



Signalling System Failure on 16 October 2018

LegCo Panel on Transport
Subcommittee on Matters Relating to Railways

October 2018

Special Fare Days

Thanks Passengers for Patience

- Adult Octopus holders enjoy Child Octopus concessionary fares
- Concessionary Octopus holders enjoy a flat fare of \$1 (except for the Airport Express, MTR Feeder Bus, journeys to or from Lo Wu and Lok Ma Chau stations and East Rail Line First Class Premium)



Latest Follow-up and Response

- The Government and the MTR Corporation are concerned about the incident
- Conduct in-depth investigation
- Set up an executive review panel involving overseas signalling experts and local railway experts
- Will review existing contingency plan
- Submit a detailed report in two months

Brief on Train Service Disruption on 16 October 2018

Time	Issue
5:28 am	Trains on Tsuen Wan Line, Kwun Tong Line and Island Line were unable to receive stable train commands. Trains were switched to manual mode at reduced speed.
5:40 am	Maintenance staff arrived at signalling equipment rooms to look into the signalling fault and conduct repair works.
5:46 am	Maintenance staff informed OCC that the relevant signalling systems required rebooting.
5:52 am	Anticipated a longer recovery lead-time needed, MTRCL notified TD
5:57am	Informed passengers train service information via various channels
6:00am	Amber alert was issued.
6:20am	Rad alert was issued.
9:20 am	The recovery of Island Line was completed.
10:07 am	Signalling fault happened on Tseung Kwan O Line. Trains were switched to manual mode at reduced speed.
11:45 am	The recovery of lines were completed. Train service resumed normal.

Initial Testing and Data Analysis Result

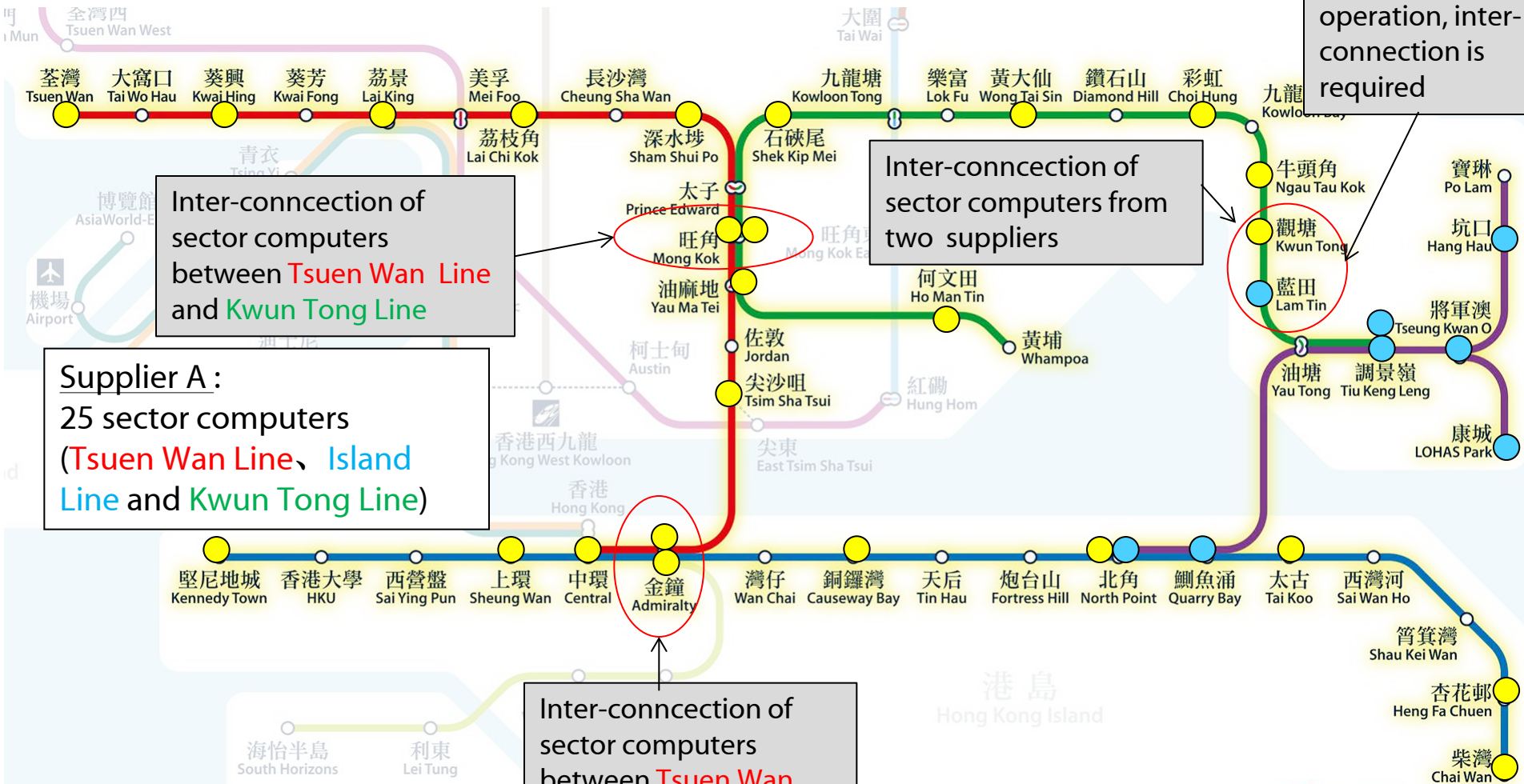
Sector Computer Distribution in the Signalling System and Cross-line Network Management

