LC Urgent Q1: Disruptions of railway services

Following is an urgent question by the Hon Gary Fan under Rule 24(4) of the Rules of Procedure and a reply by the Secretary for Transport and Housing, Mr Frank Chan Fan, in the Legislative Council today (October 24):

Question:

On the early morning of the 16th of this month, staff members of the MTR Corporation Limited (MTRCL) completed the tests on a new signalling system for the MTR Tsuen Wan Line and reverted to the existing system. However, they found that the signalling systems of the Tsuen Wan Line, the Island Line and the Kwun Tong Line had all broken down simultaneously and could not be fixed before the first trains commenced service. The signalling system of the Tseung Kwan O Line also broke down later. As a result, all these four railway lines could only provide limited services during the morning rush hours. This also caused severe knock-on effect and chaos on the road traffic, affecting hundreds of thousands of members of the public. In this connection, will the Government inform this Council, given that MTRCL is gradually replacing the signalling systems of various railway lines, whether the Government and MTRCL will take immediate measures to prevent the relevant works from causing disruptions of railway services, and whether they will expeditiously formulate contingency plans (including alternative public transport services) to deal with large-scale disruptions of railway services?

Reply:

President,

During the morning peak hours on October 16, train services of the MTR Island, Tsuen Wan, Kwun Tong and Tseung Kwan O lines suffered from service disruption. Although train service was not suspended, the carrying capacity of the four railway lines were reduced with limited train service with intervals of about 12 to 15 minutes. The incident covered a wide area affecting numerous passengers. The Government and the MTR Corporation Limited (MTRCL) are sparing no efforts to look into the cause of the incident in order to avoid recurrence. Regarding the question raised by the Hon Gary Fan, I will reply from the following aspects.

In the early morning on October 16, MTRCL conducted testing of the new signalling system along the Tsuen Wan line, during which both the new and existing systems functioned normally. Before 5am, MTRCL switched back the signalling system to the existing one to prepare for train services. At 5.28am, the Operations Control Centre found that trains on the Island, Tsuen Wan and Kwun Tong lines were unable to receive target speed instruction. Out of safety concern, trains on these three lines were switched to manual mode at reduced speed from the start of train service at around 6am. During the period, the over-speed protection function of the trains continued to

function in ensuring railway safety.

Engineering personnel of the MTRCL immediately carried out emergency repair works. Having failed to recover the system, engineering personnel then attempted to reboot the signalling system of the respective lines one by one. At 5.52am before the first train commenced service, MTRCL informed the Emergency Transport Co-ordination Centre (ETCC) of the Transport Department (TD) and issued amber and red alarms consecutively according to the established contingency plan, requesting other public transport operators to enhance services. During the emergency repair works, the Tseung Kwan O lines also suffered from signalling fault and trains were switched to manual mode at reduced speed. Upon rebooting the computers at the stations along the four railway lines, emergency repair works were completed one after another by 11.45am and train service gradually resumed to normal frequencies.

Upon receiving MTRCL's notification, taking into account the severity of the incident, the ETCC of TD upgraded its operation level to Level 2, led by directorate staff of TD, and deployed additional staff to co-ordinate other public transports and to provide emergency support. The Centre urged MTRCL to disseminate information to passengers and closely monitor and manage passenger flow in stations. It also contacted and requested franchised bus and tram operators to enhance service and sent additional staff to assist passengers in queuing. With TD's co-ordination, 11 routes of franchised bus, 24 additional trams and the Star Ferry enhanced its service during the incident to assist in picking up affected passengers. During the period, TD disseminated information to the public through media, website and mobile applications, and also deployed personnel to key affected stations. The Electrical and Mechanical Services Department (EMSD) also deployed personnel to MTRCL's Operating Control Centre and Kowloon Bay Central Equipment Room to observe train operations and monitor the repair works.

During the incident, the MTRCL deployed an additional 400 staff to assist passengers, including conducting crowd control at stations. MTRCL also updated the public on the relevant information through media briefings, its mobile applications, and broadcasts at stations and inside train compartments. During the incident, ticket gates of each affected station were switched to a specific mode, of which passenger fare was not deducted.

According to the initial investigation by MTRCL, the incident was likely caused by unsmooth operation and data processing of the existing signalling system software. After resetting, all systems along the lines have returned to stable operation. Based on the abovementioned initial investigation findings, EMSD has requested the MTRCL to continue in-depth investigation, while conducting an overhaul on the related equipment of the signalling system and submit a detailed report in two months. MTRCL has set up an investigation panel. It shall arrange overseas and local experts to assist in the investigation, and conduct a comprehensive review on the system with the signalling system supplier. Directions of the detailed investigation include data processing synchronisation arrangements of the signalling systems undertaken by two suppliers, whether there are any potential software compatibility problems, and whether the interconnection and communication of the railway lines are smooth. EMSD will continue to monitor the investigation

work.

TD will also review the existing contingency plan, including the arrangements of free shuttle buses by MTRCL during the incident, and whether there is room for other public transport operators to enhance services during the incident, in order to improve the handling of similar incidents in future. However, it should be noted that shuttle bus service is an emergency supplementary measure with limited carrying capacity, and would be subject to factors such as road conditions, which can hardly replace normal train service.

As regards to Member's question on whether the incident is related to the signalling system upgrading project, according to the signalling system alarm log of the MTRCL, the incident indeed occurred after MTRCL switched back the signalling system to the existing one and operated it for some time. There was no evidence showing correlation between the incident and the signalling system upgrading project. That said, the MTRCL has further strengthened its monitoring and maintenance of the existing systems when testing the new signalling system, and has deployed additional personnel to stand by at stations' signalling equipment room to expedite the repair works. Separately, EMSD has discussed with MTRCL to temporarily segregate the inter-connection of railway lines to avoid them to be affected by one another under similar incidents. As mentioned above, EMSD and MTRCL including the expert panel set up by MTRCL will also review whether the incident was indeed not related to the signalling system upgrading project when conducting the in-depth investigation.