Selected V-Station®HD Case Studies

V-Station HD Multi-Channel Video Recording/Streaming Systems are often called “the Swiss Army Knife” of multi-camera video recording and streaming devices due to their exceptional flexibility to accommodate diverse applications and workflow styles. They combine project management, media management, recording, switching, automatic line-cut creation, live streaming, and content distribution. V-Station HD has become the choice of exacting users in Business, Academia, and Government.

Observation & Analysis

GOVERNMENT OF INDIA

Department of Space
Indian Space Research Organisation

APPLICATION

Eight camera synchronous recording and playback of rocket launch from multiple angles.

PRINCIPAL SYSTEM COMPONENTS

Phase 1: Eight custom V-Station HD Studio8 Multi-Channel Recording/Streaming Systems with add-in Studio Companion Software. Phase 2: Three additional custom V-Station HD Studio8 systems.

USER EXPERIENCE

Note: The classified nature of this project precludes more than a cursory overview of the application.

The Indian Space Research Organisation (ISRO) needed to synchronously record and play back certain rocket launch aspects of Satish Dhawan Space Centre’s (SDSC) Chandrayaan 2 mission to land on the moon’s south pole. Chandrayaan 2 was launched 22 July 2019 from the Sriharikota Space Centre (SHAR) located off the coast of India’s Andhra Pradesh state. SDSC chose FutureVideo over several other DVR manufacturers and FutureVideo engineers provided certain special capabilities that were needed.

The Bottom Line

Studio8’s long recording times and project management capabilities provided SDSC with the ability to log and annotate any frame being recorded—or to do so later during playback. With up to 8TB of video storage and 8 channels of simultaneous 1080p60 synchronized recording/playback, SDSC can record up to 320 hours per channel (2,560 total hours) with each of their custom Studio8 units.

Launch of Indian Space Research Organisation’s (ISRO) Chandrayaan 2 from Sriharikota Space Centre (SHAR)

Broadcast

APPLICATION
Multi-channel line-cut proxy recording of network TV show.

PRINCIPAL SYSTEM COMPONENTS
FutureVideo V-Station HD Studio4 Multi-Channel Recording/Streaming System.

USER EXPERIENCE
Broadcast engineering services behemoth NEP provides the production services for the television show "The Talk" airing daily on CBS. It's shot in a sound stage on the CBS lot in Studio City, California (once the home of Republic Pictures).

The Workflow Bottleneck
As one of his daily tasks, NEP engineer Jason Celek burned and distributed low-resolution SD copies of show episodes on DVD to various production and network departments. He sought a way to replace the inefficient optical-based system with an advanced yet affordable file-based proxy HD recording solution.

V-Station HD Solution
Celek's evaluation of FutureVideo's V-Station HD Multi-Channel Video Recording/Streaming Systems convinced him the Studio4 model would meet his needs and provide additional capabilities that would be quite useful.

With NEP's newly acquired V-Station HD Studio4 system installed, Celek gained the ability to simultaneously record up to 4 video feeds, but uses 3 in the application at this time. He assigned Channel 1 to record the line-cut with a window-burn of LTC. Channel 2 records the same feed without the time code burn. Channel 3 was set to record the same "line-cut" signal at a low 6Mb/sec rate (for reduced file size) which is then shunted off to the network as the show's "return feed."

Though V-Station HD can record full 1080p 60fps HD at high bit rates, Celek opted to use its lower resolution and lower bit rate settings to make the proxies. These became immediately distributeable, without format conversion, thanks to V-Station HD's H.264 MP4 file-based recording technology and its FTP site uploader. Studio4's Project & Media Asset Management software enabled the entire process to be efficiently controlled and for desired content to be easily located.

The Bottom Line
NEP's V-Station HD Studio4 system enabled them to save time and reduce workflow steps, while speeding up access to the show's content. Plus, Studio4 provided them with a cost-effective way to record 4-cam HD rehearsals, which the show's Producers can access at will through DropBox.

Training

APPLICATION
Multi-camera/multi-room training.

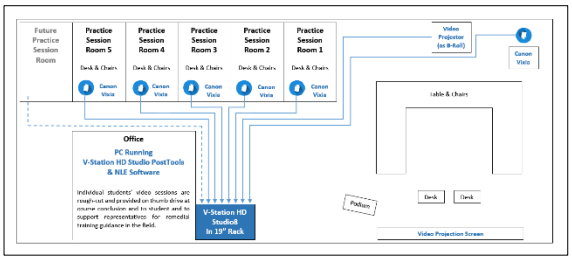
PRINCIPAL SYSTEM COMPONENTS
V-Station HD Studio Multi-Channel Video Recording/Streaming System, 6x Canon camcorders, video projector.

