



# Livestreaming Solutions

Equipment and Resources for Churches

# Housekeeping

# Housekeeping

- Questions: Feel free to ask questions using the “raise hand” reaction or the chat. If you type in the chat please begin with “**QUESTION:**” so I can see.
- Sample setups and specs will be sent in a PDF handout.





A Little About Myself...

# Current Service

- IT/Communications Facilitator -  
Hudson River Presbytery
- Solo Pastor -  
First Presbyterian Church of Mahopac





April 14, 2019 - First Presbyterian Church of Mahopac

## Breathe on Me, Breath of God (Cont.)

**G C G / G C D D7 / G D Em C / G D G**

Breathe on me, Breath of God, till I am wholly thine,  
Until this earthly part of me glows with thy fire divine.  
Breathe on me, Breath of God, so shall I never die,  
But live with thee the perfect life of thine eternity.



March 15, 2020 - First Presbyterian Church of Mahopac



SECOND SCRIPTURE READING

LUKE 13:1-9

Present Day - First Presbyterian Church of Mahopac





# Opening Thoughts


# Opening Thoughts

- Free  $\neq$  Better
- Cheap  $\neq$  Better

\*These are guidelines more than rules.



# Opening Thoughts

- Take and use what you need.
  - Budget for the future.
    - Look at spending more upfront.
    - Invest in tools that make livestreaming easier.
    - Consider livestreaming an extension of your physical building.
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# Opening Thoughts

- Do what is physically possible.
  - If you don't have the volunteers for a larger setup don't pursue that avenue!
  - Make what is in your realm the best it can be.
- Fancier setups do not equal more viewers.





# Internet

# Internet

- Upload is more important than download.
  - Minimum 10 Megabits (Mbps) for 720p.
- Ethernet > Wifi
- Research current internet offers in your area!




# Internet Speed Test

Google “Speed Test”


# Streaming Services



# Streaming Services

- Free - Facebook & YouTube
    - Can only stream to one service at a time (unless you are using a paid service).
    - Can be tricky to setup and schedule streams.
    - Streaming directly to Facebook or YouTube may result in undesirable audio.
- 


# Streaming Services

- Paid - i.e. Restream & Stream Yard
    - Allow you to broadcast to multiple platforms.
    - Provide a web based studio.
    - Access to features such as combined chats from Facebook and YouTube.
    - Some features require upgrades.
- 



