

PSSI²
Global Services Issue 5

TRANSMISSION TIMES





Super Bowl Success, On and Off the Field

PSSI Global Services was proud to be a part of Super Bowl LIII in more ways than one. As you might expect, we provide a pretty impressive scope of transmission services — but this year we were represented in front of the cameras as well.

In his first-ever Super Bowl appearance, our very own Dustin Tanner of PSSI News Group played in the drum line alongside Maroon 5 during the halftime show. Dustin, an Atlanta native, has been playing the drums since he was little, and over the years he's participated in numerous drum line competitions and played with a variety of bands, earning himself quite an impressive reputation as a percussionist. A huge congratulations to Mr. Tanner on this incredible accomplishment!

Of course, we had quite a few hands on deck behind the scenes as well to provide a wide variety of transmission services.

- The night before the big game, we had Kevin Spangler and Eric Hall over at the historic Fox Theatre in Atlanta to provide transmission services for the NFL Honors ceremony.
- Throughout the whole week, our CK25 mobile teleport, with Craig Henry at the helm, was stationed at the Super Bowl compound in Atlanta to serve as the routing and transmission source for CBS Sports Network's on-site production. With interconnections between facilities in Connecticut and NYC to feed all of CBS's many content platforms, Craig oversaw more than 26 inbound feeds and 22 outbound feeds over satellite, IP and fiber.
- As a last line of defense in the event of a catastrophic failure or power outage (which, fortunately, didn't happen), we had Rick Ball and C12 on-site to encode and uplink the disaster feed.
- Meanwhile, in our CK48 mobile teleport, John Bright was busy uplinking a three-channel mux of the main game broadcast and downlinking feeds from remote trucks around the country, including live shots from our NT26 and K38 trucks. NT26, manned by Kyle Meyer and John May, was set up at the NFC team hotel, while Benny Griffis and K38 were strategically positioned in Atlanta with a full camera crew to provide last-minute shots from around the city.
- PSSI News Group was on hand as well, supporting our friends at CNN. Charlie Neiswenter and Lorenzo Dottori kept busy in the press compound, providing live shots around the clock for CNN's coverage of the big event.

When it came to the outcome of the game itself, we had a mix of disappointed Rams fans and jubilant Patriots supporters here at PSSI Global Services — but when it came to our role in this year's Super Bowl, we celebrated a big win all around!



PIT and STS Connect to Form New Transmission Gateway

Thanks to the new connectivity we established between PSSI International Teleport (PIT) and Sydney Teleport Services (STS), we have significantly expanded our international reach.

By creating a gateway between the two teleports, we are now proudly able to offer instant, scalable solutions for international distribution throughout the Americas, Asia-Pacific and Europe. Through this win-win bidirectional connection, our clients gain direct access to Asia-Pacific satellite fleets, as well as STS's expansive fiber network. Meanwhile, STS clients can now benefit from PIT's 50-plus antennas, as well as production services at the PSSI Pittsburgh Videotech Center.

The gateway leverages PIT's dual 10 Gbps AT&T Global Video Services connectivity. This high-capacity fiber network connects PIT to STS's point of presence (POP) in Los Angeles, California — and Nimbra units at both ends allow for fully programmable ASI and data connections.

We're pleased to share that this new connectivity is already proving its value. On Feb. 10, we successfully transmitted the UFC 234 pay-per-view, which originated in Melbourne, Australia, to international viewers. And we've got plenty more projects on the horizon!

And the Award Goes to ...

Another awards season has come and gone, and as you might have guessed, the PSSI Global Services team was on-site once again for all the major events to transmit every second of the excitement.

Here's a look at some of the highlights:

- Golden Globes – Mark Huss, with the LA Sprinter, and Wes Hill, with NT25, joined project managers Michael Hollander and Eric Hall at the Beverly Hilton hotel to provide a full scope of transmission services as well as domestic and international distribution of the event.
- Grammys – Senior engineer Brian Blomstrom was on-site at the Staples Center to handle CBS's domestic transmission, while Strategic Television vice president, Jason Land, worked alongside Chris Hovden and project manager Logan Schinto for the massive international distribution of the big show. Bob Tweed and David Conwell of PSSI News Group were also there in the press compound to catch all the red carpet action for our friends at CNN.
- Academy Awards – Not only were Chris Hovden and project manager David Gallardo at the Academy of Motion Pictures in Beverly Hills for the much-anticipated announcement of the Oscar nominations, but our team was also there in full force for the show on Feb. 24, live on ABC. Brian Blomstrom and CK35 were at the Dolby Theatre in Hollywood for the awards, and then just a few hours later they were back in action for the "Live with Kelly and Ryan" after-party show. Meanwhile, project manager Logan Schinto monitored the press pool feeds of the Governors Ball and red carpet action, and Bob Tweed and David Conwell of PSSI News Group were busy providing CNN with live shots of all the Oscars action.
- Critics' Choice Awards – Larry Sheets and Chris Hovden were there in the CK35 mobile teleport to provide transmission services live from the Barker Hangar in Santa Monica.
- Screen Actors Guild Awards – We had the CK35 mobile teleport at the Shrine Auditorium and Expo Hall, where Brian Blomstrom, Chris Hovden and David Gallardo were on-hand for Turner's domestic broadcast, as well as international distribution of the show.





Taking Things Up a Notch With **NASCAR**

Last year, PSSI Global Services and NASCAR accomplished an unprecedented broadcasting feat during the Rolex 24, transmitting a total of 28 video paths and 75 audio paths for 32 consecutive hours. We transmitted all 28 video paths to NASCAR's production facility in Charlotte, North Carolina, using a single antenna, one transmitter and two transponders, with all paths delivered simultaneously via AT&T's fiber network for redundancy. The end result? A successful broadcast, and an engineering Emmy for us and our friends at NASCAR.

For this year's Rolex 24, we outdid ourselves again. Partnering with the talented folks at NASCAR, our team successfully transmitted an unprecedented 32 video paths via both AT&T fiber and satellite to NASCAR's home facility. This amounted to around 260 megabits over two transponders with 150 audio channels from one truck.

We're proud to have once again demonstrated the **viability of at-home productions** on a large scale, utilizing both terrestrial circuits and satellite, and we're **looking forward** to another great year of racing!

If There's Football, **We're There**

From college games to the Super Bowl, when it comes to football, the PSSI Global Services team has been around the block a few times. This year, though, we also took on something new — games, pregame and halftime shows, data over satellite for production, and more for the Alliance of American Football (AAF).

While the league didn't take hold, it was a great opportunity for us to demonstrate our multi-format production and transmission capabilities. **Here's a look at the services we provided in partnership with AT&T:**

- Managing at-home transmissions for eight to 10 video paths per game
- Providing comprehensive at-home production services in our K34 uplink/production hybrid for all the pregame and halftime shows, including switching, graphics, replays, audio mixing and more for AAF's virtual set, plus backup game transmissions out of K34's antenna
- Downlinking signals at PSSI International Teleport (PIT) and passing them on via AT&T Global Video Services (GVS) to Sneaky Big Studios in Scottsdale, where they are producing the show
- Providing decoding and engineering support at Sneaky Big with a receive antenna for disaster recovery
- Setting up a bidirectional IP circuit between the stadium and PIT via satellite to provide data and comms for production
- Coordinating confidence return feeds from Sneaky Big via AT&T GVS, which will be uplinked at PIT and received by our truck at the AAF venue

It was an exciting project, and we're thrilled to have been a part of it.



Engineer of the Quarter – Mike Sheehan

Congratulations to Mike Sheehan, our Engineer of the Quarter!

Mike has been a great addition to the PSSI Global Services family since he joined the company in September 2012. This quarter, Mike kicked things off working a "Bachelor" remote in Park City, Utah, and then spent several weeks in -25 degree temperatures covering five junior hockey events in Canada. Of course, those are just a couple examples of his hard work and dedication — Mike regularly adventures from coast-to-coast and beyond engineering successful C-band and Ku-band uplinks for our clients.

FUN FACT: In high school, Mike rebuilt a lawnmower with pistons from an old Chevy, and it's still being used to this day!