Network management

Aims at deploying trains across lines flexibly and effectively

Supplier B:
8 sector computers
(Kwun Tong Line and Tseung Kwan O Line)

Due to train operation, inter-connection is required



Inter-connection of sector computers between Tsuen Wan Line and Kwun Tong Line

Supplier A:
25 sector computers
(Tsuen Wan Line, Island Line and Kwun Tong Line)

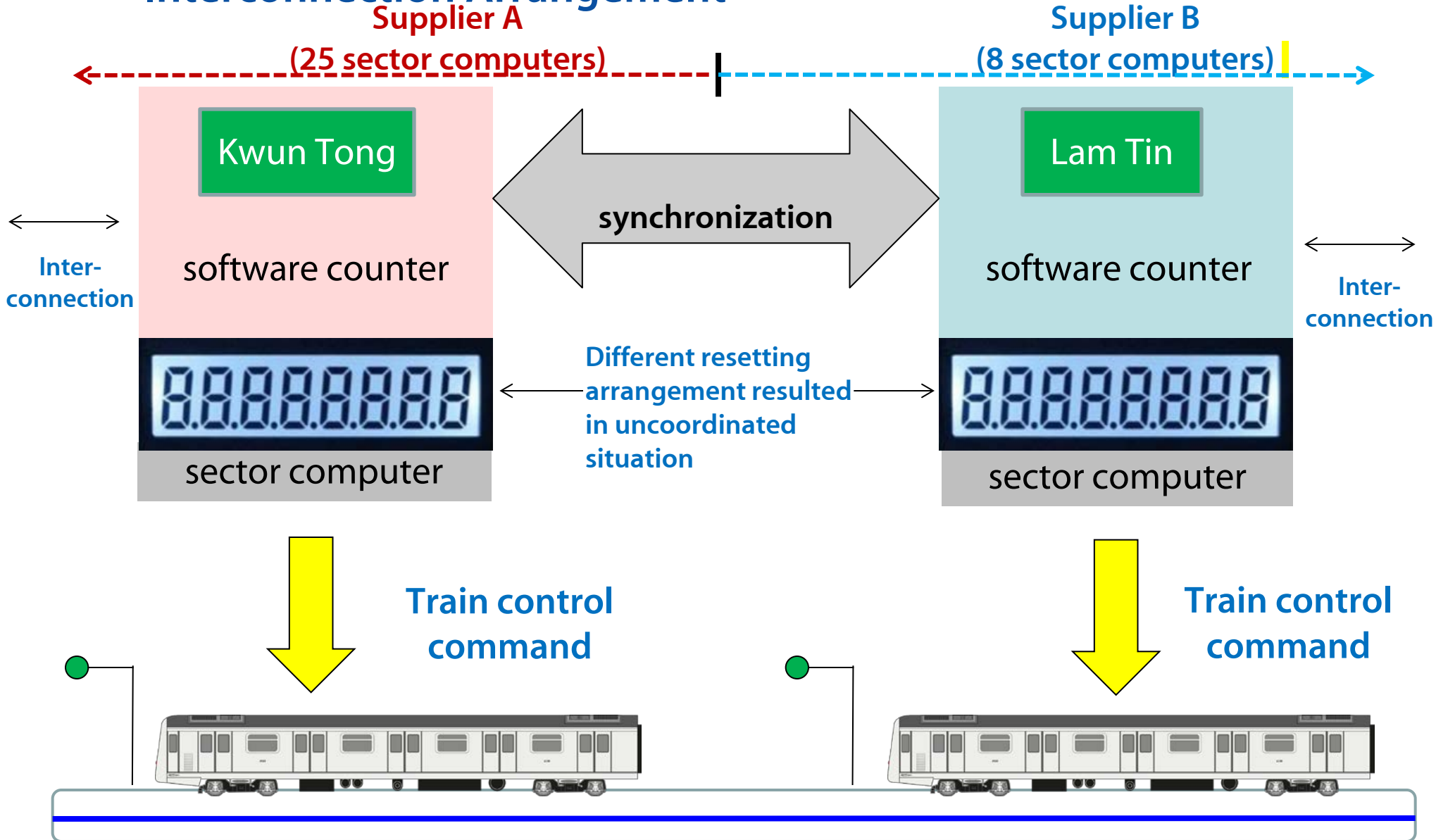
Inter-connection of sector computers from two suppliers

