



International Civil Aviation Organization

**Seventh Meeting of CNS/MET Sub-Group of APANPIRG and
Tenth Meeting of CNS/ATM IC Sub-Group of APANPIRG**

Bangkok, Thailand, 15 – 21 July 2003

Agenda Item 18: Consider CNS/ATM Training needs

**IMPORTANCE OF STANDARD KNOWLEDGE AND PROCEDURES WHEN
CONDUCTING ATC DATA LINK OPERATIONS**

(Presented by Australia)

SUMMARY

This paper highlights the necessity for the use of standard operating practices and procedures by both aircraft operators and air traffic services providers when conducting ATC data link operations. It also describes the ATC data link operations training courses provided by Airservices Australia. These courses have been specifically designed for aircraft operators, air traffic service providers and safety regulators.

1. BACKGROUND

1.1 Airservices Australia, along with several other South Pacific air traffic service providers, has been using Controller Pilot Data Link Communications (CPDLC) as the primary medium for communications in oceanic airspace since 1995. In 1999, Australia introduced Automatic Dependent Surveillance (ADS) services in the South Pacific, and by early 2000, ADS and CPDLC services were being provided to more than a dozen aircraft operators in all Australian non-radar airspace.

1.2 Data link capability continues to expand in the region with most major Asia/Pacific oceanic FIRs providing at least CPDLC services. Australia and Europe are now using data link in domestic airspace and the number of aircraft operators using data link is also growing.

1.3 The implementation of data link has brought about significant changes in pilot/controller communications practices, operating procedures and surveillance techniques. Aircraft operators, air traffic service providers and other industry groups have worked together to ensure the data link practices and procedures used from region to region are as standard as possible.

1.4 Investigation of problem reports and incidents during more than 7 years of data link operations has highlighted the absolute necessity for pilots and controllers to use standard procedures and practices and to have understanding of the capabilities and limitations of data link systems. Most incidents involving missed communications, misunderstandings and failures to comply with ATC clearances could have been avoided if standard operating procedures and practices had been followed completely.

1.5 Comprehensive controller and pilot training programs are essential for building the appropriate knowledge.

2. TRAINING REQUIREMENTS

2.1 ICAO Annex 6 (Operation of Aircraft) describes the general training guidelines for pilots, dispatchers and maintenance staff. Aircraft operators using ATC data link must develop and/or modify existing training programs to include the standards, operating procedures and practices for CPDLC and ADS operations.

2.2 Once training programs for CPDLC and ADS are in place, aircraft operators must obtain operational approval from the relevant authorities in the State of registry prior to the operational use of ATC data link. Other state authorities may also have operational approval requirements. Operators should obtain the relevant requirements and guidance directly from States in which data link operations are expected.

3. AVAILABLE TRAINING PROGRAMS

3.1 A number of airlines currently conducting data link operations have made their training programs available to other operators on a commercial basis. A list of operators offering programs can be obtained from IATA.

3.2 Airservices Australia provides structured, one and two-day training courses covering all operational aspects of ATC data link. These courses have been specifically designed for aircraft operators, air traffic service providers and safety regulators.

3.3 Instructors with extensive experience in providing data link services use operational terminology to explain how ATC data link can safely and efficiently be used in an automated ATC environment. Aircraft operator courses include:

- Overview of ATC data link applications and concepts
- Connection management
- Standard Operating Procedures (including pre-flight)
- Automatic Dependent Surveillance operations
- Data link safety features
- Emergency and abnormal operating procedures
- How ATC processes and uses data link information
- Lessons learned
- Flight scenario workshops where participants walk through typical data link flights.

3.4 ATC courses use a similar curriculum but concentrate on the ATC perspective.

3. RECOMMENDATION

3.1 The meeting is invited to note the information in this paper.

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