# Software Studios

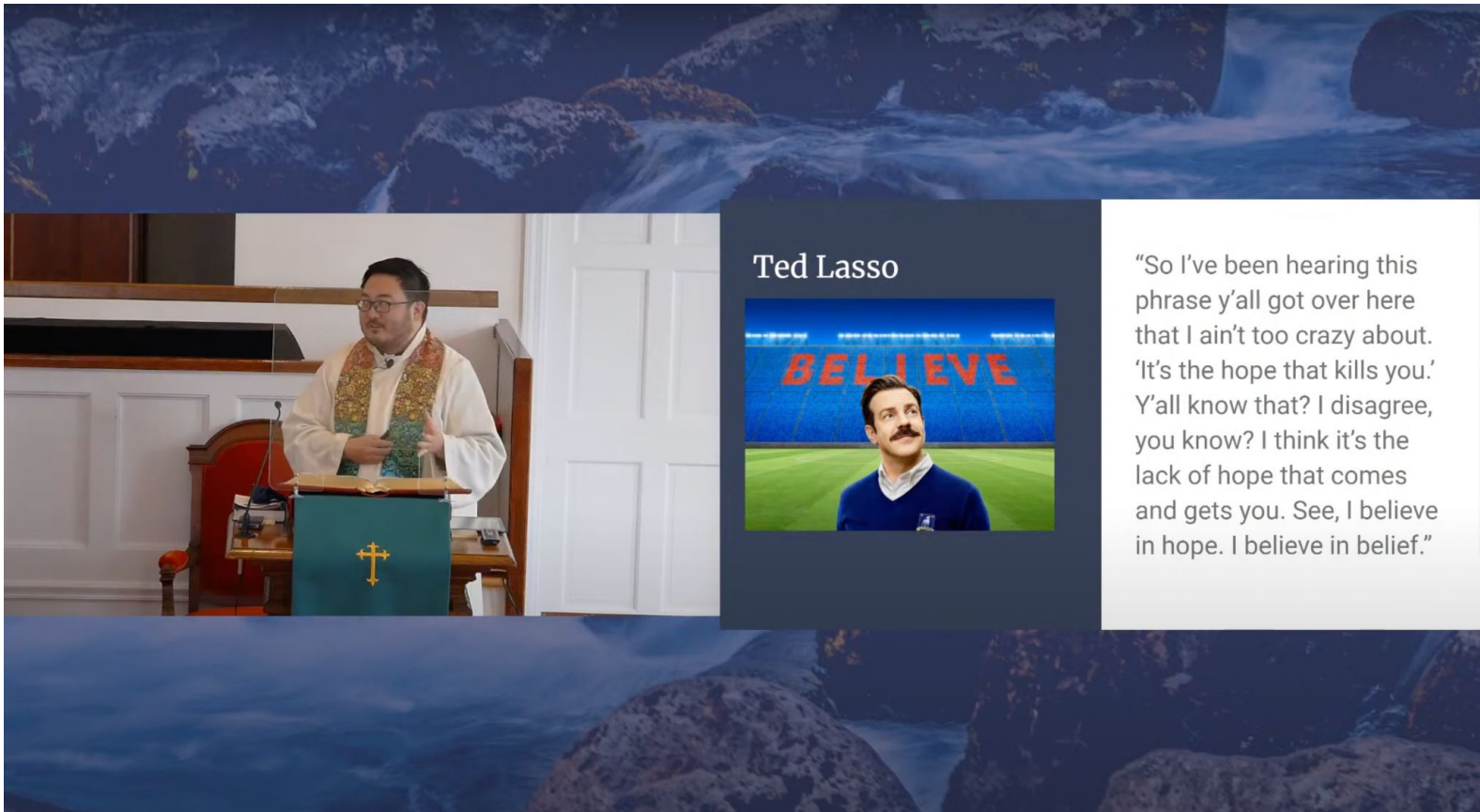
# Software Studios

- OBS - Open Broadcaster Software (FREE)  
<https://obsproject.com>
  - Plethora of guides (and videos) to help you setup your livestream.
  - Can create various scenes: pre-roll, video, video and slides, etc.
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# Software Studios

- Allows unlimited possibilities in terms of creativity and “branding” of your church.
- The “Virtual Camera” allows you to bring your production quality to programs such as Zoom.
- Requires some study and practice, but worth it!





Ted Lasso



“So I’ve been hearing this phrase y’all got over here that I ain’t too crazy about. ‘It’s the hope that kills you.’ Y’all know that? I disagree, you know? I think it’s the lack of hope that comes and gets you. See, I believe in hope. I believe in belief.”

Example of OBS: First Presbyterian Church of Mahopac



# Audio



\*Disclaimer: I am not an audio expert.



# Audio

- If it's not mic'd it won't be heard!
- Things to consider:
  - Does the worship leader/pastor walk around?
  - Is there special music that is mic'd?
  - Is there a mic for the choir or organ?



# Audio

- Additional Considerations:
  - Wireless lapel mic (FCC Compliant).
  - Boundary or Shotgun Microphones.
  - Stand mics for special events or music.




# Audio


- USB Audio Interface
  - Can use your current mixer or sound board to input audio into your computer.
  - Only allows for one way audio.
  - May require tweaking to remove “static.”



# Audio

- USB Sound Board / Mixer
    - Two way audio (input to computer and output to your sound system).
    - Flexibility if you wish to allow for Zoom participants to lead parts of worship.
    - Cleaner audio input.
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# Audio

- Tips:
    - Troubleshooting may take awhile.
      - Bring in someone who knows audio.
    - Investment in new equipment may be needed.
    - Broad capturing mics are not a bad thing (i.e. Boundary / Shotgun Mics).
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# Audio

- Example of Boundary Capture Mics
  - [Audio-Technica Pro 44 Boundary Mic](#)
  - [\(Organ & Singing Sample\)](#)
- Example of Shotgun Mics
  - [Audio-Technica AT875R](#)
  - [\(Organ & Singing Sample\)](#)



# Computers

# Computers

- Laptops
  - Pros - Can be less expensive and portable.
  - Cons - No “future proof” upgrade path, cheap laptops don't last long.





# Laptop Buying Tips

- Minimum \$500
- Look for laptops with “dedicated graphic cards.”
- Look for laptops with at least 16GB of RAM.
- Storage depends on how you intend to use the laptop. (i.e. Video Editing = More Storage)



# Computers

- Desktops
  - Pros - Upgradeable and more “future proof,” access to more powerful hardware later.
  - Cons - Can be more expensive upfront, requires additional peripherals, requires some technical knowledge.



