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During a worship service at Rock Springs, a staff member works on controlling the video feeds with the recently installed NewTek system at the church in Easley, South Carolina.

With Upgrades, South Carolina Church Connects Campus, Adds High Def

Updates to church's campus included NewTek TriCaster TC1 in its main worship space, along with five Panasonic AW-HE130WPJ high definition PTZ cameras, and a pair of Panasonic AJ PX270PJ HD manned cameras.

Andres Caamano | Feb 25, 2019

EASLEY, S.C. – For a church like [Rock Springs Baptist Church](#), the aspect of streaming their worship services has been a long-standing practice. Despite having such a history of doing so, there was a recognition to upgrade its video and streaming capabilities.

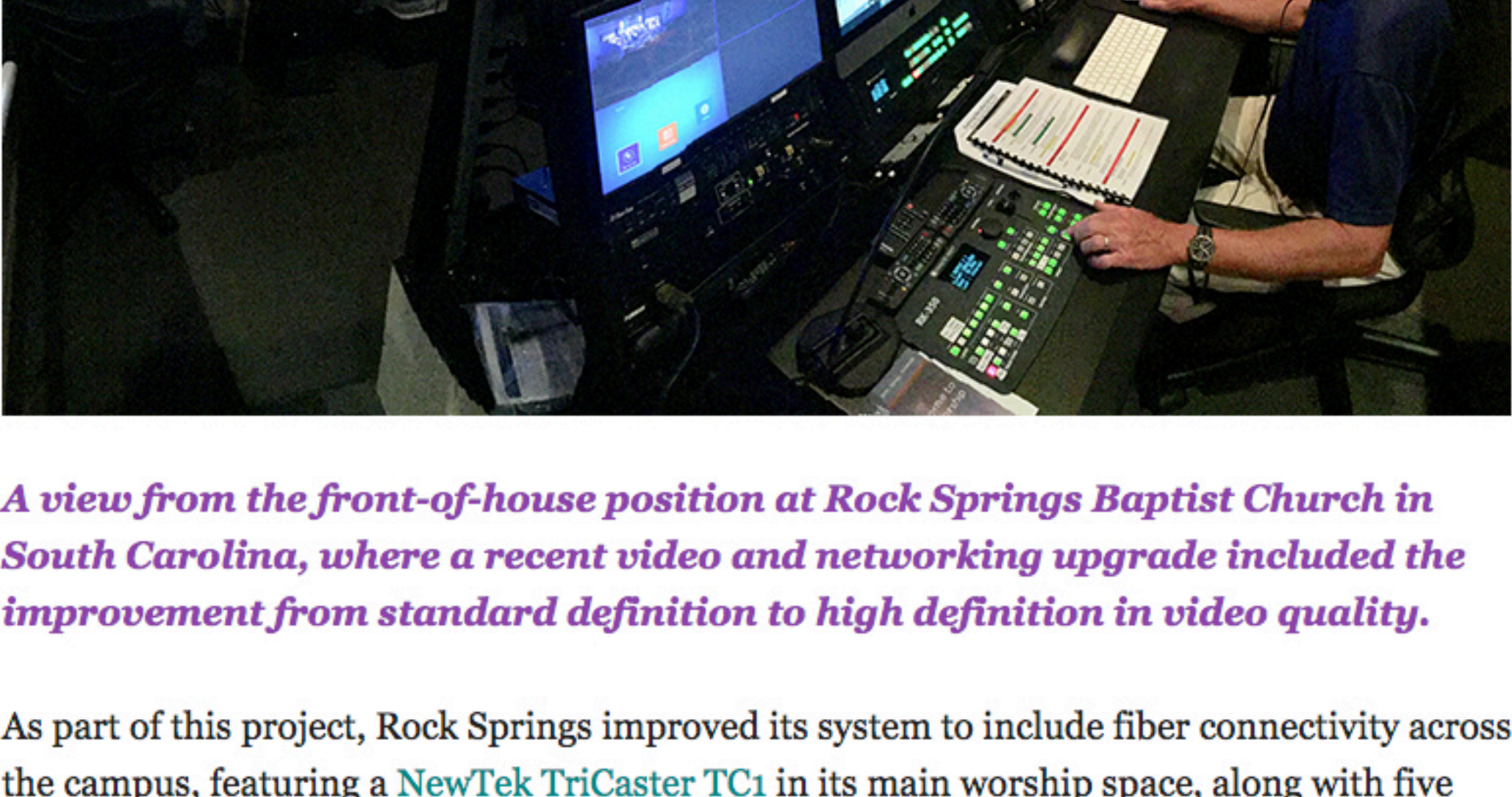
As Jim Cawthon, the church's minister of media explained, the church's standard definition cameras and projectors "had aged quite a bit, which could be seen in the imagery, and we were limited," to adding to that system, in terms of potential upgrades.

