



# Joint Case Study / Beta Test

## Objective

In March 2020, churches were forced by Provincial mandate to close their doors to in person worship. Churches quickly responded and created a multitude of on-line offerings to remain connected to their respective communities. The suspension of in-person service spawned a new age of “digital engagement”, often taxing human and financial resources.

While churches have begun to reopen, the threat appears as though it will remain for at least a year- if not more. This will extend the need to remain accessible to those who elect to not return to in person worship. An upside to this unexpected turn of events has been the churches ability to connect with parishioners, who for various reasons were unable to come to service. It has reconnected parishioners who moved to other communities and in many cases has garnered new followers. It is now apparent that these digital services should continue indefinitely.

In an effort to explore how churches may be able to affordably sustain an on line service long term, the Synod office and the parish of St. John's Shaughnessy entered into a joint “Beta” test of a streaming camera and application from a company called Mevo.

This document will serve less as a recommendation but more as a release of the many learnings that have come from the Beta test. Each Parish should do their own due diligence and make their decision on how to proceed (if at all) based on that Parish's unique needs.

## The Product

There are 2 camera options. Specifications and demonstration videos are available via the manufacturer's website [mevo.com](http://mevo.com). In an effort to accelerate the learning curve, here are a few side by side differences that may be helpful.



- \* Records in 4K although maximum streaming resolution is currently 1080p
- \* 1 hour battery life



- \* Records in 1080p (Max)
- \* 4 hour battery life
- \* captures up to 120 degrees of image

- \* captures up to 150 degrees of image
- \* Receives external audio via mini USB port (adapter sold separately) OR via wifi connection to apple device.
- \* To extend the battery life and gain additional ports, the Mevo “Boost” option is recommended

- \* Receives external audio directly via 1/8” trrs OR via wifi connection to apple device.
- \* Better (compared to Plus) recording quality vis built in mic.

\*\* Note – while the cameras, on their own, can act as a 1 touch video recording device, to operate all of the features and stream live you will need to download and operate the Mevo app through an apple device. We recommend an iPad as it provides a larger screen for preview and shot manipulation.

Again, we recommend you visit [mevo.com](http://mevo.com) and also view many of the demo / review videos on YouTube. This will give you more details on the cameras and their operation.

## The Mevo 2.0 app and Vimeo Producer



In order to unlock the full potential of the camera, you will need to download and run the Mevo app. The app is free and you can use the app to not only control the camera’s functionality but for no extra charge you can stream to 1 social media platform and store what you stream to the micro SD card. Throughout the document we have been mentioning “apple devices” as that is what the app was designed for and what we used for our beta test. It appears as though it will work on android tablets but we have no experience (so far) with that.

For about \$20 per month (paid annually) you can subscribe to Vimeo Producer. After you get the camera you can register for a 30 day free trial to see what it has to offer. We believe it is well worth the investment. Beyond the simple fact that it unlocks the ability to stream to multiple social media sites at the same time it opens up access to a countdown, graphic overlays, graphic inserts and more. If you viewed the stream from wither of the July 19<sup>th</sup> services that were produced with the mevo, all of the graphic insertions were done through producer. There are additional features we have yet to experiment with and an even more powerful production and editing subscription you can get but we haven’t looking into that as of yet.

Beyond zoom, pan and cut, all controlled with your fingertips from your tablet or phone, the mevo also has built in AI. Within the app you can set the camera for facial recognition, auto follow and auto pilot. Once the camera recognized a face, the auto follow will do exactly that. If the subject moves left, the camera automatically pans and “follows” the person talking. You can activate “auto pilot” and the smart technology will automatically switch to different faces, zoom, pan out and follow automatically. You can adjust the sensitivity to these features within the app. It’s very cool technology however, be careful with the speed settings. I did a demo video and when I talk I rock back and forth. The camera followed me and after watching it I felt sea sick.

Lastly, the app allows you all of the adjustments you would get on a DSLR camera. White balance, tone, colour, contrast, back light etc. While you think you have an issue with lighting we suggest you get someone in who knows about photography and have them work with the various adjustments. You may be surprised what can be accomplished by just using all of the digital enhancement tools located within the app.

St. John’s has an issue with back lighting, most of which could be corrected in the feed. They did elect to get additional lighting as the in person audience like it when they returned to the church.

## Current vs. Mevo Streaming Option

As mentioned, the Synod office has worked with St. John's in performing a Beta test.

Prior to the suspension of in person worship, St. John's had no live streaming and spoken word was amplified within the church through a variety of handheld and headset / lapel mics. The audio was mixed through a 16 track board and delivered to 4 wall mounted speakers.

Upon the suspension of in person worship, the in-house PA system was disabled and the audio was captured through the mics that were being used previously and fed into a small, 8 channel board. Additional mics were added to capture the choir and organ (both unamplified for in person worship) and the audio (voice, music and singing) was then fed through a digital adapter into a computer. The computer (macbook) captured the mixed audio as well as (via a USB hub) video signals from 3 apple devices (1 iPad, 1 iPod and 1 iPhone). The sound and the video was controlled through the computer and then fed to multiple streaming platforms. The mixing of the audio as well as the editing of the live stream video required 3 people to administer.

For reference, here is a link to Sunday July 19<sup>th</sup>'s service as recorded via the aforementioned configuration.

