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民航處前助理處長
Former Assistant Director-General of Civil Aviation

在民航處的四十年

40 Years in the Civil Aviation Department

啟德的歲月

加入部門成為見習航空交通管制主任後，我完成了嚴格而密集的空管訓練課程，並於 1979 年取得雷達管制員資格。在最初的前線工作日子裡，空管只有一次監察雷達。管制員需要憑記憶將雷達屏幕上的每個飛機目標，與其身份資料逐一對應。

啟德是一個位於市中心的單跑道機場。空管必須確保跑道容量得到有效運用。塔台與進場管制之間必須緊密協調到港航班的降落間距，以安排離港航班在之間起飛，因為管制員知道跑道運作中任何中斷都可能導致嚴重的交通延誤。

The Old Days in Kai Tak

After joining the department as a Student Air Traffic Control Officer, I went through the demanding and intensive ATC training programme and became qualified as a Radar Controller in 1979. In my early days on the frontline, only primary surveillance radars were available for ATC. Controllers were required to correlate each aircraft target on the radar scope mentally with its identity.

Kai Tak was a single runway airport in the middle of the city. ATC must ensure that the runway capacity was effectively utilised. Landing intervals must be well coordinated between Tower and Approach Control to accommodate intervening departures, knowing that any interruption on runway operation might cause serious traffic delay.

過渡至香港國際機場

無論每位啟德員工多麼努力，單跑道運作的限制，直至 1990 年代初政府宣布在赤鱘角興建替代機場後才得以改變。然而，空管很快面臨一場可預見的危機：新機場需要雙跑道全天候運作，估計所需人手是當時啟德編制的兩倍以上。培訓一名管制員需要 6 至 7 年時間，鑑於培訓容量有限，根本不可能在新機場目標啟用日前，配備足夠人手。因此，部門啟動了海外招聘計劃。雖然這解決了初期的人力問題，但在隨後幾年，空管管理層要管理一支由不同文化、培訓背景和經驗的管制員組成的大型混合團隊，無疑是一項艱鉅的挑戰。

監管經驗

在 2005 年至 2010 年間，我先後被調派主管機場安全標準部和飛行標準及適航部，兩者均是負責監管香港航空業界的分部。這兩次調職讓我拓寬對部門其他職能的知識和經驗。

啟德機場當時由民航處營運，而部門同時亦負責監管其運作是否符合相關法例及國際標準。這種雙重身份難免會給人一種中立性不足的印象。隨著香港機場管理局的成立以營運香港國際機場，民航處作為監管者的角色能更明確界定。

展望將來，我相信民航處同事將不斷探索，日新又新，維持部門的監管專業水平。

Transition to the HKIA

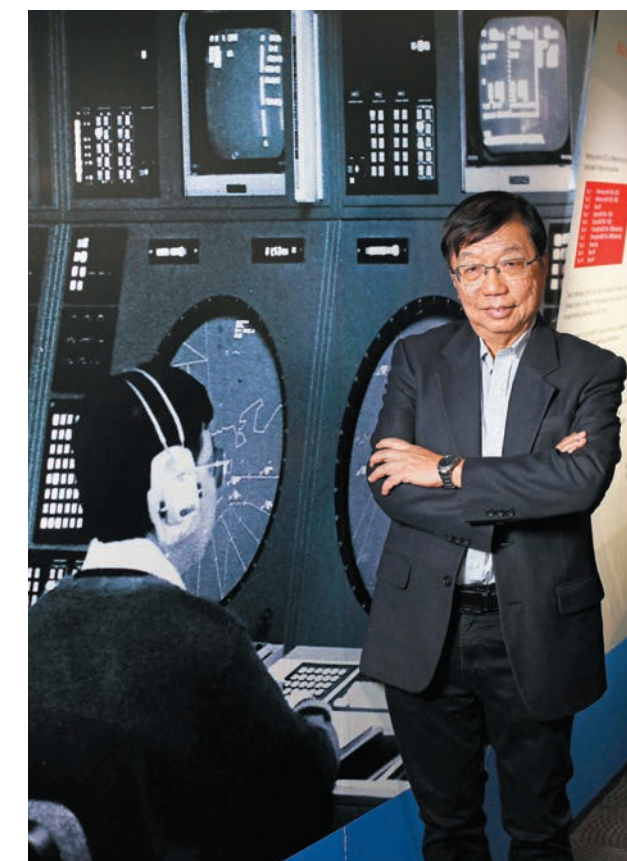
Despite the hard work of every Kai Tak staff, the limitation under single runway operations could not be changed till the early 1990s when the Government announced the construction of a replacement airport at Chek Lap Kok. However, ATC soon faced a foreseeable crisis: operating dual runways round the clock at the new airport was estimated to require more than double the manpower at Kai Tak. Given the time required to train a controller of 6 to 7 years and limited training capacity, it was totally impossible to have enough staff before the target opening day of the new airport. Overseas recruitment exercises were therefore initiated. While this resolved the initial manpower problem, managing a large mix of controllers with different cultures, training backgrounds and experience was indeed a great challenge to ATC management in the following years.