As part of the new video production configuration, the church uses ProPresenter for IMAG, incorporating lower-thirds for front of house, sending them to the TriCaster to the recently built control room.

The installation work, which was completed in late May, was part of a \$1.2 million integration project for the sanctuary that seats 3,500 people - with the church hosting three Sunday services each week, averaging 2,200 congregants across its two Sunday morning services - while integrating it with other locations on campus.

For the Southern Baptist Church, in existence for 160 years, the time for this upgrade "was right, and we knew that it was the time to take that step," noted Cawthon.

Among the major aspects of this expansive upgrade was going from an eight-input switcher for streaming, paired with a prosumer camera and three installed PTZ cameras. As described by Tommy Cario, of [WH Platts Company Company](#), with offices in Charleston, S.C., the integrator of the project, the upgrades were significant in that the prior main switcher was "from the mid '90s, and the PTZ cameras from the same time. Now they have a full HD, and they weren't doing any camera production in the other three venues."



A view from the front-of-house position at Rock Springs Baptist Church in South Carolina, where a recent video and networking upgrade included the improvement from standard definition to high definition in video quality.

As part of this project, Rock Springs improved its system to include fiber connectivity across the campus, featuring a [NewTek TriCaster TC1](#) in its main worship space, along with five [Panasonic AW-HE130WPJ](#) high definition PTZ cameras (run via two controllers in the control room), and a pair of [Panasonic AJ PX270PJ HD](#) manned handheld cameras, all in conjunction with three [Panasonic PT-RZ21K](#) 21,000-lumen laser projectors and seven [Panasonic PT-RZ700](#) 7,000-lumen laser projectors that were either located in their new or old worship space.

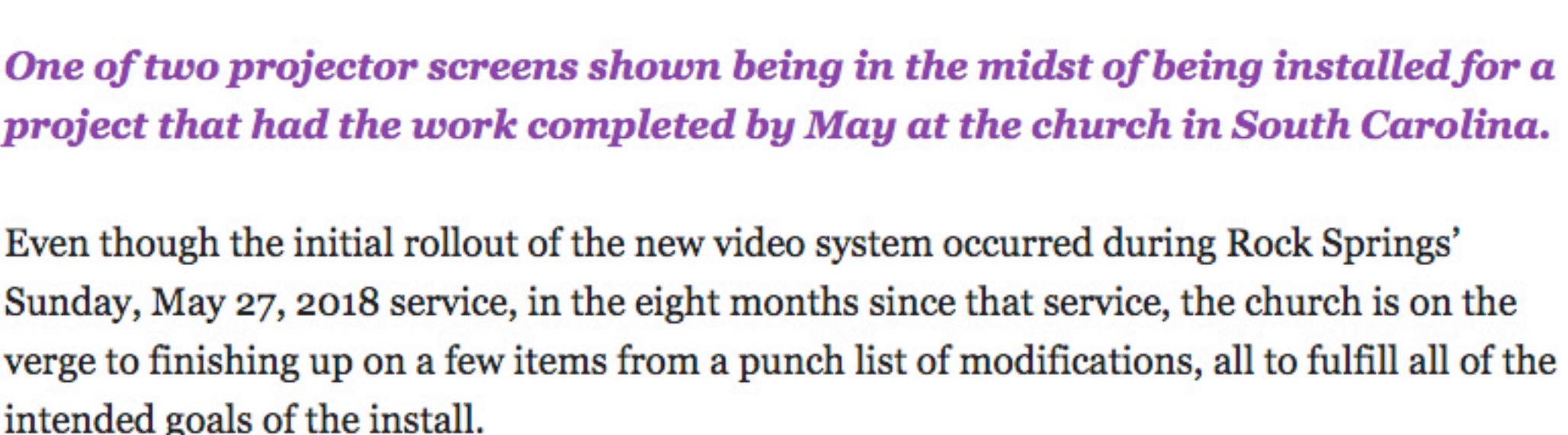
"They came to us, to upgrade their video services, and we gave them a master plan," explained Cario. "We installed a TC1 as the main unit, to go with eight cameras and laser projectors, while they have three other TriCasters Minis at three other venues."

