



## Case Study

### Taking Airborne Downlinks to the Next Level with Diversity Receive Systems

#### San Antonio Police Department Realizes Benefits of Upgrade

Public safety agencies across the U.S. have discovered the value real-time video provides during tactical situations. If airborne assets are deployed, but no one can see the video they are collecting, the full benefit of these assets is not being realized. The ability to view a tactical situation from all deployed assets minimizes response time and optimizes officer safety by allowing command staff to quickly establish operational priorities and assess public safety.

As technology changes and advances, more and more public safety organizations are investigating options to upgrade their surveillance equipment to real-time, high-definition digital video systems. These organizations want to utilize their existing infrastructure to stream mission critical video imagery over IP and public cellular networks for viewing by key decision makers, regardless of their location.

#### The Challenge

In early 2013, the San Antonio Police Department began this upgrade process. Home to more than 1.5 million people and spread out over 400 square miles, the department realized their aging analog microwave equipment installed in helicopters and at receive sites were no longer capable of supporting their needs.

San Antonio operates multiple helicopter air assets, one fixed receive site, one fire and one police command vehicle, and wanted a system that would provide live video from all assets to both their Emergency Operations Center (EOC) and officers on the ground. They also wanted their system to be interoperable and compatible with other law enforcement communities in the area, such as the Austin Police Department and Texas Department of Public Safety. Finally, the coverage area needed to encompass both the city and surrounding suburbs.

#### The Solution

Vislink reviewed San Antonio's requirements and, in conjunction with our Value Added Reseller, RSI Global Communications, designed, developed and implemented a complete end-to-end video surveillance solution.

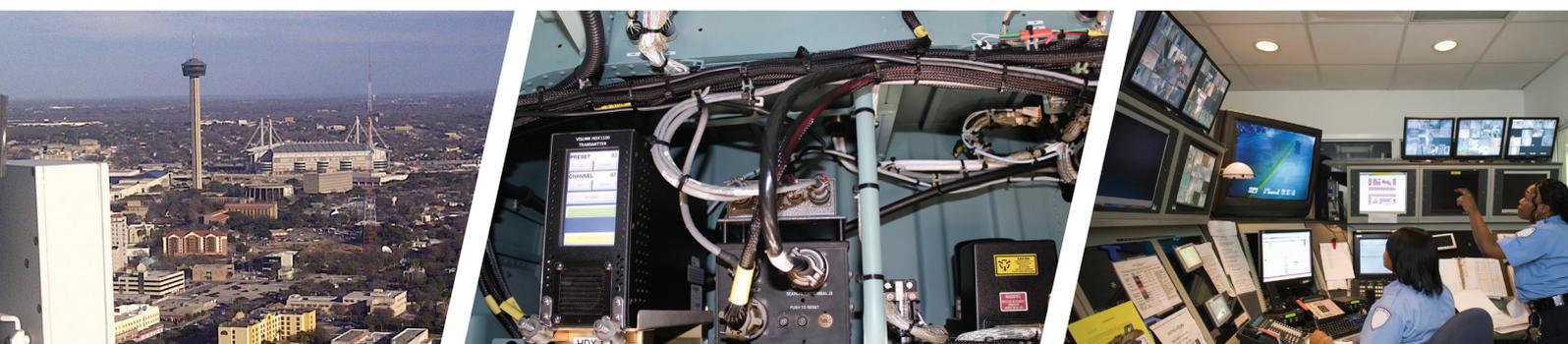
The complete solution included:

- 4 helicopter transmitters
- 1 fixed receive site with six sector antennas on top of tower and two diversity receivers
- 1 fire command vehicle with sector pod antenna and diversity receiver
- 1 police command trailer with sector pod antenna and diversity receiver
- 2 digital handheld receivers
- 1 Video Media Server

#### The Technology

The San Antonio Police installed downlink transmitters and omni-directional antennas on their four helicopters. Real-time imagery is transmitted simultaneously to command vans, ground personnel with handheld receivers, and the fixed receive site. To receive the video, the receive site is configured with six sector antennas, two diversity receivers and a video media server.

The video media server converts the video stream to IP, allowing complete flexibility in distribution options. The video is streamed directly to a video wall at the EOC for viewing by command staff, allowing them to make informed tactical decisions. The video media server also streams real-time video to field edge devices,





such as smartphones, tablets, and laptops for viewing from virtually any location.

Vislink and RSI Global Communications worked together with the local frequency coordinator to secure three home channels for the City of San Antonio in the 6.5 GHz band, allowing them simultaneously transmit from multiple aircraft, providing greater flexibility and improved service during crisis response.

## Conclusion

By upgrading from analog equipment to a digital receive system, San Antonio was able to take advantage of increased operating range and superior image quality. They were also able to realize the benefits of interoperability and compatibility with other local area agencies.

"The San Antonio Police Department was pleased with their ability to purchase a comprehensive integrated solution from a single provider, complete with system evaluation, design, manufacturing, installation, service and extended warranties."

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