TECHNOLOGY NOTE

FLIR United VMS acts as force-multiplier for law enforcement

FLIR United VMS improves security management, evidence capture and real-time response for Port Angeles police.

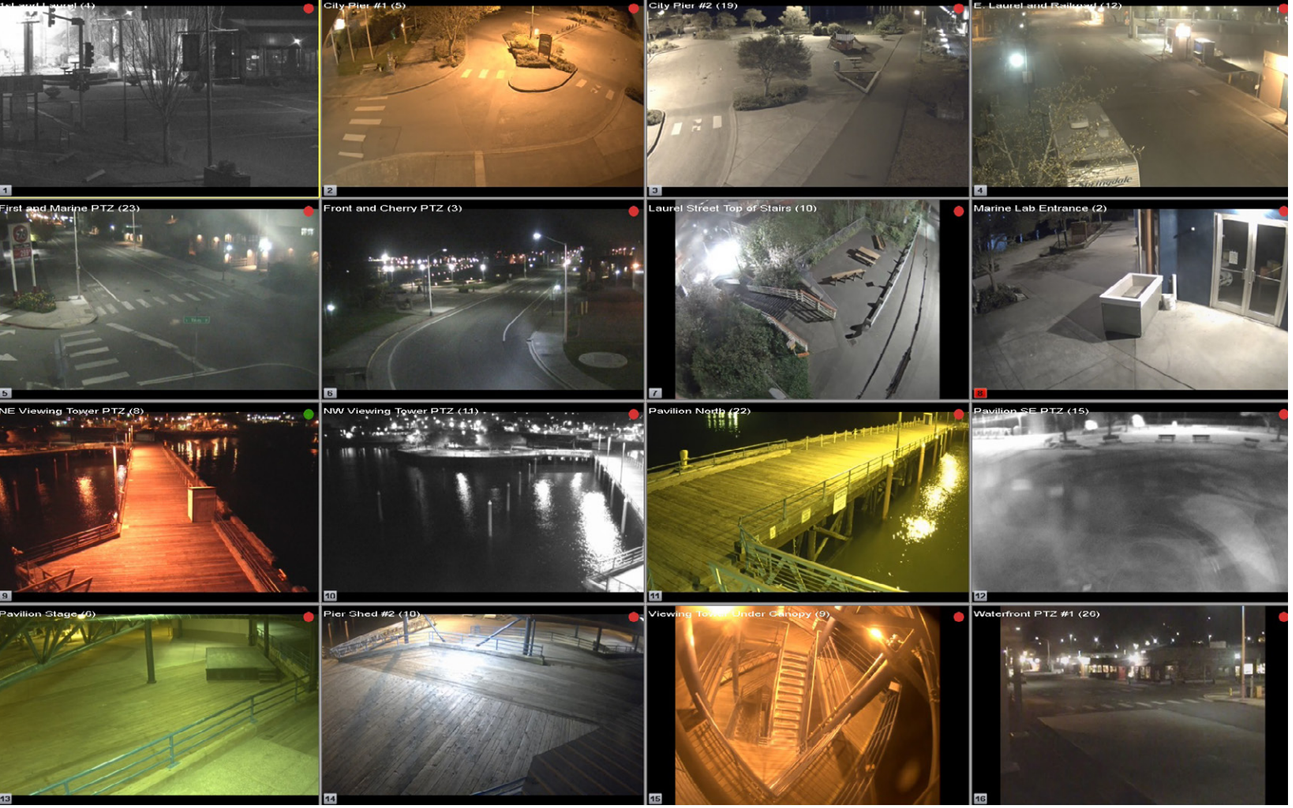
Crime prevention and public safety are top priorities for municipalities. However, limited staff and resources inhibit law enforcement from quickly and effectively responding to all incidents. By deploying FLIR's advanced, enterprise–grade video solutions, police fleets dramatically increase their ability to monitor all city entry points and view live surveillance video from problematic locations.

Port Angeles, Washington, located on the U.S.-Canada border, is host to a thriving maritime port and a significant customs entry point into the United States. This picturesque city is located on the Olympic Peninsula, opposite Canada's stunning Vancouver Island and Victoria, British Columbia. Port Angeles is the gateway to beautiful Olympic National Park, attracting approximately three million visitors during the spring, summer and autumn months. Ferryboats travel the 90-minute route between Port Angeles and Victoria several times a day for most of the year, making the small town a popular tourist destination. The city's harbor is deep enough to provide anchorage for large vessels, such as tankers and cruise ships, making the port a busy location itself.

