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The Need for Speed: AI Model & Software Updating on Edge AI Devices

Allxon's Over-The-Air Group Deployment Helps Build Public Trust

Technical issues have become the new norm in the digital age. A smart city functioning on intelligent traffic management edge devices necessitate constant AI cloud updates to prevent a government's worst nightmare.

The Newest Traffic Surveillance Technology

With the latest technology, police are now using embedded AI and edge computing solutions to photograph and identify license plate numbers and vehicle types. Installed along highway routes, this new method of intelligent traffic law enforcement ensures a law-abiding public, compliant with traveling speeds and transportation regulations.

As of January 2020, Taiwan has 22 of its expressway and highway segments installed with these edge AI devices to conduct point-to-

point speed measurements. Its AI algorithms identify license plate numbers from point A to point B to determine their time and speed on sections of the road. The new surveillance technology also classifies vehicle types to ensure prohibited vehicles do not intrude on routes that may endanger traffic flow and violate road regulations. Fines and penalties are issued to those who violate traffic laws. Using smart transportation AI systems, police can now remotely regulate traffic flow to bring safer roads to the greater public.

Outdated Onsite Engineering

Intelligent traffic surveillance technologies, like video recognition on edge AI devices, encase a sophisticated AI software model that requires frequent updating. On 2 March 2020 Changhua county, Taiwan the Transportation Bureau revoked 3,627 traffic tickets issued to vehicles travelling on Tai no. 61 West Coast Expressway, due to software issues on smart edge AI devices. The technical issue generated unnecessary and tedious administrative inconveniences between the Transportation Bureau and the general public. The disruption not only affected people's trust towards government operations, an additional approximation of NT160,000, was wasted merely on post and administrative fees. Further government expenses were spent on necessary technical support and software updating services, adding to the time wasted on resolving software problems. Installed along the highway and expressway routes of Taiwan, technical support engineers need to physically travel to operate on each edge device. Nowadays, engineers need to manually deploy the latest traffic AI models into the edge devices and to make sure troubleshooting and updates are successful and uninterrupted. An edge device that circulates on inaccuracy breaks a rigorous transport system designed to administer and ensure public safety. False license plate and vehicle detection results in the unfair issuing of fines and penalties to innocent law-abiding citizens, causing disruption and distrust between the public transport sector and its people

The Need for Speed: Allxon's Over-The-Air Group Deployment for mass AI Model Updating

Allxon Device Management Solutions (Allxon DMS) offer a group deployment solution to remotely mass update AI models on every edge device around the world. Allxon's Over-The-Air feature can help MSP to instantly perform firmware or software updates using the Allxon DMS Portal. The Over-The-Air deployment service supports multiple operating systems with multi-network capabilities across devices to ensure baseline compatibility. What would have taken weeks of sitting through traffic on highway routes just to individually deploy new AI models, new software, or training intelligence to every edge device can now be conveniently executed on Allxon DMS Portal in just a few clicks. Over-The-Air updates can also be scheduled for after office hours to minimize downtime.

With the combination of NVIDIA Jetson platform and Allxon DMS on IoT hardware systems, SI/MSP can help transportation bureaus resolve technical issues faster on traffic management edge devices in a cost effective and timely manner. With Allxon OTA deployment service becoming a popular demand on government Request For Proposal documents, SI/MSP can use this Allxon DMS service to help transport sectors make better use of government funding. Allxon's Over-The-Air deployment cloud service ensures intelligent traffic law enforcement devices receive the latest transportation information, keeping them in check, for a safer, smarter city. ●