航空交通管理

AIR TRAFFIC MANAGEMENT

航空交通管理部負責為國際民航組織指定的飛行情報區及負責區內提供航空交通管制、航行資料及飛機事故警報這三種服務。本部承諾繼續實踐我們的使命宣言：*致力於安全及有效率的航空系統*。

I. 航空交通量

本部在年內共處理了177 759架次在香港國際機場升降的國際及本地航班。此外，本部亦為70 561架次飛越香港飛行情報區及負責區的航班提供服務。與去年比較，在香港國際機場升降的航班數目下跌了約1%，而飛越飛行情報區及負責區的航班數目則下跌了4%，這跟東南亞地區的經濟表現有關。

自一九九八年十月起，由於新機場的跑道及滑行道在設計上較理想，在只有一條跑道操作的情況下，其容量亦可從啟德機場的每小時31班，增加至34班。取得運作經驗後，一九九九年三月起的跑道容量進一步增加至每小時37班次。

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Air Traffic Management Division is responsible for the provision of air traffic control service, flight information service and alerting service within the Hong Kong Flight Information Region (FIR) and Area of Responsibility (AOR) as assigned by the International Civil Aviation Organisation. The Division pledges to ensure that our mission statement is achieved: *Committed to a safe and efficient air transport system.*

I. TRAFFIC LEVEL

During the year, Air Traffic Management handled a total of 177 759 aircraft movements (international and local) at the Hong Kong International Airport (HKIA), and 70 561 movements through the FIR and AOR. When compared with the previous year, the number of airport movements decreased by approximately 1 per cent while overflights decreased by 4 per cent. The decreases were due to the regional economic situation in Southeast Asia.

Commencing October 1998, the runway capacity at the new airport, with single runway operating, was increased to 34 movements per hour when compared with 31 per hour at Kai Tak. This was possible because of better design of the runway exits and dual taxiway configuration at the new airport. After gaining operational experience, the capacity figure was further increased to 37 movements per hour since March 1999.

II. 招聘及培訓航空交通管制人員

為了應付新機場24小時運作的需要，本處在年內增聘了27名見習航空交通管制人員，佔本部整體人數約10%。截至一九九九年三月三十一日，航空交通管制人員共有241名，較去年上升15%。航空交通事務員則共100人，較去年增加18%。

為新機場啟用而提供全面之在職空管人員培訓計劃已如期於一九九八年四月完成。在此之後，為了確保空管人員在新的操作環境下也能保持一貫的專業水平，各項相關訓練課程相繼開展。連同為新僱員提供的入職訓練，本部在年內的專業培訓課程密度大幅提升，合計為空管人員提供44項培訓課程，並為航空交通事務員提供30項培訓課程。

III. 航空交通管理

民航處繼續與國內及澳門的民航管理部門保持緊密聯繫，以協調香港、深圳、珠海和澳門等機場在發展飛航程序及航空交通管制的事務。國內、香港和澳門三方在年內舉行了多次三邊會議，在新香港國際機場啟用前就規劃珠江三角洲各機場空中交通管理之整體計劃達成共識。

II. RECRUITMENT AND TRAINING OF AIR TRAFFIC CONTROL STAFF

Recruitment of additional air traffic control (ATC) staff to cope with the manning of 24-hour operation at the new airport progressed on schedule. Twenty-seven additional student ATC officers, representing approximately 10 per cent of the staffing strength, were recruited in 1998/99. As at March 31, 1999, the number of ATC controllers stood at 241, an increase of 15 per cent as compared with the previous year, and the number of Air Traffic Flight Services Officers (ATFSOs) stood at 100, an increase of 18 per cent as compared with last year.

Full scale conversion training of all in-service ATC staff to prepare for the new airport operation was completed on target in April 1998. Thereafter, training activities continued to take place to further refine the skill and competency level of ATC staff and to better equip them for more complex operations at the new airport. Consequently, together with the ab-initio training for new ATC staff, intensive training activities were carried out throughout the year. Altogether, 44 training courses were provided to 307 controllers and 30 courses to 258 ATFSOs.

