



3/11/2024
Revision 4

Your Vision, Our Experience:

City of Spring Lake Park

City Hall Remodel Audio
Visual Systems

Proposal for Engineering,
Installation, Integration, and
Training



Introduction

About Z Systems

Z Systems, Inc. is a professional video integrator, reseller, and rental house, specializing in the engineering, design, and integration of customized video and A/V systems. Z Systems is a small business based in St. Louis Park, MN.

NOTE:

Z Systems is a small business and a woman-owned business.

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Overview

The City of Spring Lake Park is remodeling they City Hall building and as part of this remodel, is seeking to outfit the building with new audiovisual systems. The City has entered into a design contract with Z Systems, and as part of this, Z Systems has met with representatives of the City as well as other entities involved with project. The resulting list of desired functionality for the AV systems in the new building is as follows:

Desired Functionality

Council Chambers

- A professional broadcast production switcher that is both powerful and easy for a novice to use.
- The existing Sony PTZ cameras and document camera should be re-used.
- A new lectern, which should be portable and have a shelf for the existing document camera.
- Two ceiling-mounted displays above the dais, facing the audience. Another display along the north wall. Six high-brightness displays on the dais, in between each of the seating positions. A confidence monitor on the easy wall, mounted above the windows, near the ceiling.
- A button-based presentation switcher which would live at the staff area of the dais, with an auxiliary button panel in the control room for use by production switcher operator.
- Hard-wired HDMI inputs at lectern and staff position at dais, as well as a Barco Clickshare wireless presentation system.
- Seven wired gooseneck microphones for dais, as well as two wireless handheld microphones.
- A ceiling speaker system divided into two zones – one for the audience and one for the area around the dais. A third zone would be for the hallway overflow area.
- Video conferencing capability to broadcast the meeting on a platform such as Zoom. This meeting would be hosted by the staff PC OR by a PC connected to the Barco Clickshare.
- The ability to encode two video outputs from the production router that can be received at north Metro TV for a remote production workflow. North Metro would provide one of the two encoders.



Desired Functionality

Desired Functionality (Continued)

Multi-Purpose Room

- This room should feature three displays on carts, with video conferencing functionality.
- The displays and speakers in this room should be able to receive a feed from the council chambers for overflow use.
- This room should have two wireless microphones- a handheld and a beltpack/lavalier.

EOC / Training Room

- The room will be used for emergency operations/command and control, remote training and on-site training.
- The room should feature two cameras for video conferencing – One to capture a presenter/trainer in this room and allow for remote participants, and one to capture the people sitting in the room to receive training from remote locations.
- A large display on the south wall, a large display on the east wall and a third display on a cart.
- A touch panel control system to allow the routing of various sources to various displays, control the room speaker and microphone volume, and turn the displays on and off.
- A new lectern.
- A Barco Clickshare wireless conferencing system for wireless BYOD.
- One wireless handheld microphone and a wireless lavalier microphone

Conference Rooms (2)

- Conference Rooms AV Systems should not be included in this work.



Featured Technologies

ROSS



ATLONA



Ross Quorum Meeting Control System

Governments and legislators need to document both the audio and video of their meetings often without access to the facilities and skills they need. Ideally, this would be from multiple angles at very high quality. Quorum introduces automation to control cameras, add graphics, and monitor microphones. Operators without technical backgrounds can use Quorum's intuitive interface designed for anyone to use to produce professional results where every nuance is captured accurately.



Atlona Velocity Control Systems

Atlona Velocity is a touch panel control system that is affordable to set up and modify and very easy to use. The touch panel in the Training Room/EOC will allow the user to route video to various displays.



Kramer VS-61 IDT 6x1:2 4K HDMI/HDBaseT Extended Reach PoE Auto Switcher

The Kramer VS-61 IDT is a high-performance automatic switcher for HDMI video signals, with six HDMI inputs, the unit can automatically or manually switch to a predefined or last connected input. The switcher features contract closure connections for a remote custom button switcher panel.



