

Discussion comments by Andy Pepperdine

Video conferencing tool

This note is about one free tool to allow people to share a video conference. You should be aware that all such tools will use considerable cpu power and bandwidth. Older machines and poor connection speeds may seriously degrade the experience.

Jitsi

This is a very simple tool that requires no registration, is completely free, and can be used from any connected device.

From a desktop or laptop, one of these browsers is essential: Chrome or Chromium. Other browsers do not seem to have the features required. Either they do not work at all, or they are very unstable.

For access via a smart phone or tablet, then the app **jitsi meet** is all that is required.

In order to talk and see one another nothing else is needed, except of course a microphone and camera.

For some advanced features, like recording the conversation, then access to a Youtube channel is required.

All conferences are encrypted.

Getting started

Desktop and laptop: install Chrome on Windows, or Chromium on Linux.

On the Apple store there is a **jitsi meet** app, that claims: “Requires iOS 11.0 and watchOS 4.0 or later. Compatible with iPhone, iPad, and iPod touch.”

It is also available under the name **jitsi meet** on the Google play store for Android devices.

To check that your peripherals work, then these applications on Linux might be useful. For the camera, install **cheese** and start it up. It should find the camera and show a picture of you automatically.

To check a microphone, a simple package is **gnome-sound-recorder** which will immediately show you a simple window with a red **record** button and when clicked and you talk, you can see the amplitude of the incoming signal shown on a moving display. Stopping it and replaying with the little black triangle should replay what it heard.

If the playback is quieter than you would like, then go to Settings → Sound, and look under the Input tab to set the levels more to your liking.

Caution

It would seem that older machines cannot cope with this app. We do not know why, but maybe due to lack of updating, or simply too little capacity.

Also, the downloads at the **jitsi** website are for a server, and you should not use that for normal chats. You need a client.

Defining the space to meet

The place you meet in is called a **room**, and you will have to decide on a name for your room. It should be unique, so choose a name that no one will ever use for such a purpose, but probably also tied to its use so you can recognise it for what it is. For instance if we had a group in the U3A dedicated to studying widgets, then a name like *u3abathwidgetgroup* would be a good choice.

When everyone has been given this name, and a time is chosen to meet, then you begin. If you are using a browser on a desktop or laptop, then navigate to this site:

<https://meet.jit.si>

and enter the name of the room you have chosen. That is all you need to do to get started.

If you are using an app on a mobile device, then the app takes you straight there, and you just enter the name of the room.

When you set this up, it is possible to also set a password, but everyone must know this before they can enter the room. (See below how to set a password after you have started.)

If you do not set a password, then anyone could stumble into the room, which is why it would be best to choose an unusual, but expressive, name for your room.

Functions available

Android (and probably Apple app)

When you first start up these apps, you must give them access to the microphone and the camera if you are to be seen and heard.

For the **jitsi meet** app, the functions are mostly from the three button menu on the right. If you do not see the icons, touch the screen and they should appear.

Not everything described below for desktops is available, so look around in the menus to see whether you can find the equivalent function, if it is not described in the next section.

Mobile device menu access

This section is for mobile devices. It describes the Android version. The Apple version has not been tested. Features for desktop and laptop devices follow in a later section.

Some features of the app can be accessed on a mobile device only **outside** the meeting. Before you enter a meeting, you should check the external menu, from the three lines at top left, to ensure it has all the information you want it to say.

Entering quietly or noisily

It is in this external menu that you can set whether the camera and microphone are muted when you enter, or not. If your video is off, then all others will see is a new person, but a black display for them, but you will see them.

Similarly, if your microphone is muted, then they will not hear you, but you can hear them.

Setting your name

Also it is in this external menu that you can set your name, and it is advisable to do so immediately you start the app up. You cannot change your name without leaving a meeting and re-entering.

If you enter a meeting with no name set, everyone else will see you listed as Jitster.

Mobile menu after entering the room

When you are in the app, then tapping on the screen will bring up a line of 5 items on the bottom, if they are not already visible.

Starting a chat session

The leftmost one, a quote bubble, will open the chat session for the meeting to enable everyone to exchange textual information.

Control of your own participation

The next from the left will mute the microphone. Touching it again will restore your voice.

The red button in the centre will hang up the call, and this is how you leave the meeting.

The next will turn off the camera so you handle personal interruptions without disturbing the meeting. Touching again will undo this action.

Other features

The rightmost one is three dots to bring up another menu. In here you can toggle between the two cameras, the forward or backward facing one.

Most of the options to do things described below can be found under **More options**.

One of the useful entries there is to change the view between one where all participants have the same space (the **tile view**) and one where only one is given prominence, the others becoming thumbnails. In the latter case, touching on a thumbnail will make that the principal one.

Chairman's control

It is also under the More options that you find the ability to raise your hand to indicate you want to speak. This feature will require discipline on the part of everyone in the room. Raising your hand will set a flag in the display of everyone to say you have something to say. It is then up to the chairman to keep control and give you the floor when appropriate.

How you see others

The menu of items applicable to a particular person can be found by a long press on the appropriate person's display. Here you can mute, or kick them out. You can also here set that particular user to be the principal one via the **Show on stage** entry, which also undoes the tile view if set.

Some functions are not available on a mobile device, like checking the quality of the connection for each person.

Desktop & Laptop

The following description is for the desktop/laptop version only. The mobile apps have similar features, but accessed differently.

