



International Civil Aviation Organization

**SPECIAL IMPLEMENTATION PROJECT (SIP) ON ATS
INTER-FACILITY DATA COMMUNICATION
IMPLEMENTATION SEMINAR**

Bangkok, Thailand, 12-13 October 2010

Agenda Item 2: Review requirements of implementation of AIDC in the APAC region

BENEFITS OF AIDC IMPLEMENTATION

(Prepared by the New Zealand)

SUMMARY

This paper reviews the benefits of AIDC in terms of the Global Plan initiatives from a New Zealand perspective. This paper refers to Global Plan Initiatives.

GPI-7 Dynamic and flexible ATS route management
GPI-16 Decision support and alerting systems

1. INTRODUCTION

1.1 This paper illustrates some of the benefits that have accrued to Airways New Zealand and our customers by implementing AIDC.

2. DISCUSSION

2.1 The Global Plan notes that AIDC brings significant advantages over voice communication in terms of both workload and safety. In particular, AIDC provides efficient linkages between ground systems, improved handling and transfer of data, reduced communication errors, and reduced workload. The automation of coordination tasks between adjacent sectors improves the quality of information on traffic transiting between sectors and makes it more predictable, thereby allowing reduced separation minima, decreased workload, increased capacity, more efficient flight operations, and enhanced safety.

2.2 In NZSO AIDC was implemented with the OCS ATM system in 2000. At that time we were struggling to maintain a procedural strip based system and a single sector operation with an average of around 130 flights per day. With OCS we are now handling an average of 195 flights per day and still maintaining a single sector operation except on weekends. We have seen a reduction in controller loop errors and a significant reduction in controller workload by automating the coordination tasks using AIDC. A typical AIDC CDN sequence to modify previously coordinated information is usually completed within 30 seconds and during this time it is possible for the initiating controller to continue with other work while waiting for the receiving unit's response. Contrast this with voice coordination via telephone where the initiating controller has to wait for the receiving controller to answer then process the request. Processing intervals measured in minutes were quite common.

2.3 User-preferred routes make use of the capability of aircraft operators to determine optimum tracks, based on a range of flight parameters. DARP (Dynamic Airborne Reroute Procedure) has the aircraft making reroute requests directly to the ATC unit in control who then process and modify the request if necessary and forward the approved route to aircraft and the next downstream ATC unit. AIDC is a pre-requisite before implementing the DARP procedure. We have implemented DARP for aircraft in transit between Auckland and Oakland FIR. With the new ATM systems now installed in Tahiti and Nadi ISPACG has plans to extend the availability of the DARP procedure in the SOPAC.

2.4 AIDC has provided Airways New Zealand and our customers the benefits envisaged in the Global Plan.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the above information.
