CAD reports operational event of ATMS

In the morning today (September 21), while the technical staff of the maintenance service provider of the Civil Aviation Department (CAD)'s Air Traffic Management System (ATMS) were carrying out the planned housekeeping procedures of the Ultimate Fallback System (UFS) of the ATMS, the technical staff inadvertently rebooted the network switches of the Main System, which was operating, by removing the dedicated power source of the network switches and reconnecting it afterwards. As a result, the Main System displayed an alert message. While the occurrence was being followed up, the technical staff switched the ATMS from the Main System to the Fallback System, which shares the same design and was operating, according to the established procedures. Throughout the occurrence, the processing and display of flight data remained normal. All flight information (both essential types and supplementary types) of all flights in the Hong Kong Flight Information Region was displayed on the radar screens. The Air Traffic Control Officers (ATCOs) continued to provide air traffic control (ATC) services as usual.

"At 5.49am this morning, the technical staff of the maintenance service provider were carrying out the planned housekeeping procedures of the UFS, the technical staff inadvertently rebooted the Main System's two network switches one after another by removing the dedicated power source of the network switches and reconnecting it afterwards. The two network switches are identical and serve as mutual backup for each other. As this procedure is not applicable to the Main System which is operating, the execution of the procedure on the Main System resulted in the display of an alert message as per system design. The technical staff on-site immediately followed up and carried out investigations. Having co-ordinated with the ATC supervisors on-site, the technical staff switched the ATMS to the Fallback System according to the established procedures at 5.57am. During this eight-minute period, the ATCOs were able to keep direct voice communication with the pilots of all flights and to provide ATC services at all times. Due to the switchover from the Main System to the Fallback System, certain non-critical system functions were temporarily suspended, such as the flight data exchange functions with the adjacent Flight Information Regions (FIRs). Nevertheless, the ATCOs continued to maintain close liaison with the adjacent FIRs through voice communication system according to the established procedures. After the original Main System was inspected by the technical staff of the maintenance service provider, it then served as a backup as per system design," a CAD spokesman said.

"According to the information we gathered, the occurrence was caused by human error and was not related to the performance of the ATMS itself. It was not necessary to activate the Ultimate Fallback System of the ATMS in the process. The occurrence did not affect arriving or departing flights, nor did it affect aviation safety. Nevertheless, the CAD is very concerned about the occurrence and has asked the maintenance service provider to submit a report to give a full account of the occurrence and to come up with improvement measures to prevent recurrence . The CAD will also review the oversight of

the housekeeping procedures of the ATMS," he added.

The ATMS has built-in multiple fallback systems to tackle different scenarios. The Main System and the Fallback System are independent but identical systems with the same design and functionality, which can immediately take up the role of each other in the event of an outage for maintaining ATC services continuity. All professional ATCOs receive rigorous training and have the skills and experience required to deal with unexpected circumstances in accordance with the established procedures, so as to continue to provide ATC services and safeguard aviation safety.