USER EXPERIENCE
Irvine, California-based SWDS (SouthWest Dealer Services) conducts specialized courses for retail automotive industry finance managers. Role playing, an integral part of the week-long course, is captured on multiple video cameras in different training rooms. Upon completion, the students are each provided with a video of their course activity--including their individual practice sessions and critiques.

The Workflow Bottleneck
SWDS needed a way to improve training results and overcome inefficiencies in their course-produced videos. Workflow was clearly a problem. A V-Station HD Studio Multi-Channel Video Recording/Streaming System proved it could satisfy both needs. A test run convincingly demonstrated how unnecessarily convoluted their existing workflow of capturing, editing, and converting video truly was. Until then, VP Training & Development, Peter Velau, and his staff had been burning the footage taken from each of the 4 camcorders onto DVDs, then from the DVDs to a Windows PC editing system (Microsoft Movie Maker and Roxio, each for different purposes), then converted the video back to DVD format, and finally burned the edited version onto a new DVD. They would then mail the DVD to the student. All this took about two days of each training week and Velau was overdue for a more efficient solution.

The V-Station HD Solution
According to Peter, "We developed a top-notch training curriculum. But, I had to find a better way of handling the video observation & analysis aspect. It was tedious! V-Station HD seemed to provide the capabilities and features I sought--in one system. Once our V-Station HD Studio4 system was operational, I was amazed at how much time we saved. Now, we're able to edit and process student performance during session breaks. When the course concludes, we're able to place a USB thumb drive with the V-Station HD-produced content in the students' hands as they exit our facility. We then send duplicates to our field support team to guide them with student follow-up."

Corporate Growth Leads To Studio8 Upgrade
After using the V-Station HD Studio4 system for three years in their original location, SWDS' growth triggered relocation to larger facilities with more session rooms. They added more cameras and had their system factory-upgraded to the new V-Station HD Studio8 (HDMI) specification. More students can be accommodated now--with no learning curve for the training staff. Congratulations to Peter Velau and his colleagues at SouthWest Dealer Services.



SWDS Training Facility

V-Station HD Studio8 in SWDS' 19" Rack

The Bottom Line
With V-Station HD, SWDS was able to radically simplify their workflow. Tasks that had taken days now take hours. Plus, the finished video content is immediately available to their students.

