## Comments by Greg Jackson from BOAC Virtual Meeting- February 25, 2013

- It was a remarkably effective meeting for a group that hadn't done this before, although it took 20-30 minutes for everyone to get used to the pacing and rituals.
- It would have been very useful to have some kind of backchannel for things like "Could Jeff please speak up?", sharing URLs, and so forth. In my experience, some kind of XMPP-based chat room (XMPP is the protocol for Google Talk and other "jabber" systems) serves this purpose admirably, but that's another setup; the better alternative is to use a videoconferencing service that has a built-in chat function (Adobe Connect and WebEx both do this, as I recall, and I'm sure other products do too).
- Camera aiming was a bit of a problem, mostly because the service NSF was using didn't automatically include one's own image among those in the gallery (you could turn on a "view self" option, but it then blocked part of the window). So a few participants were too light or too dark, and a couple of people just had foreheads showing.
- It's important to get audio right. Videoconferencing works best when participants either use good USB headsets (I use a Plantronics 478, which costs about \$30) or a good noise-canceling desk mike. Just using a built-in mike and the computer's speakers isn't good enough, really, and makes aggressive use of the Mute button essential. Bluetooth headsets work okay, but not as well as wired ones.
- Participants also need reasonably good network connectivity, typically 4Mbps or more in each direction. (The typical home Comcast Internet service is fine inbound, but falls a bit short outbound, although that's being upgraded in many cities; AT&T and Verizon are better balanced.)
- In the NSF room with several people, the audio worked pretty well, but it would have been good to have two or three video cameras so that they could be zoomed in on no more than, say, 2-3 people each. Alternatively, it would have worked to have one overall camera, and then another that could be manually pointed at whoever was speaking.
- The service NSF used did automatic focus switching (that is, putting whoever was speaking into a larger part of the screen), but it didn't do it very quickly, and this confused participants.
- The handraising protocol worked pretty well. Many services have a "raise your hand" capability built in, usually along with "thumbs up" and "thumbs down" and sometimes text or chat capabilities. I encourage NSF to look into services one notch more sophisticated than what was used.
- I'd also suggest that if possible NSF provide any participant who asks a good videoconferencing camera and a headset -- together those come to about \$100, although better stuff runs about three times that.