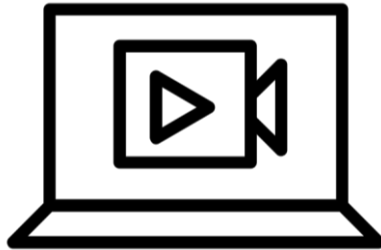


How to Get Started with Livestreaming



One parish's livestreaming story and how your parish can get started with livestreaming.

Slides available at <https://zumbro.me/2020/08/05/livestreaming-presentation-from-c3-tech-conference>
(Everything underlined is slides is a link)

About Me

(ie, why you might want to consider what I have to say)



- Full time software engineer in San Luis Obispo, California, working for Amazon in the Kindle Books realm.



- Serves as IT Coordinator at St Louis de Montfort Parish in Santa Maria, California.



- Built the MassLivestream.com platform to automate livestreaming for churches and works with sites across the country in their livestreaming efforts.

What we are going to talk about

(ie, why you might want to stick around for the rest of the presentation)

Will attempt to answer the following questions:

- What is livestreaming?
- Why should my parish consider livestreaming?
- What are some methods my parish could use to get started livestreaming?
 - Will cover three livestreaming methods today and discuss their relative strengths and weaknesses.

Additionally, I will try to provide some core “take away” tips coming out of my experience with livestreaming.

Please feel free to put questions in the chat during the presentation, or enter your name in the chat if you would like to be called on to speak your question.

**What is
livestreaming?**

1.

Livestreaming Origins

- Definition: *to stream (a live event) over the Internet*
 - Merriam-Webster
- Saw a rise in usage in the late 2000s when consumer internet connections started to have sufficient upload bandwidth to support livestreaming at a decent quality.
- One of the first consumer livestream options was a site called Justin.tv (became Twitch.tv).
- Popular platforms today include YouTube Live, Facebook Live, Twitch.tv, Periscope, Vimeo Livestream, etc.
- Today, livestreaming is used for everything from sporting events to government hearings, in many ways replacing traditional live television.

**Why should my
parish consider
livestreaming?**

2.

Post March 2020 Answer

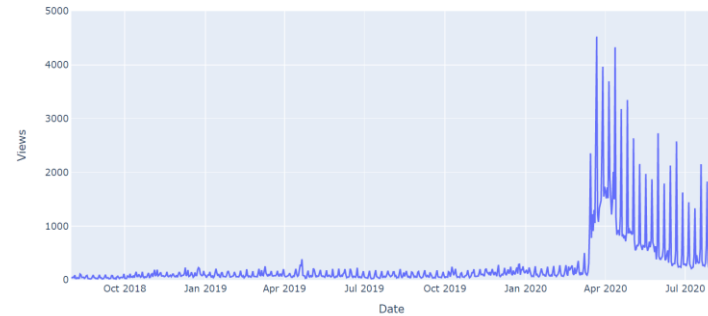
- The popularity of livestreaming for churches has increased exponentially since March 2020 and the start of COVID-19 related lockdown restrictions.
- For many parishes, livestreaming is the primary (if not only) way that parishioners can participate in the Mass and other parish activities.
- Livestreaming is likely to be an essential tool for some time to come.

SLDM Statistics (Post March 2020 View)

- **August 2018 – July 2020:**

- ~400k livestream views

SLDM Livestream Views August 2018 - July 2020

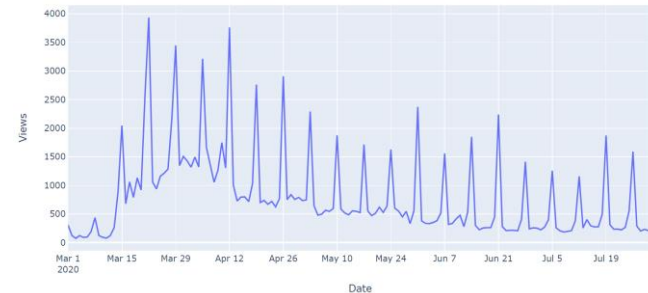


- **March 2020 – July 2020:**

- ~150k livestream views

- ~70k hours watched

SLDM Livestream Views March 2020 - July 2020



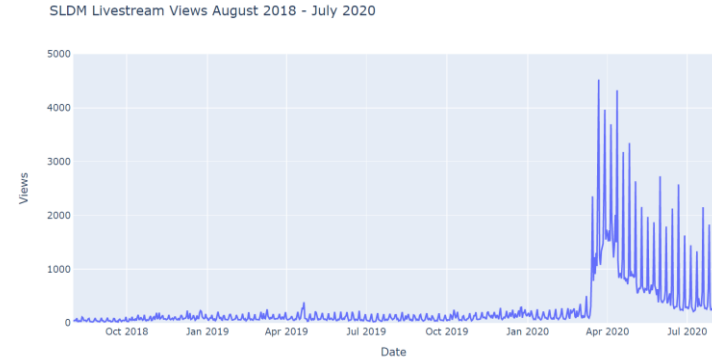
Pre March 2020 Answer

- Why would you want to livestream in “normal” circumstances?
 - Reach those who would not otherwise have access (ie, the sick or homebound).
 - Help driving engagement within your parish.
 - Reaching people outside your parish, both Catholics and non-Catholics.