[https://youtu.be/F\\_HPCIWGPik](https://youtu.be/F_HPCIWGPik)

For the beta test, we ran the Mevo camera and app simultaneously to the multiple camera setup mentioned above. Our hope was to capture the best "apples to apples" comparison while streamlining the process. For this, we operated the Mevo Start camera and controlled it through an iPad. The sound was captured in the same manner however for this test, we didn't plug the audio from the board into the camera but rather plugged it into the mic input on the iPad and the audio was streamed to the camera via wifi and then broadcast to the social media platform. For this configuration we needed the following: 1 Mevo Start camera, 1 telescopic mic stand to mount the camera, 1 iPad and an iRig XLR to TRRS adapter with phantom power and gain control. The camera was mounted back 3 rows of pews and was left of center. It was charged so there was no need to provide power and by running the audio into the iPad, there was no need to run an audio cable to the camera. The iPad sat in a stand at the audio mixing board and the transitions, graphic overlays were easily managed from there. The administration related to this recording was managed by 1 person.

For your reference, here are links to the Sunday July 19<sup>th</sup> 8 and 10am services recorded via the aforementioned configuration.

<https://www.facebook.com/ReganGorman1/videos/3367544443277846/?d=n> 8am

<https://www.facebook.com/ReganGorman1/videos/3367845313247759/?d=n> 10am

## Possible Configurations

Option #1 – Mevo camera and built in mic

This would need to be tested but there is a case to be made, especially for smaller churches, that the camera could simply be set up on a stand, activated via the apple device and simply stream what it captures. Simplest and certainly the easiest and most affordable solution.



## Option #2 – Mevo with external audio.

This is the best and recommended option however you will need to consider a few things. In most of the churches (St. John's included), often those speaking are on mic but the organ, piano and choir are loud enough they don't require any mics. If this is the case you need to remember that if you can't pick up the sound on a mic then you can't stream that sound over the internet. Additionally, you can't just add a mic for the choir or the organ and add it to the mix you feed inside the church as it will create feedback when you turn it up. To get around this you have to separate what you need to amplify through your in house speaker system from what you simply need to capture to support your streaming. In the case of St. John's we actually run 2 mixing boards. The main board runs the sound for inside the church and that main board links to a second board that not only feeds the mic signals but also the choir and organ mics to the live stream. If you have someone who runs your sound, work with them to make this happen.

If you are like most churches and have a simple sound setup that allows you to amplify spoken word then our recommendation is that you purchase a good quality compressor mic that will do a wonderful job of capturing all that ambient noise (the organ, the choir and the parishioner's responses) and an item called an iRig DUO. This will basically allow you to capture sound from 2 sources, adjust the level of each and feed it into one signal, usually through a 1/8" mini jack (I recommend it be a TRRS jack as you will need that tip is you want to feed the signal into an iPad mic jack). So, with the help of some cable adapters you will want to feed the amplified signal from your sound board into one side of the DUO and your good quality ambient mic into the other side of the DUO. Then, you will have a single 1/8" jack that you can plug into the back of the camera or into the mic jack on your apple device. You will need to adjust the level of each signal coming in to make sure it is balanced but once it is set you will need little further adjustment.

## Additional Points of Interest

While the Mevo Plus does give you the ability to record in 4k, this resolution isn't currently supported by any streaming platform. You might consider it if you are thinking you want to do some great quality recording beyond just streaming. One thing to notice is that the 150 degree lens does create a slight "fish eye" effect.




The camera uses "digital zoom" not "optical zoom". This means you do lose a little clarity when you go into full zoom. For the purpose of streaming we don't feel this should hinder your decision to go with Mevo.

You can get up and running in an hour. We know. We did it. That being said, there is a learning curve and it is a bit fussy to get going at the start but once you run it a few times you will find it very intuitive.

A solid internet connection is a must. If you want to run everything off your wifi, make sure it is stable. If not, wire it into your router.

## Investment

Below is a list of items we investigated and depending upon what you decide to do can help you figure out the cost.

	Mevo	Cost of Entry	St John's Shaughnessy Beta	Minimum setup
				
	PLUS		Start	Start
Camera	\$ 410.00	\$ 545.00	\$ 545.00	\$ 545.00
Boost	\$ 270.00			
Power over Ethernet Adapter		\$ 205.00	\$ 205.00	\$ 205.00 (could be less if just MiniUSB to ethernet adapter used)
Case	\$ 70.00	\$ 70.00	\$ 70.00	
Stand	\$ 110.00	\$ 110.00		
iPad	\$ 400.00	\$ 400.00		
Vimeo Producer Annual Subs	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00
iRig	\$ 50.00	\$ 50.00	\$ 50.00	
iRig Duo (to support ambient mic)	\$ 150.00	\$ 150.00		
Adapters and cables	\$ 400.00	\$ 400.00	\$ 400.00	\$ 150.00
micro SD card and adapter	\$ 75.00	\$ 75.00		
Lighting (2 x Yorkville LP LED2)	\$ 1,900.00	\$ 1,900.00	\$ 1,900.00	
Lighting brackets	\$ 140.00	\$ 140.00	\$ 140.00	
			<u>\$ 3,560.00</u>	<u>\$ 1,150.00</u>

[www.mevo.com](http://www.mevo.com)