Bills Committee on
Road Traffic (Amendment) (No. 2) Bill 2011

Response to Members' Request for Information

Purpose

This paper provides the Administration's responses to the questions raised by Members at the meeting of the Bills Committee (BC) on Road Traffic (Amendment) (No. 2) Bill 2011 (the Bill) on 20 December 2011.

Electronic Data Recording Devices

Functions of and information to be recorded by electronic data recording devices

2. An electronic data recording device (EDRD) is a device which records and stores the vehicle's running data digitally. It includes a sensor which senses the running data of a motor vehicle, an on-board device which transmits the data to a recording medium, a recording medium that stores the data, and an analysis system consisting of analysis software and reader.

3. The EDRD proposed for installation on public light bus (PLB) should be capable of recording and storing the following data for at least 30 days:

(i) date and time;
(ii) actual speed at intervals not exceeding one second;
(iii) records of harsh acceleration and deceleration;
(iv) events of over-speeding when the designated speed threshold is exceeded;
(v) records of actual speed, headlamp and direction indicator status, and service braking system status just before stopping; and
(vi) records of power status, data downloading events, settings altered and device faults.

4. The installation of EDRD on PLBs will facilitate fleet management and deter PLB drivers from improper driving. The data captured will also help the Transport Department (TD) to investigate service-related complaints against PLB services in conjunction with the operator, ensure the proper functioning of EDRD, and enhance monitoring of PLB operation such as driving performance of drivers. Further, if it is reasonably believed that a PLB installed with an EDRD is involved in a traffic accident or offence(s) under the Road Traffic Ordinance (Cap. 374) (RTO), the data captured may also be used in investigations by the Police.

Storage period requirement for EDRD

5. The EDRD (also known as "digital tachograph") adopted by the European Union (EU) requires that vehicle speed be stored for the last 24 hours of operation and that driver activity data such as driving times and daily distance travelled for 28 days be stored. Only the detailed data relating to each driver's driving and rest hours, and the five most serious over-speeding incidents would be stored in the device for 365 days.

6. EDRDs (known as "Vehicle Travelling Data Recorder") used in the Mainland normally record the driver's driving and rest hours, and vehicle speed for 360 hours (or 15 days).

7. The EDRD we propose for use on PLBs would store data for at least 30 days. This represents a balance of achieving the intended purpose and ease of data handling. Given that the intended purpose of the EDRD is to facilitate fleet management, complaint and traffic accident investigation, and to deter PLB drivers from improper driving, 30 days of data is considered adequate. An operator may decide to download the stored data on a regular but not excessively-frequent basis for future reference.

Experience of franchised bus companies in Hong Kong

8. All franchised bus companies have committed to equipping new buses with EDRD, and retrofitting in-service buses with this device. To date, about 85% of the franchised buses have already been equipped with EDRD. With the EDRD, franchised bus operators may know more about their bus captains' driving behavior and have more information in case of traffic accident for investigation.

9. TD has not received any reports of tampering with the device by bus captains. According to the bus companies, reports of defects or malfunctioning have been few.

Overseas and Mainland experience

10. The main purpose of using EDRD in the EU is for monitoring compliance with driving hours regulations and for improving long haul road safety and drivers' working conditions. Since May 2006, digital EDRD is required on all new registered heavy goods vehicles and passenger vehicles carrying over nine persons, and vehicles used for carriage of passengers on regular services where the route distance does not exceed 50 km are exempted.

11. In the Mainland, the purpose of installing EDRD aims at combating driver fatigue and deterring speeding, and currently the relevant requirement only applies to newly registered long distance/tour coaches of over nine meters in length. The technical specifications of EDRD in the Mainland have made reference to the standards used by the EU.

12. The technical specifications need to be tailor-made to suit the local requirements and operating conditions. The specifications for the EDRD we are proposing for adoption in Hong Kong are formulated after consulting local research institutions, vehicle suppliers, and local and overseas EDRD suppliers with reference to the technical terms and testing requirements adopted in the EU and the Mainland.

Specifications for EDRD under the Bill

13. The performance specifications for the EDRD are given in the proposed Schedule 19 in clause 15 of the Bill. For the purposes of device approval, EDRD suppliers will have to prove compliance by testing their products according to relevant industrial standards.

14. The technical specifications for EDRD in the EU or the Mainland do not specify serviceable life span period. However, we note that it is currently the norm for device suppliers in the EU and the Mainland to provide one year of limited warranty for their products.

15. Although it is not a common practice to mandate any period of warranty on electronic equipment by law, the Administration would require EDRD suppliers to provide a minimum warranty period of 12 months, as well as repair services for seven days a week, when granting approval to EDRD products.

Anti-tampering measures

16. Although an EDRD is required to undergo reliability testing before approval, it is still possible for such device to become defective or malfunction after having been used for some time. A driver or enforcement personnel can detect malfunction by means of two signal lamps, one indicating the normal functioning of the data collection and recording function, and another one showing other faults or abnormal operation.

17. An EDRD is designed to prevent tampering or alteration of the data stored therein. The on-board device of the EDRD will be sealed. Sealing is also required for those wiring connections on the device, which could be disconnected thus causing undetectable alteration or loss of data. The seal is thus a means of detecting tampering attempt by visual inspection. The actual vehicle speed and time data, data download record, as well as logging of device faults and alterations to the settings stored in the EDRD will all provide further evidence of manipulation or interference.

