AEye and Intetra Deploy Groundbreaking Lidar-based Automated Tolling Solution

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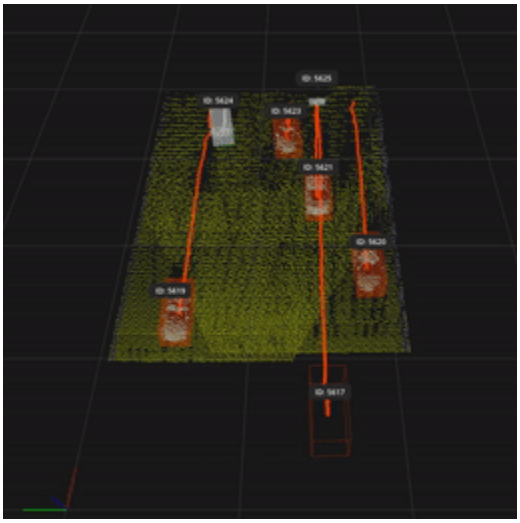
Jointly Developed, the State-of-the-Art System Delivers Significant Cost and Reliability Benefits over Legacy In-ground and Above-ground Detection Systems

DUBLIN, Calif.--(BUSINESS WIRE)--Sep. 13, 2022-- AEye, Inc. (NASDAQ: LIDR), a global leader in adaptive, high-performance lidar solutions, and Intetra, a premier provider of end-to-end solutions for Intelligent Transportation Systems (ITS) and Electronic Toll Collection Systems (ETC), today announced the development and deployment of their state-of-the-art lidar-based tolling solution. The automated tolling system, powered by AEye's 4Sight™ Intelligent Sensing Platform provides greater reliability at a lower cost over inductive loop systems and other above-ground detection modalities, including camera and radar. Intetra is deploying the new automated tolling system in Turkey and Kazakhstan, with the intention of expanding the relationship to include other ITS applications and geographies globally.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20220913005535/en/



Intetra's lidar-based tolling solution leverages AEye's 4Sight™ Intelligent Sensing Platform to provide accurate, real-time detection and generate actionable and precise data to support automated tolling. (Graphic: Business Wire)

"This lidar-based tolling system is truly groundbreaking. It leverages AEye's software-defined architecture to provide accurate, real-time detection, and generate actionable and precise data to support automated tolling," said Intetra CTO Recep Bahar. "Not only that, it's easy to install, operate, and maintain – a huge time and cost savings realized over previously installed inductive loop systems, which required cutting into pavement and re-routing traffic to make improvements."

The companies will be showcasing the automated tolling system at AEye booth #1403 at the ITS World Congress, taking place in Los Angeles from September 18 to 22, 2022. For more information or to schedule a demo, go to: https://www.aeye.ai/demo/.

Fast, Accurate Perception

AEye and Intetra's lidar-based tolling solution is designed to improve real-time data collection, ensuring better, more accurate information is used to drive decisions and avoid revenue leakage. It does this by leveraging 4Sight's software-configurable architecture and edge intelligence to better locate, identify, and track objects over time. AEye has also created a library of performance modes to accommodate virtually any tolling system needs and optimize for them. These performance modes deliver accurate, high-resolution, long-range 3D point clouds at high frame rates, providing the precision and data needed to detect and classify vehicles within the given road boundaries.

The solution can provide data for up to eight lanes of traffic per sensor, collecting information such as vehicle speed, trajectory, type classification, tagging, dimensions, and time stamp, without false or missed detections due to adverse weather conditions. This is a significant improvement over current systems, which may miss vehicles that are traveling at high speed or making last-second lane changes.

Significant Cost Savings

The lidar-based tolling system also offers significant cost savings. Unlike inductive loop systems, which necessitate cutting into the pavement and re-routing traffic for installation and maintenance, the lidar-based system is mounted on gantries or traffic poles and is software-configurable. This makes the lidar-based system much faster, easier, and less costly to install, upgrade, and service, while an open SDK ensures flexible integration and low maintenance cost. Furthermore, the system is highly versatile regarding sensor height, pitch angle, number of lanes, and types of data extracted.

Due to the software-configurability of the system, Intetra is able to manage all traffic counting and classification using one sensor, resulting in additional savings. Customers achieve better accuracy with just one lidar at the top of a gantry. The outcome is an integrated tolling solution that achieves optimal performance for any tolling use case, and delivers a level of efficiency and safety not possible with cameras alone.

"We are incredibly proud of the solution we co-developed and are deploying globally with Intetra," said Baris Sarac, Director of Business Development, Europe ITS & Smart Mobility at AEye. "AEye's software-configurable lidar solution uniquely provides the ultimate flexibility and longevity for automated tolling applications, allowing for over-the-air system upgrades and optimized performance, all within a single architecture."

Lidar is the only deterministic sensor that provides the specific data needed for ITS applications due to its ability to precisely determine vector and velocity to establish where an object is going. AEye goes a step further, providing a software-definable lidar that enables the customization of scanning capabilities for any ITS application. That translates into a single lidar sensor providing all traffic counting and classification data to controllers, and doing so with greater accuracy than existing inductive loop and above-ground detection systems, including camera and radar.

Built on AEye's award-winning 4Sight platform, 4Sight M is the first and only lidar solution whose performance has been independently verified by a reputable third-party testing organization. VSI Labs, the leading active safety and automated vehicle technologies researcher, published a report confirming 4Sight M's breakthrough range, resolution, and speed capabilities. To see what a software-configurable sensor can do, and to experience the 4Sight M performance in real-time, visit https://www.aeye.ai/demo/.