HuddleCamHD SimpliTrack3 Auto-Tracking PTZ Camera

The SimpliTrack3 Auto-Tracking PTZ Camera from HuddleCamHD is a dual-sensor PTZ camera with a 20x optical zoom capable of capturing crisp images with resolutions up to 1080p60. The SimpliTrack3's advanced auto-tracking and auto-framing features can easily toggle between tracking a lecturer and framing groups of people in the scene, making it an ideal solution for conference settings or classroom interactions. The SimpliTrack3's Smart Auto-Tracking technology intelligently locks onto the subject, ignoring other moving objects and adjusting to changes. Easily toggle Auto-Tracking or Auto-Framing ON/OFF. Toggle between manual PTZ controls and automated PTZ movements with a simple command. These commands can be sent to the included software or to an optional joystick controller.

System Description

Council Chambers

Production, Control Room and Rack Equipment

- A Ross Carbonite switcher will be installed, as part of the Ross Quorum Meeting Control System. This provides an easy-to-use graphical interface, making production easy for even a novice user.
- A Ross video router will be installed to allow for routing of various sources. This device will serve as the central hub of the production system in for the council chambers, and presentation endpoints (displays) will also be fed from this router.
- One Magewell video encoder will be installed to allow for streaming of an output from the Ross router via SRT to north Metro TV for a remote production. This output will also feed a Blackmagic video recorder and a customer-provided Makito X encoder for signal transmission.
- A Symetrix audio digital signal processor will be installed. This will provide audio processing for the Council chambers.
- A large uninterruptable power supply will supply steady power, eliminate power irregularities and provide a brief battery backup period in case the power goes out.
- An unmanaged PoE+ network switch will allow equipment to connect to an isolated AV network. This switch will also provide PoE+ power to cameras.
- A control room desk with other needed furniture will be installed in control room. The exact furniture is still to be determined prior to install, and will be based on the available space.
- Various displays will be installed in control room for program video and any other video sources that need to be monitored.

Displays

- Two 65" displays will be mounted from the ceiling, on either side of the dais, facing the audience. Another 65" display will be wall mounted on the north wall. A 43" display will be mounted above the windows on the east wall, which will show the program video instead of the presentation video (confidence monitor). A 43" Display will also be installed above the windows in the hallway for overflow purposes.
- Six compact portable 16" displays will be installed on the dais – One in between each seating position. These have higher brightness than a standard monitor. to handle glare.



System Description

New Lectern

- System includes a new portable lectern. A gooseneck microphone holder will be installed on the lectern so a wireless handheld microphone can also function as the lectern microphone. This means a microphone cable won't have to be disconnected if the lectern is moved.

Cameras

- The existing Sony BRC-H800 PTZ cameras will be re-used, and installed at locations specified during our meetings.
- The existing document camera will be re-used, and installed on a shelf on the side of the lectern.
- There will be wired HDMI connections at the staff position on the dais and at the lectern.

Presentation System

- A Kramer presentation switcher will be installed at the council dais at the staff area. This switcher can be controlled by buttons on the device itself. In the control room, a custom button panel will be installed to control the switcher from the master control area.
- A Barco Clickshare CX-30 wireless conferencing system will be installed for wireless video conferencing and presentation. Both this wireless connection and a wired connection at the staff position at the dais will also receive USB video containing the program video and audio from the production switcher for use in video conferencing apps on the computer. This will allow city council and other meetings to be broadcast on platforms such as Zoom.
- A BrightSign digital sign player will be installed, which will be a source for the presentation system. A graphic, such as the city logo, can be played from this player, to be displayed on the chambers displays when there is no active presentation taking place.

Audio

- Seven wired gooseneck tabletop microphones will be installed on dais. The bases have a button which will be set up as 'hold-to-mute' - while the button is pressed, the microphone is muted.
- Two wireless handheld microphones will be installed. One of the two microphones will be used as a lectern mic.
- A total of 12 ceiling speakers will be installed, in three zones. One zone will cover the audience area, the other zone will cover the dais area, and a third zone will be in the hallway for overflow. The zoning of the speaker system will allow for elimination of feedback and a better overall audio experience.

Continued on Next Page...



