

CASE STUDY

CHALLENGE

Build a broadcast center in just 12 months and transition live-to-air content without interruption or degradation. Expand that broadcast center to power fast growth in streaming media.

SOLUTION

Provide facilities, engineering design, integration, staffing and managed distribution services from a single source.

BENEFITS

- Creative engineering that reduces wear and tear on broadcast center staff while improving service continuity
- Flawless transfer of origination to new broadcast center
- Single-source responsibility for support staffing, technical operation and transmission services
- Access to expertise in broadcast technology, VOD and online video
- Expansion into online and app streaming with minimal overhead and high-quality execution

▶ Delivering Showtime Content On the Air and Over the Wire

State-of-the-art broadcast and streaming center



Showtime Networks went on the air in July 1976 on a single cable system in Dublin, California. Two years later it went national, before becoming a subsidiary of Viacom in 1982. Over its +40-year history, Showtime acquired or launched more than 20 channels of feature films, original programming and sports and entertainment events. It was one of the first cable networks to broadcast in HDTV and, at the end of 2018, served more than 25 million subscribers.

Looking for a New Home

The company reached a turning point in 2005, when Viacom Chairman and CEO Sumner Redstone announced that his company would spin off its CBS broadcast network subsidiary to revive a stagnating stock price. Showtime was originating its programming from a Viacom-owned broadcast center in Hauppauge, New York. Decisions in the Viacom executive suite, however, bundled Showtime into the CBS spin-off – which meant that the company would soon need a new broadcast facility.

Fortunately, Showtime had friends in the neighborhood. In 2003, the company had gone looking for a vendor to provide the origination and satellite distribution for a video-on-demand (VOD) service. After a thorough bidding process, Showtime vice president of broadcast engineering Jim Occhiuto selected Globecomm to design a VOD network from content ingest through distribution to servers located at cable headends. Once Globecomm's Broadcast Lab completed the design, he asked the company to build and operate the system from its Long Island International Teleport in Hauppauge. By 2007, Globecomm had been successfully running the custom-designed VOD network for four years.

When Showtime issued the RFP for a new broadcast center, it was natural for Jim's team to include Globecomm among the bidders. And in June 2006, they awarded Globecomm the contract, based on technical capability, depth of engineering support, proximity to New York City and competitive pricing. The fact that Showtime's staff would find themselves working in the same Long Island town was an added bonus.

The Clock Starts Ticking

Globecomm had just 12 months to design and integrate a Showtime broadcast center at the teleport and put it on the air. The job of designing it went to principal engineer Augusto Villasenor.



“Jim Occhiuto wanted a new approach to master control,” said Villasenor. “He wanted to reduce wear and tear on the operators. After talking to everyone on the Showtime team, we designed a set of ‘pods,’ each controlling two to four services, instead of cramming everyone into one big room. Each pod could manage all their services, so there was never a need to run to another console.”

While the pod system made the design more complicated, Augusto worked to reduce complexity and cost elsewhere. The traditional design for a digital broadcast center sends all incoming and outgoing signals through a single router. Globecomm designed a modular system with two paths for every signal. Inbound signals could go either to the router or direct to the ingest system; outbound signals could go to the router or direct to the uplink. The modular approach eliminated the router as a single point of failure and reduced the total amount of cabling required. It also made possible the use of a smaller router. When the Showtime staff found a suitable router sitting in their warehouse, it became part of the design.

In addition to designing and integrating the broadcast center, Globecomm agreed to operate the underlying infrastructure. Responsibilities included uninterruptible power, HVAC, technical operation of all equipment (with SLAs for uptime), uplinking and distribution to cable headends. Showtime personnel would ingest the content, do the scheduling and handle day-to-day operations, while Globecomm would ensure that decisions made in the broadcast center were executed across the cable and DTH universe.

Going Live

The most nerve-racking part of any broadcast center deployment is putting it on the air. In just a couple of hours – instead of weeks or months – Showtime transitioned 25 standard digital channels, 3 HD channels and 1 analog channel to the new broadcast center. That smooth transition was the product of intense planning. Globecomm commissioned the ingest operation early so that Showtime staff could find and fix bugs in the digital content management system. Showtime set up connectivity to Manhattan and the existing Viacom NOC to begin transferring digital assets to the new video servers days before the on-air transition. Globecomm even ran its asset management system in parallel with Viacom’s system throughout the transition process to ensure a flawless start.

The best preparation, however, is no match for Mother Nature. Right after the transition was complete, Hauppauge was hit by a huge rainstorm with gale force winds. It made headlines by knocking out part of the New York City subway system. Globecomm’s headquarters flooded with an inch of water

throughout the building and three feet in the teleport. But if you were a Showtime viewer, you never knew it happened. “It was amazing to see how everyone banded together to ensure the services would not be impacted,” said Jim Occhiuto. “From administrative assistants to presidents, everyone chipped in.”

Streaming Success

Broadcasting has changed immensely since 2007 and Showtime has changed with it. In 2011, it introduced Showtime Anytime, an authenticated app for existing subscribers, followed by the Showtime app in 2015. They have since gained millions of subscribers. To serve the new requirement, Globecomm expanded the broadcast center by nearly 7,000 square feet to accommodate an advanced streaming management and monitoring center, where staff run services and route content on the public internet.

Quite a few of them are Globecomm employees. From the six Globecomm staff supporting Showtime in 2007, the support group has grown to more than 20 people. They are quality control and digital media operators, master control operators, VOD technicians and broadcast technicians. A senior broadcast engineer and integration technicians manage a continuous refresh cycle for the technology. By turning to Globecomm for staffing, Showtime gets the best of both worlds: access to the skills and experience it needs to run a changing business, and the ability to keep its own operation lean.

Winning the Fight

In 2017, heavyweight champion Floyd Mayweather accepted a challenge from UFC star Conor McGregor to fight in Las Vegas. Showtime won rights to broadcast the fight as a pay-per-view event online and a strong marketing campaign created an audience estimated at 4.5 million total viewers.

As the August date of the fight approached, however, Showtime realized that many would turn to its Showtime app for access – but the app lacked the distribution infrastructure to handle a massive number of simultaneous streams. Globecomm found a solution fast. Using its direct connection to Amazon Web Services, Globecomm spun up processing and distribution capacity on AWS. On the night of the fight, AWS provided distribution direct to the Showtime app and easily managed the volume.

“Whatever the customer needs to be successful, that’s what we do,” says the company’s director of programs, Jerry McClendon. “When Showtime decided to move in with us all those years ago, they took a gamble – and we are proud that it paid off.”



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