



Dejero's real-time connectivity scores big for public safety agencies at ultimate football game

Dejero's *Smart Blending Technology* guarantees public safety at one of the world's biggest sporting competitions

Overview

There aren't many sporting spectacles in the world which attract almost 70,000 fans to one stadium. With an additional 114 million football fans watching events unfold live on screen, in February 2023 the eyes of the world were on the State Farm Stadium in Glendale, Arizona.

At this scale, security is of utmost importance and real-time cooperation between federal, state and local stakeholders is paramount to guarantee public safety. Major sporting events are not only prime targets for terrorist and cyber attacks, but densely populated crowds can be a challenging dynamic to control where situational awareness is key.

Security operations in Glendale were coordinated on the ground via two mobile command vehicles which synchronized video and data feeds from multiple helicopters and from other mobile personnel on the ground.

In these constantly evolving environments, ultra-stable communication platforms and real-time data streams are necessary to ensure every stakeholder is kept in the loop at all times.

About the customer

Ensuring public safety at large-scale sporting events requires teams from multiple agencies to work together seamlessly and in real-time. From enforcing temporary flight restrictions, to implementing spectator safety, maintaining perimeter security, scanning delivery vehicles or monitoring potential flashpoints; these teams rely on rock-solid connectivity and ultra-low latency to stay connected across rapidly changing environments where timely decisions can mean the difference between life or death.

Challenge

With tens of thousands of people to track and multiple teams shouldering the responsibility of keeping everyone safe, these large-scale events are always team efforts.

The coordination and distribution of all the available data is a significant task when representatives from local law enforcement agencies, the county sheriff's office, state law enforcement and others all need timely information to make critical decisions.

Up to four helicopters can be in the air at any one time, all streaming live high-resolution video to a mobile command vehicle located on the ground a mile from the stadium. From this portable location, video and data streams are coordinated and sent to other command centers where stakeholders can make tactical decisions based on the available data.

Being able to react in such a dynamic and ever-changing environment is entirely dependent on reliable remote connectivity, and tens of thousands of people using their own personal mobile devices puts an even greater strain on resources, where data-intensive apps and live video streaming can overwhelm cellular networks.

Every agency needs reliable and rugged connectivity to function; they need very low-latency connectivity to be able to make informed decisions based on real-time video coverage, and they need dependable access to data channels to ensure their own support channels are functioning as they need to.

In such a pressurized environment these things are non-negotiable; data dropouts can cost lives.

Solution

In Glendale, every stakeholder was kept in the game using a robust network of Dejero devices. In addition to EnGo mobile transmitters sending live video feeds from on the ground and in the air, the mobile command vehicles featured FlexPoint transceivers and two Dejero PathWay signal encoders to receive and distribute these live video feeds to all supporting agencies and stakeholders.

Meanwhile, reliable data connectivity was provided via two GateWay M6E6 units – one in primary use and a second as redundancy.



Dejero's *Smart Blending Technology* provided critical connectivity for public safety agencies during this year's final football play-off at State Farm Stadium, Glendale, Arizona.

Reliable data transport was guaranteed using Dejero's patented *Smart Blending Technology*, which protects against network dropouts by combining multi-carrier and multi-technology solutions across LTE, fiber and satellite connections.

Smart Blending Technology dynamically monitors connectivity paths from multiple providers to manage bandwidth, packet loss and latency differences in real-time. This provided not only enough bandwidth to send live video to enable mobile command vehicles to manage multiple live video streams in the field, but enough to ensure that each independent agency had access to all the data needed to maintain their own internal support systems.

Each helicopter and each independent EnGo transmitter on the ground was able to monitor different aspects of the event on the fly, and each camera signal was picked up by Dejero's FlexPoint receivers located in two mobile command vehicles. From there, the Dejero PathWay encoders could distribute signals to any management server in the world with latency as low as 0.8 seconds. Meanwhile the PathWay's AES256 stream encryption provided additional security to ensure that data remained fully encrypted until it could be decoded by a Dejero receiver at its destination, enhancing the overall security of this complex, multi-agency effort

This portable delivery network provides unmatched reliability, expanded coverage and guaranteed bandwidth, delivering service that public safety agencies could depend on.

Meanwhile, Dejero's GateWay not only benefits from the same *Smart Blending Technology* but it is also FirstNet Ready®, which means it can be used directly on AT&T's priority wireless communications network designed exclusively for first responders and the public safety community.



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Results

By blending across diverse networks, video feeds could be transmitted within milliseconds, where the speed and reliability of signals makes all the difference. It provided tactical teams with all the information needed to respond to evolving situations at this large-scale event.

The EnGo and PathWay units blended signals provided by a range of carriers using FirstNet and Verizon priority for the main transmission. Each unit housed two T Mobile, two AT&T and two Verizon priority sim cards. Every video signal was fed into a BigPipe video server to give access to teams across the entire chain of command.

But connectivity isn't just important for camera feeds, the Dejero network provided ample access to data too. The GateWay M6E6 was at the heart of the entire public safety operation, providing internet connectivity to every agency across the support infrastructure. It not only ensured reliable and seamless connectivity, it also enabled each support team to utilize their own private systems - all routed through the GateWay - which included access to Silvus Technologies radio applications for MIMO communication and other specialist law enforcement systems.

In an environment where a few seconds can make all the difference, providing reliable situational awareness to a multitude of teams keeps people safe.



Public Safety mobile command vehicles and helicopters relied on Dejero devices and connectivity for real-time situational awareness, streaming video and data to and from multiple command centers

Connectivity you can count on. Dejero keeps first responders safe with resilient wireless connectivity for mission-critical communications.

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