



Milestone 'EggsProtect' helps Dublin Zoo protect animals and their future families

Dublin Zoo stops taking of ostrich eggs by local wild badgers - with a little help from Milestone XProtect video surveillance

"Milestone XProtect, together with Axis thermal and infrared cameras installed in our African Savanna habitat, picked up incidents of ostrich eggs being taken by wild badgers. The large eggs were being rolled under a gate, up a hill and then smashed on a rock, whereupon a badger set was getting a tasty meal at our ostriches' expense. We were able to lay humane traps to catch these badgers and then resettle them in the park land beyond the outer perimeter of the zoo." - Gerry Creighton, Operations Manager, Animal & Grounds, Dublin Zoo, Ireland.



The Challenge: A more comprehensive centralized video management system was needed to manage a growing number of IP cameras that were being deployed to serve a range of needs at Dublin Zoo, including perimeter security, animal welfare, and animal behavior studies.

Zoo keepers also had concerns about a few overnight incidents of overnight on Dublin Zoo's flamingos by wild animals. Ostrich egg numbers were down too. Keepers wanted to explore the use of cameras to help study the behavior, and ensure the welfare, of all animals under their protection.

The Solution: New Axis thermal and infrared (IR) cameras were integrated with Milestone XProtect Corporate video management software, providing live and recorded video to be viewed on 17 different PC viewing stations around the zoo via XProtect Smart Client. A total of 140 new Axis network cameras were installed by Milestone Expert Certified partner Kelcom.

The Result: The system provided clear evidence of the taking of ostrich eggs by wild badgers. It also discovered unwelcome late night visits by wild otters who harmed a small number of flamingos. Zoo keepers were able to study recordings of these visits and use this intelligence to correctly position humane traps to catch and relocate the perpetrators well away from the zoo. As a result, ostrich egg incidents stopped and the flamingo population began to grow once again. The new IP video management system has also proved vital in studying animal behaviors, including group dynamics and sleeping habits.



'EggsProtect'

XProtect Corporate video software was used to capture the moments when ostrich eggs were being taken and eaten by wild badgers, and when otters found their way into the flamingo pool at night. The badgers were sneaking in via a specific fence, and making their way across the multi-species habitat called the African Savanna, under the cover of darkness while the zebra herd was acting as security guards. But the clever badgers were managing to outwit the zebras and take the eggs before making their exit under that same fence, pushing them up a hill, and letting them roll down to smash on a large rock. Dinner was served.

Animal Behavior Studies

Dublin Zoo uses the latest technology with video cameras to observe the habits of animals, often providing video recordings and sharing live views with animal experts around the world. So much so that Dublin Zoo's Operations Manager, Gerry Creighton, regularly runs online training sessions supported by the provision of live video from specific cameras during animal training sessions, births, veterinary procedures, feeding times, and other key events.

Brendan Walsh, Senior Zookeeper at Dublin Zoo, recently completed a three-year study of the zoo's eight elephants to better understand their sleep patterns and night-time behaviors. Brendan's findings have provided new knowledge in this area:

"Through intensive study of images gathered on the Milestone XProtect video system from infra red cameras installed in the bull and cow elephant houses, we learned a great deal about the varied



sleeping patterns of elephants at different ages. Elephants sleep on average about four hours per night. They get this sleep in chunks, which tend to get longer as they get older."

"For example, a young elephant will wake up more than 20 times per night, but older ones may only rise four times between the hours of 12AM and 7AM. That said, the oldest cow of the group – the matriarch – will sleep very little when elephant calves are around, as she sees it as her job to alert them to any impending danger."

Dublin Zoo also has several cameras deployed in the elephant training area, where animals are taught to do a variety of activities, from presenting their feet for a routine pedicure or making it easier for keepers to perform routine medical inspections. Recordings from this training area are sent to Alan Roocroft, a world-renowned expert in elephant behavior based in San Diego, California.

Alan reviews these recordings each week and talks to Dublin Zoo about any issues via Skype, all without the expense of flying him over to gain these insights. Veterinary consultants can also be sent these recordings if keepers have health concerns for the animals they are looking after.

Irish national television channel RTÉ has a TV series called 'The Zoo' which has been running for the last six years. The Zoo's production team sometimes uses video recordings from the cameras for the show, airing elephant, big cat and gorilla births in recent years. Combining this with the use of five network cameras displaying live views of a range of animals on the zoo's website has helped Dublin Zoo build its visitor numbers substantially, so that it now has more than 1.1 million visitors annually.



The open platform company

Milestone Customer Case Study



Milestone Mobile for Access on the Go

The zoo's operations manager and 12 of the 44 keepers employed at the zoo are able to access images around the clock via Milestone Mobile, in case they need to check on the animals that are under their charge overnight.

Milestone Open Platform Advantages

Milestone XProtect's open platform architecture allows operators to choose from the widest range of network cameras and select the best ones for any given task. Milestone's open Application Programming Interface (API) makes it easy to integrate XProtect with other edge devices or third party software systems for security, such as access control and building management. Milestone's open model also enables partners to easily customize the look and feel of XProtect Smart Client to better meet the needs of the customer.

Gerry Creighton, Operations Manager, Dublin Zoo, sums up:

"Anyone serious about animal welfare in zoos must have a decent network video system today. By having cameras you can see the whole range of animal behaviors on their own terms. By viewing them undetected, you see their natural behaviors – their sleeping, eating, befriending and mating patterns, as well as group dynamics and hierarchies.

"From a security point of view, it helps us keep out intruders that might harm animals under our protection. It has also enabled the zoo's security team to tighten perimeter security and stop unauthorized feeding of animals by visitors."

Future developments with Milestone Eco Partners

New Video Content Analysis software will be trialled shortly at Dublin Zoo. Milestone Expert Certified Partner Kelcom will conduct video analytics testing in order to help the zoo conduct deeper-level analysis of the video captured. Kelcom will integrate Milestone eco partner Agent Vi's Savvi Business Intelligence tools with Milestone XProtect, to help enhance the learning and behavioral studies being carried out at Dublin Zoo.

Declan Kelly, Chief Executive of Kelcom Networking, said: "Working with Milestone, and its eco partners Axis and Agent Vi, is helping us develop a world-class enterprise-level IP CCTV infrastructure for Dublin Zoo."



About Milestone Systems

Milestone Systems is a global industry leader in open platform IP video management software, founded in 1998 and now operating as a stand-alone company in the Canon Group. Milestone technology is easy to manage, reliable and proven in thousands of customer installations, providing flexible choices in network hardware and integrations with other systems. Sold through partners in more than 100 countries, Milestone solutions help organizations to manage risks, protect people and assets, optimize processes and reduce costs. For more information, visit: www.milestonesys.com.

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