System Description

Multi-Purpose Room

- As per our discussions with Spring Lake Park, there will be three 85” displays on carts. An HDMI cable can be plugged into designated wall or floor ports to receive the room video feed.
 - The room will have an HDMI input wall plate, which will allow for presentation into the room AV system (all three displays).
 - The room will also have A Barco Clickshare CX-20 will feed the room AV system.
 - When a laptop is connected via the HDMI wall plate, the displays in the room will receive video and audio from the connected device. When there is no laptop connected to the wall jack, the displays will receive a feed from the Chambers video system.
 - One of the three video carts is intended to be used for the east portion of the divisible space. This video cart will have a Barco Clickshare CX-20 wireless conferencing and presentation system and a Logitech Rally Bar Mini all-in-one video conferencing bar. To present, the user plugs the Clickshare button into their computer. The Logitech camera, microphone and speakers will be sent wirelessly to the connected computer. A second cart will be similar to the first cart, with an 85” display, a Barco Clickshare, and Logitech all-in-one device. The Logitech device will be the full-sized Rally Bar as opposed to the mini, as it has more powerful speakers than the Rally Bar Mini. This cart is intended to be used in the main west side of the Multi-Purpose Room.
 - On each of the conferencing carts, the Clickshare connection will be active on the cart display when Clickshare is in use, otherwise the display will default to main video feed.
 - Note: in the current design, the video conferencing and wireless connectivity system for the two carts that have those capabilities will only function on the carts they are a part of, i.e. they don't connect the rooms speakers, nor do they connect to the other screens.
 - **Either of the two video conferencing carts can be used as standalone systems in any room in the building, such as the conference rooms.**
 - A third cart will not have will only receive the main video feed, and it can also be used as a display in the Training Room / EOC via a wall HDMI jack.
 - A display will be mounted on the wall, which will receive the main room video feed.
- This room will also have a total of nine ceiling speakers, separated into two zones. Six speakers will be in the main (west) zone and three will be in the east zone.
- The room will feature five wireless single-channel handheld/lavalier combo systems.
- There will be a wall-mounted audio controller to control audio levels and sources in the room.
- A Bluetooth wall plate will be installed on the wall to allow people to play music.
- The room will share an audio processor with the chambers AV system.



System Description

Note: A second, possibly wireless control panel was requested for these spaces. It is technically possible to install a second touch panel, but it is not officially supported by Cisco. For this reason, Z Systems is not able to quote a second touch panel for these rooms. **Please talk to Freddie if you have questions about a second touch panel!**

Wireless touch panel is not possible, as the touch panels require a power source.

EOC / Training Room

- The EOC / Training room has several different usage scenarios.
 - As a training room, a trainer can be presenting in this room, while a local and remote audience participate in the training.
 - As a training room, a local group of trainees can be trained by and interact with a trainer in a remote location.
 - As an emergency operations center, different wired and wireless video sources can be projected to the various screens in the room.
- A new lectern will be installed in this room, which will contain some audiovisual equipment.
- This room will have an 85” display on south wall, an 85” display on the east wall, and will feature a wall plate which can be used with one of the 85” cart displays from the Multi-Purpose room.
 - The room will have two pan/tilt/zoom cameras. These cameras have intelligent tracking and framing technology, allowing for the perfect shot without the need for an operator.
 - One camera will be installed on the north wall. This is the presenter camera and will track and frame a presenter as they move about the room.
 - The other camera will be installed near the large display on the south wall. This camera will frame any subjects sitting in the room.
- There will be one Atlona Velocity touch panel, installed on the lectern surface. The touch panel will allow for display control, audio control, source selection for room displays, and camera selection for video conferencing purposes.
- The room will have two wireless microphones – a handheld and a lavalier.
- The room microphone will be a Shure MXA920 overhead ceiling array mic, this will allow for clear capture of room participants.
- There will be a wired input near the lectern for the system, as well as wireless BYOD video conferencing system. Both the wired connection and the Clickshare wireless connection can be used for video conferencing apps. A third input into the system will be via an HDMI wall plate somewhere in the room.
- The room will have 6 ceiling speakers.
- Two video feeds will be sent to the video system in the chambers. The sources for these feeds will be selectable on the touch panel.
- One of the input sources for this system will be a feed from the council chambers video system. The source for this feed will be selectable on the chambers video router control panel.



Scope of Work

Scope of Work:

- At least one, if not more, site visits and customer meetings to finalize details such as exact display locations, room dimensions and characteristics, etc. Based on findings from this/these visit(s), changes to final cost may result.
- Creation of block diagrams and rack elevations, as well as some room elevations for key pieces of equipment.
- Configuration of various subsystems in-shop at Z systems in preparation for deployment onsite. This could include network switches, presentation switchers, control systems, Ross video switching systems, Shure microphone systems, etc.
- Travel to jobsite, load in.
- Unboxing and preparation of new equipment
- Installation and configuration of new and existing equipment as indicated in system description above, on diagrams below, and on attached quote.
- Testing of systems.
- End-user overview on new system functionality.
- Clean up, load out.

