Intelligent Traffic Enforcement Robot (ITER)

The number of licensed motor vehicles in Hong Kong has been increasing continuously for the past few decades while the roads and parking/loading/unloading spaces do not increase proportionately especially in the overcrowded urban areas. Illegal stopping/loading/unloading at bus stops, restricted zones and yellow box junction (i.e. moving traffic offences) are prevalent and cause serious traffic congestion and road safety concern.

At present, the Police deploy beat officer / traffic warden to issue fixed penalty tickets (FPT) at scene or mobile video teams (MVT) to take video of moving traffic offences and issue FPT afterward. These enforcement modes are labor-intensive and only effective when there is an officer presence. When the manpower are withdrawn for other commitments at other locations, the moving traffic offences re-occur. The existing labor-intensive enforcement modes seem unsustainable in the long run.

The use of Intelligent Traffic Enforcement Robot (ITER) can replace the MVT to take video of moving traffic offences at scene round the clock at traffic congestion/accident blackspots. Issuing of FPT will then be taken place in the backend.   This will save much manpower to work on the street despite of the fact that we may need more manpower to process cases in the backend.

The proposed ITER consists of two portable high-definition camera towers, wireless 4G transmission of video to a backend server, video analytic software with learning capability (artificial intelligence - AI) in the field computer to identify vehicle number plate and moving traffic offences. Short video footages of possible moving traffic offences, captured by cameras and AI on the street, will be transmitted to the backend server.   Investigating officers will check the server and those video footages to verify an offence and initiate prosecution action as appropriate.

The camera towers can be deployed to any blackspots configured for specific moving traffic offence(s). The ITER will create huge deterrence effect against opportunistic / irresponsible driving behaviors same as the existing red light and speed enforcement cameras, enhance the efficiency and effectiveness in traffic enforcement, and save cost in public service delivery.