Can You Identify Problem Vegetation Before It Fails? We Can!

THEOREM GEO

What if you could identify high-risk vegetation before it fails?

What would be the impact on your SAIDI metrics?

And how would that improve your customers' perceptions of your network reliability?

Multispectral imagery uses wavelengths not visible to the human eye, and it is how pollinators see the world around us. Multispectral imagery captures the amount of reflectivity of sunlight from vegetation; the reflectivity is determined by the amount of chlorophyll in a plant leaf and indicates vegetation health.

Multispectral imaging can pick up instances of unhealthy vegetation before it is readily apparent to the naked eye. Aside from normal aging-related decline, other factors such as infestation, disease, weather, and even environmental hazards can contribute to and accelerate vegetation decline. Multispectral cameras provide a cost-effective way of capturing GPS-enabled data to determine vegetation health. The dashboard-mounted camera used in the image above was approximately $400.

CartoVid is a cloud-based platform for GPS videos, photos, and data that supports and analyzes multispectral video. GPS-enabled multispectral video can be acquired through multiple means using inexpensive multispectral cameras. These methods include mounting on vehicle dashboards, drones, and even helicopters, thus making this a cost-effective means of acquiring transmission and distribution data.

We work with you to capture the data, perform the analytics, and provide you with actionable insights into the specific location of problem areas.

Finding High-Risk Vegetation Using CartoVid & Multispectral Imaging Use Case

THEOREM GEO

Use Case From Eastern U.S. Electric Utility

A multispectral video of the distribution network right of way was captured from a vehicle's dashboard. From there, Theorem Geo ran video analytics through the CartoVid data analytics platform and provided the client with actionable insights of high-risk trees identified; both the latitude and longitude and corresponding video evidence.

An arborist from ArborMetrics Solutions, a recognized industry leader that leverages software, hardware, and people into mobile workforce solutions to streamline vegetation management programs and who the utility uses for work planning, investigated the trees, identified, and confirmed the findings. This utility was on a five-year maintenance cycle, and the area in question was pruned approximately three years ago.

"The multispectral image capture and analysis using CartoVid provides utilities with an effective way to identify imminent vegetation threats before they cause a service interruption."

ARBORMETRICS
PEOPLE ARE OUR POWER

Bob Richens
President, ArborMetrics Solutions
Past President of the Utility
Arborist Association

The arborist also stated that the high-risk situation in this example would not have been flagged during the last maintenance cycle in that area. A work order was issued to remove the vegetation before impacting the circuitry.

But don't just take our word for it; see it for yourself!

View of Tree From Human Eye

Multispectral Image from CartoVid

Arborist Inspection Confirms Rotted Base