SECURITY UPGRADE

Video surveillance is a powerful tool to enhance border security and public safety. However, outdated video equipment can create critical security vulnerabilities. To ensure the security of the City of Port Angeles, officials wanted to upgrade its aging analog video surveillance system to a solution that provided higher resolution images and remote video access, while remaining easily scalable over time. As the city's analog system reached end-of-life, officials also desired to improve surveillance in high-traffic areas within the city and along the coastline.

Port Angelis officials chose to replace their aging video surveillance equipment with a higher resolution system from FLIR that was also scalable over time.



The FLIR United VMS surveillance system allows officers to stream video from any of the city's cameras to their patrol, cars either through a cellular network or a private wireless mesh network.

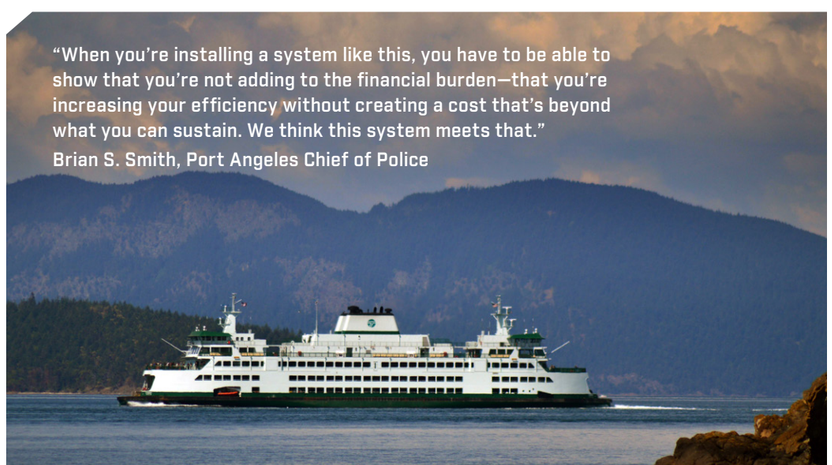
"The analog system was obviously obsolete the day they put it online," said Brian S. Smith, the Port Angeles Chief of Police. "We could only view video from one spot—in our control room."

Another goal of the upgrade was to allow police officers to stream video from any of the city's cameras to their patrol cars. This would enable faster, more effective incident response and serve as a force-multiplier and improve situational awareness for the small department.

"We needed a new approach to leverage our existing law enforcement resources to address current and emerging challenges," Smith said. "We knew that advanced video surveillance technologies could provide a quick return on investment."

City officials dedicated a significant amount of time, money and manpower to acquire the technology to meet the city's new security plan. After a three-year process, Port Angeles secured a $400,000 Homeland Security grant. Officials then asked for a security system recommendation from Last Mile, Inc., who had previously designed and installed a successful security solution for the city of Seattle. Based in Longview, Washington, Last Mile, Inc. manufactures Cyclone wireless network gear, resells high quality wireless network and security equipment, and provides microwave wireless and CCTV system consulting, design, and integration services. The company has been servicing cities, public entities and private industries for over 17 years.

Last Mile, Inc. later met with Port Angeles city staff to learn their security system specifications. Officials sought a scalable, open platform solution that uses Internet Protocol (IP) for monitoring and control, and supports surveillance products from many manufacturers. They also wanted to integrate a wireless mesh network, optimized for video applications in outdoor municipal and public safety deployments, to stream live video to police vehicles.