Regulatory Experience

Between 2005 and 2010, I headed the Airport Standards Division and the Flight Standards and Airworthiness Division, both responsible for overseeing and regulating the Hong Kong aviation industry. These postings broadened my knowledge and experience in other functions of the Department.

Kai Tak Airport was operated by the CAD, which was also responsible for overseeing the compliance of its own operations with legislation and international standards. This dual role might inevitably create a perception of inadequate impartiality. With the establishment of AAHK operating HKIA, the CAD's role as a regulator became more clearly defined.

Looking ahead, I trust that CAD colleagues will continue to explore and learn to maintain the Department's regulatory expertise.





郭募勤 Captain Roger Carmichael

民航處前航空營運督察
Former Flight Operations Inspector

翱翔天際：一位機師對香港 民航發展的回顧

Navigating the Skies: A Pilot's Reflection on the Development of Civil Aviation in Hong Kong

作為一名終身航空愛好者和資深機師，我親眼見證了香港民航的非凡演變——從只有一條跑道的飛行場，發展至今日的國際航空樞紐。

我的飛行旅程始於一個草地飛行場，當時我駕駛一架尾輪單引擎的「花栗鼠」(Chipmunk) 小型飛機。隨著歲月推進，我展開了商業飛行員的職業生涯，駕駛過各種型號的飛機——從勞斯萊斯Avon Sabre噴射戰鬥機，到波音707、波音747、波音777-200與-300ER，以及空中巴士A300貨機。我也很榮幸獲頒英國飛行員與領航員協會的「資深飛行員證書」(Master Air Pilot Certificate)，此殊榮全球至今僅有1 350人獲授。

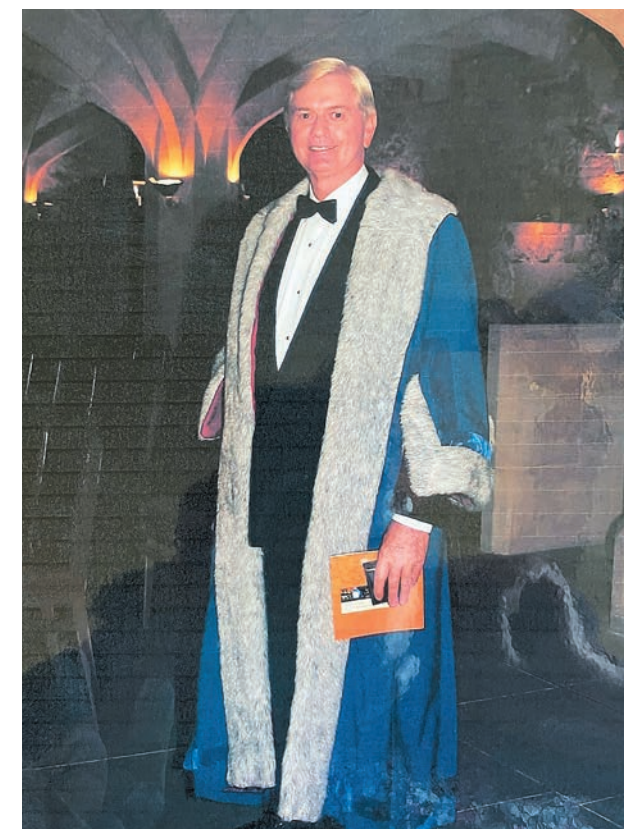
As a lifelong aviation enthusiast and seasoned pilot, I have witnessed the remarkable evolution of civil aviation in Hong Kong, from a single runway airfield to now an international aviation hub.

