

St John's HowTo No 6:- Using OBS for streaming and broadcasting

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2 See also

See other documents in the St Johns Church series of How To. These can be found in the church sharepoint Projection & Visual subsite here: (Permission needed.)

(<https://stjohnschurch809.sharepoint.com/Projection/Shared%20Documents/Forms/AllItems.aspx>)

These can also be found on the public website (www.benrhydding.org.uk) in pdf format.

As of today 18/8/2020 the following documents exist:
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1. How to No1. Zoom meetings
2. How to No2. Recording and streaming tips and tricks for computer audio and video
3. How to No3. Recording talks, prayers and readings.
4. How to No 4. Video Montages
5. How to No 5. Including videos in church service sheets
6. How to No 6. Using OBS for streaming and broadcasting

3 Summary

Since the Covid lockdown started in March 2020 we have been producing a service sheet containing links to videos for songs, sermon and readings etc. This service sheet is distributed to church members using the Mailchimp service but is also used as the basis for our Zoom streamed service on the Sunday morning.

In the service sheet are links to videos, some of which come from Youtube and some are home grown videos of talks, songs and readings.

This document describes in brief the process of using OBS to provide a smooth experience to the users when watching videos or shared liturgy.

At the time of writing, we use OBS for just the videos during the Zoom service but I hope to move to using it for the service leader to provide a seamless experience for the congregation. I have found quite a few churches already doing this and it neatly sidesteps one of Zoom's weakest points – screen sharing.

4 OBS – why

OBS aimed at folk wishing a to broadcast a video and audio stream to services such as Twitch, Youtube, Facebook etc. It is a free package that allows you to preset a list of scenes that use live or pre-recorded video, audio and images and send them out to your audience. It is commonly used for webinars and also game play sharing.

It has a lot of capabilities including capturing anything that is happening on your computer – such as a game, or in our case videos, webcam, pdf docs or power point.

This capability makes it possible to switch between scenes such as my camera and mike, full screen videos and then me but on the notice board outside church etc etc.

One very weak aspect of Zoom is the screen sharing. It is impossible to go smoothly from face on camera to a document. With OBS this is one click and the (via a selected preset – I like the fade) transition just happens.

I would like to move to OBS for the service leading. We can then use liturgy on power point or even the PDFs and smoothly switch from talking head to images or side by side or blended views. We can even in OBS have a scene where the camera and liturgy are side by side or text overlay the camera using luma keying. It is a much MUCH better tool than Zoom screen sharing.

5 The setup before a service.

This assumes all the tools are installed and configured as described below. I do this before every service – it takes around 2-3 minutes only.

5.1 Step1. Create Playlist of videos (in VLC)

I use VLC because I am familiar with it. You can use other media players. I usually do this step the day before so I have time to test it out.

Key settings for any media player:

1. Set it so you click on an item in a playlist and it plays full screen always from the beginning of the video.
2. When it gets to the end of the video it pauses and does NOT play the next item in the list.
3. Progress bar is useful but not essential

Using VLC I create a playlist of all the videos that may be needed in the service. I add all the videos we may use – I can always skip if the part of the service is done live. I save the playlist in the ‘**media ready for sharing**’ folder for that Sunday (purely for my convenience.)

If using VLC it is downloaded from here: <https://www.videolan.org/vlc/download-windows.en-GB.html>)

The main settings in VLC are:

- Advanced: Playlist.
 - Play and pause
 - Auto start
- Advanced Video
 - Disable screensaver
 - Show media title on video
 - Fullscreen video output

Having set the options I then click on Save or you will need to set them all again next time.

5.2 Step2. Open VLC on the first song and pause it.

This creates the window that OBS will capture. If you open OBS before the VLC window is there it will capture another window at random.(Eg your banking login!)

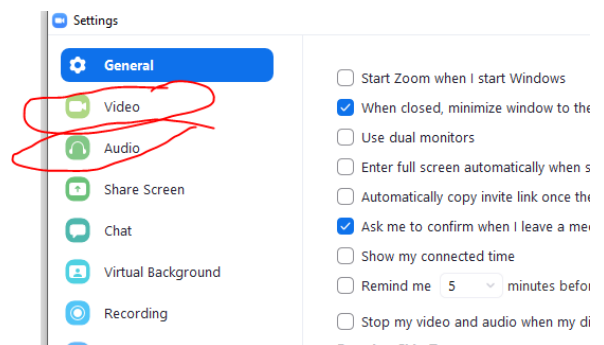
5.3 Step3. Open OBS

This now will be able to see all its scenes and be ready to go.

I select my default scene.(My camera and microphone.)

5.4 Step 4. Open Zoom settings- check audio/video

I open Zoom and go into settings. I check it is seeing my camera and hearing my microphone using the audio and video tabs – left:-



6 When the Zoom meeting starts

6.1 Join meeting

I click on the link in the email to join the meeting. I will appear to users at this time as my camera and mike. Captured by OBS. (Zoom ‘thinks’ OBS is my camera and mike.)