Scope Exclusions / Customer Responsibilities:

- Troubleshooting or Maintenance on existing equipment or systems, aside from what is indicated in the system description above. Existing equipment is expected to be in working order. Additional troubleshooting and configuration, aside from what is indicated above, will incur additional costs.
- Network considerations. Cisco Room systems require wired network connections.
- Electrical. All new equipment requires nearby AC power outlets.
- Disposal of refuse and unused equipment. This is the responsibility of others \.
- Delays due to circumstances out of Z Systems control may result in additional costs.

Z Systems Annual Service Contract Included In Proposal.

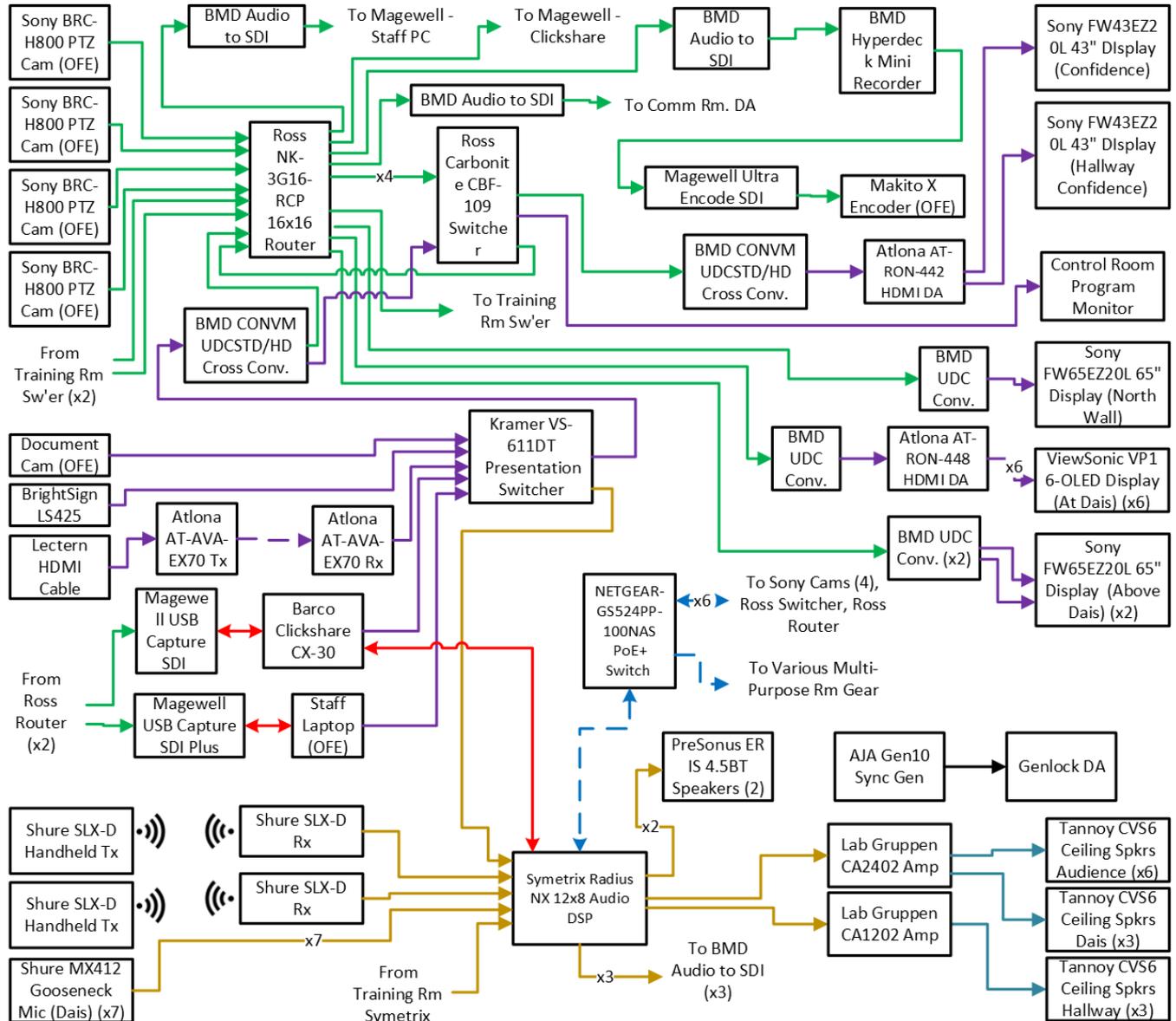
This proposal doesn't include pricing for a silver annual service contract. This is in addition to our 90-day installation warranty. This means that for a year, Z Systems will service the system without any additional service charges. Please inquire for the cost of getting covered.