# Desktop Buying Tips

- Minimum \$700 - \$800
- Look for desktops w/ AMD or NVIDIA graphics.
- Look for at least 16GB of RAM.
- Storage depends on how you intend to use the laptop. (i.e. Video Editing = More Storage)



# Additional Tips

- Prepare to budget for parts or a new computer after 5 years (assess the status).
- Care for your computer: Delete any clutter, remove unused programs, etc.
- Provide necessary ventilation!





# Video

# Video

- Cameras, cameras everywhere...
  - Video Cameras
  - PTZ (Pan Tilt Zoom)
  - Mobile Cameras

\*Each camera has a pro and con.



# Video Camera

Things to know:

- Will require a video capture card.
- Need “Clean HDMI Out.”
- Look for a quality tripod.



# Mobile Camera (MEVO)

Things to know:

- Requires an app.
- Can link multiple cameras together.
- Built in microphones.
- Can be mounted on a tripod, wall, or column.





# PTZ Camera

Things to know:

- Generally more expensive.
- Can create “presets” for positions.
- Can incorporate more than one.
- Can be controlled by a remote, software, or a joystick.



# PTZ Camera

## Different Types:

- USB Cameras (plug in via USB).
- SDI Cameras (require converter).

\*If you plan to use one camera stick with the USB models.



# Optional Peripherals

# Optional Peripherals

## Displays:

- Flat Screen TV
- Projector (min. 5000 ANSI Lumen)

## Cameras:

- PTZ Camera Joystick Controller



# Optional Peripherals

For Desktops:

- 1-2 Monitors (2 Recommended)

Audio:

- Headphones for monitoring

“Livestreaming Space”



# Sample Setups

# Sample A

**Estimate: \$1,200 - \$1500**

\*Assumes you are buying all the equipment from scratch.

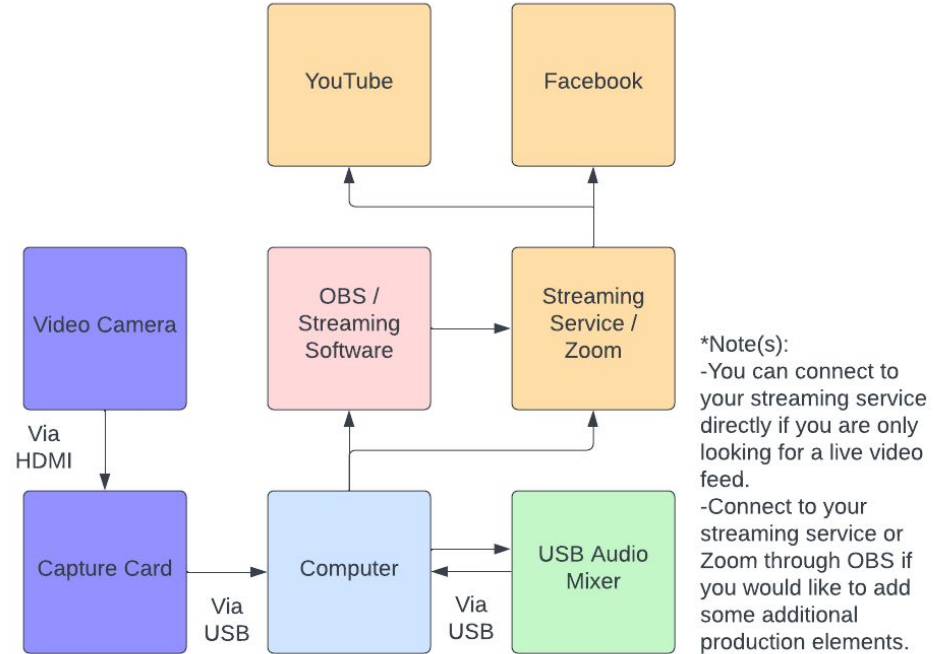
\*\*May cost more or less depending on current...

## Essentials:

- Video Camera on Tripod
  - Requires Capture Card
- Laptop
- Sound Interface

## Example:

[Union Church of Pocantico Hills](#)



# Sample B

**Estimate: \$900 - \$1300**

\*Assumes you are buying all the equipment from scratch.

