GENERAL

PERIOD

The tests in August and September 2011 were carried out via the service of Blue Jeans Network. In October 2011 the Telekom service VideoMeet was tested, which is based on Blue Jeans Network - respectively uses and expands Blue Jeans Network.

DEVICE CLASS

VideoMeet is a platform that allows users of different video conference devices and of clients with different underlying protocols to meet in a joint conference. H.323, SIP and H.320 are among the supported standardised video conference protocols. Telephone dial-in is possible as well. Concerning H.323, devices and clients of all providers are supported. It is not yet possible - but in progress - to dial in via SIP device. With this service, VideoMeet also supports Skype and Google Talk. You can find a list of all the supported devices here: https://videomeet.telekom.de/de/Mehr-Infos/. All in all, 25 people can participate in one conference.

LICENSE CONDITIONS

VideoMeet is a service provided by Telekom. At the time of the tests, it was still in the free test phase.

TEST

TEST SCENARIOS

Point-to-point conferences were tested, in each case with one Skype participant and different H.323 room systems (LifeSize Room, Tandberg C40, Polycom HDX 8004), respectively one desktop system (Mirial Softphone), with data presentations of every participant. Another scenario consisted of a conference with Skype and a DFN-MCU conference with five H.323-systems (LifeSize Room, Tandberg C40, Polycom HDX 8004, Mirial Softphone and Tandberg Movi). Skype and a H.323-system were tested exemplary for data presentation. In the third scenario, two Skype participants and the aforementioned five H.323-systems met in a conference. Tandberg Movi, Skype and Polycom HDX 8004 were chosen for the presentations.

OPERATION

Via https://videomeet.telekom.de/de/Login/ you can register, set up a conference and administrate it. VideoMeet assigns a conference ID to every conference. Information about the meetings can be sent to the participants by means of an invitation email.
DIAL-IN

H.323

The H.323 system establishes a connection to the VideoMeet server dt.bjn.vc or 31.171.208.154. Afterwards, you are asked to enter the 5 letter code (which is shown on the screen of the H.323 system) over the conference interface of VideoMeet (cf. graphic to the right). Alternatively, you can enter the conference ID at the the H.323 system. It subsequently joins the conference.

SKYPE

If you want to use the link to Skype in the invitation e-mail, Skype has to be running already. With the URL, a Skype call is initiated. Before a connection can be established, you have to select Skype in the small window "Anwendung starten" that pops up. Now, the Skype call to VideoMeet can be performed. Finally, you have to confirm that VideoMeet is allowed to send video. Alternatively, you visit the login page of VideoMeet and start your conference with the conference-ID. There, you can initiate a Skype call and proceed as described above.

TELEPHONE DIAL-IN

You may use the number +49 69 255 114412 for the telephone dial-in. After that you join the conference with G.711 and 64 Kbps.

GOOGLE TALK

In the test period in October 2011, access via Google Talk was still in the beta phase. Therefore, it has not been tested yet.
The audio and video quality can be rated good to very good depending on the device. During the point-to-point connection to Mirial Softphone ambient noises were audible occasionally at Mirial Softphone. In the course of the conference with seven participants, Skype showed some audio drop outs at the beginning, respectively short fluctuations in quality during the conference. The Polycom HDX 8004 displayed background noises, which often occurred at the end of sentences during conversation. Furthermore, one Skype participant could partly not be understood due to audio drop outs.

In the conference with 7 participants it became apparent that the video quality diminishes for both Skype users when a second Skype user participates, to the point that the quality could not be rated good any more.

Skype received and sent video and audio with H.264 (640x480 pixels) and SILK (16Khz 30 Kbps) in all connections. All the H.323 participants sent video with H.264 with 1280x720 pixels and received H.264 with alternating image formats between 736x416 and 1280x720 pixels. G.722 with 64 Kbps, G.722.1 with 32 Kbps or G.722.1c with 48 Kbps were used as audio codecs.

Skype provides exactly one video channel for video and file sharing. When you start a data presentation it is sent instead of the video. When the data presentation is finished the user has to restart the video. H.323 users are used to being provided with a second video channel for the data presentation.

The data presentations Skype receives are of good to satisfying quality. All test slides are transmitted fast, but they are always blurry. In full screen mode a font size beginning with 14 pixels is easily readable, otherwise beginning with 16 pixels.

The quality of data presentations sent by Skype varies, with few exceptions, between satisfying and poor for the other participants. Often, slides are only readable beginning with a font size of 16 pixels.

Slides with complex, complicated graphics are transmitted faultily, only in parts or not at all, sometimes they are displayed superimposed. From time to time, a black bar on the left and right or a black frame edges the slides. The slides pulse repeatedly, i.e. parts of the image become blurry briefly, image errors occur.

When sending a presentation via Skype, the received video window of all participants is sent, too, in such a way that a part of the slides is always covered. Unfortunately, the recipient cannot change that.

Annotation 1/2012: Slides do not pulse any more.
CONCLUSION

All in all, the audio and video quality can be evaluated as good to very good. Data presentation to H.323 devices is only suitable for slides with a simple design, few text and big font size without elaborate or complicated graphics or pictures. Nevertheless, all data presentations are displayed more or less blurry.

We recommend that all participants meet in a VideoMeet conference without involvement of a MCU. As soon as several participants join via MCU conference, events become confusing because of double cascading and the possible combinations of voice activated and continuous presence. Unfortunately, with single dial-ins for all participants the conference becomes more expensive because more connections are necessary.

Deutsche Telekom provides VideoMeet as a Hosted Service. In other words, the DFN cannot guarantee having data sovereignty over sent data. The solution is SW-based so sniffing of data is definitely possible.

DOCUMENTATION

Provider: Telekom VideoMeet (Blue Jeans Network)