

## LCQ7: Monitoring speeding of franchised buses

Following is a question by the Hon Jeremy Tam and a written reply by the Secretary for Transport and Housing, Mr Frank Chan Fan, in the Legislative Council today (February 27):

Question:

The Kowloon Motor Bus Company (1933) Limited (KMB) has installed electronic data recording devices (commonly known as "black boxes") on all its buses to monitor the performance of bus captains. Upon detecting instances of speeding, etc., the black boxes issue real-time alerts to the bus captains concerned and automatically generate exception reports for KMB to take follow-up actions. However, a staff union for bus captains has recently pointed out that as the black boxes are erroneous in measuring vehicle speed and their positioning function is inaccurate, the black boxes have often incorrectly identified buses not exceeding the speed limits as speeding, and therefore have mistakenly issued speeding alerts and recorded instances of speeding. The staff union has claimed that there were over 1 000 cases in the past six months of bus captains being wrongly issued warning letters about speeding. In this connection, will the Government inform this Council:

(1) whether it knows (i) the number of bus speeding cases recorded by the black boxes of KMB's bus fleet and (ii) the number of warning letters about speeding issued by KMB to its bus captains, in each of the past three years;

(2) whether it knows when KMB began to use black boxes to monitor bus speed across the board; whether the number of bus speeding cases known to KMB after using the black boxes has increased significantly when compared with the situation before then;

(3) whether it knows the name of the supplier for the black boxes currently used by KMB; the number of suppliers in the market which supply similar devices;

(4) whether the Transport Department (TD) received any reports or complaints last year about errors of black boxes in measuring the vehicular speeds and positions; if so, whether TD conducted any investigation;

(i) if investigations were conducted and the outcome was that the reports or complaints were substantiated, whether TD has requested KMB to review the bus speeding cases stated in the exception reports generated by the black boxes in the past and revoke the punitive actions taken against the bus captains concerned; whether TD has requested KMB to work out the solutions to the aforesaid problems of the black boxes with the supplier or change the black box supplier; and

(ii) if investigations were conducted and the outcome was that the reports or complaints were unsubstantiated, whether TD has requested KMB to adopt measures to reduce bus speeding instances (including retrofitting speed limiting retarders on all buses), adopt a scientific approach to identify road sections prone to speeding and regularly publish statistics on bus speeding; and

(5) whether it knows if errors have been found in the black boxes of the bus fleets of other franchised bus companies in measuring the vehicular speeds and positions?

Reply:

President,

Under the requirements of the franchise terms, all franchised buses are required to be installed with electronic data recording devices (commonly known as "black boxes"). At present, all franchised bus operators make use of the black boxes to generate real-time alerts to bus captains as well as exception reports automatically when the speed of the vehicle exceeds a pre-set threshold. The franchised bus operators will review the exception reports, investigate improper driving behaviour and take appropriate follow-up actions, such as issuance of verbal advice, verbal warning, written warning; and step up the remedial trainings for the bus captains concerned. The bus captains concerned may be dismissed should circumstances warrant.

On the other hand, the Transport Department (TD) set up in March 2018 the Working Group on the Enhancement of Safety of Franchised Bus (Working Group), which comprises representatives from all franchise bus operators, to consider and study possible measures to further enhance bus safety. Among others, the TD has, through the Working Group, requested the franchised bus operators to liaise with the suppliers of black boxes for their bus fleets to develop a bus monitoring and control system (BMCS) with positioning function, operational information monitoring function and geo-fencing technology. One of the functions of the BMCS is, by making use of the black boxes and Global Positioning System or other positioning technologies, to conduct real-time monitoring of the bus speed on roads with different speed limits. This will facilitate a more comprehensive monitoring of speeding and enable the generation of real-time alerts to bus captains. All franchised bus operators have commenced a trial of the geo-fencing technology since the third quarter of 2018, and they are fine-tuning their BMCS by using the data collected from the trial, so as to further enhance the system. When rolling out the various safety enhancement measures, including the real-time monitoring of the bus captains, the franchised bus operators will keep good communication with their frontline staff, listen to their views carefully and refine the various measures as appropriate with a view to further enhancing the operational safety of franchised buses.

Our reply to the various parts of the Hon Jeremy Tam's question is as follows:

(1) According to the information submitted to the TD by the Kowloon Motor Bus

Company (1933) Limited (KMB), the number of suspected speeding cases recorded by the black boxes in 2016, 2017 and 2018 is 3 223, 2 093 and 6 255 respectively. It should be noted that the figure in 2018 increased noticeably when compared with that in the past two years because KMB enhanced the function of the black boxes and the monitoring standard in 2018. In the past, the system was not able to detect speeding cases not exceeding 70 km/hour on road sections with speed limit of 50 km/hour, and it has now been enhanced to be able to monitor speeding in accordance with the various speed limits of different road sections in conjunction with the electronic map data. The figure in 2018 also includes the bus trips not in service.

When following up suspected speeding cases, KMB will verify the data recorded in the black boxes and the speed limits of the road sections concerned vigorously, and conduct stringent analysis and prudent assessment, before mapping out the appropriate follow-up actions. The number of warning letters issued to KMB bus captains in respect of verified speeding cases is 84, 102 and 790 in 2016, 2017 and 2018 respectively. The figure in 2018 is higher than that in the past two years because of the change in KMB's arrangements on handling speeding cases since mid-2018. The company has cancelled the practice of deducting the bonus of the speeding bus captains as penalty (the related bonus has been incorporated into the basic salary of bus captains to improve the remuneration packages of bus captains) but increased the use of warning letters in order to further improve the situation of bus captains speeding. The abovementioned monitoring in conjunction with the electronic map data is also a reason for the higher number in 2018 when compared with that in the past two years.

(2) The use of black boxes could effectively monitor the speeding situations of bus captains. KMB has been using black boxes to monitor speeding by bus captains since 2008. In 2014, KMB started to make use of black boxes to provide real-time alerts for speeding, and installed at driver cabins driving indicators which will give out light signals and emit sounds to alert the captains when the bus speed exceeds 70 km/hour. In 2018, KMB enhanced the function of black boxes by using electronic map data so as to allow the black boxes to monitor speeding on road sections with different speed limits automatically and further enhance the monitoring of speeding by bus captains.

(3) At present, the black boxes used by the franchised bus operators in Hong Kong mainly come from two suppliers, namely NEC Hong Kong Limited and ZF Friedrichshafen AG. The current supplier of KMB's black boxes is Openmatics s.r.o, a subsidiary of ZF Friedrichshafen AG.

(4) The TD has not received report or complaint about errors of black boxes in measuring the vehicular speeds and positions. Nonetheless, as mentioned above, KMB made it clear that in monitoring bus speeding and following up such cases, the company will verify the speed data recorded in the black boxes and the speed limits of the road sections concerned vigorously, and conduct stringent analysis and prudent assessment before a decision is made on the appropriate remedial trainings to be received by or disciplinary actions imposed on the bus captains concerned. Furthermore, KMB has set up an independent appeal mechanism to handle appeals made against any disciplinary

action to protect the rights of the bus captains concerned and ensure the procedural justice of the review process. The appeal board is a standing mechanism. The appellant can come before the board in person to put up his/her case and the board will process each appeal case.

(5) Other franchised bus operators indicated that no significant errors have been found in the black boxes of their bus fleets in measuring the vehicular speeds and positions. The TD will continue to follow up with the franchised bus operators on the trial of geo-fencing technology to refine the system with a view to further enhancing the operational safety of franchised buses.