

## High-Speed Fiber and Drones Power Live-Streaming Accident App

Adam Stone | August 21, 2018



The city began leveraging [unmanned aerial systems \(UAS\)](#) a little over a year ago, sending out [drones](#) to capture video footage of accident scenes. A \$10,000 grant from smart cities accelerator US Ignite enabled development of a new live-streaming app.

“This allows all the subject matter experts to collaborate, without having to get together on scene. You could have engineers and utility operations managers and public safety officers all working together,” said Will Aycok, general manager of Wilson Greenlight Community Broadband, the city’s fiber network. “If everyone can see what is going on in the field, that is going to speed your response and you’ll get the right resources on the scene.”

Now in field testing, the live-stream capability should deploy operationally in early 2019.

### **Municipal drones**

Visual data helps experts reconstruct accident scenes. It allows analysts to gauge damage and also helps them to determine what went wrong. Before Wilson officials turned to drones, the city had personnel scaling fire-truck ladders at accident scenes to capture visual documentation. It was a less than perfect solution.

“That ties up a lot of resources, and it imposes on the community by slowing down traffic,” Aycock said. “Now in less than 30 minutes, on the typical scene, our reconstruction folks can collect all the needed data.”

This kind of UAS use falls in line with efforts playing out in cities nationwide, as municipal authorities look to leverage broadband access as a tool for public service.

“Enhancing public safety response is a very fertile area,” said Scott Turnbull, national technology leader at US Ignite, whose smart communities program provides financial and technical support to 25 U.S. cities and one in Australia.

“There’s also interest in drones for infrastructure management, being able to see things like downed power lines in hard-to-reach areas. There are applications around soil quality and land management, using UAS sensors to measure the hydration and temperature of the soil,” he said. “The sky is the limit, when you are looking at wide-area applications.”

The FAA has been trying to [make it easier](#) for cities to experiment with unmanned craft. It recently selected 10 test cities for its Unmanned Aerial System Integration Pilot Program, through which local government and private partners will test new civic uses of UAS. FAA may then write up new regulations based on these emerging use cases.

A number of cities already have moved to put drone capabilities into play. Long Island, N.Y., officials are [using drones](#) to aid firefighters, monitor municipal property and track storm damage. Albuquerque, N.M., is working on a plan to use drones for [utilities inspections](#).

For all these implementations to be effective, a robust broadband network is key.

## Getting bandwidth

As the local broadband provider, Wilson deployed its high-speed network in 2006-07 and now is expanding the network into more rural areas.

“We have done a lot of the low-hanging fruit: Automated meter reading, cameras for asset monitoring, replacing legacy radio systems. Now we are in the phase of ‘what comes next,’ which includes the broader array of IoT sensors, and drones are a platform for that,” Aycock said.

The city-operated network typically runs at speeds 10 to 100 times greater than a typical commercial network. In considering a public-safety implementation like live-streaming of drone data from accident scenes, city officials said that broadband capability was a determining factor.

“It really comes down to what kinds of data and what quality you require,” Aycock said. “If you want to have a live stream of ultra-high-definition video, and it’s for public safety uses, you need to have an ultra-robust network.”

With that robust network in place, Wilson officials envision expanding the use of real-time drone streaming.

“We believe this application could provide the foundation for future uses,” Aycock said. “You could actually have drones headed out in advance of a fire truck, sizing up the

situation while the crew is still en route. This is a little way off, but that is where it might be heading.”

In order for expanded drone implementations like this to become a reality, the city will likely need to find a way forward within a shifting framework of aviation rules.

“We are making sure that all the safety protocols are in place, and also that the regulatory environment allows for it,” Aycock said. “ There are risk managers and attorneys and federal regulators who all have a role to play in how we develop this technology. Developing this software is a first step, but there is still a lot of work that needs to be done.”

<http://www.govtech.com/public-safety/High-Speed-Fiber-and-Drones-Power-Live-Streaming-Accident-App.html>