PRELIMINARY DESIGN PROPOSAL

Streaming System Options

St Mark UMC

4601 Fairfield Ave

Fairfield, OH 45014

Project # 50969

3-11-2022

All prices subject to change without notice based on cost changes in the industry as a whole. Once shipped, items, if order is cancelled, will be subject to a 20% restocking charge.

Note: This proposal is designed as a conversation starter and as such pricing is based on the exact configuration presented being installed. It is anticipated that any final pricing will be different from this based on final product and installation specifications.

TO: Mark Hensler; Joe Payne, Pastor

Proj # 50969

Note: all equipment proposed herein is standard HD resolution and not UHD(4K). All devices can be upgraded to UHD if so desired with the appropriate upcharge for equipment. Labor rates will not change.

Scope: Provide options for upgrading the livestream system in the church

Option 1: Basic

This option adds audio to the existing camera and configures the system to be fully operated from the church.

Features:

1. Use existing Hikvision camera
2. Use existing joystick and configuration to control the camera.
3. Maintain current streaming engineer location
4. Connect audio from a monitor channel on the audio desk to the camera
     a. Audio engineer uses monitor to mix audio using headphones
     b. Audio engineer jumps between room levels and stream levels
5. Bring Youtube/Facebook configuration to the church for the stream engineer to program as needed or:
6. Stream to Boxcast, StreaminchurchTV or other multicast/scheduling service where multiple destinations can be configured using the Boxcast dashboard.

Note: This option does not include any physical desk or workstation modification.

Cost estimate: $2500.00

Optional Lenovo 14" laptop computer $ 895.00

Option #2: Hardware switching, Level 1

This option adds hardware switching and one new camera with joystick. Operator remains in current location. Audio will be introduced at the video switcher but control will remain at the audio console.

 Features

1. Add Black Magic ATEM Television Studio HD switcher
2. Add PTZOptics 30X zoom PTZ camera & joystick
3. Connect presentation system program output to switcher
4. Use existing Hikvision camera & connect to switcher*
5. Use existing joystick and configuration to control the Hikvision camera.
6. Maintain current streaming engineer location
7. Connect audio from a monitor channel to the ATEM switcher.
   a. Streaming engineer can use headphones to monitor the audio and set overall levels but not the mix.
   b. Audio engineer uses monitor to mix audio using headphones
   c. Audio engineer jumps between room levels and stream levels
8. Bring OBS configuration to the church for the stream engineer to program as needed or
9. Stream to Boxcast or other multicast/scheduling service where multiple destinations can be configured using the Boxcast dashboard.

*NOTE: It is unknown if there might be latency issues between using a direct wired camera with an I/P based camera. The Hikvision will have to be connected through an IP to SDI converter. This may cause issues with lip sync. Additionally, since the cameras would be from different manufacturers the camera engines may be from different manufacturers with the result that matching color between the cameras may prove to be problematic.

Note 2: This option does not include any physical desk or workstation modification.

Cost estimate: $ 7900.00

Optional Lenovo 14" laptop computer $ 895.00

Option # 3: Hardware switching with production studio location:

This option adds hardware switching and one new camera with joystick. A remotely located studio space will be provided for stream engineer. Audio will be introduced at the video switcher and individual input channel levels will be controlled by the studio engineer.

Features

1. Create a studio location where equipment and streaming engineer will operate in a secluded environment
2. Add Black Magic ATEM Television Studio HD switcher with optional computer control
3. Add Black Magic Web Presenter to provide encoded stream. (eliminates OBS)
4. Add PTZOptics 30X zoom PTZ camera & joystick
5. Connect presentation system program output to switcher
6. Use existing Hikvision camera & connect to switcher*
7. Use existing joystick and configuration to control the Hikvision camera.
8. Using an iPad or computer, streaming engineer will have access to the all channels on the audio desk through a monitor channel.
   a. Streaming engineer will have headphones from which to mix the audio as needed for off-location viewing.
   b. House audio engineer has no input in the mix.
9. Stream to Boxcast or other multicast/scheduling service where multiple destinations can be configured using the Boxcast dashboard.

*NOTE: It is unknown if there might be latency issues between using a direct wired camera with an I/P based camera. The Hikvision will have to be connected through an IP to SDI converter. This may cause issues with lip sync. Additionally, since the cameras would be from different manufacturers the camera engines may be from different manufacturers with the result that matching color between the cameras may prove to be problematic.

Note 2: This option does not include any physical desk or workstation modification.

Note 3: It is unknown if the current WiFi access point will reach the new studio location for audio control with the iPad. Should there be insufficient connectivity to preform this operation additional costs will be required to develop a solid connection.

Cost estimate: $11,300.00

Optional Lenovo 14" laptop computer $ 895.00

Option 4: Upgraded hardware based option with studio location

This option adds a second PTZ camera and upgrades the video switching to a desktop console and provides for speakers for monitoring audio levels.

Features:

1. Create a studio location where equipment and streaming engineer will operate in a secluded environment
2. Add Black Magic ATEM Television Studio Pro HD switcher with optional computer control
3. Add Black Magic Web Presenter to provide encoded stream. (eliminates OBS)
4. Add 2 PTZOptics 30X zoom PTZ cameras & joystick
5. Connect presentation system program output to switcher
6. Use existing Hikvision camera as an overall room view for engineer
    a. Can be connected to the switcher as a third camera*
7. Use existing joystick and configuration to control the Hikvision camera.
8. Using an iPad or computer, streaming engineer will have access to the all channels on the audio desk through a monitor channel.
    a. Streaming engineer will have either headphones or speakers from which to mix the audio as needed for off-location viewing.
    b. House audio engineer has no input in the mix.
9. Stream to Boxcast or other multicast/scheduling service where multiple destinations can be configured using the Boxcast dashboard.

*NOTE: It is unknown if there might be latency issues between using a direct wired camera with an I/P based camera. The Hikvision will have to be connected through an IP to SDI converter. This may cause issues with lip sync. Additionally, since the cameras would be from different manufacturers the camera engines may be from different manufacturers with the result that matching color between the cameras may prove to be problematic.

Note 2: This option does not include any physical desk or workstation modification.

Note 3: It is unknown if the current WiFi access point will reach the new studio location for audio control with the iPad. Should there be insufficient connectivity to preform this operation additional costs will be required to develop a solid connection.

Cost Estimate: $15,600.00