

CNSATM-DPS: DATA PROCESSING SYSTEMS

OBJECTIVES.

This course provides a knowledge and understanding of the principles used in ATM data processing (flight data processing, surveillance data processing,...) and an overview of their use in ATM systems.

The data processing domain addresses all systems which process flight data and environment data in support of integrated ATM operations. The domain is therefore one of the enablers for the achievement of integration and interoperability between systems, and contributes to the strategic objectives of uniformity and capacity.

WHO SHOULD ATTEND.

This course will be directed to:

- **Engineering, Technical and/or Maintenance** professionals of an Air Navigation Service provider (ANSP) that are involved in the design, installation and/or operation of FDP and SDP systems and their evolution.
- **CNS/ATM sector companies staff** requiring knowledge of FDP and SDP systems providing services in Air Navigation as well as their evolution defined in ICAO, Eurocontrol, EUROCAE, ETSI, EASA,... So, industry would be able to analyse the evolution of current A-SMGCS systems having a more global view in order to be able to generate better Offers bidding to Call For Tenders launched by ANSPs.

KEY BENEFITS OF ATTENDING.

You will:

- **Learn** current status of the art about FDP and SDP.
- **Understand** the principles managing the evolution of FDP and SDP systems.
- **Know** the technical and operational specifications of FDP and SDP systems.
- **Practise** the implementation of operational procedures based on FDP and SDP systems.

HIGHLIGHTS

Technical and operational course based on a wide experience deploying FDP and SDP systems and services in Air Navigation.

Practical explanations based on current operational implementations.

Practical exercises to settle down theoretical concepts.

Ideal course for students with little, middle or high background on FDP and SDP systems due to the customization performed by the Trainer.

Recommendable course for designers, implementers, developers and professionals within the aeronautical CNS/ATM sector.

- **Win** experience and know-how to generate better Offers to ANSPs CFTs.

COURSE PRE-REQUISITES.

Basic knowledge about CNS/ATM systems.

TABLE OF CONTENTS.

- 1) Introduction to Data Processing.
- 2) FDPS Core Functions.
 - Flight Data Input. Error Checking.
 - Flight Data Processing. Creation of SFPL. Route Expansion. Activation.
 - Flight Data Distribution. Coordination.
- 3) Mode S Data Processing in ARTAS.
- 4) Mono Radar tracking.
- 5) Multi Radar tracking.
- 6) Mode S operational aspects.
- 7) Correlation.
 - Purpose of Correlation
 - Conditions for Correlation
 - Triggers for Correlation
 - Correlation process
 - Manual Correlation
 - Effects of Correlation
 - Cancellation of Correlation
- 8) Flight Plan Update.
- 9) Vertical (mode-C) Tracking.
 - Introduction to vertical tracking
 - Explanation of the non – recursive method
 - Mode-C problems
- 10) STCA - Short Term Conflict Alert.
- 11) Medium Term Conflict Detection.
- 12) Introduction to the Interoperability Regulation.