System Diagram

Council Chambers, Control Room and Hallway Overflow

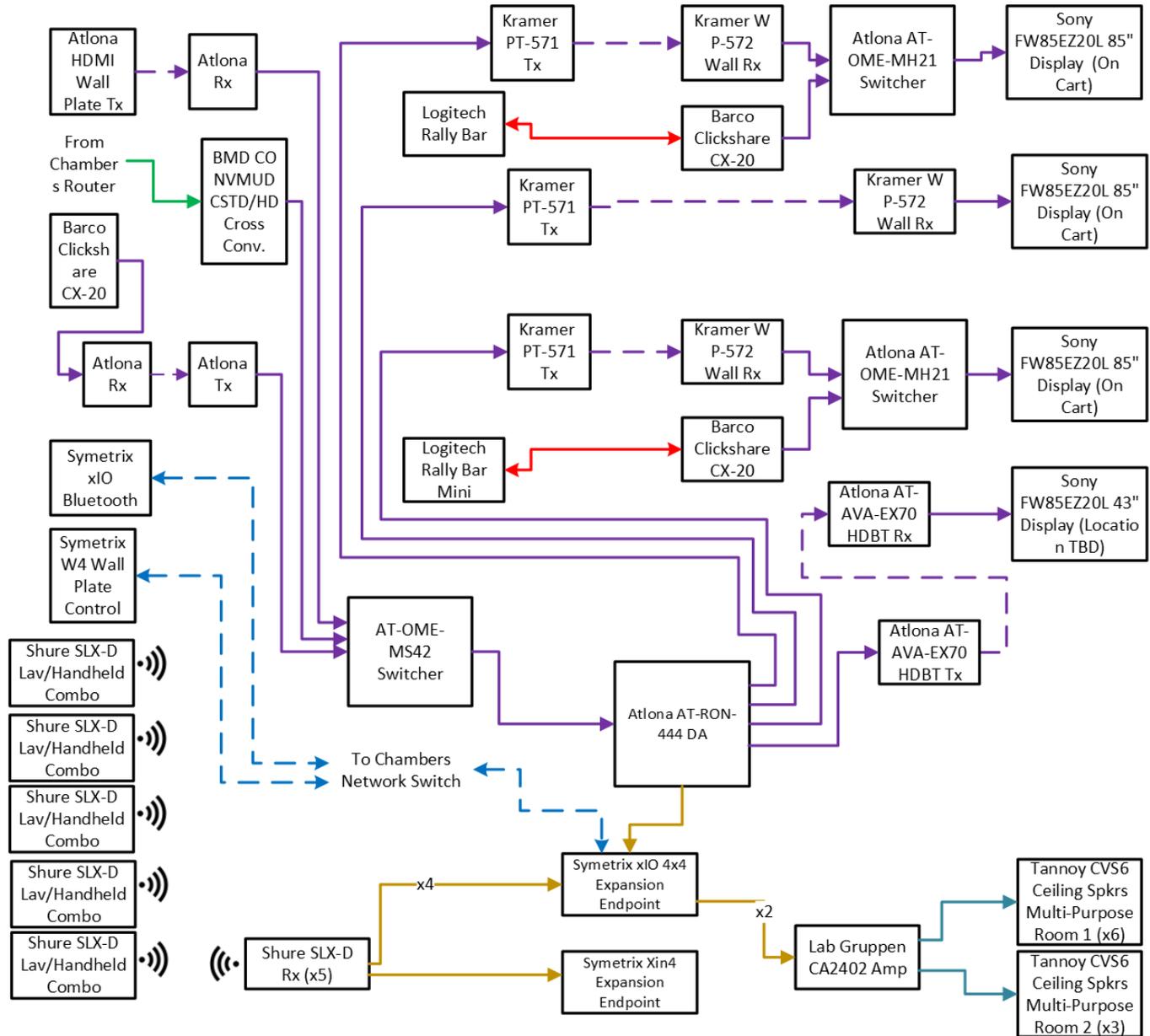
Note: This preliminary diagram is meant to demonstrate overall equipment connectivity and signal flow, and may not contain all connections in the final system.