About AEye

AEye's unique software-defined lidar solution enables advanced driver-assistance, vehicle autonomy, smart infrastructure, logistics, and off-highway applications that save lives and propel the future of transportation and mobility. AEye's 4Sight™ Intelligent Sensing Platform, with its adaptive sensor-based operating system, focuses on what matters most: delivering faster, more accurate, and reliable information. AEye's 4Sight™ products, built on this platform, are ideal for dynamic applications which require precise measurement imaging to ensure safety and performance. AEye has a global presence through its offices in Germany, Japan, Korea, and the United States.

About Intetra

Founded in 2005, Intetra is an innovative market leader within Intelligent Transport Systems (ITS) and Electronic Toll Collection Systems (ETC). Intetra manufactures hardware, as well as develops state-of-the-art in-house software solutions to optimize energy efficient and climate friendly systems which monitor and manage complex traffic and mobility challenges. Our clients are public as well as private operators. Products include Variable Message Signs (VMS), Variable Traffic Signs (VTS), Passenger Information Display Systems (PIDS), Road Safety Solutions, Traffic Signal Systems, Smart City Solutions, Monitoring & Management Systems, and many more. Intetra provides end-to-end solutions for RFID Electronic Toll Collection, starting from design, through technology development, production, consulting, installation, training, service, maintenance, and management.

Forward-Looking Statements

Certain statements included in this press release that are not historical facts are forward-looking statements within the meaning of the federal securities laws, including the safe harbor provisions under the United States Private Securities Litigation Reform Act of 1995. Forward-looking statements are sometimes accompanied by words such as "believe," "continue," "project," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "predict," "plan," "may," "should," "will," "would," "potential," "seem," "seek," "outlook," and similar expressions that predict or indicate future events or trends, or that are not statements of historical matters. Forward-looking statements are predictions, projections, and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Forward looking statements included in this press release include statements about the use of AEye's products as part of a tolling solution, the benefits for the use of such products, as well as the use of lidar generally, among others. These statements are based on various assumptions, whether or not identified in this press release. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as and must not be relied on by an investor as a guarantee, an assurance, a prediction, or a definitive statement of fact or probability. Actual events and circumstances are very difficult or impossible to predict and will differ from the assumptions. Many actual events and circumstances are beyond the control of AEye. Many factors could cause actual future events to differ from the forward-looking statements in this press release, including but not limited to: (i) the risks that the Company's lidar-based tolling solution may not provide greater reliability at a lower-cost over inductive loop systems and other above-ground detection modalities, including camera and radar; (ii) the risks that Intetra may not be able to successfully deploy the new automated tolling system, nor be able to deploy such systems to other ITS applications or geographies; (iii) the risks that the Company's lidar-based tolling solution may not improve real-time data collection sufficient to ensure more accurate information is used to drive decisions or avoid revenue leakage; (iv) the risks that the Company's lidar-based tolling solution may not provide data without false or missed detections due to adverse weather conditions; (v) the risks that the Company's lidar-based tolling solution may not provide a significant improvement over current systems; (vi) the risks that the Company's lidar-based tolling solution may miss vehicles that are traveling at high speed or making last-second lane changes; (vii) the risks that the Company's lidar-based tolling solution may not provide significant cost savings; (viii) the risks that the Company's lidar-based tolling solution may not be faster, easier, and less costly to install, upgrade and service; (ix) the risks that the Company's lidar-based tolling solution may not provide flexible integration and low maintenance cost; (x) the risks that the Company's lidar-based tolling solution may not achieve optimal performance for any tolling use case or deliver a level of efficiency and safety not possible with radar and cameras alone; (xi) the risks that the Company's lidar-based tolling solution may not be the only deterministic sensor that provides the specific data needed for ITS applications; (xii) the risks that the Company's lidar-based tolling solution may not enable customization of scanning capabilities for any ITS application; (xiii) the risks that the Company's lidar does not allow for more accurate, timely, and reliable vision as compared to camera or radar-only systems, or such camera or radar-only systems may become substantially equivalent in relevant performance factors; (xiv) the risks that the Company's lidar is not able to adapt to any situation and requirement within any ITS application; (xv) the risks that the Company will be able to successfully launch products into the market; (xvi) the risks that lidar adoption occurs slower than anticipated or fails to occur at all; (xvii) the risks that laws and regulations are adopted impacting the use of lidar that the Company is unable to comply with, in whole or in part, changes in competitive and regulated industries in which the Company operates, variations in operating performance across competitors, and changes in laws and regulations affecting its business; (xviii) the risks that the Company is unable to adequately implement its business plans, forecasts, and other expectations, and identify and realize additional opportunities; and (xix) the risks of downturns and a changing regulatory landscape in the highly competitive and evolving industry in which the Company operates. These risks and uncertainties may be amplified by the COVID-19 pandemic, including the Delta and Omicron variants, as well as future variants and subvariants, which has caused significant economic uncertainty. The foregoing list of factors is not exhaustive. You should carefully consider the foregoing factors and the other risks and uncertainties described in the "Risk Factors" section of the Quarterly Report on Form 10-Q that AEye has most recently filed with the U.S. Securities and Exchange Commission, or the SEC, and other documents filed by us or that will be filed by us from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made.

Readers are cautioned not to put undue reliance on forward-looking statements; AEye assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. AEye gives no assurance that AEye will achieve any of its expectations.

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