

## Church Worship Service Broadcasting Setup

### 1. What do you want?

Since the Covid-19 pandemic, many churches have started (or are thinking of starting) to broadcast their worship service to the congregation. Some are taking this opportunity to reach out to an even wider audience.

Basically there are two options: livestreaming and pre-recording.

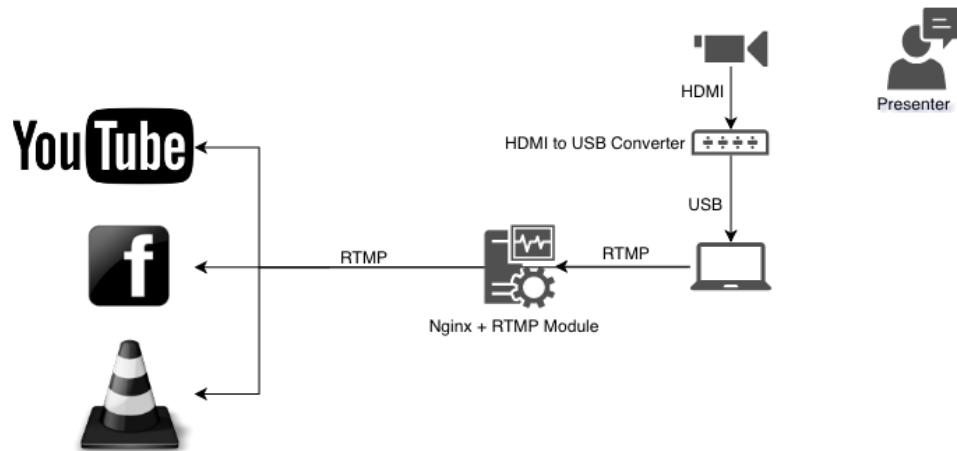
- 1) Livestreaming: there are several internet platforms that provide free livestreaming services such as Youtube, Facebook etc. You can also add such a service on your website but there will likely be some extra cost. For congregations of our size, it is better to use a free service such as Youtube or Facebook. They have very powerful services, user friendly platforms, and different end platforms to watch such as cellphone, tablets, smart TV etc.

For Youtube, you can NOT livestream from your cellphone or tablet. (This livestream function requires at least 1000 subscribers)

For Facebook, you can livestream from your smart devices like cellphones or tablets.

- 2) Pre-Recording

You can record your service using any devices like cellphones, cameras, video cams etc. Then you can upload your videos to the service platforms. The advantage to this is that you have more control of the content like pictures, sounds, subtitles etc.



### 2. Equipment and setting

Before thinking of investing in this broadcasting ministry, you may want to think of your church setting first. Do you want a broadcasting ministry alone, or do you want in-person worship with broadcasting at the same time. It is much easier with one camera/camcorder facing one pastor/preacher rather than multiple cameras for minister, assistant, and musician etc.

See example below.



We can see that this setting is good without in-person service because the camera is in the middle of normal traffic. The camera control person normally stands behind the camera. In this case, it will be a distraction during the service too. The wiring and cables on the ground create a safety hazard.

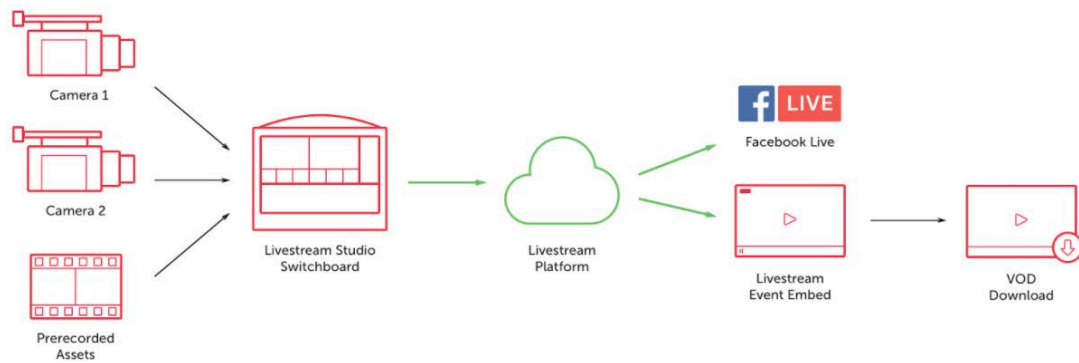
This setting is mostly a temporary one used by congregations with few or no in-person worshippers. It works well with low budget equipment: camera, computer, HDMI connector, and some cables. For livestreaming, of course you will also need to test the speed of your internet connection.

The second option is for the long term setup with PTZ video cameras. This type of camera is fixed to the ceiling or wall of the worship area. With computer software or a control panel, you can remotely control the camera by changing the shooting angles or zooming etc. This option requires professional installation because all equipment has unique set up requirements.

A couple other important pieces of equipment for livestreaming/recording are lighting and a microphone. With clear sound, you can attract the audience even with only fair picture quality and lighting. It might be worth investing in a good wireless microphone to work with your existing audio system.

### **3. Hardware, Software and Control**

Now let us talk about the set up for the above option.



- 1) We need a camera with HDMI output. There are several camera models on the market for living streaming with costs ranging from 500 dollars to several thousands.
- 2) It is good to have a control switch board for switching the cameras, sounds or other contents. But you can skip this equipment if your setting is simple with one camera. The computer control software can do a similar job for you.
- 3) HDMI converter. You need a Video Capture Device to connect your camera with your computer. At Bestbuy you can get a Cam Link 4K Capture Connector for about 200 dollars.
- 4) Once the camera is connected to your computer. You need to have a livestreaming platform (software) to control the contents. OBS Studio is very popular, free software. It can control several video inputs, sound inputs, your PowerPoint Contents etc. It can also set up your Youtube or Facebook account for livestreaming.

### **Conclusion:**

This video and livestreaming ministry can bring the Word of God to broader fields with the existing internet platform. Many churches report that their ministry is reaching a much broader audience than existing members only through this ministry. However, this ministry also requires a whole team of people to work together, especially some technical person to work on hardware and software control panels with the computer. It takes time for the ministers, assistant ministers, musicians, choirs, and the technical persons to work together. For the pre-recording setting, there is also a heavy workload of video editing and compiling. We praise the Lord that many churches in ELCIC are thinking of this ministry, and the Mission Committee of Eastern Synod will provide some financial support to our churches in this ministry.