Microphones
- Cables as necessary to connect devices

### **Bi-directional hubs will also require the following additional equipment:**

- 1 Computer to run bi-directional audio/video
- 1 Screen
- 1 Projector

### Appendix C

Example audio block diagram.

