PSSI LIVE

Issue No. **12**

TRANSMISSION **TIMES**

Happy Holidays!

This year has been a challenge for everyone. The pandemic turned the world of live events completely upside down, and as an industry, we had to forget everything we thought we knew and find entirely new ways of producing and delivering content to viewers. It has been a difficult year, but the resilience we have seen throughout the industry has been truly remarkable.

Here at PSSI, our creativity and agility were put to the test as we worked to find solutions for a new and unexpected set of needs. We are proud to say we rose to the occasion time and again, and we are tremendously thankful for all our fantastic clients and partners who have been a part of this unprecedented journey. Your help and support made all the difference, and we couldn't have done it without you.

As we prepare to welcome a new year, we look forward to continuing to work alongside you to meet every new challenge. We are here for you, ready to take on 2021 with unmatched innovation, determination and solutions.

From all of us at PSSI, we wish you a happy, healthy holiday season. May the new year bring peace, joy and success to you and your loved ones.

– Rob Lamb, CEO

PSSI to the Rescue: Our Last-Minute Election Coverage Solution

When TF1 France called us in need of a last-minute replacement for a rooftop flyaway system intended to facilitate coverage of the 2020 U.S. election, we jumped into action to provide a fast and seamless IP solution.

Attempting to move a flyaway system into the D.C. area in the 16-hour window of time we had is next to impossible, so Tracy Michaels, our director of project engineering, suggested an IP solution to replace the uplink system. With some quick thinking and the combined resources of PSSI and our partners, we turned a challenging situation into a successful delivery of nearly 18 hours of content for a critical international broadcast.

After receiving the urgent call, we programmed a set of Nextologies NXT4 appliances with gateway switches and rushed them to FedEx for an early morning delivery. While the equipment was in transit, we built routing in the Nextologies platforms for a primary and backup SDI delivery as well as an ASI multicast TSoIP at 10-20 mbps on a point-to-point route from Washington, D.C. to PSSI International Teleport (PIT). PIT has a robust Nextologies server infrastructure to support multiple SDI signals in and out, as well as multicast feeds.

For TF1 France's election coverage, the SDI signal was delivered to PIT with a 250 ms latency buffer. From there, the teleport frame rate converted the 1080i/59.94 signal to 1080i/50 and pushed it out on the Telstra GMN fiber network to BT Tower for onpass to TF1.

We also provided an on-site engineer in Washington, D.C. to manage the equipment and support TF1 France throughout the project. Senior engineer, Mike Lemieux, brought a MediaKind AVP1000 Multiplexer and RX8200 Receiver to facilitate additional capabilities and to act as a potential gateway and quality control point.

For a last-minute project of this nature, implementing a timely, successful solution requires a tremendous amount of flexibility and resources. Our skilled engineering staff and strong partnerships with industry leaders such as Telstra and Nextologies make us the premier transmission solutions provider — in any context, via any platform.

Any Given Sunday at PIT

For some people, Sunday is synonymous with relaxation and brunch. For the team at PSSI International Teleport (PIT), it's synonymous with being busy beyond belief. But we're happy to be busy doing what we love, and we wouldn't have it any other way! Bill Sciolla and Lance Banks sat down to give us a rundown of what they're up to during a typical Sunday at PIT:

NFL

We can have as many as 16 NFL games on any given Sunday. Each comes in via ATT fiber from various stadiums around the country as well as from Fox and the NFL Network RedZone channel, which we downlink. Each game gets a standards conversion to 1080i/50 and an audio remap. As you can imagine, just making sure all the incoming signals are working correctly can be a handful, not to mention routing and configuring all those games.

We also take some of the incoming games and turn them to satellite or fiber for individual team clients, such as the New York Giants and Los Angeles Chargers. We often have dual KU uplinks of one of the games, plus an additional all-22 feed that shows the game from an overhead camera capturing the entire field.

Luckily, we have a room with two quality control (QC) stations used exclusively for NFL. We have a 16x multiviewer on the left where we can see all incoming games, and one on the right so we can see what we are sending out. Plus, we have two monitors with audio at each station to QC each game individually.

