C-DATA: GROUND DATA NETWORK IN ATC

OBJECTIVES.

This course provides a comprehensive overview of the data communication applications, technology and infrastructure used in ATM. The ATC IP Network Services are covered in detail, including Surveillance, OLDI/FMTP, Messaging, and others.

Related ICAO Global Air Navigation Plan issues are analysed, together with strategic developments.

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 ground data networks.
- **CNS/ATM sector companies staff** requiring knowledge of ground data network as a system facilitator for the current CNS/ATM applications as well as the future ones. Such knowledge allows generating complete offers bidding to the different Call For Tenders launched by the ANSPs to provide systems and/or technical services.

KEY BENEFITS OF ATTENDING.

You will:

- **Learn** data network technology for ATS implementation.
- **Understand** the principles for designing ground data networks in the ATC scenario and integrating ATC users into the network.
- **Know** the technical and operational specifications of a ground data network
- **Practise** the implementation specific solutions to interconnect CNS/ATM systems.

HIGHLIGHTS

Technical course based on a wide experience working on ground data communication networks in an ATC scenario.

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 aeronautical data communications networks 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 implementing ground data networks in the ATC scenario.

COURSE PRE-REQUISITES.

Basic knowledge about data communications networks.

TABLE OF CONTENTS.

1) Status of the art about data technology.
2) Types of aeronautical data formats (Flight plans, AIS, MET).
3) Underlying networks (IP).
4) Aeronautical Messaging Networks (AFTN/CIDIN/AMHS)
5) OLDI and FMTP.
6) Surveillance data communications.
7) Further ATM Data Communications:
    - Datalink systems (ACARS, ATN).
    - ATS Voice over IP (telephony and radio).
    - SWIM.