SLDM Statistics (Pre March 2020 View)

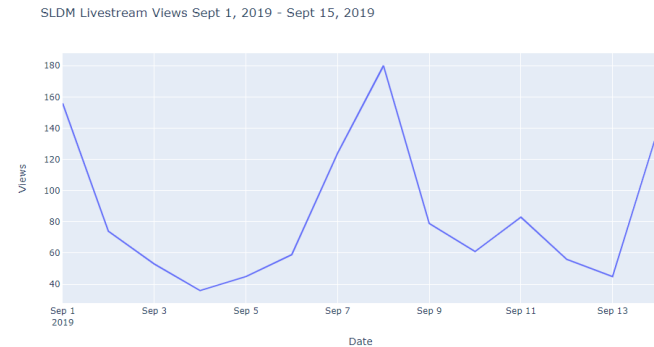
- **August 2018 – July 2020:**

- ~400k livestream views



- **Sept 1st, 2019 – Sept 14th, 2019:**

- ~1.2k livestream view
- Random two weeks snapshot, still a significant reach



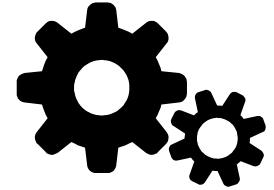
Takeaway

- Today, we are at one of the most important time in history for reaching people though non-standard means such as livestreaming due to COVID-19.
- Even when more normal times return, livestreaming still has an important role it can play for bringing together members of a parish community.

3.

**How can my parish
get started with
livestreaming?**

Three main steps to start livestreaming:



**Determine
livestreaming
platform**

**Obtain
necessary
equipment**

**Make stream
available to
audience**

These steps are closely related, not necessarily a linear progression in this order.

On platforms

- Many different options for livestreaming platforms. Not recommending any one in particular (will use YouTube Live for demo and discuss what I have built with MassLivestream).
- I will try to discuss livestreaming methods that can work with multiple platforms.
 - This is done through the standard for livestreaming called RTMP (Real Time Messaging Protocol).
- Some platforms to look into that I think would work well for parishes (based on popularity or feature set) :
 - YouTube Live (free), Facebook Live (free), Vimeo Livestream (paid), MassLivestream (paid).
- Will further cover some advantages and disadvantages of these platforms while looking at livestreaming methods and tips.

Three ways to get started

- Livestreaming from a phone or mobile device
- Livestreaming from a computer or other specialized equipment
- Livestreaming autonomously without an operator

Each method has pros and cons. Will attempt to explain some of these for each method.

Method 1: Livestreaming from a phone or mobile device

- A great entry point to livestreaming.
- All that is required is a phone or tablet, many of which already have dedicated internet connections built in. This can help reduce the need to rely on standard internet connections.
- Mobile livestreaming can support a wide-range of streaming platforms thanks to RTMP support.
 - Some platforms, such as YouTube Live or Facebook Live also have dedicated apps.
 - These apps can have restrictions (such as YouTube app requiring a certain number of channel subscribers to livestream).
 - However, these restrictions can be circumvented with by using an RTMP stream, which all Facebook and YouTube also support.

Demo



We will use Larix Broadcaster (a free RTMP streaming app for iOS and Android) to stream to YouTube live in less than 10 minutes!

Set-by-step guide available at
<http://zumbro.me.s3-website-us-west-1.amazonaws.com/C3ConferencePresentation/>

Method 1 Advantages & Disadvantages

■ Advantages

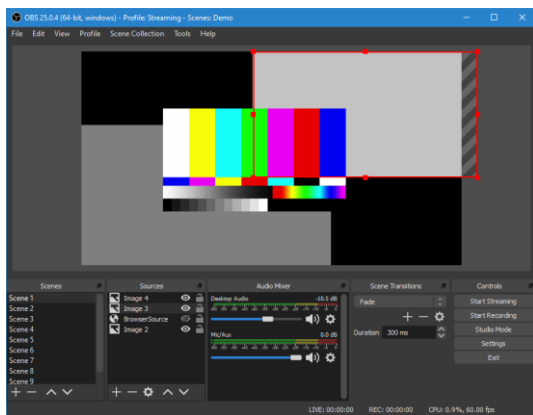
- Easy to get started, no special equipment needed!

■ Disadvantages

- Requires manual operation.
- Due to lack of quality zoom capabilities on most devices, must be relatively close to target.
- By default, just uses built in audio on camera (though Bluetooth options might be interesting here!).

