

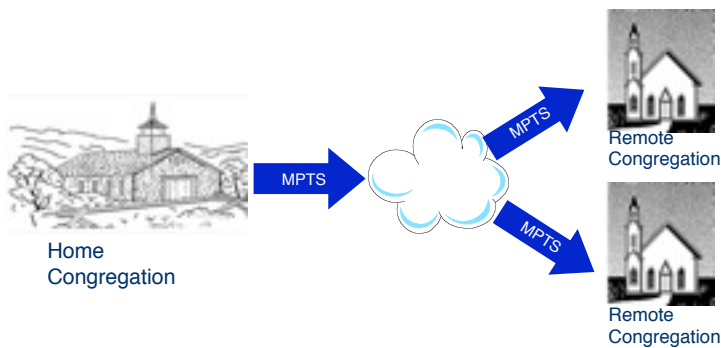


A growing trend in the modern House of Worship is the shared worship experience among geographically separated congregations. Extremely high production values, multi-camera high-definition programs and multi-channel audio are all needed on a near real-time basis by the remote campuses.

The DVStor² Transport Stream Recorder provides delayed playback of a multiplexed program to multiple sites independently, and with an easy to use interface.

BACKGROUND

Audio and video production techniques for House of Worship (HoW) applications now rival the capabilities of high-end television production studios. Even the modest modern church often provides image magnification of the worship leader and graphics hymnal and scripture support for the convenience of the congregation. The use of high-definition cameras and multiple synchronized displays is the norm in such churches.



More and more churches are expanding to multiple church campuses. These churches use video to distribute the message to each remote site. Some churches have implemented this by pre-recording the main service several days in advance, and physically distributing content via hard drive, DVD, and so on, to each remote site. On the day, the pre-recorded content is then played at the appropriate point in the local service.

Others have established live digital links between the sites and carefully managed each local production to attempt a seamless "join" with the main service. This approach, of course, requires careful coordination and timing – anything "off schedule" at the main site can cause numerous schedule problems at the remote sites.

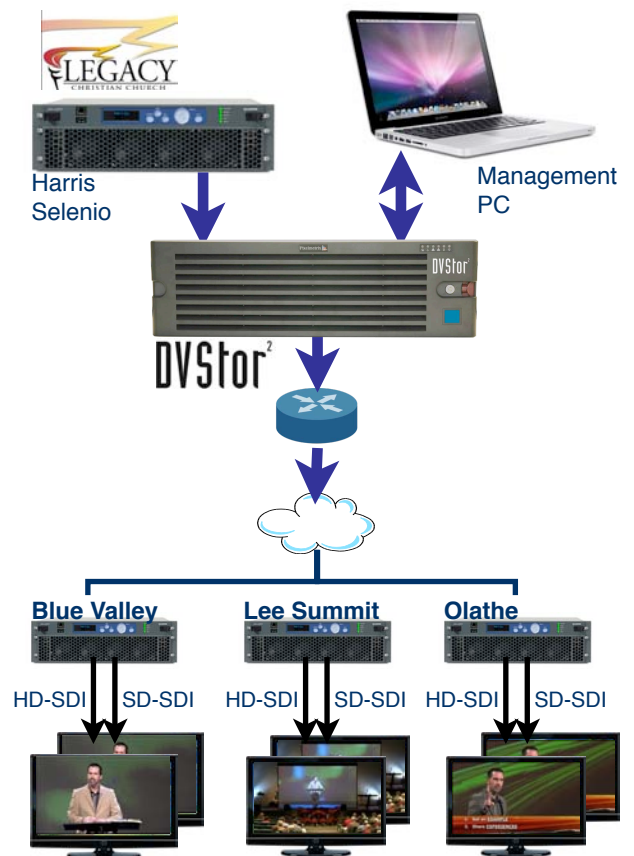


DVSTOR² MULTI-SITE CAMPUS DELAY SYSTEM

A variable delay of the integrated program from the main campus that is controlled by the remote campus is a better solution. This lets remote operators present the main message easily and naturally with the flow of the local service.

The Pixelmetrix DVStor² has been enhanced with new functionality to provide this capability for such House of Worship applications.