System Diagram

Multi-Purpose Room

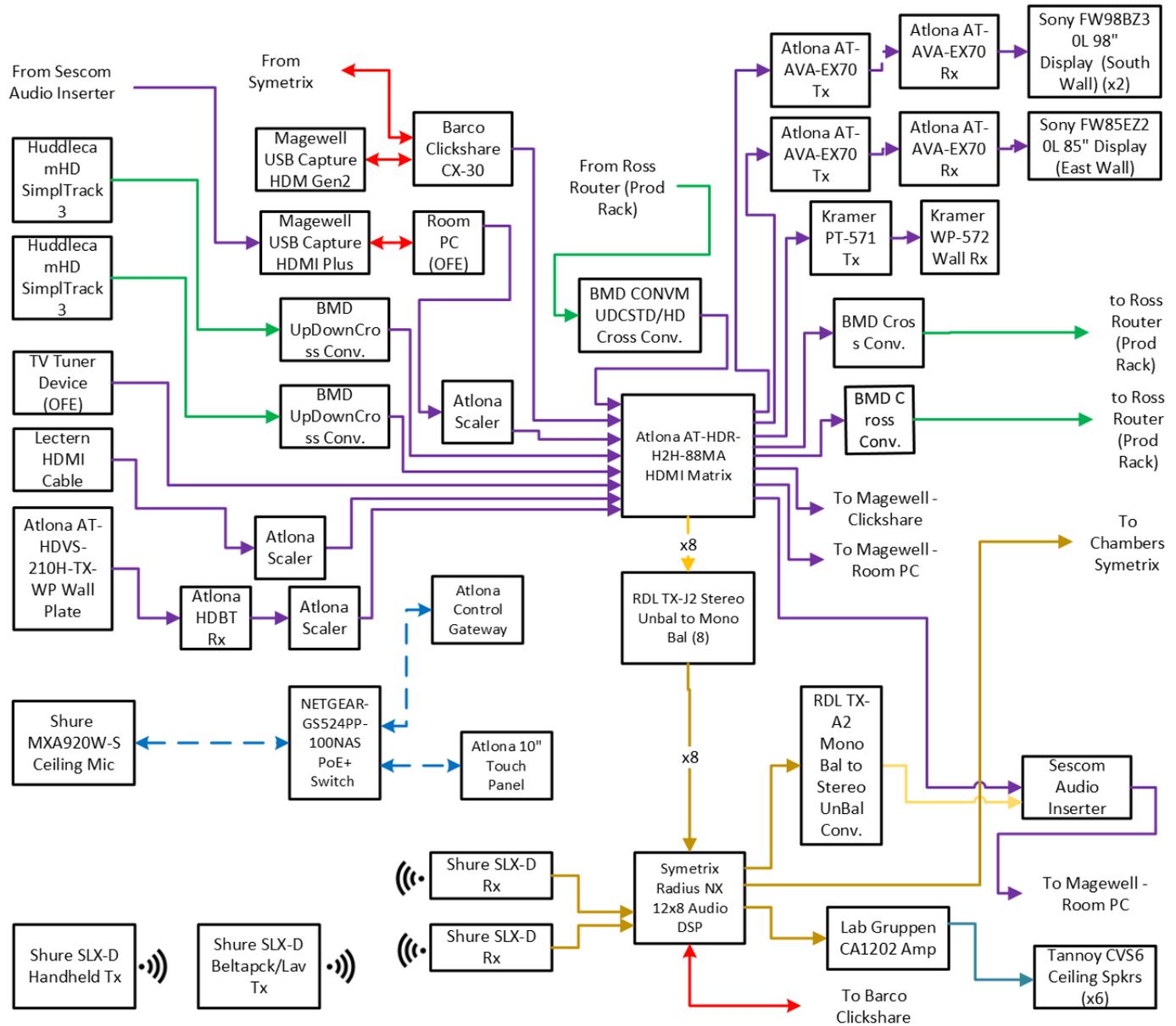
Note:
This preliminary diagram is meant to demonstrate overall equipment connectivity and signal flow, and may not contain all connections in the final system.



