International Civil Aviation Organization

WORKING PAPER

ASSEMBLY — 38TH SESSION

TECHNICAL COMMISSION

Agenda Item 38: Other issues to be considered by the Technical Commission

IMPROVEMENT OF FLIGHT DATA MONITORING SYSTEMS IN TURKEY

(Presented by Turkey)

EXECUTIVE SUMMARY
The collection, analysis and monitoring of flight data are amongst the most important activities in an airline in order to improve safety. This working paper summarizes the work in progress to enhance flight data monitoring (FDM) systems in Turkey.   **Action:** The Assembly is invited to: a) review the information presented in this paper;   b) encourage Member States to promote use of FDMs as a key tool for airlines in maintaining and enhancing their safety performance; and   c) consider Member States to strengthen FDM's current state by licensing and keeping the human resource quality level at the highest degree

Strategic Objectives:	This working paper relates to the Safety Strategic Objective.
Financial implications:	No additional resources required.
References:	Doc 9859, *Safety Management Manual (SMM), Second Edition — 2009* Skybrary, http://www.skybrary.aero/index.php/Flight_Data_Monitoring Teledyne Controls, *Wireless Groundlink Brochure*

1.   **INTRODUCTION**

1.1   Flight data monitoring (FDM) comprises a number of activities designed to collect and routinely analyze recorded flight data in order to improve the safety of flight operations. It is the most effective tool used for identifying risk precursors and taking the appropriate remedial action.

1.2   The ICAO Annex 6 ― *Operation of Aircraft*, Part I — *International Commercial Air Transport — Aeroplanes*, paragraphs 3.3.5 and 3.3.6 relate to the implementation of flight data analysis.

1.3   This paper summarizes improvements made to FDM systems in Turkey.

2.   **IMPROVEMENTS IN TURKEY**

2.1   In the area of Flight Data Monitoring, Turkish Civil Aviation has developed both technologically and conceptually.

2.2   Turkey's two biggest operators, Turkish Airlines and Pegasus Airlines, have been collecting flight data using wireless methods. Figure 1 shows wireless data download and automatic analysis process. Wireless data collection has been very beneficial for the operators in terms of saving time and achieving a good data recovery rate. A Turkish private airline started using alert messages to perform required maintenance actions as soon as the event triggered in the system. For example, hard landings, flap speed exceedances, and EGT exceedances are reported by the system automatically just after landing.
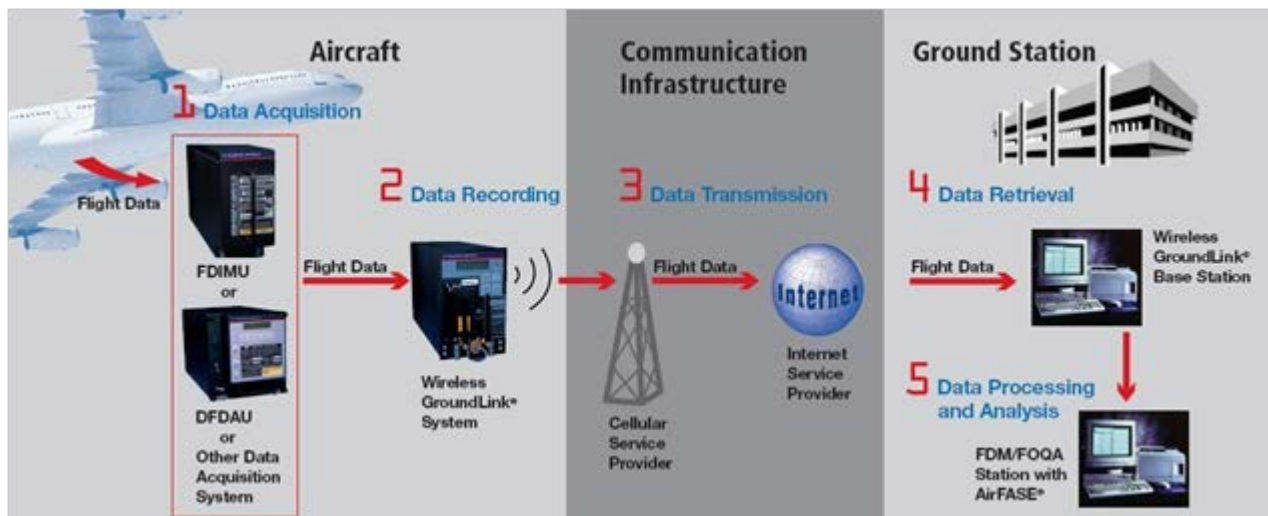

Figure 1. Wireless Data Download and Analysis Process

2.3   The Turkish Civil Aviation Authority has formed an FDM working group consisting of experts, in order to improve safety awareness through the FDM system and provide operators with support in drawing the maximum safety benefits from their FDM programme. This working group has identified four main areas as risk domains to be worked on. These are loss of control, runway excursions & incursions, controlled flight into terrain (CFIT) and air proximity.

2.4   Furthermore, Turkey has recently joined EASA EOFDM (European Operators FDM) working groups to share knowledge and gain a high level of safety performance.

3.   **CONCLUSIONS AND RECOMMENDATIONS**

3.1   Turkish civil aviation has become very active and innovative in its approach to safety in the last decade. In this respect, FDM systems strongly contribute to increased flight safety and operational efficiency. FDM systems can be used not only for observing the trends but also for measuring the performance of operations, within the safety management system.

3.2   Member States may consider strengthening FDM's current state by licensing and maintaining the human resource quality level at the highest degree. In order to achieve this, FDM experts should preferably be selected among highly qualified and skilled engineers. Additionally, licensing them may enhance their utilization of their authorization more effectively within the expected range.

3.3   Regulatory authorities' support is necessary for continuous improvement. Development of a positive safety culture can be achieved only with a significant effort by all parties.

— END —