NASCAR and IMSA

For IMSA races, the trucks at the track put up two huge muxes, which only test for two hours. We feed these muxes to NASCAR in Charlotte, North Carolina, and are then in hot standby in case of fiber failure. We also receive a clean version of the race, the world feed, from NASCAR to uplink throughout the entirety of the race, which can last up to 25 hours.

Our work on NASCAR races is similar. The truck at the track puts up two muxes for the entirety of the race, which we downlink and feed to NASCAR in Charlotte. They also feed us two individual services, the world feed and the backhaul, which we uplink for the entire race.

WWE

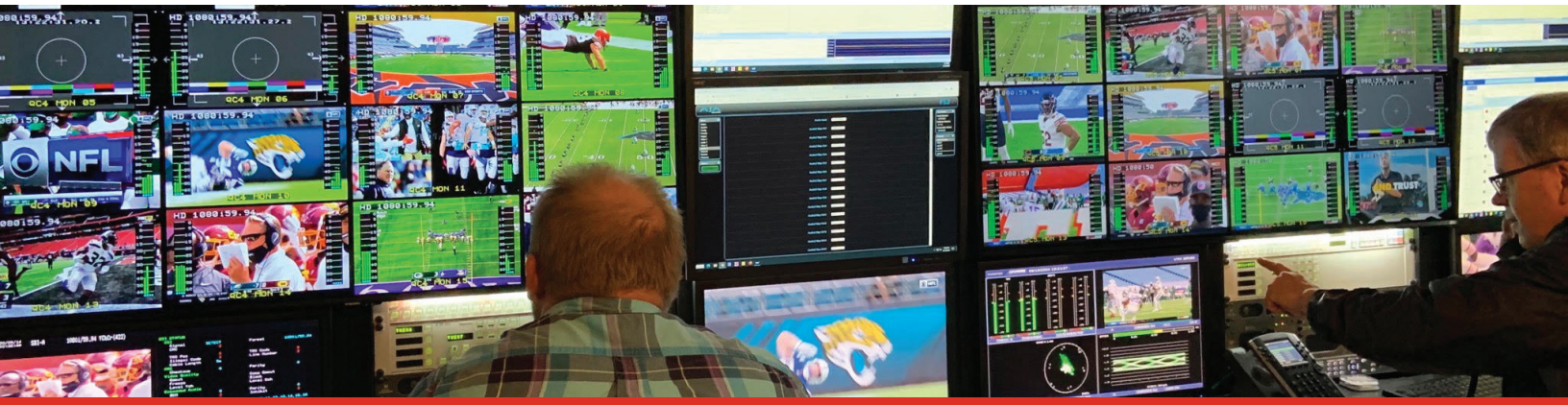
From February to October, our work with WWE was very different than it has been in the past. The teleport played a bigger role in each project, with us bringing in the raw pre-produced C-band event feed from the site in Orlando to transmit to WWE Stamford. We also received the finished Ku-band event feed from Stamford to uplink to the takers.

Recently, however, our workflow has returned to normal. WWE content is uplinked from the site on C-band and Ku. We downlink both and record the mux for the replay, and send the C-band signal via ATT fiber to WWE Stamford. We downconvert the incoming satellite main service to SD and re-encode it with an audio remap. We also take an HD version, remap the audios differently to get Mandarin and Hindi, and encode that to send to Telstra for uplink for Asia.

Anything Else That Comes Our Way

In addition to these regularly scheduled events, we usually have a few additional Sunday projects, such as awards shows.

And of course, we set all of this up practically from scratch, as our Saturday nights usually extend well into the morning hours with a full schedule of UFC, Top Rank, PBC, DAZN and more.



Now Trending: Internet Over Satellite

Internet over satellite is becoming an increasingly popular service here at PSSI. Leveraging our teleport resources and our partnership with Eutelsat Americas, we are able to provide broadband internet to remote locations that may have little or no terrestrial internet available.

