



A Different Kind of Remote Education

Del Norte Unified School District Builds for an Online Events Future with a Lesson Plan from Advanced Systems Group

When the Covid pandemic started in March 2020, class schedules across the Del Norte Unified School District (DNUSD) weren't the only activities shifting to remote status.

Challenges:

- Give a school district's diehard population of super fans access to school-related content when all public gatherings were shut down due to the Covid-19 pandemic
- Select cameras that could withstand wet and windy weather conditions as well as delivering the quality, performance and remote accessibility required

Solutions:

- The school district worked with ASG to evaluate, specify and install a centrally controlled, networked streaming system across its 11 campuses
- The district chose BirdDog Pan-Tilt-Zoom (PTZ) NDI cameras, including weatherproof outdoor cameras, to deliver high-definition uncompressed video at the lowest latency

Results:

- The school district can live stream sports and academic events to the community's passionate fans and followers
- Due to its success and positive community response, what began as a temporary Covid workaround has now become a permanent reality, and there are plans to scale the system to cover every school in the district for all sports and academic event



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Health and safety guidelines shut down all public gatherings, but also accelerated a plan the Northern California school district already had in progress: installing a remotely controlled, centralized wide area network to live stream sports and academic events to the community's passionate fans and followers.

“We're a small, rural community with a huge, diehard population of super-fans, many who've lived here their entire lives and closely follow our school events,” says Michael Hawkins, Director of Communications, DNUSD. “They were always hungry for school-related content but once they were denied any type of access, they were simply starving.”

DNUSD worked with Advanced Systems Group to evaluate, specify and install a networked streaming system based on BirdDog Pan-Tilt-Zoom (PTZ) NDI cameras deployed across the district's 11 campuses and centrally controlled from an operations center in Del Norte High School.

“Previously, we had a few cameras on tripods connected to a patchwork of devices, basically a jury-rigged system that worked for the occasional live stream,” Hawkins says, “Live streaming wasn't something that was very important or taken seriously at the time.”

That changed once the community was deprived of witnessing milestone events. “Not seeing your grandchild graduate, participate in a school concert, or watch your graduating high school senior play in a final game was a huge blow to the quality of life for our community members,” says Hawkins. “It became clear we needed a livestream solution that could be permanently set up at multiple locations across the district.”

Network capacity and infrastructure were never the main issue. In 2018, DNUSD underwent an extensive, five-million-dollar network infrastructure upgrade, with 10-Gig connections to larger locations and at least 1-Gig circuits to smaller satellite sites.

The harder decisions were related to camera selection with range, durability, latency, video quality and maintenance all high on Hawkins' priority list. The weather was also a serious consideration.

“We regularly get tons of rain and heavy winds,” Hawkins says. “It's a lot to account for since even the smallest amount of residue will fog up the lens of most cameras from the inside. Plus, we were planning to hang these cameras about 50 feet high. We needed to find cameras that were sealed like a tank, remotely accessible and high performance.”

Working with ASG and BirdDog distributor Broadfield Distributing, Hawkins selected a mix of indoor and outdoor models from BirdDog's A200, A300 and P200 series. The



outdoor cameras offered the additional features DNUSD needed: weatherproof with IP67-rated enclosures and easy deployment with a single CAT cable for video, audio, camera control and Power over Ethernet.

An essential benefit of the BirdDog cameras is compliance with the full NDI specification for delivering and receiving high-definition uncompressed video at the lowest latency among other NDI-compliant devices on any network or in the cloud. The use of NDI infrastructure allowed DNUSD to take advantage of its IP network to connect cameras throughout its campus, without having to spend additional time and expense on video, audio, control, and power cabling.

A True Partnership

From the initial design phase through camera selection to installation, ASG supported Hawkins and the DNUSD team with consulting services, technical guidance on camera selection and NDI infrastructure, support and workflow expertise – as well as some troubleshooting resourcefulness along the way.

A perfect example occurred during the 2021 graduation week ceremonies, which the district targeted as an early system test. The DNUSD IT department installed its first three BirdDog cameras at Del Norte High School's football field, the site of the middle and high school ceremonies. One was placed in the announcer's booth and two high atop light poles.

The streams ultimately came off perfectly, once ASG was able to resolve a supply chain issue that threatened to derail the entire event schedule.

"One specific type of pole mount for the cameras was delayed and we were getting dangerously close to show time," says Hawkins. "I was getting nervous and even losing sleep over it, thinking what a disaster it would be to go through all this planning and then disappoint everyone by not livestreaming the graduations because of a Covid-related supply chain snag. We needed to make this happen."

Hawkins called ASG account manager John Shike, who began calling distributors throughout his network to see who had the required mounts in stock.



“He immediately grasped the severity of the situation and was able to connect the dots, change the order, find the type of pole mount that would work and get it to us in time,” Hawkins says. “He dedicated all his time to making sure we had everything we needed and was the bridge between us and any problems we faced along the way.”

DNUSD’s command center for all live streams across the district is at a central location near Del Norte High School. Events can take place miles away from headquarters and still be live streamed in high definition to the community.

“The entire ASG team was a great resource from consultation, to distribution, and just being good people,” Hawkins says. “They were a huge value to us in every way.”

With ASG’s support, DNUSD now has a network and facility infrastructure flexible enough for use as a teaching tool. Students in the district’s Career Technical Education program, under the direction of media arts high school teacher Ron Gastineau, now earn class credits working as camera operators and system technicians, giving them invaluable experience while they prepare for careers in broadcasting and media.

Building for the Future

What began as a temporary Covid workaround has now become a permanent reality for DNUSD, due to its live streaming success and positive community response. Plans include scaling the system up to every school in the district for all sports and academic events, ultimately totaling about 40 cameras across the 11 schools.

Once in-person gatherings for events return, Hawkins expects live streaming to remain a popular option—not only for DNUSD local and geographically dispersed fans, but also for followers of the schools competing against DNUSD.

“Even that short period of time when we couldn’t have any in-person events took a massive toll on a community like ours,” Hawkins says. “Being able to offer quality live stream experiences, whether as a primary or secondary option, has so many positive impacts on the entire community. It’s something that helps people get out of bed in the morning.”

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