III. AIR TRAFFIC MANAGEMENT

The Department continued to maintain close liaison with the civil aviation authorities of the Mainland and Macau in relation to the development of flight procedures and ATC co-ordination arrangements for

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IV. 航空交通管制遷往新機場

隨着機場搬遷，航空交通管理部在一九九八年七月五至六日期間遷入新機場。早於一九九七年五月，空管人員已對空管器材進行各種實地測試。當整體空管系統及所有空管器材測試於一九九七年十月順利完成後，空管人員隨即在新機場接受全面培訓，並於一九九八年四月如期完成了這些培訓課程。在七月五日黃昏，新的空管中心及控制塔已開始與啟德的空管單位同步運作。當最後一班航班從啟德機場起飛後，位於新機場的空管單位正式全面接管香港航空交通管制服務。

雖然空管工作在新環境下運作順利，但民航處仍會繼續密切監察整個系統，並且根據所得經驗對運作程序稍作修訂。總括來說，空管工作在新機場進行得十分順利。

V. 搜索及救援

在一九九八年十二月，本處舉行了一次大型的搜索及救援演習，目的是使有關人員得到適當的訓練。演習共分兩部分，其一是由直升機示範由海中拯救生還者上船的短程演習，另外是四架定翼飛機和兩艘船隻在海洋上搜索模擬目標的長程演習。參加這項演習的本地及海外機構包括香港警務處、消防處、政府飛行服務隊、民安隊、海事處、政府新聞處、機場管理局、駐港解放軍部隊，以及美國的空軍、海軍

the new airport as well as for Shenzhen, Zhuhai and Macau. Throughout the year, a series of tripartite meetings were held and agreement has been reached towards the formulation of an integrated air traffic management plan and ATC arrangements for the airports in the Pearl River Delta prior to the opening of the new HKIA.

IV. TRANSFER OF ATC OPERATION TO NEW AIRPORT

ATC operation was transferred from Kai Tak to the new airport on July 5 and 6, 1998 in conjunction with the airport relocation. Prior to the transfer, ATC staff had participated in various on-site testing of ATC equipment as early as May 1997. When the final overall system integration and testing of all ATC equipment were successfully completed in October 1997, full scale training of all ATC staff at the new facilities then commenced and was completed on schedule in April 1998. In the evening of July 5, 1998, the new ATC Centre and Control Tower at the new airport commenced operation in parallel with those in Kai Tak. When the last flight departed from Kai Tak, the new ATC Centre and Control Tower then completely took over the control of all traffic.

Upon relocating to the new airport, ATC operation has adapted well in the new operating environment. Nevertheless, the system was continuously under close scrutiny and minor refinement to operating procedures was carried out in light of experience gained. All in all, ATC operation has been functioning very satisfactorily at the new airport.

V. SEARCH AND RESCUE

A large scale search and rescue exercise was held in December 1998 with the objective of providing continuation training to personnel responsible for search and rescue operations. It consisted of a short range exercise with helicopter rescue demonstration

及海岸防衛隊。國內、泰國、汶萊、新加坡及澳門的搜索救援單位亦派出人員前來參觀演習實況。是次演習為搜索及救援人員提供了交流經驗和切磋技術的好機會。

VI. 自動從屬監視系統測試

自動從屬監視系統的測試繼續進行。此系統利用衛星科技和數碼網絡，以及甚高頻通訊系統，使空管單位與航機在雷達覆蓋範圍以外保持通訊及作出監察。這系統在質素及覆蓋範圍上比現有的傳統地面儀器更為優勝。因應有關器材的最新發展和在測試時所得經驗，這系統正在作出改善，使本處能掌握更多在運用這新技術方面的知識，彼能為本處計劃裝置的最終系統作好準備。

from the sea onto a ship and a long range exercise with the search of a simulated target in the ocean by four fixed wing aircraft and two ships. Participants from both local and overseas organisations included the Hong Kong Police Force, Fire Services Department, Government Flying Service, Civil Aid Services, Marine Department, Information Services Department and Airport Authority, together with the Hong Kong Garrison, United States Air Force, Navy and Coast Guard. Observers from the search and rescue organisations of the Mainland, Thailand, Brunei, Singapore and Macau also took part in the exercise. The exercise provided a useful forum for search and rescue personnel to share experience and exchange technique and expertise.

VI. Automatic Dependent Surveillance (ADS) Trial

Evaluation on the satellite-based Automatic Dependent Surveillance System (ADS) continued. The ADS system will enable ATC to communicate with aircraft outside radar coverage and keep them under surveillance by making use of a digital datalink through satellite and Very High Frequency communication networks. It will offer a performance in terms of quality and coverage far superior to that of a conventional ground-based system. The ADS evaluation systems are being upgraded in light of recent equipment development and the experience gained during evaluation, which enable us to finalise the technical specifications for an ultimate operational system.