HIGH-DENSITY LIDAR FOR UTILITIES

Transmission and distribution LiDAR solution

L3Harris' proprietary Geiger-mode LiDAR data delivers the most accurate high-resolution data available from an aerial platform for planning, engineering, infrastructure management and natural resource management.

Utility companies need to safely and efficiently maintain a reliable electrical system by using a defense-in-depth strategy to manage their networks and ensure consistency in the power supplied to customers.

Managing transmission and distribution networks with precise LiDAR data enables system-wide modeling for asset tracking and risk management from the desktop.

High-density, wide-area LiDAR collection not only enables system mapping capabilities, but also enables monitoring of asset conditions down to wires and poles.

A relatively quick airborne collection results in reliable system-wide views without spending months of time collecting on-the-ground surveys.

TRANSFORMING UTILITY MANAGEMENT

Transform utility management into a science with more precise and uniform LiDAR point cloud data. The Geiger-mode collection platform enables higher accuracy collection along transmission corridors and across distribution networks with enhanced detail.

Enhanced Data Management

> Detailed network mapping enables accurate asset tracking and enhances planning activities.

> Uniform, high-density LiDAR data provides the detail needed across multiple departments.

> Refreshed data integrates smoothly into existing modeling programs.

ACCURATE, HIGH-RESOLUTION ADVANTAGE

> Collection provides enough details for transmission network assessments and enhanced distribution asset identification and tracking

> Customizable classification schemes support unique feature identification and enable height, density, type, and condition assessment

> Quick and precise identification of vegetation encroachment risks based on "as surveyed" or modeled conditions
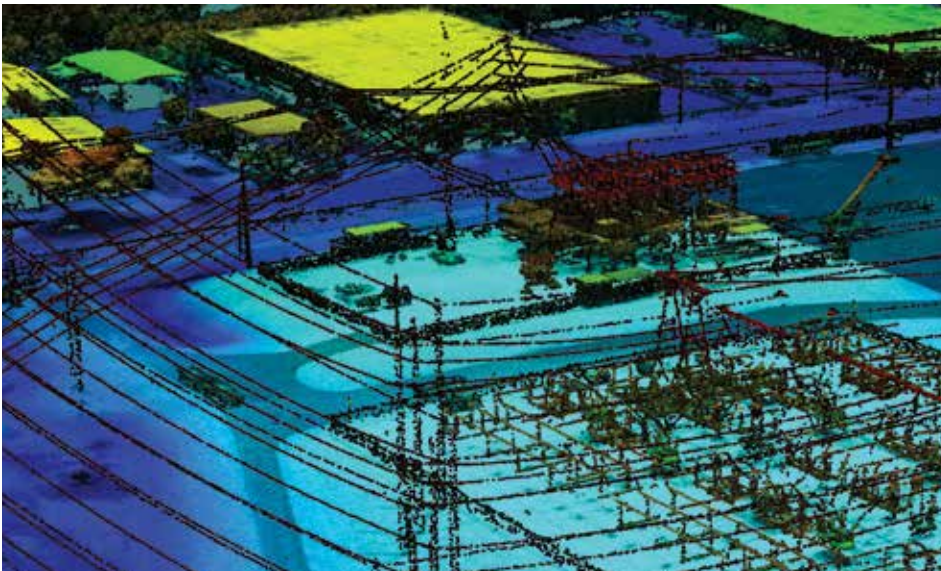
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POINT CLOUD DATA FOR RESULTS

L3Harris' Geiger-mode LiDAR technology provides highly accurate point cloud data from which to build Transmission Engineering Services - Method 1 finite models, generate various derivative products for utility applications and support subsequent analytics across all parts of the organization.

High-density LiDAR point cloud data enables utility asset mapping, vegetation encroachment assessment and advanced analytics for operations, maintenance planning and remediation.

Vegetation management planning is enhanced with high-resolution LiDAR point cloud models to identify potential risks or hazards in a timely manner. Our customizable analytics evaluate potential prescriptive treatment protocols to identify the best outcome results with a very high percentage of accuracy.

DISTRIBUTION ASSETS

Today, high-resolution LiDAR data is improving the positional accuracy of utility assets and serving as the base for enhanced feature identification of distribution assets such as utility poles, conductors, transformers, service lines and guy wires.

High-resolution LiDAR data permits the mapping of these assets within centimeters of their exact location, providing utility owners with a much more accurate picture, two dimensionally as well as three dimensionally, of utility networks.

Having this more accurate and vast information allows for the development of system-wide modeling to visualize and generate derivative information that supports data-driven decision making.

TRANSMISSION CORRIDORS

The area covered by high-density LiDAR collection enables timely mapping opportunities when field surveys can take several months and many labor hours to complete.

The high-density data delivers information useful for multiple needs including:

> Support for planning and routing

> Monitor condition of corridor assets

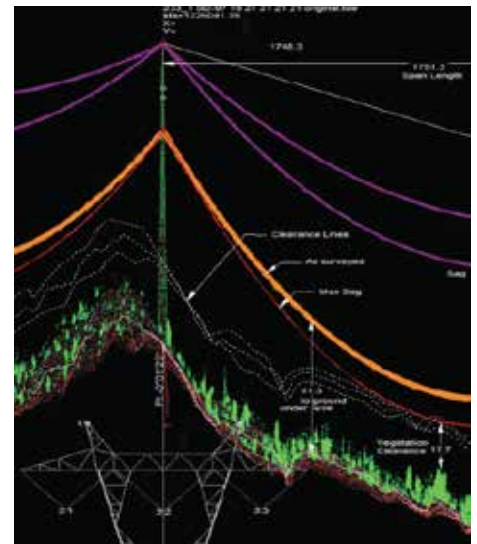> Assess activities along the corridor to understand patterns

VEGETATION ENCROACHMENT AND ANALYSIS

Vegetation encroachment poses a significant risk to the operation and stability of utility networks. Utility managers annually spend significant resources to physically monitor and assess utility easements.

Geiger-mode LiDAR reduces the need for teams of personnel to drive or walk circuits within the network and visually identify encroachment risks. LiDAR data is acquired along the corridor right-of-way, classified by feature class; vegetation analysis is conducted; and vegetation encroachment risks are identified, categorized by severity, and reported to utility managers for prioritizing mitigation efforts.

Utilities are incorporating high-resolution LiDAR to:

> Improve system visualization

> Develop risk-based strategies that eliminate unplanned asset failures

> Improve network reliability

> Enhance asset investment strategies

> Monitor aging infrastructure

> Maximize the life of existing and new asset investments

L3HARRIS™
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1025 W. NASA Boulevard
Melbourne, FL 32919