

# 飛安查核工作排程與人員指派之研究

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## 摘 要

民國八十六年，我國民航局參照美國聯邦航空總署實施飛安監理檢查制度；藉由航務及適航兩大類檢查確保航空業者符合運作之標準及航空器之適航，以有效減少潛在飛安事件之發生。其中，「查核工作任務安排」與「檢查員指派」可謂是落實此制度的重要關鍵，因此，本研究系統性的分析探討查核工作安排與檢查員指派之問題特性，將查核工作安排之執行效率與合理性，檢查員指派之技能差異、彈性、公平性與查核作業品質一一納入考量，建構出一個可合理有效安排查核工作並公平且彈性運用查核人力的數學模式，經限制規劃法求解，最終可計算出一個對整體系統而言最佳化的結果。

本研究之飛安查核工作排程與人員指派模式較現行飛安查核工作排程與人員指派方式更具系統性；利用電腦的運算亦可減少檢查員以人力執行工作排程與人員指派的負擔。模式經驗證具可行性，應能作為未來民航局發展飛安查核工作排程與人員指派系統之基礎。

關鍵字：飛安查核、工作排程、檢查員指派

# **Scheduling Airlines Safety Auditing and Inspector Assignment**

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## **ABSTRACT**

In 1997, the Civil Aeronautics Administration (CAA) in Taiwan took the measure of Aviation Safety Surveillance Program which is based on the similar program of Federal Aviation Administration in U.S.A. to ensure airlines comply with the operation standards and airworthiness and thus, reduce the risk of potential hazards. *Inspection Job Scheduling* and *Inspector Assignment* are two critical tasks in this program. In order to optimize these two tasks, their characteristics including the efficiency and reasonableness of *Inspection Job Scheduling* as well as the inspectors' varied ability, and feasibility, fairness and quality of inspection associated with the *Inspector Assignment* are systematically analyzed.

In this study, a model with above characteristics is developed and solved by constraint programming. An optimal solution for the whole system derived from the model is more organized and efficient than the current one. Moreover, the workload of manual scheduling auditing and inspector assignment can be effectively reduced with computer processing. Besides, the illustrated example suggests the model has the potential for further development and can be a useful tool for airlines safety auditing and inspector assignment for CAA in the future.

Key words : Airlines safety, Job scheduling, Inspector assignment