Spotlight on Brian Nelles

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

A I started in television back in 1981, some 38 years ago, in Rapid City, South Dakota. While at KEVN, I held various jobs, such as a master control operator, editor (on quad tape, U-matic and even film), technical director, chyron operator, and finally, news photographer. In 1986 I market jumped from Rapid City to Las Vegas (KTNV) and ended up in Phoenix at KTVK television. Working as a news photographer in Phoenix was a great experience, one that gave me an opportunity to work with wonderful reporters such as Elizabeth Vargas, who now works as the lead investigative reporter/documentary anchor for A&E Networks. Elizabeth and I were honored with an Emmy Award for spot news coverage while working together at KTVK.

In the early 1990s, I found myself working as a freelance handheld camera operator for various sports producers as well as on news documentaries for the MacNeil/Lehrer NewsHour. In 1994 the call came from Rob Lamb to join the Production & Satellite Services (PSSI) staff, utilizing the satellite truck experience I gained from my time working for KTVK in Phoenix. For the past 25 years I have had the pleasure of working with Rob, Chuck and so many other great colleagues at PSSI — and I even became good at reading Rob Lamb's handwriting!

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

A My favorite things about working in this business are the ever-changing technology and the wonderful people that I have had the pleasure of working with over the past 25 years that indeed shaped the industry as we know it today.

Q What is your favorite PSSI Global Services memory?

A One of my favorite memories at PSSI was a large live production we did for the BBC Natural History unit at MBARI, the Monterey Bay Aquarium Research Institute, back in 2003. On this job we were tasked with transmitting live programming from the research vessel stationed off the coast of California. These two microwave paths were relayed from a mountaintop to the MBARI location just north of Monterey. Here, the live material from a deep sea rover below the surface, along with cameras on the research vessel, were mixed with the set location and then transmitted live back to the BBC in London



with the Wolfcoach truck. My time living aboard the vessel and the memories of trying to keep the microwave paths connected, with no tracking or stabilized platforms available, during these long shows out on the ocean seem like yesterday.

Here is a picture of a regular styrofoam coffee cup that I decorated and placed into a dive bag that was attached to the deep sea rover as it went down over 2,500 meters. This is what you call pressure — 3,642 pounds per square inch. Ahhh, the good times ...



Q If not this career, what?

A Hmmmm ... Well, I read the news on the radio at one time! I wanted to be a paramedic when I was young, and then as I got older I found the ocean and became a PADI scuba instructor. Now I think a career selling umbrella drinks on a beach sounds great.

Q Please tell us a bit about your family.

A I have been blessed with a wonderful son, Alexander, who is studying at UNLV. My wife, Stacy, somehow juggles our hectic home that includes two and a half horses, Sabrina, Hudson and Beau Jangles (yes Beau is a mini); our Weimaraner dog Grace; and a tank full of saltwater fish.

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

A There are probably many things people would be surprised to hear. I became an eagle scout at the age of 16 and earned the PADI open water scuba instructor certification. I enjoy horseback riding, camping, side-by-side riding, reef tanks, welding and building projects, including building my own house in Colorado.



PSSI Global Services Earns the Technology & Engineering Emmy®



The PSSI Global Services team looks forward to the NAB Show every year, but this time we had something extra to get excited about: accepting our Technology and Engineering Emmy® Award during the recognition ceremony on April 7.

We are thrilled to be honored with this award, alongside our friends at NASCAR, for our cutting-edge work on transmission schemes for large-scale “at-home” productions.

While broadcasters have been producing at-home events for many years, our award-winning transmission innovations have enabled much larger — and more complex — at-home productions than ever before. Our engineering team has developed new techniques in video compression and modulation to maximize data throughput at extremely low latency for satellite transmissions as well as for fiber and IP distribution platforms. These technological advancements significantly reduce

costs and simplify logistics for major live television events by eliminating the need for extensive on-site production crews.

In early 2018, we used these transmission capabilities in partnership with NASCAR to successfully conduct the largest at-home production to date for the Rolex 24 in Daytona, Florida. The transmission from the event back to NASCAR’s headquarters in Charlotte, North Carolina, included 28 video paths and 75 channels of audio delivered synchronously for 32 consecutive hours. We did it all with just two transponders on a single satellite, accessed with one antenna and one solid-state amplifier.

Receiving this Emmy is a **huge honor for all of us at PSSI Global Services**, and it is the result of a tremendous amount of **hard work and dedication**. Our team invested countless hours and hundreds of thousands of dollars in developing this solution for our clients’ large-scale at-home production needs, and **we couldn’t be prouder of the results**.