System Diagram

EOC / Training Room

Note: This preliminary diagram is meant to demonstrate overall equipment connectivity and signal flow, and may not contain all connections in the final system.



Our Team

Company Background

- Number of years in business: **24 years**
- Taxpayer Identification Number: **41-2007713**
- Number of years working with government agencies: **18 years**
- Resumes of the project manager and key personnel who will be responsible for performance of any contract resulting from this RFP: **(see right)**
- Firm ownership and, if incorporated, the state in which the firm is incorporated and the date of incorporation: **Marjorie Zdechlik, incorporated on September 1, 1998, in the State of MN**

Z Systems has decades of combined experience in pro video and A/V integration. We are a team and a family. Here are the key Z Systems staff members you will be working with throughout this project:



Freddie Gotfredson | Account Manager

freddieg@zsystem.com

Freddie will function as the primary contact on this project, and his responsibility is to ensure clear communication among all parties and that any customer needs are met in a timely manner. Freddie has a passion for customer service. He brings with him a lifetime of experience in the world of multimedia production and design, having worked as a freelance audio and video producer, as well as a graphic, web, and print designer.



John Zdechlik | Integration Manager and Vice President

johnz@zsystem.com

As the VP and lead project manager, it is John's responsibility to make sure Z Systems delivers on our promises. John will serve as the customer's main point of contact during the integration process and is responsible for scheduling the installation team and making sure that no details of a project are missed. John received his degree in electrical engineering and promptly went into the A/V industry right out of college. Job roles have included consultant, design engineer, sales engineer, and now vice president of Z Systems. John co-founded Z Systems in 1998 based on a need in the marketplace for a small, elite group of highly technical people to tackle the tough jobs in a very hands-on manner.



Jeremy Hauer | Installation Supervisor

jeremyh@zsystem.com

Jeremy will be assisting in the installation and integration of this project. Jeremy has a background in engineering and construction, having worked as a television sound editor and construction contractor for a combined 22 years. Jeremy's education was in networking, and he has certifications from Atlona, Cisco, Microsoft, and Apple, as well as the ProTools media production suite.



Margie Zdechlik | Owner, President and Controller

margiez@zsystem.com

As the President of Z Systems, Margie is quintessential to all aspects of our business, including our company culture, our commitment to customer service and professionalism, and our business operations. As the controller, customers will interact with her on issues such as billing and shipping.



Featured Projects

Z Systems has decades of experience engineering and integrating customized A/V and video solutions. We have worked with city governments, houses of worship, educational institutions, professional sports teams, and Fortune 500 companies. Whatever the job, Z Systems has the experience to get it done correctly, on time and on budget. Here are some projects we have designed and integrated:

MNDOT Mankato Training and Conference Room Audiovisual Systems

Z Systems designed and installed the audiovisual systems for the large conference and training rooms at MNDOT Mankato. This included a triple divisible space, conference cameras, presenter cameras, an Atlona Velocity Control System, new ceiling microphones, and new 98" displays.

Ordway Theater / Saint Paul Chamber Orchestra Live Production System

Z Systems installed high-end cameras and a high-end broadcast switching system at the Ordway theater to capture, record and live stream the Saint Paul Chamber Orchestra performances, allowing them to reach a larger audience.

Minnesota Orchestra Live Production System

Similar to the Saint Paul Chamber Orchestra, Z Systems designed and installed premium broadcast and production equipment for the live streaming and production system at the Minnesota Orchestra.

Newport City Hall Audiovisual Systems

Z Systems designed and installed all of the audiovisual systems for the new City Hall at Newport. This included training rooms, the City Council Chambers, and a number of conference rooms. These rooms use Atlona Velocity Control systems, similar to the rooms in this proposal.

Ramsey County and Washington County – Various Audiovisual Systems

As a primary audiovisual vendor for Ramsey and Washington Counties, Z Systems has installed dozens of audiovisual systems of various shapes and sizes at conference rooms in both counties.