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6.2 Co-host

I request the host to make me a co-host. That means I can mute others when playing a video.

6.3 Use original sound

I select the **USE ORIGINAL SOUND** option of Zoom – (see how to document no 1). This is crucial to ensure videos I play are heard with good quality by the congregation. I usually leave this activated all through the meeting.

7 During the Zoom meeting

I take part in Zoom as an ordinary user. When and as needed I select different scenes in OBS. If I am producing the sound at any given time, such as talking or playing a video I ensure I am unmuted in the Zoom settings.

If I am playing a video myself or one of the co-hosts will mute everyone else to ensure any sound they make does not interrupt the video I am playing.

I choose scenes in OBS as required and if a video is needed – click on the VLC playlist to send the video out in place of my face and microphone.

I use various scenes in OBS but the three main ones are:

1. My camera and microphone.
2. VLC screen and sound capture – for playing videos
3. My camera (my face) in a small window overlaid on the church photo. (I use this to signal to the service leader that the video has come to the end.)

Remember that Zoom ‘thinks’ OBS is my camera so I can present anything I like as my Zoom persona.

8 Installing and setting up OBS

8.1 Downloading

The setup is a bit techy but once sorted can be forgotten. There are a lot of videos on how to do it online – eg <https://medium.com/@jkudo/how-to-output-obs-as-a-virtual-camera-and-recognize-it-as-a-video-source-with-zoom-or-teams-8b00cd25311f>

I ignored most of these and did it the hard way:- I used all FREE versions of everything.

Download and install OBS from here: <https://obsproject.com/download>

Install Virtual Cam from here <https://obsproject.com/forum/resources/obs-virtualcam.949/>

Download and install Virtual Audio cable <https://www.vb-audio.com/Cable/> You only need one cable (the free option)

8.2 The reasons why we need the extras.

OBS natively connects to Twitch/Youtube/Facebook etc but not to Zoom. Don't know why!

To make that happen we install the Virtual Cam add on to OBS. OBS sends its video out to VirtualCam. In Zoom we select OBS Camera instead of the webcam.

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To make the audio work the same way we install VAC (Virtual audio cable). We configure eOBS monitor output to go to the VAC and then in Zoom, change its input from mike to VAC.

We have now tricked Zoom into thinking OBS is our webcam.

8.3 Setting up OBS – once only

OBS needs to output video to the VirtualCam device. Tools/VirtualCam – Start.

It needs to output Audio to Cable input VAC input No 1 as the monitor output. (May be named differently on your setup).

These two settings ensure OBS sends whatever it sees and hears out to OBS Camera and VAC channel 1.

8.4 Setting up Zoom Once only

The video input needs to be the 'OBS Camera'.

The audio input needs to be Cable Output (Virtual audio cable 1) may be named differently.

These two settings ensure that Zoom captures the OBS output, rather than your webcam directly.

8.5 Setting scenes in OBS. As/when needed

OBS scenes are the way in which you can smoothly switch between your camera and mike and anything else such as VLC video capture or a power point screen capture. You can add multiple copies of the same source to a scene – eg 4 copies of your camera arranged on screen. The possibilities are endless.

Each scene needs (ideally) at least one video or picture source and one audio source.

My basic scene collection is described above. I don't change these from one week to the next unless I get bored and decide to create a new fun 'Andy on old TV view' or something like it!

8.5.1 Basic Camera and mike scene

To create the me and my microphone scene I did the following steps:

- I clicked in the scene area and hit the + button. I called the scene – 'me and camera'
- I clicked in the sources area – the + button to add a source. I selected video capture device/create new and clicked OK.
- In the dialogue that pops up I selected my webcam – Logitech C270
- Clicked in the sources area – hit the + button and added audio input capture. In the dialogue that ops up I selected my webcam audio.

That's it – I have my first scene.

8.5.2 VLC Video scene

I then added another scene that was the VLC video. Before doing this – get VLC playing a video full screen and then pause it. (You need to be able to search for the VLC output screen so it must be there, albeit paused.)

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- Create the scene – call it something like VLC player
- Add a source – ‘window capture’. In the dialogue that pops up – hunt for and select the VLC output window. (This is just the video)
- Add another source ‘audio capture’ In the dialogue that pops up select the audio device that would play the audio from VLC. (I have a multi channel USB audio interface so this is different for me.) You will have to experiment so that when playing a video in VLC, this selection routes the VLC audio to Zoom

8.5.3 Other scenes

I have also a scene which has my camera and mike but overlaid on it is a window capture of ProPresenter Lyrics package. I add a few clever OBS tweaks such as Luma Key and finish up being able to sing and play and show Proresenter Lyrics overlaid over my camera view. (I use a foot pedal to step through lyrics.).

The possibilities are endless.

End of document