

# Zion Lutheran Church Technology Upgrades

To be presented to the Annual Congregational Meeting January 26, 2014

The two main categories addressed by this proposal are; 1) **technology in worship**, and 2) **improved office technology**. Within the **technology in worship** category are the computer and network installation, and three sub-categories: **Projection**, **Audio**, and **Live-streaming Video**.

1) A core installation used by all three of the worship sub-categories would be a single computer and pair of monitors which would be placed on a multi-purpose desk in the balcony/choir loft and an expansion of the computer network to support it.

1A) The **projection** category includes the placement of three screens and projectors, as well as the hardware to mount and install those items. Three screens are the ideal arrangement for Zion as that would place appropriately sized screens on either side of the sanctuary - not detracting from the chancel and pulpit as the main focal points - and a third screen in the rear of the church so the worship leaders can also see what is being projected. In the event we want to have a service or other event without the screens as a distraction they will be able to be retracted. Projection in the sanctuary will allow us to use PowerPoint or similar presentation software to reduce the printing of bulletins and inserts, to improve our visitor friendliness by reducing dependency on multiple books and papers in worship, the use of thematic art or sermon illustrations, and it could even be used for other non-worship applications such as movie nights and distance education opportunities.

1B) The **audio** update category places a very powerful and flexible digital audio mixer in the balcony of the church and a relatively small interface in the sacristy to connect to the microphones and instruments currently used in worship. This is a significant upgrade from the small powered mixer currently located in the sacristy and provides us with several benefits.

a) It places the control surface in the sanctuary where the person running the sound system can hear what the congregation hears and make adjustments as needed.

b) It would allow for audio to be sent from the computer for use as a "virtual musician" in the event we do not have an organist/pianist available, or to play sound tracks from videos that can be used in worship, as sermon illustrations, or even to facilitate distance learning provided by one of the newer seminary partners that have sprung out of LCMC.

- c) It would allow for audio to be sent to the computer to record MP3 files so we can place sermon or worship services on the website as podcasts, or merely to record them to CD's to take to shut-in's who do not have internet access.
- d) The use of this new digital technology allows us to do this all through one very inexpensive cable connecting the mixer in the balcony to the interface in the sacristy. With older analog technology we would be spending nearly as much just in cables.

1C) Equipment needed to **live-stream video** of the service to the church website are a camera mount, a high definition camcorder, and a signal encoder to get the video signal into the computer. The camera specified in the attached spreadsheet is rather unique in that it includes the signal encoder in the camera, so all we need is the camera and mount. Live-streaming of video is the modern-day equivalent of the cassette tape or CD that was taken to shut-in members, it also has the potential to be a point of connection to members who are too far away temporarily, and as an outreach to people in the community who may be interested in us but are too afraid or self-conscious to walk through our front door on a Sunday morning.

2) Finally is the update of the office computer. The current computer in the office is a very old one (running Windows XP) and has no connection to the internet. Also the church management software that is used to keep track of church membership is out of production and the data stored in it is not able to be accessed to transfer it to a new computer and up to date software. Leslie currently creates all the church bulletins and newsletters on her own computer at home. When she retires from the position of church secretary we will still need to be able to create those documents. A modern computer running Windows 7 or 8 will be up to that task for several years. The software proposed is produced and supported by Concordia Publishing House's Concordia Technology Systems, so we know it will be supported into the future and that it is particularly suitable for use by a Lutheran church.

The prices on the attached spreadsheet have been gathered from various sources over the last month or so and are subject to change one way or the other, and through careful stewardship we may even find better deals or improved components when we actually go to place orders. We are very fortunate to have people in the congregation with the skills and the willingness to install the equipment. Another LCMC congregation without these gifts among their membership recently installed a similar computer and projection system (no sound system upgrades, no streaming video, and no office technology upgrades) in their sanctuary and spent about 1.5 times the total that is proposed for the entire technology package here at Zion.

### Zion Technology Upgrades

<b>Computer on balcony</b>	<b>Source</b>	<b>Cost/unit</b>	<b>Shipping</b>	<b>Qty</b>	<b>Cost</b>
Computer to run projection, video, & audio		\$ 640.00		1	\$ 640.00
22" LCD Monitor		\$ 130.00		2	\$ 260.00
Desk for balcony	Musician's Friend	\$ 300.00	\$ -	1	\$ 300.00
					<b>\$ 1,200.00</b>
<b>Network improvements</b>					
Netgear D6200 Router/Modem	Newegg	\$ 156.99	\$ -	1	\$ 156.99
TP-Link Archer C7 Router	Newegg	\$ 99.99	\$ -	1	\$ 99.99
					<b>\$ 256.98</b>
<b>Projection Package</b>					
Elite Screens Spectrum128X	Ebay	\$ 260.99	\$ -	3	\$ 782.97
Atdec TH-WH-PJ-CM Projector Ceiling Mount	Amazon	\$ 69.91	\$ -	3	\$ 209.73
Panasonic PT-VW440U	Full Compass	\$ 1,249.90	\$ -	3	\$ 3,749.70
HDMI 1x4 Cat6 Amp	Monoprice	\$ 162.61	\$ 8.39	1	\$ 171.00
					<b>\$ 4,913.40</b>
<b>Streaming Video</b>					
Panasonic HC-V720 Live Streaming HD Camcorder	B&H	\$ 478.00	\$ -	1	\$ 478.00
Camera Mount	B&H	\$ 90.00	\$ -	1	\$ 90.00
					<b>\$ 568.00</b>
<b>Audio Update</b>					
Behringer X32	Sweetwater	\$ 1,499.99	\$ -	1	\$ 1,499.99
Behringer S16 Digital Snake	Sweetwater	\$ 899.99	\$ -	1	\$ 899.99
					<b>\$ 2,399.98</b>
<b>Office Computer Updates</b>					
Computer for Church Office		\$ 500.00		1	\$ 500.00
22" LCD Monitor		\$ 130.00		1	\$ 130.00
CTS Shepherd's Staff Software	Concordia	\$ 799.00		1	\$ 799.00
					<b>\$ 1,429.00</b>
<b>Grand Total</b>					<b>\$ 10,767.36</b>

The Stars Tell the Story  
An Advent Worship Series

Worship 59  
Offering 2:30-3:00

The Stars Tell the Story  
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