**Virtual Presence in Physical Meetings**

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3GPP IT Task Force

We are discussing virtual/remote participation in a physical meeting. There are two clear kinds of meetings:

- **physical meetings** (face to face)  
- **virtual meetings** (no face to face, every participant is remote)

To that I think we need to add:

- **hybrid meeting** (some are face to face [F2F], some are remote)

It seems to me we will concentrate hybrid meetings to address the action item from PCG.

**Action PCG41/01:** IT Improvements Ad Hoc Group to study the conditions under which virtual presence in physical meetings/virtual meetings would be practicable and the types of tools that would be required to support them [**3GPP/PCG#41(18)05**].

That is not to say that we couldn’t separately investigate virtual meetings – what is possible today and how this could be improved. But this is not the task at hand.

Let’s distinguish first between the possible roles for remote participants that we *could* support. This doesn’t mean we should try to support all of them.

1 – remote chairman / session chairman

2 – remote secretary

3 – remote presenter

4 – remote rapporteur

5 – remote on-floor discussion participant: questioner / commenter / objecter

6 – remote off-floor meeting participant: following closely / in the queue to take the floor to comment|question|object

7 – remote voter (note we already have a mechanism for proxy voting, this remote role would be ‘direct voting’ virtually)

8 – remote attendee *as checked-in* delegate

I suggest we leave 7 and 8 out of the discussion, since they will be covered by the working procedures task force.

I suggest we rule out 1 since one really needs to see delegates to guide the discussion successfully, to get some benefit from a face to face meeting. If the session chairman is remote, then effectively *everyone* is remote – the on-line meeting becomes virtual not hybrid.

I suggest we assume to start out with that there are no added IT requirements *for the face to face participants themselves* to participate in a hybrid meeting. This may be incorrect, e.g. we may decide that the F2f participants need some display showing ‘who is talking remotely’ or of the queue of remote participants waiting to speak, etc. I ask these questions below and further questions may arise. I propose that we focus on the remote participants’ needs first.

Please find below an initial analysis of what different actors would do and need, with IT functions needed in blue (or omitted if ‘everything will work as it normally does’ as <normal>.) I leave some items FFS.

I proceed optimistically as if ‘everything is possible’ in a hybrid scenario for roles 2-6.

