

Daintree Rainforest Observatory Monitors Nest with VMS



Daintree Rainforest Observatory Monitors Osprey Nest with Milestone Video

The Challenge

James Cook University's (JCU) Daintree Rainforest Observatory has an osprey nest on top of a crane near the canopy - the uppermost rainforest layer that encompasses the branches and leaves of the trees and serves as the richest habitat for plant and animal life. To enable Daintree researchers to monitor the ospreys, JCU needed a camera that could be mounted in a delicate position and a system that could monitor the ospreys' movements and everything happening in and around the nest. They also needed flexible video data storage management and a system that was easy for research fellows to download and use.

The Solution

JCU enlisted the help of CoastalCOMS, a company specializing in cloud-hosted environmental digital asset management and a longtime Milestone Solutions Partner. CoastalCOMS mounted a Sony VM632R network camera at the end of the crane boom and a robotic SNC-WR630 on the crane tower. CoastalCOMS use a fiber optic cable to connect the cameras to the server room. The camera, which operates at one megabit per second, sends its data for viewing and recording on Milestone XProtect Essential video management software (VMS).

2016

Organization
Daintree Forest

Location
Australia

Industry
Segment
Government

Solution
Milestone XProtect Essential

Partner
CoastalComs

Camera
Brand Sony

No. of
cameras 6

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Advantage

With a camera mounted on the crane, researchers are able to closely monitor the birds without disturbing them. They can also isolate video segments to capture still shots of the ospreys to export and share. The easy-to-use VMS interfaces allow research fellows with no prior VMS experience to quickly download and monitor the osprey camera output from various remote research facilities.

James Cook University Ecological Research

JCU's Daintree Rainforest Observatory is one of only five long-term ecological monitoring sites in Australia. There are two laboratories onsite, one open-air teaching lab and one traditional, air-conditioned laboratory equipped to support the basic needs of most rainforest research. The Observatory also has the Canopy Crane, which allows researchers to explore the rainforest from above, where the atmosphere is different, down through its various levels and into the soils and subterranean water resources.

The wide variety of micro-climates present in the rainforest make it possible for researchers to conduct many experiments they could not conduct elsewhere, such as exposing a small section of the rainforest to drought conditions to test the effects.

Milestone Helps Researchers Capture Incredible Footage

According to CoastalComs, a division of Coastal-watch, the ospreys have been nesting in Daintree for years, but now the Milestone solution is giving them the chance to finally observe them up close.

Researchers had no reliable way to access the birds. GoPro-type cameras, were considered, but it was too inconvenient to have to constantly shift the camera angles and send people to collect the footage. With Milestone, observers have video features and control at their fingertips - remotely.

Chris Lane, General Manager for Coastalwatch, says that the day after the cameras were installed, the ospreys began to investigate their new neighbor and the result was stunning.

"The birds were curious from the start," Lane says. "They would fly right up to the camera and poke their heads around it. Nigel and I happened to be around the observatory one day, and one of the people monitoring the camera excitedly called us into the control room. Milestone VMS had recorded the osprey looking right into the lens! We archived a two-minute clip of her flying up into the nest and back down, and we isolated single frames from the VMS. There's an incredible shot of her looking out at the entire rainforest. It's one of the best shots we've ever captured."



With Milestone, we have every setting and feature we could want at our fingertips - remotely. It's an incredibly powerful monitoring tool.

— CoastalComs

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Lane says that research fellows are encouraged to download Milestone Mobile on their phones and tablets and are provided with logins to view the cameras and extract imagery.

Lane is excited to share the osprey cam with the public in the near future.

“Right now, the nest is comprised of two ospreys bringing up their young in that nest,” Lane says. “My hope is that in 12-18 months, satellite connections will improve to the point that we can stream the camera live to the public, so they can get as excited as we are about it. We may even be able to show a live hatch.”

Animal Cams Paired with Milestone Make New Research Possible

Nigel Sim says based on the success of the osprey cam, researchers asked that 5 static Sony VM632R) cameras be installed to monitor a group of possums they thought were living in a certain place. When the cameras went live, they saw that no possums were there after all. However, a large colony of tree ants had made its home there.

“While it turned out to be a completely different research project, we got incredible footage of these enormous ants,” Lane says. “The ecologists were super excited to get live shots of the ant nest getting built. Without Milestone, none of this would have happened.”

Lane says there are also cameras monitoring penguins in Victoria. “They’re affiliated with the penguins on Phillip Island, which is the biggest penguin colony in mainland Australia,” Lane says. “With just a camera or two connected to Milestone, biologists and ecologists are now able to do research that just a few years ago they were only dreaming about.”



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Chris Lane
Coastalwatch

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“We have a steady stream of happy research fellows using Milestone for various projects. They pick it up really quickly.”



About Milestone Systems

Founded in 1998 and acquired by Canon Europe in 2014, Milestone Systems is an independent company within the Canon Group and a global industry leader in open platform IP video management software, according to IHS Inc. Easy to manage, reliable and proven in thousands of customer installations, Milestone technology supports flexible choices in network hardware.

For more information, visit: milestonesys.com

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