The church added video production capabilities for the first time outside of the main worship space, adding TriCaster Minis to be used at its youth worship center, the college auditorium, and its 750-seat chapel.

In describing the install, Cario said, "We did install single mode fiber in these buildings, and then all our network switches use SFPs (Small Form-factor Pluggable networking) and fiberconnectivity between those and includes a full fiber backbone. We networked these together ... it works great. Interconnectivity was a big thing for them, to have communication and media available to all venues."

As part of the new video production configuration, the church uses ProPresenter for IMAG, incorporating lower-thirds for front of house, sending them to the TriCaster to the recently built control room. "We are overlaying the feed to our program output on an auxiliary output of the TriCaster, and sending it to the projectors," noted the Rock Springs minister of media. That content is what the church uses for streaming and recording, as well as distribution.

Regarding what areas that the install focused on, Cawthon said, "It was everything from the visual side. From screens to projectors and our IMAG switcher, it included all our projection side for streaming and the video production side."



One of two projector screens shown being in the midst of being installed for a project that had the work completed by May at the church in South Carolina.

Even though the initial rollout of the new video system occurred during Rock Springs' Sunday, May 27, 2018 service, in the eight months since that service, the church is on the verge to finishing up on a few items from a punch list of modifications, all to fulfill all of the intended goals of the install.

"We're at 99 percent of the way there," noted Cawthon. "A lot of guys have come for the hard transition (as part of that initial rollout), and a couple of guys (have continued to work) ever since then."

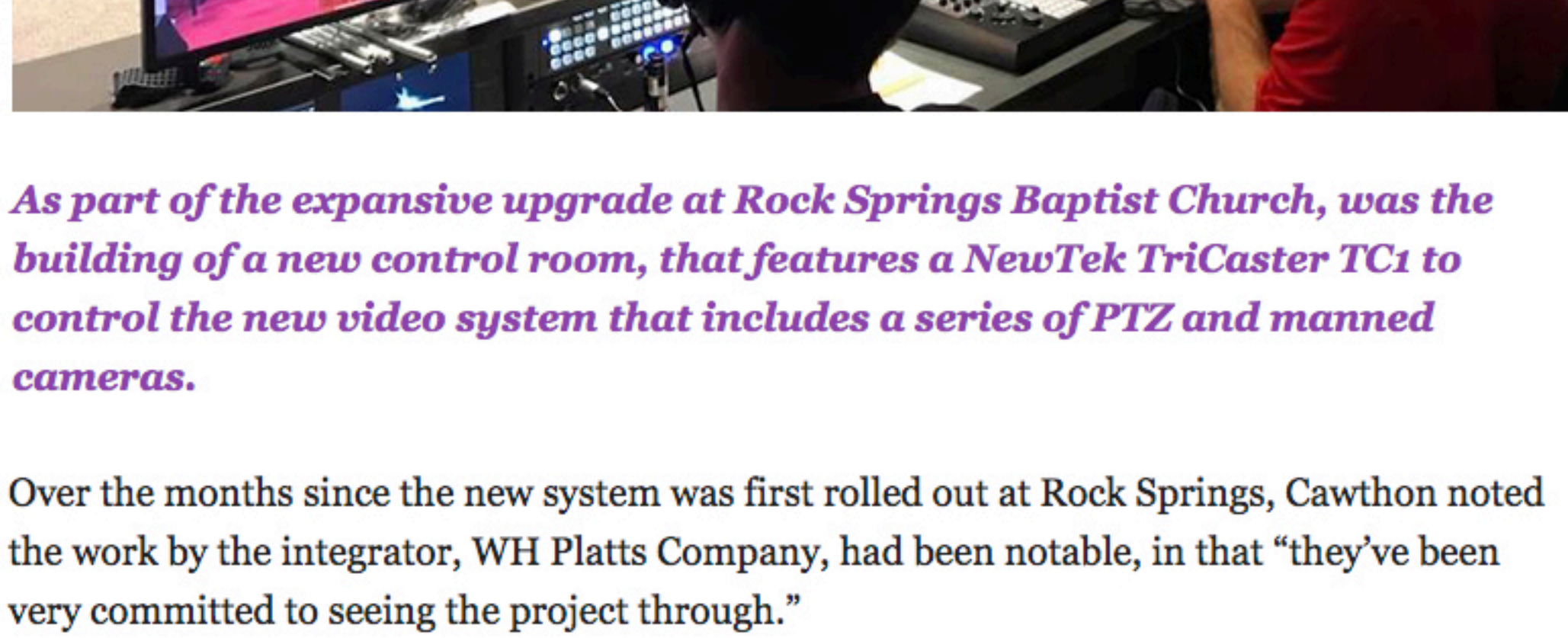
The beginnings of this project date back to December 2017, when equipment as part of the install was first ordered, with the integrator coming on-site last February. That month, the pulling of cable began, with the switchout to the new system happening about three-plus months later.