My journey began at a grass airfield, where I flew a small tail-wheeled single-engined Chipmunk. I continued through a career as a commercial pilot flying various aircraft types—from Rolls Royce Avon Sabre jet fighters to Boeing 707, Boeing 747s, Boeing 777-200 and -300ER, and Airbus A300 freighter. I was also honoured to be awarded the Master Air Pilot Certificate, one of only 1 350, issued by the British Guild of Air Pilots and Navigators.

在我的飛行生涯中，香港一直是最喜歡的目的地。熟悉我飛行經歷和知道我熱愛香港的朋友，常常問及我因降落難度極高而聞名的啟德機場的回憶。由於降落難度極高，當年只有機長才可在啟德機場進行降落。在13跑道降落，我需要駕駛飛機以450英尺高度飛至「格仔山」，並手動完成47度的急轉彎，對準跑道降落。毫無疑問，在啟德降落是我一生中經歷過最刺激的降落之一。

在離開航空公司後，我移居香港，並加入民航處擔任航空營運督察約10年。這份工作加深了我對香港航空業及其背後專業人員的敬佩。這支高質素的航空營運督察團隊，會定期檢查航空公司外站的各項設施、飛行模擬器、考官資格、機師的飛行時限、航線飛行等多方面，確保行業維持高標準。民航處亦積極推動創新文化，對新構想常抱持主動和開放的態度。這種開明的精神促成了多項進展，例如落實有關型別等級訓練機構(TRTO)批准以及延程飛行(ETOPS)批准的規例。

我很高興曾是民航處的一員，也欣慰看到香港民航業的光明前景。



Hong Kong had always been my favourite place to fly into during my career as a pilot. People who know me, aware of my flying history and love for Hong Kong, often ask about my memories of the well-known difficult landing at Runway 13 of Kai Tak Airport. Back then, only Captains were allowed to land at Kai Tak Airport due to its immense difficulty. To land at Runway 13, I had to take the aircraft through to the "Checkerboard Hill" at 450 feet and make a manual 47-degree sharp turn to aim and land the aircraft on the Runway. These, without any doubt, were my most exciting landings ever, at Kai Tak.

After retiring from airline flying, I moved to Hong Kong and joined the CAD as a Flight Operations Inspector, a position I held for about 10 years. This role deepened my appreciation for Hong Kong's aviation sector and the dedicated professionals behind it. The team of highly qualified Flight Operations Inspectors conduct regular inspections of various facilities provided at airlines' overseas stations, flight simulators, their examiners of airmen, flight time limitations, flight en route, and many more. The regulatory efforts ensure the high standards of the industry. The Department also fosters a culture of innovation, often taking a proactive stance toward new ideas. This open-mindedness has facilitated various advancements, such as the implementation of regulations relating to Type Rating Training Organisation (TRTO) approval, and Extended Range Twin Operations (ETOPS) approval.

I am glad to have been part of the Department and am pleased to see the promising future of the civil aviation industry in Hong Kong.

吳邦謀 Ir James Ng

航空歷史研究者與作家
Aviation History Researcher and Author

航跡中的飛躍：從啟德到赤鱗角 見證香港機場發展的時代意義

Leap in the Flight Path: from Kai Tak to Chek Lap Kok
Witnessing the Historical Significance
of Hong Kong's Airport Development

文中末段一張攝於1968年的照片，不僅記錄了民航處自1946年成立以來的歷程，更映照出香港機場如何從僅有一條跑道的啟德，蛻變為今日三跑道並行、連繫全球的國際航空樞紐。