You will be asked in a popup to give the browser access to the camera and microphone. You must accept this if you are to be seen and heard.

When your cursor is moved in the jitsi window, then a number of icons appear at the bottom of the screen. When the cursor is moved outside the window (or left unmoved inside it), these icons disappear. Ensure your cursor is in the window to see what is described below.

Showing a presentation

It is possible to show everyone the contents of a window on your machine, rather than your camera display. This is controlled via the leftmost icon at the bottom left of the screen. Clicking that brings up an option to share the whole screen, a single window, or another tab in the browser.

To share the whole screen, select the left tab (possibly default setting here), click on the display shown, and then **Share**. Sharing the whole screen with a jitsi window visible will produce some interesting infinite regression effects, so beware.

It is probably best to select the show window tab, click on the required window in the display and then hit the **Share** button. Use that window to display the presentation.

The right tab will select another tab in the browser. Click on the relevant display and **Share**. This allows presentations of PDF files shown in the browser itself. Of course using the browser to present will add to the bandwidth needed for the conference.

Controlling a conversation

The middle icon at bottom left is a hand signal. This should be used with some discipline. If someone wishes to talk then clicking this icon will set a small mark in the window for that person. The chairman of the meeting can then call on them to make their statement – when he clicks on that person, the hand signal disappears. There are ways of managing troublesome participants described later below.

Instant chat

The application includes a means of having a textual chat. This is started using the right icon at the bottom left, a quote balloon. It opens up a chat panel where anyone can add their comments. This can be useful to transfer accurate textual information, such as phone numbers, web urls, names, etc. as well as to queue questions for the main speaker after the presentation.

Controlling your own display

The three icons in the middle at the bottom control how you are seen by others.

Going offline temporarily

If you want to go offline temporarily (someone interrupts you at the door, or you need to take a telephone call, eg) then the left icon (a microphone) allows you to mute your sound, and the right icon turns off your video.

Leaving the conference

The central red icon (an old telephone receiver) gets you out of the session altogether. This is the usual way to leave the meeting.

Controlling the appearance of the meeting

The three icons at the right control what the meeting looks like to you.

Tiling or thumbnails

The leftmost icon on the right (four little squares) will toggle between a tiled version of the screen where all the members are in the same size picture, and where only one is in the main picture, and others are in smaller thumbnail displays. Choose whatever is most suitable for the occasion. For example if you are listening to a presentation then perhaps you want the speaker's display to be the main one, in which case, select the non-tiled version and then click on the requested speaker.

Information about the session

The central icon on the right shows information about how to get into the room. As well as the direct url to use with a browser, it provides a phone number for sound only presence, but it is a USA phone number, so charges will apply.

If you click on the **Copy** link, it saves information so you can paste it into a text file, or e-mail message, to tell others about how to join.

Setting a password

This is where you can also set a password, to prevent unwanted gate-crashers.

Advanced functions

These are found in the rightmost icon at bottom right. The menu there lists a number of things to investigate if you want to experiment, but here are a couple of items you should know about.

Manage video quality

This will help if you poor bandwidth and you can reduce it to help. The **Low definition** is still acceptable as a picture. The **Low bandwidth** setting may result in no video at all.

Setting your name

You can give yourself a name that the others can see through the **Settings** menu item, and the **Profile** tab. This can be whatever you like, but as the others will see this in their visions of you, perhaps keep it short but unique for the group.

Streaming a meeting

This is a brief description based on limited experience, and proves non-trivial to set up. Any attempt to use this feature, should be practised well in advance to ensure the mechanism is understood.

This feature requires a Youtube account, and uses Youtube to do the streaming.

First, get a Youtube channel as described here: <https://www.digitaltrends.com/web/how-to-make-a-youtube-channel>

The get a streaming key as described here: <https://www.digitaltrends.com/computing/how-to-live-stream-on-youtube-with-obs/>

To start a stream from a meeting, use the menu from bottom right, and when requested enter the Youtube stream key in the pop-up.

Now, you need to go back to the Youtube live stream dashboard, and click on the red Go Live button at the top right.

Your still not finished, because you need to tell people where the stream is. Go to <https://studio.youtube.com/>

Click on Videos on the left, then on the Live tab at the top. Current streams are displayed here, and the Youtube URL for the stream can be found.

Security

By default, these rooms are open to anyone who could guess the name. However, if you want to protect it, then anyone can set the first password, and let everyone else know what that password is for everyone to use.

Later on, then you can click the little circled **i** button at the bottom right, and you will see how to dial in to the room to talk on the phone. But be warned, this is an international call to the USA, so could be expensive. In addition, there is an item there to allow you to set a password to the room.

The display options

Your own display

The vision you have of yourself will show at the top of the screen information about it – your name, the name of the room you are in, and the level of video being transmitted. Interestingly, the picture you see of yourself, is like the one you see in a mirror. Other people are as you would see them.

If you have raised your hand (with the hand icon) a little blue hand appears in the top right where your name appears.

Other displays

Other displays have a separate window for each participant. The top left shows whether they have raised their hands or not, and

In the top right the three dots indicate a menu to control them. You can mute them or even kick them out. But a more useful entry in this menu is to mute everyone else so you can hear what the speaker is saying.

Acknowledgements

I am indebted to Nick Prudden for the information on streaming to a Youtube channel.