

S-ADS: AUTOMATIC DEPENDENT SURVEILLANCE

OBJECTIVES.

This course provides an overview of ADS systems (Automatic Dependent Surveillance) contract mode (ADS-C) and broadcast mode (ADS-B out and ADS-B in).

ADS-C systems are used to send automatically requested information (aircraft position, identification,...) using datalink communications while ADS-B information (collected from the avionics) is transmitted to ground systems and other aircrafts using the 1090 MHz extended squitter.

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 ADS systems and their evolution.
- **CNS/ATM sector companies staff** requiring knowledge of ADS 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 ADS 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 ADS.
- **Understand** the principles managing the evolution of ADS systems.
- **Know** the technical and operational specifications of ADS systems.
- **Practise** the implementation of operational procedures based on ADS.
- **Win** experience and know-how to generate better Offers to ANSPs CFTs.

HIGHLIGHTS

Technical and operational course based on a wide experience deploying ADS 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 ADS systems due to the customization performed by the Trainer.

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

COURSE PRE-REQUISITES.

Basic knowledge about CNS/ATM systems.

TABLE OF CONTENTS.

- 1) Introduction to ADS-B and ADS-C.
- 2) Regulatory Framework.
- 3) ADS-B airlines implementation.
- 4) Avionics.
 - On board Surveillance Equipment
 - Different Messages and DF (Downlink Format) going out of the Aircraft
 - Airborne Monitoring
- 5) Overview of the Surveillance chain.
 - ASTERIX
 - RMCDE
 - SASS-C
 - ARTAS
- 6) Electronic Visibility via ADS-B.
- 7) Concepts and implementation of ADS-C.
- 8) ADS Deployment Plan.
- 9) Technical integration of ADS-B into Existing Surveillance environment.
- 10) Safety