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| --- | --- | --- |
| **Role** | **Activities** | **Goals** |
| 2) Remote Secretary | * Control the CR, TDOC, etc. databases – issuing new numbers and changing the status of documents.   + Communicate changes to these dbs to all participants both remote and physically present. * Identify who has the floor currently * Hear **and see** what is said (from the chair and floor) and what is presented | 1. intervene if necessary [be heard remotely and in the F2F session; all may identify that it is the secretary who is speaking The identity of the speaker should be represented in text form for the remote participants. The identity of remote participants speaking should be represented for those attending the physical meeting. This information would improve the ability of participants to interpret statements.] 2. report remotely [hear remotely; identify F2F or remote speaker remotely] 3. report on drafting, follow activity [See what is on the session screen remotely] 4. Capture all changes in the tdoc and CR databases <normal> 5. Manage tdoc database (numbers, assignments, etc) so as to keep all participants in the meeting in sync [There should be a remote representation of the current tdoc status for remote participants.] 6. Capture all agreements, actions and state changes on tdocs, comments for the report, objections in the report. <normal> 7. Identify process violations and warn the working group. <normal> 8. Interact with the Liaison officer throughout the meeting <normal> |
| 3) Remote Presenter | * **Hear what is said**    + Nice to have: feedback who is in the queue to speak, how many hands go up, whose, etc.   + Essential: speaker can be interrupted (by the chairman) * **Present remotely** (Be heard by physical meeting participants)   + Nice to have: video of chair and audience when one presents   + Nice to have: see what is being presented, in case the presentation is being marked up / edited on-line   + Nice to have: remotely visible timer if presenters are time-limited   + Nice to have: video of presenter’s face * **Off-line work** (if revisions are needed on a presented document) | 1. Present remotely [be heard remotely and in the F2F session; nice to have: control screen remotely] 2. All may identify the remote speaker [identify the speaker. The identity of the speaker should be represented in text form for the remote (and physical) participants. The identity of remote participants speaking should be represented for those attending the physical meeting. This information would improve the ability of participants to interpret statements.] 3. Draft remotely [control screen remotely] 4. Respond to comments [hear remotely] note: the chairman will determine who will comment, so it is not necessary that the remote presenter know whose hands are up but [nice to have: queue seeking the floor visible remotely] 5. Work within time constraints [shall be interruptable by the chairman; FFS - whether the chairman needs the power to ***stop*** a presenter from speaking] 6. Receive follow up instructions [hear the chairman or secretary announce numbers and tdoc status change and next step instructions] 7. Follow the tdoc status [ There should be a remote representation of the current tdoc status for remote participants.] 8. Meet with others in small groups or one on one to discuss revisions [FFS] |
| 4) Remote Rapporteur | As the off-line remote participant, but remote access also to:   * Current tdoc status of key documents is necessary * Nice to have: follow the status of off-line discussions * Nice to have: be able to convene virtual sessions as an off-line presenter. | 1. Follow the tdoc status [There should be a remote representation of the current tdoc status for remote participants.] – *Note: this is especially important to a remote rapporteur who must check the consistency of actions!*   +See (3), (5) and (6) |
| 5) Remote on-floor meeting participant | * Be recognized to speak & get the floor * Identify who has the floor currently * Hear **and see** what is said and projected in the physical session   + Indication which document is currently being presented.   + Nice to have: up to date information as to the current state of tdocs, * Be able to take actions (e.g. request a change, object to an action, propose a procedure/way forward, etc.) * Provide and access revisions, drafts, as one would as a F2F participant. * Access to the ‘drafts’ folder (read & upload) | 1. Gain the floor [remote signalling of a raised hand – allowing the chairman to manage both the remote and F2F participants in one queue.] 2. All may identify the remote on-floor participant [identify the speaker. The identity of the speaker should be represented in text form for the remote (and physical) participants. The identity of remote participants speaking should be represented for those attending the physical meeting. This information would improve the ability of participants to interpret statements.] 3. Follow what is going on in the session [hear remotely; identify speaker remotely; tdoc status There should be a remote representation of the current tdoc status for remote participants.] 4. Ability to take actions (question, comment, object [be heard remotely and in session] 5. Provide and access revisions (inbox), drafts folder, etc., as if F2F) [remote ftp access to local meeting in a timely way; remote ftp upload to meeting] |
| 6) Remote off-floor meeting participant | * Remote participation for drafting sessions (which are the same as ‘on-line’ except that there are no ‘actions.’) * Informal meeting in a virtual ‘hallway’ with F2F and other virtual participants * Informal one-on-one meeting | As above  (1: enter the queue)  (3: hear remotely; identify the remote or F2F speaker; follow TDOC status)  (5: upload and download docs)   1. participate in off-line discussion [FFS] |

Let’s discuss the material above before we discuss how to consolidate the IT requirements. Let’s get a set of consolidated IT requirements before we identify and evaluate specific candidate solutions.

Candidate Requirements for the Hybrid Scenario:

R1 Audio

R1.1 The speaker who has the floor + Chairman may speak and be heard both locally and remotely. The chairman shall be able to interrupt the speaker.

R1.2 FFS - whether the chairman needs the power to ***stop*** a presenter from speaking

R2 Video

R2.1 See what is on the session screen remotely

R2.2 A remote presenter can control ‘the screen’ remotely: the view will then be presented on the physical screen at the meeting and be available for view by remote participants.

R3 Audio + Video

R3.1 All (remote+physical participants) may identify who is speaking: The identity of the speaker should be represented in text form for the remote (and physical) participants. The identity of remote participants speaking should be represented for those attending the physical meeting. This information would improve the ability of participants to interpret statements.

R4 Floor Control

R4.1

R5 Data

R5.1 There should be a remote representation of the current tdoc status for remote participants.

R5.2 remote signalling of a raised hand – allowing the chairman to manage both the remote and F2F participants in one queue.

R5.3 remote ftp access to local meeting in a timely way; remote ftp upload to meeting

Change Log:

09.01.19 Created this document. Added content (see revision marks)

30.11.18 Posted the basic content on the 3GPP\_IT reflector