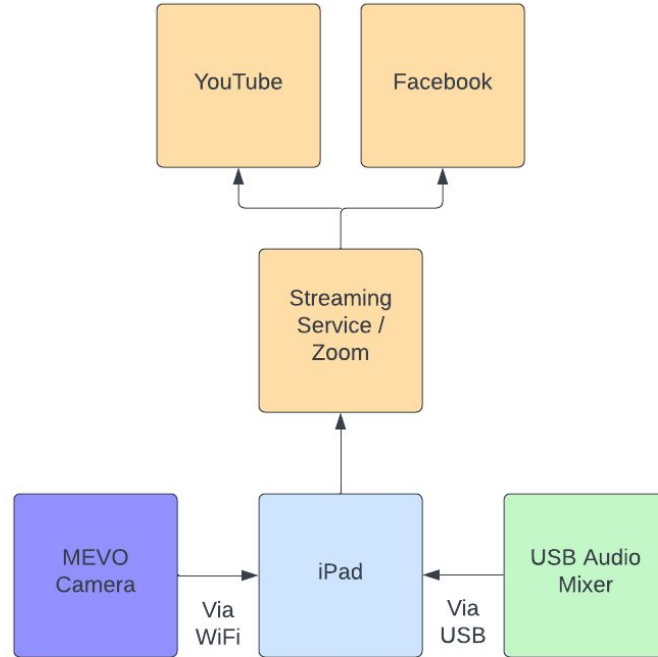
\*\*May cost more or less depending on current...

## Essentials:

- Mevo Camera
- iPad
- Sound Interface

## Example:

[Pleasant Plains Presbyterian Church](#)



\*Note(s):  
-This setup is for  
livestreaming only.



# Sample C

**Estimate: \$1900 - \$2500**

\*Assumes you are buying all the equipment from scratch.

\*\*May cost more or less depending on current...

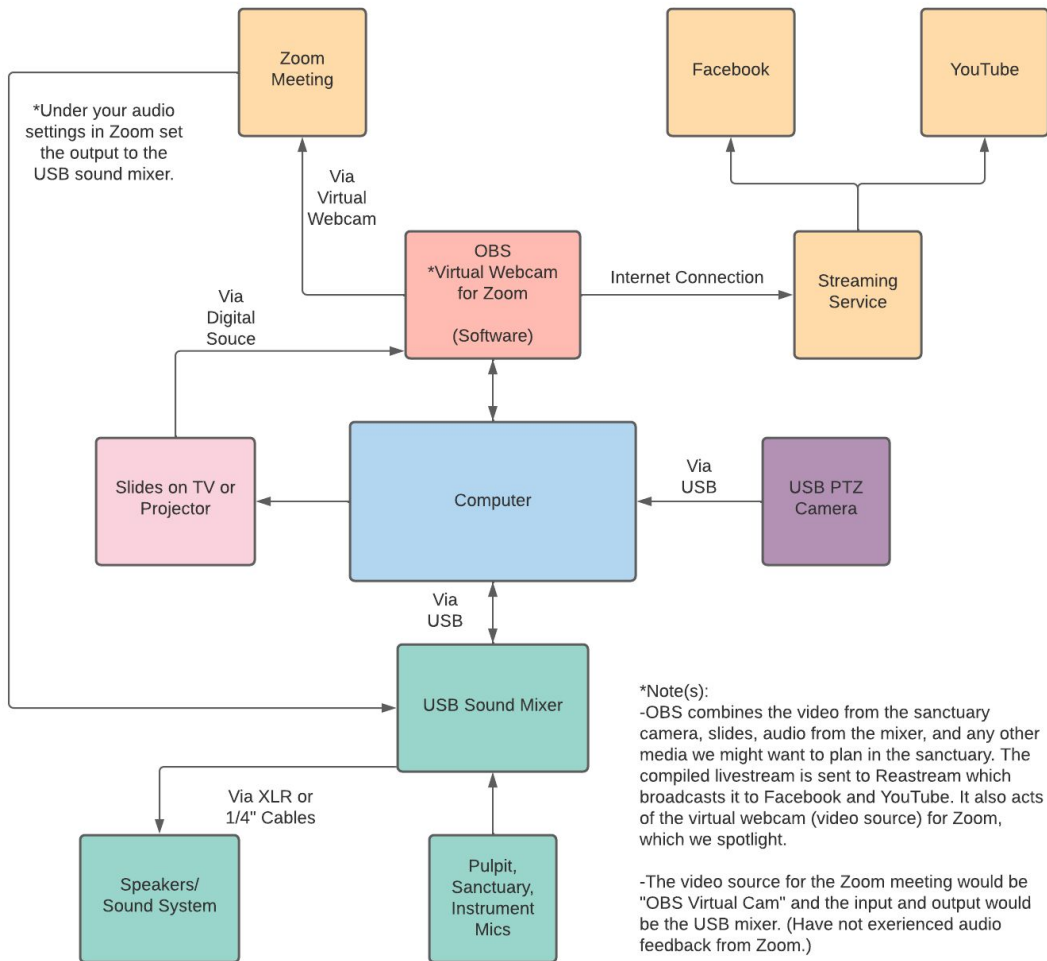
## Essentials:

- Desktop
- Camera
- Audio Interface

**Optional:** Projector/Screen

## Example:

[First Presbyterian Church of Mahopac](#)



# Sample D

**Estimate: \$2500 - ?**

\*Assumes you are buying all the equipment from scratch.

