Rescue Team Reaches Injured Hiker Faster Using PictometryOnline

Tom Bier

Battalion Chief
of Roanoke, VA

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Located in the Roanoke Valley of the Roanoke region of Virginia, Roanoke County has a population of 92,000 and boasts 22 miles of Appalachian Trail. Bisected by the Roanoke River, the municipality is one of the largest in Southwest Virginia and the commercial and cultural hub of much of Southwest Virginia.

Serving as the Battalion Chief of Roanoke, VA, Tom Bier has been a part of many rescues and emergency situations, in fact, in 2013 there were over 14,000 calls for service. Working with 160 career emergency response professionals and over 200 volunteers, Bier has developed systems for success that have not only made a difference to the emergency response teams but continue to save lives.

One incident happened August 8, 2013 at 18:49. "Our Emergency Communication Center received a cell phone call from a group of hikers stating that one of the group, a 13-year-old female, had fainted and was unresponsive and shaking. It was a cool day for August and a cold front just passed with some thunderstorms. The patient was cold, wet and dehydrated," Bier shared.

There was some confusion as to their exact location as the caller indicated that they were a mile from the Dragon's Tooth parking lot on the North Mountain Trail. "We frequently respond to calls on the Dragon's Tooth section of the Appalachian Trail, but were unfamiliar with the North Mountain Trail," continued Bier. "With a command post established in the Dragon's Tooth parking lot and a report that one of the guides was hiking out for help, it was decided to wait until that person made it to the command post to determine the best course of action."

One of the systems that Bier would utilize was PictometryOnline (POL). A visualization and mapping software that features Pictometry oblique and ortho aerial imagery specifically captured for the county. Using the POL tools, Bier's team would easily be able to measure
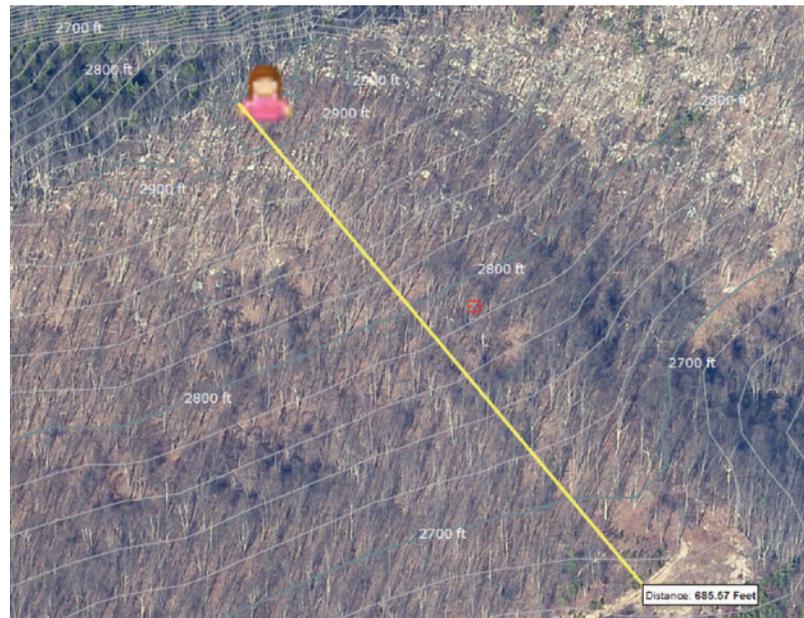
Using measurement tools in PictometryOnline, the rescue team determined the road was 600 feet from the presumed position of the patient and the team would be 250 feet below her location.

distance from patience to private road, identify ownership of parcels and determine overall condition of terrain. It is an invaluable tool for the county when trying to locate areas that are not easily accessible.

Bier continued, "While waiting, we googled "North Mountain Trail – Appalachian Trail" and discovered it was an old section of the Appalachian Trail nearby. Our emergency communication center (ECC) had provided the command post with a phone number of the caller and the command post requested the caller dial 911 again in the hopes of getting some GPS information from the call. The ECC provided the command post with latitude and longitude

coordinates. We then used POL to review the information and it indicated the subject was not on the Dragon's Tooth system but on the ridge of a nearby mountain. The guide made it to the command post and verified the location."

A recon team of two rescuers were sent in via the trail the guide used. In the meantime, POL was consulted and it indicated a private road on the other side of the mountain. With the recent heavy rains the team did not know the status of this private road and used POL to obtain owner information and make contact. The owner came to the command post and indicated that the road was passable to a point near the indicated position.

Using measurement tools in POL they determined the road was 600 feet from the position and 250 feet below the ridge. Considering that the recon team had taken over an hour to make the hike to the patient, it was decided to send a team with an SUV, pickup and UTV up the private road. After cutting their way in with a chainsaw they were able to get the SUV within a quarter mile to a washed out portion of the road. The UTV was able to make it by the washout and crews hiked up from the road to the patient. The young girl was packaged and carried to the UTV and then transported to the SUV for a ride off the mountain to an awaiting ambulance at the paved road.

