

**Legislative Council Panel on Transport  
Subcommittee on Matters Relating to Railways**

**Retrofitting of automatic platform gates**

**Foreword**

Following the meeting of the Subcommittee on Matters Relating to Railways on 21 November 2008, MTR Corporation Limited (MTRCL) has arranged a site visit for Members to Lo Wu Station on 13 December 2008 in relation to the trial of Mechanical Gap Filler (MGF) system. This paper summarizes the information provided at the site visit and the progress of retrofitting automatic platform gates (APG) at the 8 at-grade/above-ground stations.

**APG retrofit at the 8 at-grade and above-ground stations**

2. The Corporation decided to retrofit APG for the 8 at-grade and above-ground stations of the pre-merger MTR network in January 2008 and has devised a timetable for the programme. It is expected that the retrofitting works at all 8 stations will be completed by 2012.

3. The Corporation has submitted to the Subcommittee a work programme setting out the details of key milestones for APG retrofit at the 8 at-grade/above-ground stations, namely Kwai Fong, Kwai Hing, Tsuen Wan, Kowloon Bay, Ngau Tau Kok, Kwun Tong, Chai Wan and Heng Fa Chuen Stations. So far, the project has been progressing according to schedule. The Corporation is now assessing the tenders received and it is expected that the contract could be awarded in January 2009 as scheduled.

4. With a view to expediting APG retrofit at the aforementioned stations, the Corporation will continue to closely monitor the programme of works. Design of the entire project will be completed within 2009. The Corporation will also seek to further condense the works as far as practicable to speed up the installation process.

#### **APG at East Rail Line stations**

5. Regarding the retrofitting of APG at East Rail Line (EAL) stations, the inherent constraint of wide platform gaps at some platforms must be resolved first without compromising safety. At the meeting of the Subcommittee on 4 May 2007, Kowloon-Canton Railway Corporation (KCRC) further explained that other than the problem of wide platform gaps, other technical problems will also need to be resolved for installing Platform Screen Doors (PSDs) / APG at KCRC stations.

#### **MGF trial**

6. Since the rail merger, MTRCL has undertaken to carry out a trial on the MGF system at Lo Wu Station that was initiated by pre-merger KCRC. The trial has commenced in mid-2008 at Lo Wu Station, with a view to overcoming the problem of wide platform gaps at EAL stations. During the site visit on 13 December 2008, MTRCL has explained to Members a number of issues to be addressed when considering the retrofitting of APG at EAL stations, including additional dwell time and implication on train headways and signalling system, reinforcement of platform structure, reconstruction of station canopy and coordination with future railway development.

## **Issues to be addressed before considering retrofit of APG on EAL**

7. Signalling system - Due to the sequential operation of train doors and MGF and the need for the verification of MGF status prior to train doors opening or train departure, additional platform dwell time will be incurred leading to longer journey time and fewer trips. The Corporation is exploring ways to enhance the interface between the signalling systems to shorten the dwell time. This is a challenging task as there could well be impact on the verification process. Safety is of paramount importance in railway operations and it cannot be compromised when changes are made. The existing EAL signalling system could constitute a constraint to various possible enhancement measures.

8. Platform structure - EAL station platforms were not designed to accommodate the loading of APG. If APG is to be installed, additional loading will be imposed on the platform edge, so substantial station modification is necessary to strengthen the platform.

9. Station canopy - EAL platforms operate under a non-enclosed setting. The retrofitting of APG on EAL stations will affect the air movement on the platforms. To maintain comfortable environment for passengers, the Corporation needs to study the impact caused by modification of station on station environment.

10. Future railway development - To meet with future railway development, the Corporation has plans to modify both train service and station facilities for EAL. Therefore, any major changes to the facilities of EAL at this stage must be carefully considered so as to avoid abortive works and to maximize the benefits to passengers.

## **Way forward**

11. The Corporation has been working incessantly in finding suitable solutions to the above issues. At present, our engineers are exploring ways to overcome the problems of prolonged platform dwell time and total journey time.

12. The Corporation is trying to find an effective way to enhance the existing signalling system to minimise the MGF operating time and it is expected that the reliability test and passenger trial to test the performance of the full system can commence in February 2009 in phases. It is expected that by September 2009, the Corporation would have collected sufficient test data for analysis and assessment on system performance. The full review will be completed by end of 2009. Due consideration must be given to operation safety during the trial.

## **Conclusion**

13. As explained in the Subcommittee meeting on 21 November 2008, the Corporation is looking for a satisfactory solution to mitigate the inherent limitation caused by the curved line of station platforms and wide platform gaps at some EAL stations before considering further the retrofit of APG.

14. The Corporation has to address a number of issues before the retrofit of APG at EAL stations. The Corporation will continue to explore ways to enhance the performance of the current system taking into account future railway development.

MTR Corporation

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