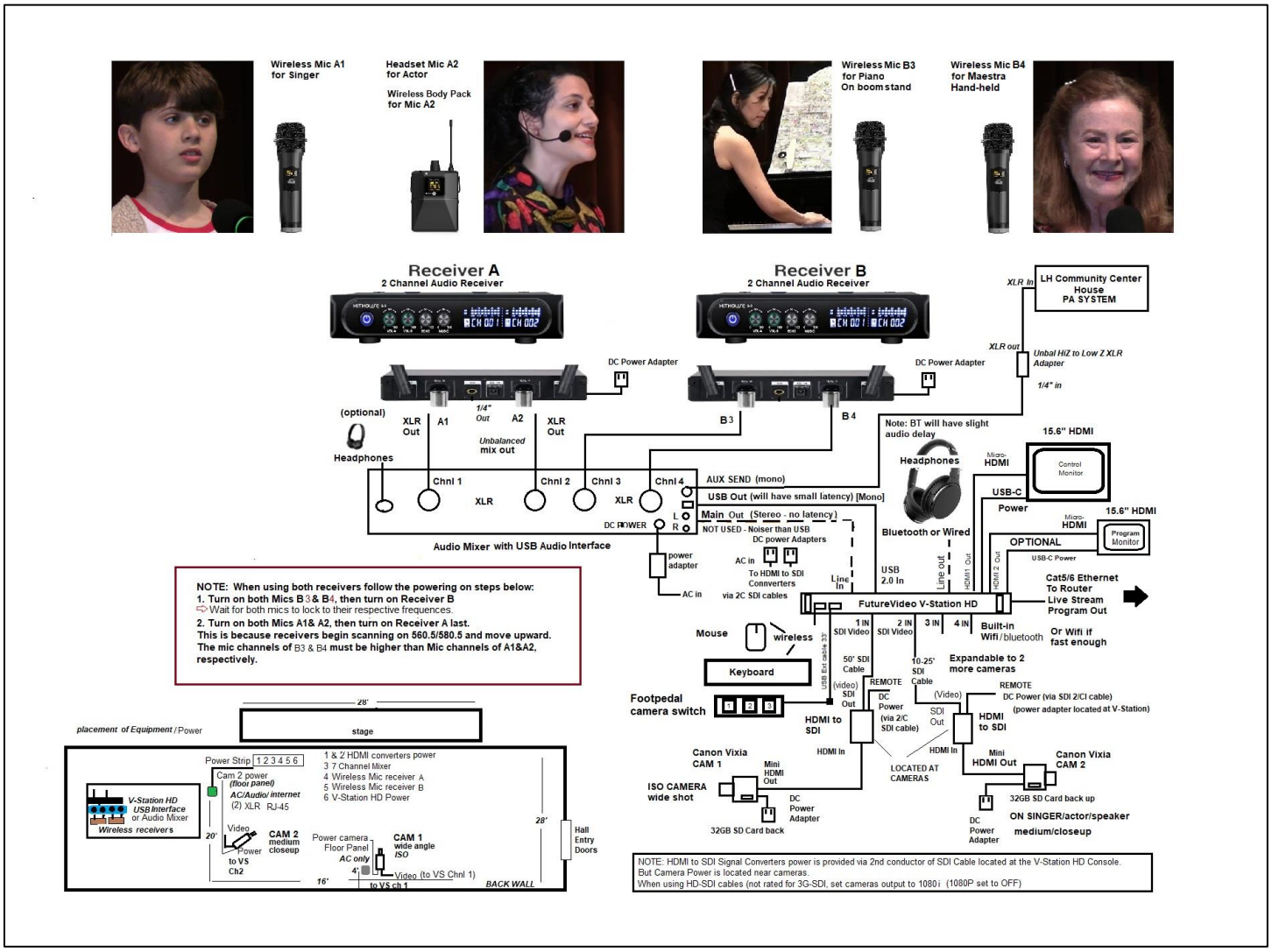
Live Event

APPLICATION

Switched two-camera recording and live streaming of concert.

PRINCIPAL SYSTEM COMPONENTS

FutureVideo 4-channel V-Station HD Video Recording and Streaming System, 1x 15.6” control monitor, 1x 7-channel audio mixer with USB Audio Interface, 4x UHF wireless microphones (2 separate receivers), and 2x camcorders with HDMI out to SDI converters.



Connection diagram for audio and video components (camera placements shown in bottom left box).

Left (L-R): V-Station HD, 7-channel audio mixer, wireless microphone receivers, control monitor.
Right: V-Station HD 4 channel 3G-SDI Recording/Switching/Streaming System (shown in 1U case with USB-powered FHD 15.6" portable monitor).

USER EXPERIENCE

Valerie Geller, Maestra of the Global Harmony Symphony in Laguna Woods, California, sought an affordable way to record and live stream their performances. But, it had to be done within a very tight budget. Plus, the system had to integrate with the auditorium public address system in the Laguna Hills Community Center where they performed.