This service is supported by our large broadband pipe at PSSI International Teleport (PIT), and we deploy a satellite truck to the remote location. Each end utilizes modems to transmit and receive the data and uplink/downlink the satellite. The upload and download capacity is flexible, depending on the amount of satellite bandwidth and customer needs — we have provided as little as 10x10 and as much as 100x100.

The Paradise modems we use at PIT and in the field can support bandwidths of up to 200 Mbps bidirectional traffic. Using these modems, we are able to facilitate IP trunking/backhaul and cellular backhaul, corporate satellite networking, video broadcasting and distribution, and more.

Here are a few of our recent internet-over-satellite projects:

Weight Watchers – We provided internet for internal meetings via Zoom between Oprah and key members of the company. These meetings were repeated over five weekends from Oprah's Montecito, California, estate. The project involved about 15 simultaneous Zoom paths.

OWN – This also came from Oprah's estate, and we provided 85 Mbps service to facilitate internet streaming.

Lucid – When production company MC2 produced the YouTube launch event for the new Lucid electric vehicle, we stepped in to help by sending the signal to PIT for live YouTube and Twitter streaming.

The Match – For this highly anticipated golf tournament, we used our Paradise modems for Aspera file transfers during the event.

NASCAR – We also leveraged our Paradise modems for NASCAR, this time for RVON timing and scoring.

*If you need **internet connectivity** or a **streaming solution** for your next event, **we're here to help**.*

Engineer of the Quarter: John May

"John has really stepped up to the plate this past INDYCAR racing season by providing the satellite uplinking and AT&T fiber shelf management out of the K33. He has also provided satellite uplinking for many of the NASCAR races this season. He moved right into 4K encoding tech support for Fox's 4K CFB season and was a great help in transitioning to the new 1080p HEVC HDR platform that Fox is now doing for the CFB season. He has worked every week, with the exception of one weekend, since the start of the Fox 4K/1080p CFB fall season."

– **Rick Varney**, Senior Broadcast Engineer

Spotlight on **John Bright**

Q Please tell us about your journey to your current role at PSSI.

A I started my broadcast career at WKRN — the ABC affiliate in Nashville, Tennessee — where I held a variety of positions, ultimately finding my niche as an uplink operator. After that, I held uplink engineer roles at Gulflink Communications, Slingshot Networks and Mobile Satellite Connection.

Eventually, I decided I was going to work for myself. In 2007, after reaching out to several builders of satellite vehicles only to be told I didn't have enough money for an uplink truck, I decided I would do it myself.

I taught myself CAD and designed the box for my uplink. Then I purchased a used chassis and took it to an ambulance manufacturer in Indiana, and they built the box for me. After that was completed, I designed and installed all the gear and wiring — everything except the electrical transformers — myself. I had built the first dual C-band transportable, which eventually became the first and only triple C-Band uplink in the U.S.

With this truck I picked up contracts for NASCAR and CBS PGA Golf as well as many other network clients. I decided to sell the truck, as well as a couple of other broadcast vehicles, to PSSI in 2016. At that time, I came on board as an uplink engineer.

Q Please tell us a little bit about your daily work at PSSI.

A My primary duties include running the CK30 for WWE events. I also take on special projects as needed.

Q What are your favorite things about working in this industry?

A I like the freedom of not knowing what the next day brings. No two days are ever the same. One day you're doing a football game, and the next week you're knee deep in wildlife in the middle of nowhere doing a show about Yellowstone. I have worked at many different companies over the years but have never felt as at home as I do working at PSSI.

Q What is your favorite PSSI memory?

A My favorite memory is being asked to engineer the many wildlife shows I have had the opportunity to work on. It is such a challenge coming up with new ways to broadcast from remote locations.

Q If not this career, what?

A I would open my own restaurant.

Q Please tell us a bit about your family.

A My wife Chelsey and I have been together for 12 years. We live in Nashville, and we have two dogs — Marley and Madison, aka Shrimp and Moo.

Q What's something people might be surprised to learn about you?

A At the age of 25, I had never driven a manual transmission. My first experience was in a brand-new uplink truck that I picked up from Frontline Communications. It was terrifying.