18. Suspected tampering acts will be investigated, and evidence will be collected by the Police. Prosecution for tampering with the device will only proceed when there is sufficient evidence.

Demonstration of the functioning of EDRD

19. A demonstration will be arranged by the Administration at a future BC meeting (i.e. at a meeting after 12 January 2012).

Speed Limiters

Administrative measures requiring installation of speed limiter on PLBs

20. The administrative measures requiring the installation of a speed limiter on all PLBs became effective in June 2010 and it had taken 15 months to complete the installation of speed limiters on all PLBs. The effectiveness of installing speed limiter on reducing traffic accidents involving PLBs can only be ascertained after all PLBs have been fitted with speed limiter. Furthermore, it is necessary to conduct the study over a sufficiently long time period (i.e. several years) in order to have a meaningful and reliable assessment and comparison. We do not therefore have sufficient relevant data at this stage to assess the effectiveness of speed limiter in reducing traffic accidents involving PLBs.

21. The number of public complaints against speeding before and after the installation, as shown in the table at Annex A, may shed some light on the effectiveness of speed limiter on deterring speeding by PLBs. Since speed limiters were installed on PLBs progressively from June 2010 onwards, the number of complaints received has shown an obvious drop since January 2011 in comparison with the same period in 2010.

22. Overseas countries require installation of speed limiter on heavy vehicles either for safety reason (as a means of reducing heavy vehicles accidents) or for protecting the environment (as a means of reducing harmful emission and noise nuisance caused by speeding vehicles). In the case of the EU, both reasons were quoted for requiring Member States to ensure that speed limiters are installed on heavy vehicles in 1992 under European Council Directive 92/6/EEC. According to the U.K. Department for Transport, the accident involvement rate for all articulated heavy vehicles fell by 26% in the period from 1993 to 2005. They believed that the relevant speed limiter legislation had played a significant role in reducing accidents.

23. In Australia, improving road safety after a spate of heavy vehicle accidents in the late 1980's was the impetus for legislating on speed limiters through Australian Design Rule 65/00. Prior to the making of the speed limiter legislation, the number of fatal accidents involving heavy vehicles was high, peaking in 1989 at 350 deaths. The number has reduced to below 200 deaths after the making of the legislation in 1991.

Anti-tampering measures

24. According to existing practice, if a PLB needs to have TD's sealing for its speed limiter, it has to undergo a calibration or health check by the speed limiter installer to obtain a calibration certificate. During the 12-month period after the commencement of the gradual installation of speed limiters by the trade, there were around 70 re-sealing cases. The re-sealings were necessitated by either breaking of the seal due to individual seal quality or the need to repair or replace the controller or other components, etc. As it is easy for the speed signal wiring to be loosened when the seal is broken, TD has required the supplier to step-up anti-tampering measures in the design to prevent possible wiring loosening. It is expected that the anti-tampering measures coupled with the penalties for tampering introduced in the Bill will effectively deter any attempts to tamper with the device.

Proposal under the Bill

25. We propose that the requirement of installing a speed limiter on all PLBs should be set out in the legislation. The major proposals in relation to speed limiter under the Bill are set out below:

(a) the speed limiter should be of a type approved by TD;

(b) the installation should be carried out by an "authorized speed limiter installer" authorized by the Commissioner for Transport;

(c) contravention of the requirements relating to speed limiters, such as using a PLB without an approved speed limiter or with an approved speed limiter which is not maintained in good and efficient working order, will be an offence. Tampering with a speed limiter will also be an offence; and

(d) penalties will be provided for the offences.

The requirements on type approval, installation, sealing and maintenance of speed limiters, as well as the penalties for offences are proposed to be set out clearly in the legislation to provide a clear regulatory framework for PLB operators and drivers to follow. Sanctions will be stipulated to deter people

from disregarding the relevant requirements and from tampering with the speed limiter. While TD may continue to enforce the requirements through administrative measures, without the legislation, penalties such as imprisonment and fine will not be available and it would be more difficult to provide evidence to act on suspected contraventions.

26. The EU, Japan, Australia and Singapore also mandate through legislation the installation of speed limiter on different classes of road transports.

Pre-service Training Schools

27. Similar to the arrangement of Driving Improvement Schools, TD requires some time to select and designate Pre-service Training Schools, and to work out the Code of Practice (including the course content, the qualification of the course instructor, the facilities of the schools and the issuance of certificates, etc.) for the school operators to follow. After the enactment of the legislation, TD will invite applications from interested parties. The six to nine months duration is a reasonable and realistic estimate.

PLB Driver Identity Plate

28. A sample and the position of display of the PLB driver identity plate which is proposed to be prescribed in the legislation are illustrated at Annex B.

Advice Sought

29. Members are requested to note and comment on the Administration's responses set out in this paper.

Transport and Housing Bureau
January 2012

Annex A

Public Complaints against Speeding by PLBs

	Number of complaints against PLB speeding			Total number of PLBs installed with speed limiter	
	2009	**2010**	**2011**	**2010**	**2011**
Jan		37	18		2,834
Feb		26	15		3,119
Mar		44	29		3,547
Apr		21	18		3,912
May		27	12		4,173
Jun	35	13	14	147	4,274
Jul	33	18	16	366	4,309
Aug	38	23	14	608	4,336
Sep	21	12	16	950	4,339
Oct	23	24	18	1,407	4,349
Nov	28	30	18	1,889	4,349
Dec	33	27		2,308	4,349

Annex B

圖一：公共小巴司機證規格

圖二：公共小巴司機證托架展示位置