The Workflow Bottleneck

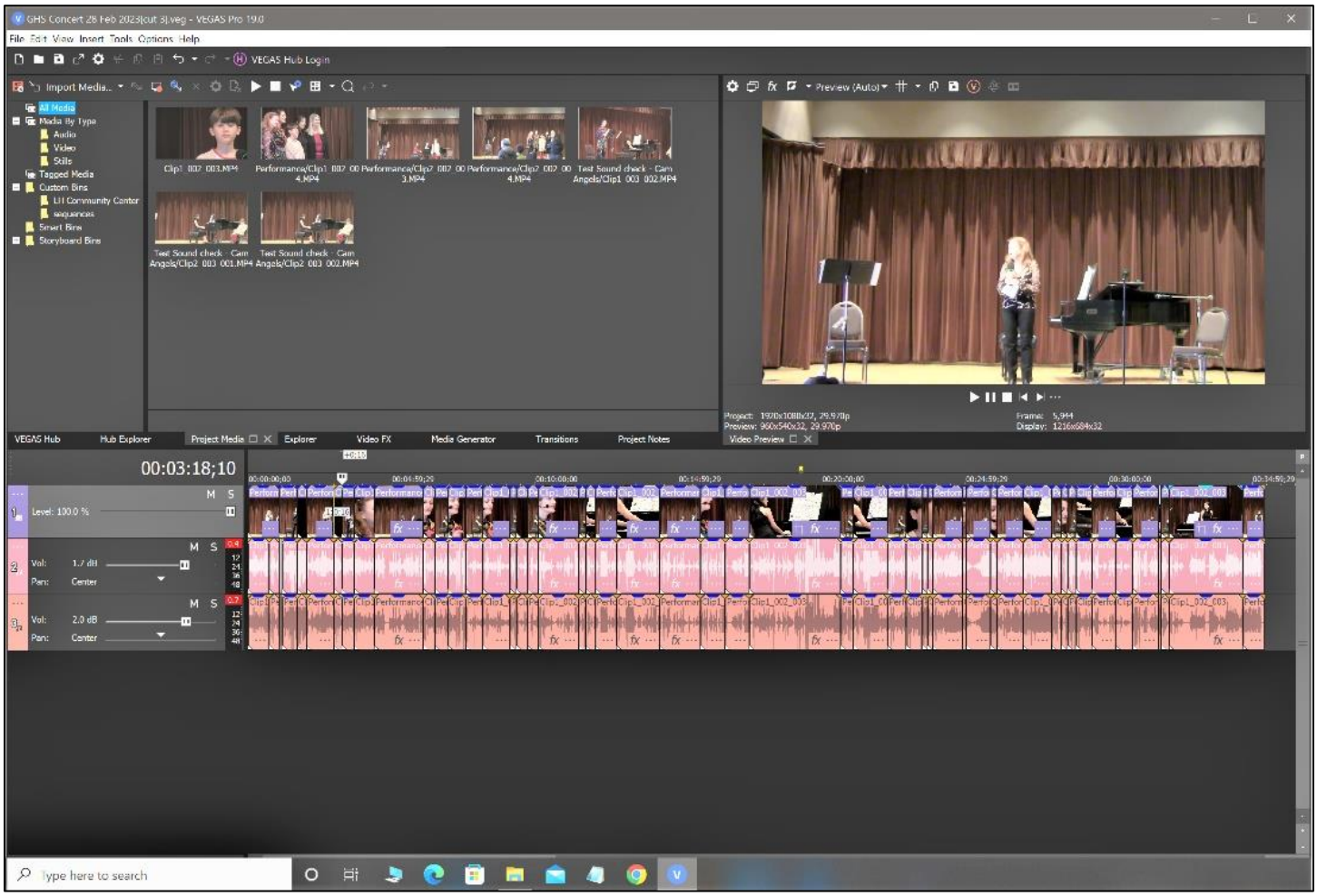
Previously, Valerie had a videographer who set up a stationary camcorder on a tripod and used the internal camera mic to capture the audio. These rudimentary production values resulted in a single angle for the viewer, and unsteady zooming to get a wide shot or close-up. Unfortunately, the camera's mic picked up considerable room echo. There was no provision for mic'ing each performer for mixed external sound. Moreover, the performance could not be live streamed. Extra time was needed, after the performance, to transfer the recorded files from the memory card to a computer, then assemble and convert them into a single mp4 file that could eventually be uploaded to YouTube. That meant the production only became available for viewing by those unable to attend many days later. Further post-production to "polish" the video project would have required even more time and effort (typically $100-$500 per minute) to professionally edit the project using traditional "file-based" workflow methods. Such an expense was beyond Valerie's modest community arts budget.

The V-Station HD Solution

The four-channel V-Station HD Studio "all-in-one" system made it possible for the performance to be simultaneously recorded in sync from each of the camera's outputs—and live stream (Use this link to view the live streamed version.) the "switched" program output to YouTube. No external devices were needed because V-Station HD has both a built-in H.264 encoders, a program switcher, and advanced streaming capabilities. Because of the size of the venue, it was decided only two cameras would be required. The camera operator could easily "switch" the feed between the isolated wide-shot camera (ISO Cam 1), the close-up camera (Cam 2), and prepared graphics from V-Station HD's Picture Store. All the while, V-Station HD's AutoProducer® feature enabled the program output to be recorded and automatically generate an edit decision list (EDL) for any post-production work desired. Integrating external wireless audio with the video was seamless, thanks to V-Station HD's ability to embed digital audio from an audio mixer {with a USB audio interface} into the live video stream and recording. The audio mix was done separately: One for the PA system and the other tailored for the live stream and program recording. This accommodated different listener realities: What those present in the auditorium heard and what those viewing the stream on YouTube heard. The audio was optimized with different sound mixes for each audience. In addition to straight cuts, V-Station HD also provided dissolves and other transition effects during the live streaming of the performance.

Live performances are likely to include some ill-timed cuts and audio fluctuations. To assist in correcting these issues, V-Station HD has built-in project and media management features that are exceptionally useful for making a post-production version of the performance. With a simple mouse click, its powerful project export utility transferred the entire production (clips and metadata) into an importable XML file that Magix Vegas Pro 19 video editing software could read. (Premiere Pro and Final Cut Pro are also supported.) All of the bins were automatically created, clips transferred, logged, and sync'd, and the original edited sequence (line-cut from EDL generated during the live shoot) laid out in sync on a timeline—all within a few minutes (see screen shot below). Since it was no longer necessary to manually create bins and copy the clips, nor sync multiple camera recordings, it was quick and easy to change the cut points using the "slide" editing tool in Vegas Pro and normalize the audio. In less than one hour, the production was refined and rendered, ready

to upload to YouTube for after-the-event viewing (Use this link to view polished version.) Using separate camcorders or even a multi-cam recorder—which have nothing like V-Station HD's proprietary Project Manager and XML export capability—to build the project from scratch would have taken several days.