啟德年代，機場嵌於鬧市之中，空間有限卻肩負着急速增長的航空需求。傳奇的13跑道進場程序——飛行員看見「格仔山」地標後，須手動轉40多度，在密集樓宇上空轉向對準跑道，被視為全球最具挑戰性的降落之一。這背後，是民航處嚴密的調度與管控，在極其複雜的環境中保障安全與效率，讓啟德成為國際航空傳奇。1960年代新客運大樓啟用，每小時可處理逾550名旅客，正是回應了香港經濟起飛對航空運輸的迫切需求。

The old photo taken in 1968, appended at the end of the article, not only records the journey of the CAD since its establishment in 1946, but also reflects how Hong Kong's airport transformed from Kai Tak with a single runway into today's three-runway international aviation hub connecting the world.

During the Kai Tak era, the airport was embedded within the bustling city, limited in space yet burdened with rapidly growing aviation demand. Regarded as one of the most challenging landings in the world, the legendary Runway 13 approach required pilots to manually bank sharply over 40 degrees upon sighting the "Checkerboard Hill" landmark, aligning with the runway while threading

然而，真正的飛躍發生在1998年。從啟德一夜搬遷至香港國際機場，不只是地點的遷移，更是航空管理技術的世紀跨越。香港國際機場全面採用先進雷達和儀表著陸系統，告別目視降落為主的的日子，進入科技導航的新紀元。三條跑道、全天候運作的能力，使香港國際機場得以承載更龐大的客貨流量，鞏固香港作為國際和區域航空中心的地位。

從啟德到赤鱗角，機場的發展始終與香港的命運緊密相連。它不僅是城市的門戶，更是經濟的引擎、連通世界的橋樑。每一次跑道的延伸、每一項航空科技的引進，都推動着物流、旅遊、貿易乃至整個社會的進步。

80年間，民航處的角色從基本運作，逐步拓展至規劃發展、科技創新與國際協作，但核心始終在於保障安全、提升效率、驅動發展。香港國際機場的壯闊航跡，既是航空史上的大篇章，亦是這座城市面向世界、不斷超越自我的明證。未來，隨着三跑道系統全面運作及航空業持續革新，香港的天際線，將繼續引領這座城市飛向更廣闊的未來。

◆1962年11月2日，樓高七層的啟德機場新客運大樓正式開幕，控制塔建於客運大樓的頂層。圖為民航處及機場員工在啟德客運大樓前拍攝團體照，約攝於1968年。

The new seven-storey passenger terminal building of Kai Tak Airport, with the air traffic control tower built on the top floor, was commissioned on 2 November 1962. The photo, taken around 1968, shows staff from the CAD and Kai Tak Airport taking a group picture in front of the passenger terminal building.



over dense urban buildings. Behind the scenes, the CAD orchestrated every moment with meticulous scheduling and control, maintaining safety and efficiency in an extremely complex environment, making Kai Tak an international aviation legend. By the 1960s, the new passenger terminal could handle over 550 passengers per hour, a vital response to the urgent demand for air transport driven by Hong Kong's economic take-off.

The true leap forward came in 1998. The one-night changeover from Kai Tak to HKIA was not merely a change of location, but a century-scale advancement in aviation management technology. HKIA fully adopted advanced radar and instrument landing systems, bidding farewell to the era of primarily visual landings and ushering in a new age of technological navigation. With three runways and all-weather operational capacity, HKIA has been able to accommodate far greater passenger and cargo flows, consolidating Hong Kong's position as a centre of international and regional aviation.

From Kai Tak to Chek Lap Kok, the airport development has always been closely tied to Hong Kong's destiny. It is not only the city's gateway, but also its economic engine and a bridge to the world. Each runway extension and every introduction of aviation technology has propelled progress in logistics, tourism, trade and society at large.

Over the 80 years, the CAD's role has expanded from basic operations to planning, development, technological innovation, and international collaboration, while its core mission has remained safeguarding safety, enhancing efficiency and driving growth. The story of HKIA is both a major chapter in aviation history and a clear testament to the city's determination to face the world and strive to excel. Looking ahead, with the full operation of the 3RS and ongoing innovation in the aviation industry, Hong Kong's skyline will continue to carry the city toward a boundless future.