In this solution, multiple video feeds and multiple channels of audio are multiplexed to form a single transport stream which is recorded on the DVStor². Each remote campus can log in to the DVStor² and establish a separate delayed playback session. Program delays as short as ten seconds or as long as several hours can easily be established, and each playback session is independent from the others and from the recording itself.



SIMPLIFIED USER INTERFACE

Each DVStor² remote client is provided with a special URL dedicated to each remote church. The HTML user interface is accessed via a standard web browser, and is intuitive and easily managed by a volunteer or staff operator.

IP Playback (Delay) Lee's Summit Pixelmetrix

Playback and re-cue controls

Initial delay offset

DVStor: Sun Feb 12 13:00:20 2012

Target IP Address: 98.100.100.180 Target Port: 7200

Initial delay offset:	Day	Hour	Minute	Second
000		00	00	00
Current delay offset:		06	21	18

Note: Minimum delay = 8 seconds.

Line	Start Time	Stop Time	TS Duration	TS Size	TS Stream
1	2012-02-12 7:30:13am	2012-02-12 1:00:07pm	05:29:48	22.76 GB	9.200Mbps
2	2012-02-12 8:00:18pm	2012-02-12 8:00:07pm	02:38:48	12.40 GB	9.200Mbps
3	2012-02-08 7:30:10am	2012-02-08 1:02:00pm	05:31:50	22.36 GB	9.200Mbps
4	2012-02-04 3:00:10pm	2012-02-04 8:00:07pm	02:58:51	12.41 GB	9.200Mbps
5	2012-01-29 7:30:07am	2012-01-29 1:00:07pm	05:29:54	22.76 GB	9.200Mbps

Total duration span: 35d 19:58:58
Recorded TS duration: 2d 02:06:45

Total H264 size: 5.777 TB
Used H264 size: 218.27 GB (3.79%)
Total recorded TS size: 194.53 GB (3.36%)

Simultaneous Multi-Client Playback

Each playback instance may be accessed and cued independently by the remote operator. This frees the local congregation from any constraint in scheduling or trying to "fit" the message from the home church.

IP Playback (Delay) Pixelmetrix

Client 1 (Playing...) Client 2 Client 3

Three simultaneous payout channels

Press "Pause" at appropriate part of main program. On director's cue press "Play" to start payout.

DVStor: Friday, October 28, 2011 12:53:40 AM

Target IP Address: 192.168.15.73 Target Port: 1234

Initial delay offset: 000 00 00 00
Current delay offset: 000 00 00 00

RECORD SCHEDULING

DVStor² allows setting of a multiple event recurring record schedule. In the delay mode, operators typically schedule DVStor² to begin recording an hour before a scheduled service, and 1 to 2 hours after the service is finished. This provides playback operators with plenty of time to cue their delay playback.

IP Recording Scheduler Pixelmetrix

Enable scheduler

Recording schedule	IP connection of TS to record	Live layout	Playback recording	Payout destination IP/Port	Op
Day: Sun	Src IP/Port: []	[]	[]	[]	Add
Start: []	Dest IP/Port: []	[]	[]	[]	
Stop: []	[]	[]	[]	[]	

Scanned IPTV traffic: 192.168.1.0/24 -> 229.1.1.2/24

Line	Recording schedule	IP connection of TS to record	Live layout	Playback recording	Payout dest IP/Port	Del
0	Sun 07:30-13:00	192.168.1.1:234	192.168.1.12:1234	No	No	None
1	Sat 17:00-20:00	192.168.1.1:234	192.168.1.12:1234	No	No	None

Supplied with a standard 8 TB of Raid-5 disk storage, DVStor² retains the most recent 32 days of recorded material, allowing more than 700 hours of recordings at 20 Mbps. In a typical HoW application, this means the most recent year of recorded services are online at all times and can be accessed for post-production purposes.

DVSTOR² VIDEO WALL

Its unique Video Wall display allows local and remote operators to view and listen to all video streams simultaneously.

Video Wall (Time) Pixelmetrix

9:20:46AM

Sunday, February 12, 2012 9:34:00 AM

FOR MORE INFORMATION

To learn more about our innovative video solutions or request a demo, contact us today!

Email: sales@pixelmetrix.com

Web: <http://www.pixelmetrix.com>

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