V-Station HD's generated xml file quickly imports the project into Vegas Pro 19 editing software.

The Bottom Line

Valerie's needs were met without exhausting her budget. She noted, "V-Station HD made it possible for those unable attend in person to enjoy all the magic our musicians and performers can deliver—*anytime* they wish." V-Station HD's "project-based" workflow enabled a polished 35-minute production of the performance to be created and uploaded in about an hour. It was their first such in GHS's 2023 season. Valerie was able to provide viewers with a satisfying experience–and save much time and expense to accomplish it.

APPLICATION
Switched four-camera recording and live streaming of presentation.

PRINCIPAL SYSTEM COMPONENTS
FutureVideo V-Station HD Pro4 Plus Multi-Channel Production DVR System (HDMI), Teradek VidiU broadcast streamer.

USER EXPERIENCE
USC's Viterbi School of Engineering planned to shoot their largest on-campus event—"Discover USC!"—with multiple camera angles and broadcast the production to Facebook Live.

The Workflow Bottleneck
USC needed a way to enable those not in the auditorium to instant message questions to Undergraduate Admissions Director Paul Ledesma through Facebook. Producer Daniel Druhora took up the challenge. He was confident FutureVideo's V-Station HD Pro4 Plus Multi-Channel DVR System, combined with a Teradek VidiU broadcast streaming device, would accomplish the task.

The V-Station HD Solution
"V-Station HD made it possible to broadcast 4-channels simultaneously, including channels dedicated to sound and the presenter's deck," said Druhora. "Bringing all those elements together with the power to broadcast HD wirelessly was the magic formula." With student workers Victoria Stein and Tiana Lowe on the Blackmagic Pocket Cinema, the Canon 7D and Vixia, and Simone Attenni as audio engineer, Druhora directed the entire 90-minute multi-cam production from the Pro4 Plus' multi-view control panel. Using the V-Station HD Pro4 Plus' built-in multi-cam switcher, Druhora was provided with greater artistic freedom to direct the event by switching between camera angles during the live presentation. In addition, the V-Station HD created a "line-cut" recording that later was uploaded to the school's ftp site immediately after wrapping. V-Station HD also recorded all the camera angles synchronously—giving Druhora the option of re-creating the shoot and re-editing the camera angles in his NLE software. With the kinks sorted out and a last-minute camera swap, the shoot was a success.

Daniel Druhora operating the V-Station HD Pro4 Plus while monitoring the live stream on Facebook Live with his smart phone

The Bottom Line
As Druhora put it, "…getting personalized attention from the FutureVideo team made all the difference."

PRODUCT UPDATE
V-Station HD Studio series models now feature built-in live multiple streaming and live line-cut streaming. Costly external streaming devices are unnecessary.

Government Proceedings

APPLICATION
Multi-camera recording of City Council proceedings and community events for upload to the city's website.

PRINCIPAL SYSTEM COMPONENTS
FutureVideo V-Station HD Studio Multi-Channel DVR System (HDMI), FutureVideo V-Station HD Field Multi-Channel DVR System (HDMI).

USER EXPERIENCE
The City of Chino Hills is a young, progressive community located in south-eastern Orange County, California.

The Workflow Bottleneck
Community Relations Manager Valerie McClung and Video Production Manager Robert Wells, needed an efficient means to do multi-camera recording of City Council sessions, interviews, and community events. Their single-cam capability was mostly limited to recording City Council sessions. They envisioned one system being hard-wired into the city's new Community Events Center building. The other would be deployed in City Council chambers as needed and stored when not.

The V-Station HD Solution
McClung and Wells discovered V-Station HD while attending a Technology Showcase event put on by one of FutureVideo's local pro video resellers. FutureVideo had been asked to conduct a presentation about multi-cam video production at the event and had a demo V-Station HD Studio System on hand to provide immersion into V-Station HD's technology. It quickly became apparent to them that both V-Station HD systems' capacity to quickly upload a production to the city's website was a very important plus. After putting an evaluation system through its paces, the City of Chino Hills authorized the purchases.

Video Technician Robert Wells operating V-Station HD Studio during an interview in the City Council chamber

The Bottom Line
V-Station HD technology provided the range of event of onsite and remote recording capabilities the city needed.