As Cario explained, the video upgrades amounted to where they were at standard definition one week, followed by a week with no AV while completing the transition in the new worship space, after which "they were streaming on Facebook Live, with high definition. Prior to that, they were not (live) streaming at all."

Live streaming for the church is a new wrinkle, he noted, in that, "They've learned that they love the impact of it being live on the internet. I don't think, when we first started this process, that they would ever do it," but since diving in, the church has seen a few hundred watching on Facebook Live for each of their Sunday services, so it's enhancing their footprint within the community.

Most of the post-install work associated with the project has been related to the initial idea of implementing a dual signal flow of HDMI and SDI on the campus, to which Cawthon admitted, "If I had to it again, I would do an SDI/NDI signal path (throughout the full campus), and would not do HDMI in a professional install ever again." While the intent of the dual signal flow of HDMI and SDI was seen a means to save some costs, he explained, they later learned that HDCP became a problem in the ability to distribute the signal, by having HDMI as part of the signal path.

Since the initial install was completed in May, Cawthon admitted that the church had come to learn about the benefits of the open networking protocol, NDI. "We were not fully aware of the NDI capabilities when we first designed this system," he said. "Over the last few months, the church added two CV502 SDI cameras by Marshall, "with those cameras running on [NewTek Connect Spark](#) over NDI into the AV network," he added, whereby the church did not have to then run new fiber lines to have those cameras on stage, instead running them through NDI up to the control room. By eliminating that additional fiber install work, the end result of adding the two Marshall cameras came to half the cost of one of the PTZs what had previously featured as part of the install.



Over the months since the new system was first rolled out at Rock Springs, Cawthon noted the work by the integrator, WH Platts Company, had been notable, in that "they've been very committed to seeing the project through."

Even though the integrator has been working on getting the last items from the punch list squared away, Cawthon noted one unexpected benefit from that work is that "the things that happen when the integrator leaves ... I've had my own tech support the last seven months."

Once the new system went live in the main worship space, Cawthon described the greatest improvements have been "the clear and brighter HD quality on our projection screens," along with clearer and tighter camera shots. In addition, "Our quality of our streaming has vastly improved from SD to HD, and we now have video capabilities in three other rooms that we didn't have before, as well as having interconnectivity between the four different venues."

With the upgrades to the video capabilities at Rock Springs Baptist, Cawthon explained that, "What we are doing today, we're doing it better, a better product for our congregation. There is an ease and convenience of being able to connect other parts of our campus with video, that we were not able to do before."

One such example, he described involved night baptism services, held during the same time as kids worship, where in the past, the children would need to stream the service over the internet to watch. The result, Cawthon described, was "periods of delays, loss of signal and buffering. Now with the distribution of our signal over NDI and fiber, they can watch these baptisms live, by pulling it up on their television as a channel."



Two staffers at Rock Springs Baptist Church work on the TriCaster TC1 system in the control room at the church following the recent install of the system as part of an extensive upgrade at the South Carolina church.

With the work that was done, Cawthon noted, "Everybody's been very pleased with the new look, the projector quality, and the image quality." Regarding feedback that he'd heard from some at Rock Springs, Cario added, "From the congregational side, they are thrilled. The user experience is much better."

While the install work was being completed prior to being introduced to the congregation in late May, the church successfully avoided any delays or cancellations of any services.

"We worked around everything, including events during the week," noted Cawthon. "The switchover was delayed to maintain the schedule of the church and the programming." Cario elaborated, "We did it in phases, as we couldn't bring any of the venues down. We would bring one venue on, debug it, and bring another on, and debug that one."

The old sanctuary was the first venue on campus to go online, finished in early March of last year, so that it could be utilized for some planned events around the corner. Next in line was the college auditorium, along with the main sanctuary, with the installation of the sound system and projectors, since that had to be ready for an event in May.