Method 2: Livestreaming from a computer or specialized equipment

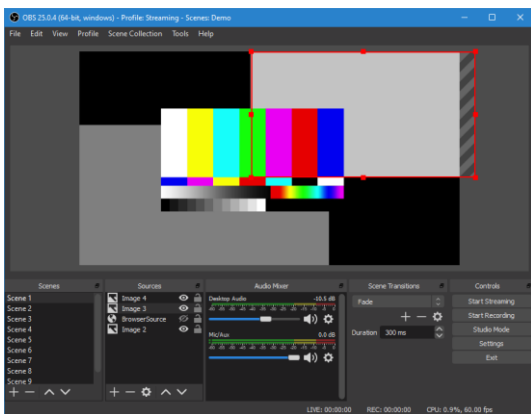
Streaming from a computer with OBS (Open Broadcast Software)



- OBS is a full-features program for hosting livestream from a computer.
- OBS supports all the features you see on high-production livestreams: Multiple cameras that can be switched between, multiple audio sources, on-screen graphics and overlays.
- Can stream to any platform that takes RTMP video (similar process to YouTube demo).

Method 2: Livestreaming from a computer or specialized equipment (continued)

Streaming from a computer with OBS (Open Broadcast Software)



- More on camera sources:
 - Webcams can also be connected over USB.
 - USB capture cards can be used to connect to any standard camera (such as a DSLR) that supports HDMI output.
 - Phones or mobile devices can be used as inputs.
- OBS has great documentation and an active forum community for questions.

Method 2 Advantages & Disadvantages

■ Advantages (OBS)

- Can produce very high production-value stream with multiple media sources.
- Does not necessarily have a high equipment cost.
- Allows room for growth.

■ Disadvantages (OBS)

- Requires manual operation.
- More moving parts adds complexity.

Method 2: Livestreaming from a computer or specialized equipment (continued further)

Streaming specialized equipment

- Specialized equipment exists for livestreaming. This would replace the standard computer in the OBS example.
- Wide range of options, with varying features and prices.
- A basic example: Mevo camera
 - Supports wireless streaming from a Mevo camera to RTMP platforms.
 - Controlled from a phone or other mobile device.



Method 2 Advantages & Disadvantages

- **Advantages (Mevo)**

- Not much harder to operate than a phone.

- **Disadvantages (Mevo)**

- Requires manual operation.
- Due to lack of zoom capabilities on most devices, must be relatively close to target.
- Wireless-only by default.

Method 3: Livestreaming autonomously

- *The goal:* To be able to livestream without the need for any manual operation. Livestream automatically starts at a schedule time, records the video stream, and makes the recording available for immediate playback once an event is complete.
- This automation allows for more reliable livestreaming.
 - Have livestreamed and recorded 2 daily Masses and 8 weekend Masses at St Louis de Montfort continuously since 2017 using this method.
- Such systems are typically built around one or more IP cameras that automatically “talk” to a streaming platform.
- Going to talk briefly about MassLivestream, which I built. Other solutions (such as StreamSpot) share some similarities.

Method 3: Livestreaming autonomously (continues)

MassLivestream

- Goal is to provide a platform specifically for churches that makes it as easy as possible to livestream.
- Everything is controlled through an online dashboard for ease of use.
- Churches get a dedicated page featuring their livestream(s) along with their recordings.
- Multiple IP cameras can be set up to give viewers the option of switching between different views.



Method 3 Advantages & Disadvantages

■ Advantages

- Easy and reliable: no need to do anything to livestream!
- IP cameras can produce high quality video from out-of-sight locations and hook directly into existing sounds systems.

■ Disadvantages

- Requires IP camera hardware.
- Requires specialized platform (and there are no free options available that I am aware of).

4.

Livestreaming tips

“Take away” tips

Starting is the most important step

- Initial stream doesn't have to be perfect, more important to make it available to people.

Try to have decent audio

- From experience, audio quality is valued over perfect video quality.

Make sure to be aware of relevant restrictions

- Make sure to be cognizant of copyright restrictions.

“Take away” tips (continued)

Easy of user matters to the user

- One of the most important factors to the parishioner will be the ease of use of your system.
- Make sure to remember your audience.

Keep in mind the tradeoffs of using a free platform

- Companies that offer free livestreaming tend to make their profits through ad sales.
- While this might not effect your livestream directly, you do not have control over recommended content suggested to you viewers.

That's it

Any questions or points of discussion?

Slides and mobile livestreaming guide at <https://zumbro.me/2020/08/05/livestreaming-presentation-from-c3-tech-conference>

Feel free to reach out via email with any questions after this session ends – website@zumbro.me

Credits

■ Images

- live stream by H Alberto Gongora from the Noun Project (<https://thenounproject.com/search/?q=livestream&i=2561295>)
- Larix Broadcaster logo (https://is1-ssl.mzstatic.com/image/thumb/Purple124/v4/92/16/fe/9216fea1-0146-aa5a-ee6f-9f92a7e94272/AppIcon-0-0-1x_U007emarketing-0-0-0-4-0-0-sRGB-0-0-0-GLES2_U002c0-512MB-85-220-0-0.png/1200x630wa.png)
- OBS product image (<https://obsproject.com/assets/images/OBSDemoApp2504.png>)
- Mevo product image (https://cdn.shopify.com/s/files/1/1091/3294/products/mevo-start-hero_x400.jpg?v=1595507422)

■ Slide Template

- Jacquenetta presentation template <https://www.slidescarnival.com/jacquenetta-free-presentation-template/1929>