

DEEP LEARNING TECHNOLOGY

Harris Geospatial has developed a suite of deep learning-based tools called MEGA™ that are designed specifically to work with imagery to solve geospatial problems. This technology is currently being used to solve real-world problems in industries that include agriculture, utilities, transportation, and defense.

AUTOMATE ANALYTICS WITH DEEP LEARNING FOR FASTER, MORE ACCURATE RESULTS

APPLICATIONS

Inventory and inspect T&D assets

Automatically extract features

Detect and assess anomalies and defects remotely

THE BENEFITS OF MEGA

MEGA excels automated target detection, land cover classification mapping, and change detection. MEGA employs a highly tuned process that relies on training models and high-performance computing to train a neural network which in turn can help identify and extract objects of interest or discover specific conditions across vast quantities of images and data. MEGA delivers results faster and more accurately than ever before.

TRUST THE INDUSTRY EXPERT

The standard accuracy for pixel by pixel classification is between 75-85%. Harris Geospatial's investment of time and money in deep learning technology has resulted in classification accuracies of up to 90-95%, and sometimes higher.

Knowing how to work with imagery is the first step toward getting a good result with deep learning. For example, understanding spectral bands can help with data reduction to make processing more efficient. It is also often necessary to exploit the strengths of multiple data modalities to answer questions. As the image science leader, Harris Geospatial leverages its deep learning technology on optical, SAR, and LiDAR data to create rich geospatial products and answer specific questions for clients.

HIGHLIGHTS

Works specifically with imagery to solve geospatial problems in industries such as agriculture, utilities, transportation, and defense & intelligence

Excels in automated target detection, land cover classification mapping, and automated scene state detection

Delivers classification accuracies of up to 90-95%, and often higher

HAVE A PROBLEM THAT DEEP LEARNING MIGHT BE ABLE TO SOLVE? HARRIS GEOSPATIAL CAN WORK WITH YOU TO DEVELOP A SOLUTION THAT MEETS YOUR PROJECT REQUIREMENTS.

FOR MORE INFORMATION:

HARRIS GEOSPATIAL SOLUTIONS
385 Interlocken Crescent Suite 300
Broomfield, Colorado 80021
Phone: +1-303-786-9900
HarrisGeospatial.com

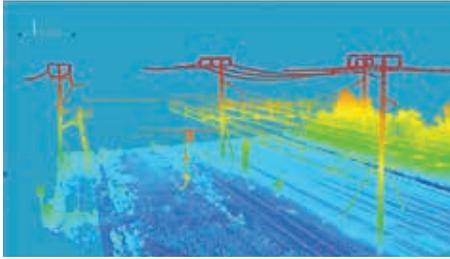
About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world. [Learn more at harris.com.](http://harris.com)

MEGA™ AT WORK

MEGA is offered through a flexible solutions approach that combines the right steps and methods to deliver a deep learning solution to meet project requirements

TRANSMISSION & DISTRIBUTION INSPECTION



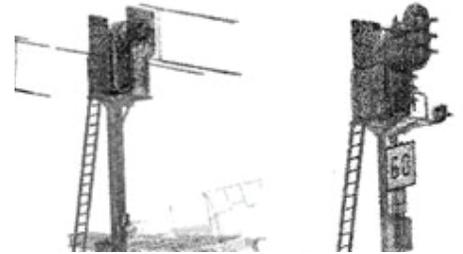
MEGA is used by utility companies as a dependable and cost-effective solution to augment manual Transmission & Distribution inspections. In one recent customer engagement, Harris Geospatial successfully deployed MEGA to identify specific anomalies on distribution poles that, had they gone undetected, might have disrupted service. MEGA was also used to locate poles and insulators, as well as identify anomalies.

DEFENSE & INTELLIGENCE



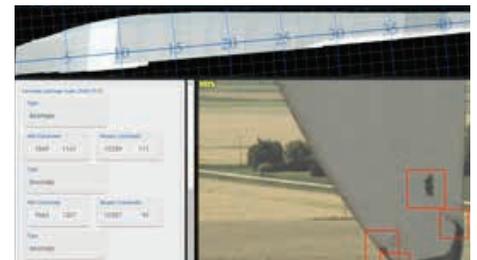
The modern battlefield pose great challenges for even the most advanced militaries and intelligence organizations. Harris Geospatial has experience implementing solutions that use deep learning technology to address a wide range of GEOINT problems. Whether it's navigating an armed conflict in an urban area, or sorting through an information minefield, MEGA will identify patterns, links, and anomalies to provide actionable information.

MANAGE RAILROAD ASSETS



Harris partnered with a railroad company to apply its deep learning technology on LiDAR data for asset inventory. The railroad company needed to find a variety of 3D objects (signals, crossings, boxes, poles). Applying deep learning to LiDAR data for 3D feature extraction can be very complex. However, Harris deep learning technology has proven to be very successful, and in this case extracted the features the railroad company was looking for with 90%+ accuracy.

WIND TURBINE INSPECTION



Harris Geospatial has partnered with EdgeData to bring imagery expertise and deep learning to wind turbine inspections using Unmanned Aerial Systems (UAS). By using UAS, the risk of climbing a turbine is mitigated, and costs and inspection times are greatly reduced. MEGA is used to discern damage to turbine blades from lightning strikes that require repair versus dirt, paint chips, and damage from bird strikes that does not need to be repaired. Harris Geospatial's solution can be repeatedly applied to produce correct damage assessment accuracies of greater than 95%.

FLORIDA | NEW YORK | VIRGINIA | BRAZIL | UNITED KINGDOM | UAE | SINGAPORE

Non-Export Controlled Information

Harris is a registered trademark of Harris Corporation. Trademarks and trade names are the property of their respective companies.

© 2018 Harris Corporation 5-18 HG-NO

HARRIS® TECHNOLOGY TO CONNECT,
INFORM AND PROTECT™