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Panel on Transport

Subcommittee on Matters Relating to Railways
Meeting on 29 March 2019

**Information note on incident of the new signalling system testing on
Tsuen Wan Line on 18 March 2019**

Upgrade of the signalling system

The Subcommittee on Matters Relating to Railways ("the Subcommittee") was briefed on the progress of MTR Corporation Limited ("MTRCL")'s upgrading of the signalling system of its railway lines at the meetings on 1 December 2017 and 1 February 2019. According to MTRCL, it awarded a contract of \$3.3 billion in 2015 to replace the signalling systems of seven railway lines (i.e. Tsuen Wan Line ("TWL"), Island Line, Kwun Tong Line, Tueng Kwan O Line, Disneyland Resort Line, Tung Chung Line and Airport Express), with a view to increasing capacity and further enhance the overall reliability and efficiency of railway services. The signalling system of East Rail Line is also being upgraded. The expected completion timeframe of the upgrading of the new signalling systems is as follows:

Railway Line	Expected Completion
Tsuen Wan Line	2019
East Rail Line	2019
Kwun Tong Line	2020
Island Line	2021
Tseung Kwan O Line	2021
Tung Chung Line, Disneyland Resort Line and Airport Express	2026

2. As reported to the Subcommittee in December 2017, MTRCL strives to implement the upgrading programme while not affecting normal train services. MTRCL has formulated contingency plans to cope with the potential risks. The new signalling system has a relatively smaller number of overall parts and components which would reduce the chances of faults. To further enhance the reliability of train service, the new signalling system is designed with strengthened back-up devices. Even if a component malfunctions, back-up devices will ensure that the signalling system continues to function properly. Upon the completion of the upgrade of signalling systems in 2026, the overall capacity of TWL, Island Line, Kwun Tong Line, Tseung Kwan O Line, Disneyland Resort Line, Tung Chung Line and Airport Express can be increased by about 10%.

3. After taking into account various factors including patronage of each railway line, signalling equipment and impact on passengers and stakeholders, MTRCL has started with the signalling upgrade for TWL. According to the information provided by MTRCL in January 2019, the signalling replacement programme for TWL has reached its final stages and full line train tests are being carried out during non-traffic hours. MTRCL expects that if everything goes with the plan, the new signalling system of TWL will be gradually put into service in the second half of 2019.

Incident of the new signalling system testing on Tsuen Wan Line on 18 March 2019

4. During the testing of the new signalling system in the early hours of 18 March 2019, two MTR trains collided near Central Station on TWL. According to MTRCL,¹ the preliminary finding of the investigation indicated that due to a software problem of the new signalling system, a Central-bound train was in collision with the third and fourth compartments of a Tsuen Wan-bound train at an intersection point of the track. In the light of the incident, MTRCL advised that all testing of the new signalling system would be suspended until the cause of the incident was confirmed. The train service between Central and Admiralty on TWL was once suspended and subsequently was resumed to normal on 20 March 2019.

5. The Administration has expressed deep concern about the collision incident which occurred during the testing of the new signalling system on TWL. The Electrical and Mechanical Services Department would conduct an in-depth and independent investigation into the design, operation and

¹ 蕭景源、鄧偉明(2019, March 19). 車長有煞車 太近「停唔切」港鐵停測試徹查 最快兩個月有結果. *文匯報*, p. A03.

LUO, C. (2019, March 19). Chaos today after train crash. *The Standard*, p. P02.

integration of the hardware and software of the new signalling system, in order to ensure the railway system is safe and reliable for use before putting the new signalling system into service. MTRCL has also set up an investigation panel to investigate and identify the root causes of the incident and make recommendations so as to prevent the recurrence of any similar incident.

6. To facilitate members' deliberation, the relevant press releases issued by the Administration and MTRCL, and some recent media reports in relation to the collision incident are set out in **Appendices I and II** respectively. The Administration will brief the Subcommittee on the relevant issues at the meeting to be held on 29 March 2019.

Council Business Division 4
Legislative Council Secretariat
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