\*\*May cost more or less depending on current...

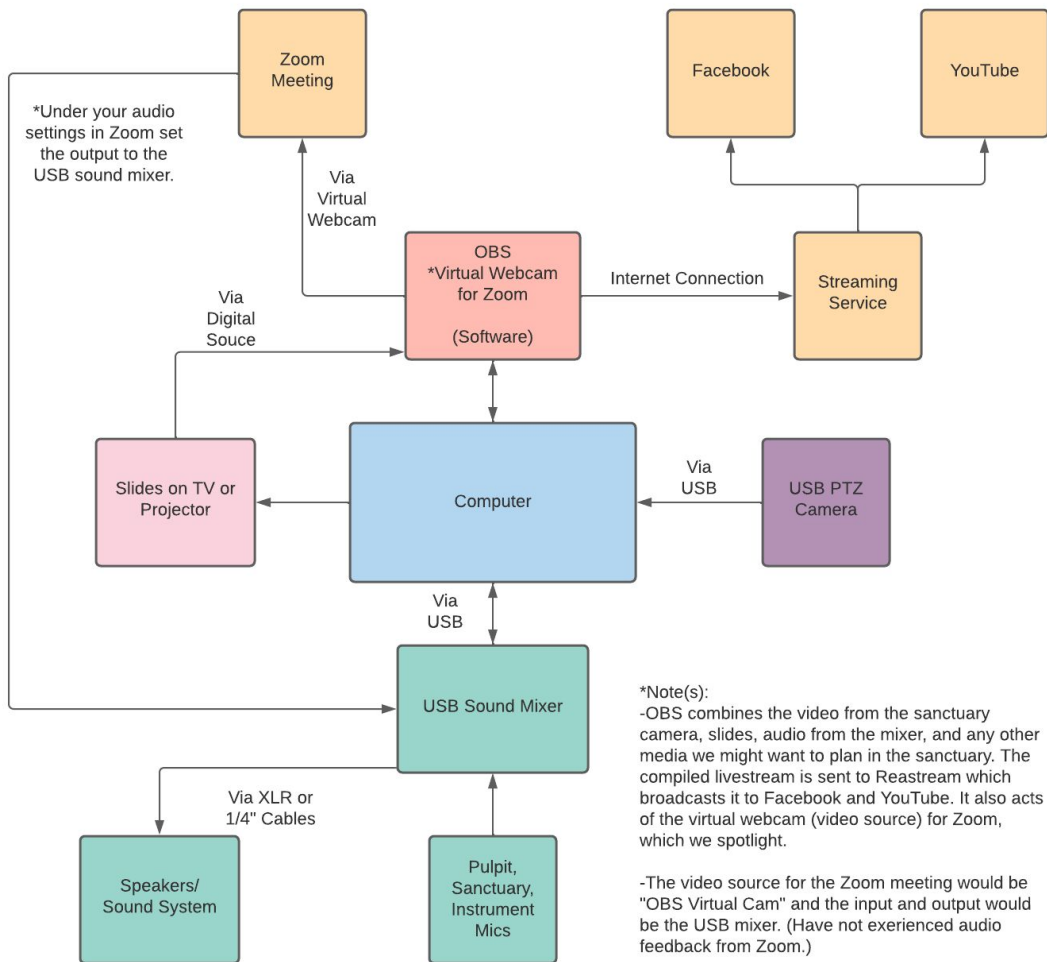
## Essentials:

- Desktop
- Camera
- Audio Interface
- Camera Controller

**Optional:** Projector/Screen, Additional Cameras

## Example:

[Larchmont Avenue Presbyterian](#)





# Volunteers

# Volunteers

- Best Practices:
  - Start simple!
  - Invest in a setup that meets your volunteers.
  - Have a “Plan B” ready for Sunday’s w/ no one.
  - Acknowledge your tech team!



# Volunteers

- Effective Training Strategies:
  - Hands on training...
  - Hands off observation...
  - Learn and teach cycle...
  - Allow for creativity!

