Hitachi Digital Services

Intelligent Infrastructure Monitoring

Case Study

Operational Efficiency and Effectiveness

Utility Substations

Objective

Decrease power-substation downtime due to damage caused by small animals and unauthorized intruders.

Challenge and Market

Power substations suffer anywhere from US$250,000 to US$1 million in damages per year due to intrusion of animals and small rodents, as well as the actions of unauthorized personnel. These damages potentially could leave thousands of customers without power for time periods that could exceed weeks or even months, yielding a forecasted economic and utility cost ranging from thousands to millions of dollars. Utility companies are looking for ways to proactively identify these entry points of intruders that cause damage to equipment, which results in customer downtime. They also seek to be alerted to threats in real time, to address them in a timely manner.

How It's Done Today

Utility companies send teams of technicians to manually perform on-site visits. Many times, the damage has already occurred, and maintenance staff still are not 100% aware of when the intruder entered the restricted zone, and where entrance occurred to prevent future intrusions. Some sites will have CCTV cameras available for recording events, but without somebody watching that video feed, it may be too late to prevent damage.

How Technology Will Address the Challenge

With Hitachi Intelligent Infrastructure Monitoring solution, you can monitor your equipment and sites virtually from anywhere. With our video AI and analytics, intruders crossing into a restricted zone will be recorded, and the appropriate staff will receive notifications and alerts regarding their entry. This alleviates drive time and allows your truck rolls to focus only on challenges that require their immediate attention.

Solution

Hitachi Video Analytics, Hitachi Visualization Suite, Hitachi Video Management and Hitachi Smart Cameras, Thermal Cameras.

Smart Spaces and Lumada Video Insights

Benefits

- Increase system uptime.
- Improve customer satisfaction.
- Decrease operational expenditure by addressing weak points in entry.
- Decrease capital expenditure by addressing intruders before damage occurs.
- Improve maintenance effectiveness and efficiency.
- Identify proactive maintenance procedures for intruders.
- Reduce carbon footprint by minimizing truck rolls.
- Enable overall reduction in operation and maintenance expenses.
- Support just-in-time materials management, and so forth.

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