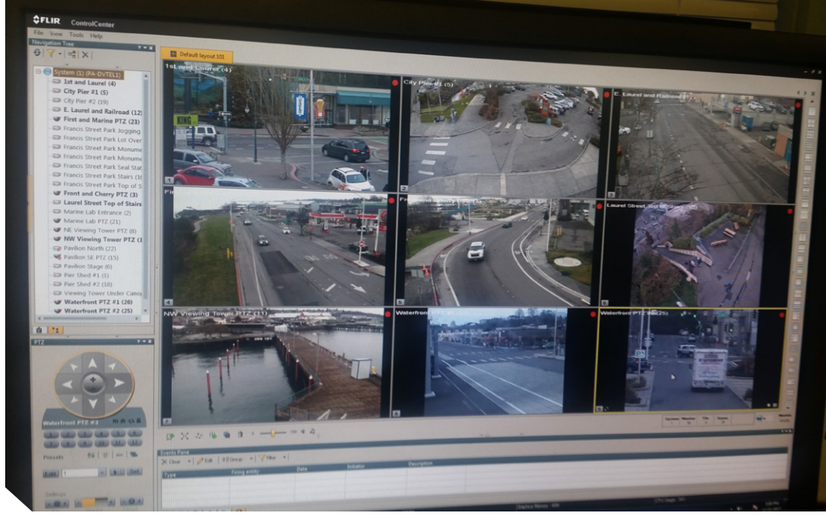
SCALABLE IP VIDEO SURVEILLANCE SYSTEM

Soon after, Last Mile, Inc. designed, configured and programmed a comprehensive IP video surveillance solution centered on the FLIR Latitude Video Management System (United VMS), which is an enterprise-level, IP surveillance system with advanced forensic capabilities, user-friendly operations, and scalable architecture. For Port Angeles, the FLIR VMS integrates with a variety of cameras and a private citywide HPE/Aruba Networks wireless mesh network for public safety personnel.

Installation occurred over three months, and now the video solution has empowered police to better protect both the port and the city more effectively. According to Smith, the surveillance is primarily used for forensic investigations following suspicious activities or emergencies, as well as for real-time containment of suspects and monitoring of certain areas.

"In terms of versatility and access, it's a great tool that we didn't have before," Smith said. "Now, we have a system we can add to. It meets our needs and allows us to have more information for patrol, response and investigation. When you're installing a system like this, you have to be able to show that you're not adding to the financial burden—that you're increasing your efficiency without creating a cost that's beyond what you can sustain. We think this system meets that."

Video data is stored at the command center for 30 days for investigative purposes and to meet Washington public record laws. To simplify cabling requirements, reduce installation cost, and increase reliability, video is transmitted to a central command center via a robust fiber backbone ring network and utilizes the wireless mesh network to reach edge locations, which would otherwise be cost prohibitive to employ. The camera feeds are then captured and managed by FLIR's Latitude VMS, which tracks incoming activity, provides a streamlined video interface and alerts officers to key events.



FLIR United VMS

STREAMING LIVE VIDEO

Port Angeles officials were particularly impressed by Latitude's innovative mobile video push app, TruWitness, which extends video surveillance beyond the point of fixed cameras and allows real time mobile device video to be viewed and recorded as additional cameras in the VMS. In fact, the TruWitness app was a key reason why they selected FLIR for the project.

Port Angeles Chief of Police Brian S. Smith.

"At the time, not a single company in the VMS sector was doing that," said Keith Young, senior sales engineer at Last Mile, Inc. "The TruWitness app is what pushed Port Angeles over the top where they said, 'We have to have that.'"

FLIR's United VMS mobile client software additionally enables police officers to stream live video to their squad cars. Police patrols are able to use their smart devices to stream, record, analyze, review and export live video from any location, enhancing rapid response and mission critical decision-making.

"We are now able to better monitor and track suspicious vehicles and passengers unloading from the ferries," Smith said. "We are also monitoring the coastline, and can dispatch police officers to send live video from any remote location."

The video streaming is done through either the cellular network or the private wireless mesh network, and the system allows officers to move seamlessly between the two.

"We have a very unique system here that uses In-Motion router boxes, which are in our patrol cars," Smith said. "It decides what is the best signal—Wi-Fi, 3G or 4G—and toggles back and forth [as police move throughout the city]. Most of the time, we're streaming the mobile application through Wi-Fi."

One of the advantages of using the private Wi-Fi is that it ensures reliable and efficient communication between law enforcement at all times. In the real world when natural disasters, riots, sport games or other large events take place, the people are on their phones, streaming video, updating social

media, making emergency phone calls, overloading the cellular networks. In those instances, police officers' cell phones become useless and they have to rely solely on limited two-way radios. Private Wi-Fi networks eliminate this issue.

"If you have your own private wireless, you can still utilize team coordination and case management apps, photo sharing, Wi-Fi calling, and the TruWitness app capability," Young said. "When everything else goes down, law enforcement and first responders are still able to communicate at the same level."

Additionally, the data plans required to run cameras over cell phone carrier connections can be extremely expensive. The private Wi-Fi network presents a significant cost-savings for the city.

LOOKING FORWARD

Video surveillance initiatives are a top priority for Port Angeles. The current system has proven useful on several occasions to help police solve crimes and gain insight into the city's security posture. Additional grants will fund projects to enhance security at local parks, transportation networks and correctional facilities. The city plans to increase the number of cameras across key locales throughout the region and add video analytics to further bolster the system's capabilities.

"We knew the success of the first phase would lead to the deployment of more cameras, so we chose a solution that could be easily and economically expanded over time," Smith said. "FLIR delivers the technology that meets our current and future needs, while providing a streamlined user experience and maximum flexibility."

Further information on thermal imaging cameras and this application can be obtained from:

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