Cisco IT Brief

Beyond Video Surveillance: Cameras as Sensors

Say "video surveillance" and most people think security. But knowing what happens to places and things when you're not around to see can also save money and help you make smarter decisions. At Cisco Live, for example, we use the same video surveillance cameras we use for security to also understand when and how trade show guests move around the venue. This helps us create the best possible experience for attendees.

You can get creative using cameras as sensors. A manufacturer that can prove that a robot's malfunction wasn't caused by operator error can convince the vendor to pay for the repair. A farmer who sees where livestock graze throughout the day can make sure they're eating well.

Cameras Store Video and Analyze It for Motion

Placing cameras in, say, pastures or factory floors used to be too costly and complicated to justify the expense. In addition to cameras, you typically need a network video recorder (NVR). Software to analyze the video. DVDs or USB drives to share the video with people in other locations. And skills to install and manage the hardware and software. If you store video in the cloud, you also need a very large network pipe to move the video from the cameras.

We avoided all of that at Cisco Live in July 2017 by deploying 30 Cisco Meraki MV Cloud Managed Cameras. Deployment was as simple as mounting the cameras, connecting them to switches, and adjusting the lens position. Once connected to the network, the cameras pulled their settings from the Meraki cloud and configured themselves.
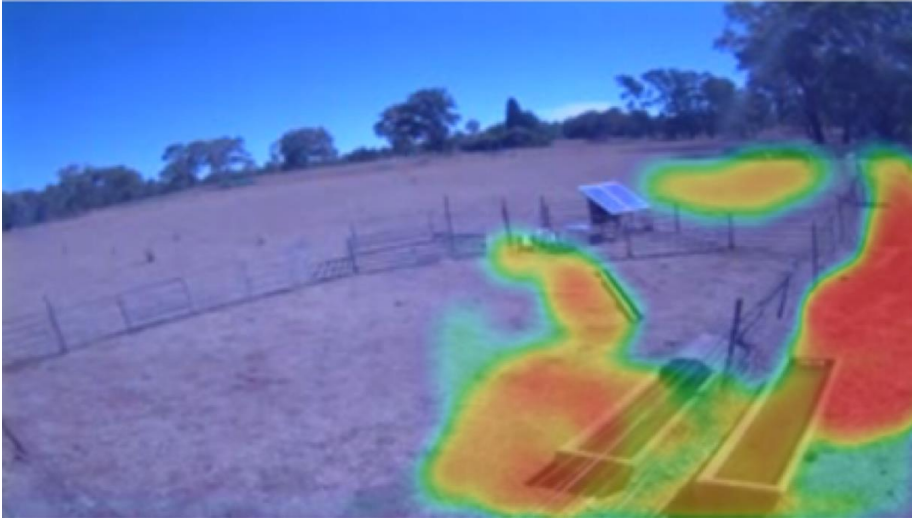
Each camera stores 128GB of video locally and analyzes it for motion. Cameras send only the motion information (not the actual video) to the Meraki cloud, so they need less than 50 Kbps of bandwidth. During the 5-day event, security staff logged into the dashboard to keep an eye on the Cisco Store. Events planners used the dashboard to better understand the paths people take at different times of day and where and when they gather. That information helped us plan traffic flow, position signage, schedule sessions, and assign the right number of staff at different times of day.

Picture Cameras as Sensors In Your Organization

- **Manufacturing.** A manufacturer used a Meraki camera to capture video of a robot arm malfunction that led to an accident on the line. The robot vendor agreed to pay for the $20,000 repair after seeing that human error hadn't caused the accident. A yogurt manufacturer uses Meraki cameras to reduce product loss from leaking vats. Operators in a central location now spot leaks sooner than they would if they made hourly rounds in person.
- **Retail.** Merchandise specialists review video to observe where customers spend the most time, which shelves they look at first—even the specific book titles they look at. Marketing teams see which advertisements and displays attract the most shoppers.
- **Farming.** An Australian sheep farmer positioned cameras in fields to record the flock's location each hour of the day. The farmer uses the dashboard to view hourly heat maps showing the flock's movement.

2 PM to 3 PM   ✕

- **Convenience stores.** Convenience stores can get more value from their security cameras by also using them to look over merchandise arrangements.
- **Restaurants**. The head chef for a restaurant group can monitor food preparation processes and quality from her office.

For More Information

Cisco IT case studies

Cisco Meraki Cloud Managed Security Cameras