Inter-connection of sector computers between Tsuen Wan Line and Island Line

In-depth Investigation in Three Directions

- Software counters' resetting arrangement and date synchronization of the signalling system undertaken by two system suppliers
- Potential software compatibility problems of two system suppliers
- Interconnection and communication of the railway lines

Synchronization, Software Consistency and Interconnection Arrangement



Immediate Measures

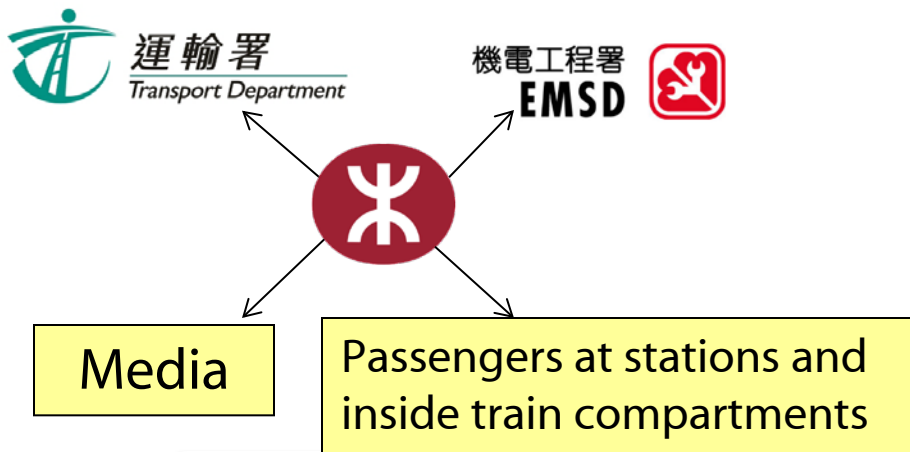
- Segregated the inter-connection between lines and reset all sector computers, all systems along the four lines have returned to stable operation
- Temporarily segregated the inter-connection of sector computers of Tsuen Wan Line, Island Line and Kwun Tong Line, minimizing the chance of lines being affected at the same time

No correlation between the incident and signalling system upgrading project

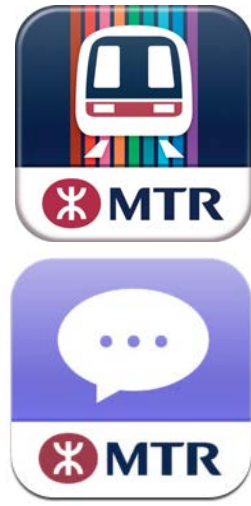
- Initial testing and data analysis result shows that different resetting arrangement of the software counters resulted in uncoordinated situation
- Through the synchronisation process and inter-connection of the service lines rendered the system unstable
- Incident occurred only after the signalling system was switched back to the existing one and operated normally for some time
- Confirmed by experts and two system suppliers

Contingency Plan

Notification and Information Dissemination



Service disruption notification



▲ 荃灣綫額外行車時間

此訊息發放時間: 2018-10-16 05:56

荃灣綫列車預計需要額外行車時間, 請為行程預留充裕時間, 我們會盡快提供進一步消息。

▲ 觀塘綫額外行車時間

此訊息發放時間: 2018-10-16 05:58

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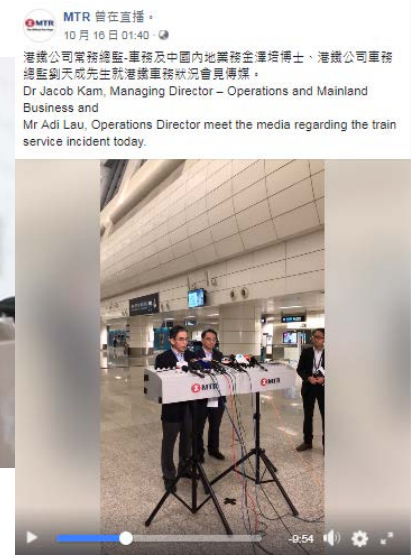
Traffic News



Station notice



Media sessions



Manpower



Deployed an **additional 400 staff** to assist passengers and **55 maintenance staff** to conduct on-site inspection and recover the systems