It took the recon team over an hour to reach the patient via the trail. With the information POL provided, the rescue team of seven was able to reach the patient in less than an hour and then it was less than an hour to get the patient off the mountain and into an ambulance.

"POL allowed us to verify the location of the patient, identify a nearby road to use for access and identify the owner of the road," said Bier. Without POL, we probably would have carried the patient out via the trail and that would have taken several hours and at least twice the number of rescuers. It allowed us to cut in half the time it took to get the patient off the mountain and to the hospital."

Roanoke emergency services also uses Pictometry imagery for Pre-Incident Surveys, measuring features and identifying landowners during wildfires and overall rough triage of structures. They have also used this technology with SWAT incidents, providing the police officers with detailed pictures of the area and owner information for nearby properties. ✍
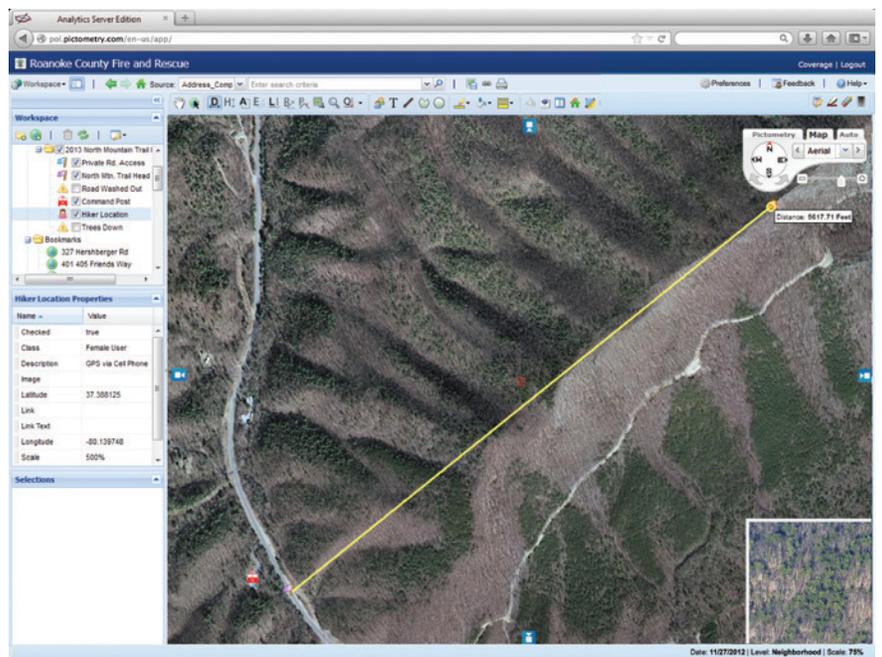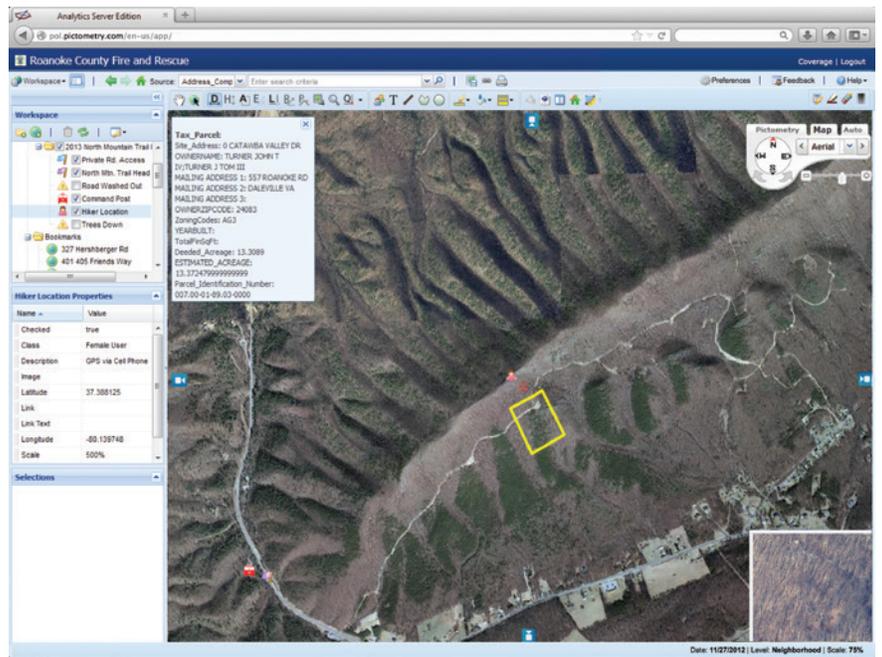
PictometryOnline was used to determine the distance from the trailhead to the patient, identify a private road nearby as an alternate and determine the road condition. This allowed the rescue time to be cut significantly.

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