



**Institute of Transportation,
Ministry of Transportation
and Communications,
R.O.C.**

PRESS RELEASE on Dec 20, 2019

Please release immediately
Contact Persons: Tung -Ling Wu Researcher
Telephone : 02-23496880
Tax : 02-25450426
E-mail : tony5@iot.gov.tw

Image Recognition and AI Technology Applications in Enhancing Traffic Event Management Practices

The Institute of Transportation, MOTC along with industry-government-academe units have researched and developed AI image recognition technology that meets traffic management demand and adapts to various situations and weather conditions (such as daytime, nighttime, rainy days, backlighting, etc.). It has won the 2020 Smart City Innovative Application Award, creating more development related business opportunities for domestic industries. Through this technology, the basic parameters of traffic can be automatically identified (such as number of vehicles, vehicle speed, lane occupancy, intersection turning flow, etc.) and various abnormal stops (such as illegal parking, road under construction, traffic accidents, etc.), while detected events and information can be instantly sent to county and city integrated information platforms, thereby enabling competent authorities to improve response handling and traffic management efficiency.

With the rise of AI transportation services in recent years, the external world has shown growing demand and quality requirements for real-time traffic information. In addition, with AI and image automatic recognition technology gradually reaching maturity, the pain spot (such as inaccuracy between notification and actual venue of occurrence, limited road condition and impact information disclosure following event occurrences, lack of comprehensive case reporting mechanisms, etc.) of real-time event information collection in the past is expected to be resolved. The Institute of Transportation, MOTC has since 2018 engaged in collaboration with Kaohsiung City Government and Tainan City Government, selecting two major road junctions and peripheral road sections as experimental sites and attempting to use image recognition coupled with AI technology to implement traffic parameters and abnormal event detections. The initial results showed 96% average accuracy in traffic, 97% average accuracy in

vehicle speed, and 90% accuracy in abnormal event detection. In the future, improvements will continue to be made targeting the identification of special vehicles, the scope of event impact, post-event detections and other issues.

According to the Institute of Transportation, MOTC, real-time traffic information has been an important part of smart traffic development, while the accuracy and instantaneousness of traffic event information are urgently needed in smart traffic application and are the major key basic services of future autopilot project promotions. The Institute of Transportation, MOTC will continue to improve AI image recognition technology accuracy and plan promotions and applications in metropolitan areas in collaboration with local governments to prefect national real-time road condition information and enable the local governments to quickly launch handling mechanisms through the notification of real-time event information, thereby improving driving convenience and safety.

