BLACKBIRD FOR TRAINING

Fundamentals of VSAT Systems & Protocols

Paris (France)

24 March - 4 April 2025

Fundamentals of VSAT Systems & Protocols

Code: GC28 From: 24 March - 4 April 2025 City: Paris (France) Fees: 8800 Pound

Introduction

This course covers Very Small Aperture Terminal VSAT systems. VSAT is growing throughout the world as a way of establishing private satellite communications networks for large organizations that have several widely dispersed locations or providing higher bandwidth for the individual. This course provides the attendees with an in-depth background of VSAT techniques as well as a state-of-the-art update on key emerging technologies and future systems.

Course Objectives of VSAT Systems

- Defining Very Small Aperture Terminals VSAT
- Understanding VSAT services and features
- Understanding VSAT architecture, system design, and coding schemes
- Stepping through VSAT propagation aspects and antennas
- Understanding the VSAT subsystem & Launching
- Understanding VSAT link design and analysis
- Explaining TCP/IP, VoIP, and Video applied to VSAT
- Understanding VSAT-base IP communications technologies

Course Details/Schedule of VSAT Systems

Day 1

Introduction to VSAT systems and their types

- Satellite Communications Overview
- Common Types of Satellites
- What is a VSAT System?
- How does a VSAT Work?

Day 2

VSAT services and features

- VSAT Networks
- VSAT Equipment
- VSAT Access Methods
- VSAT Modulation

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Day 3

VSAT propagation aspects

- RF and Microwave applied to VSAT
- Propagation Effects
- Earth Stations
- VSAT Terminals

Day 4

VSAT Antennas & Polarization

- VSAT Antennas
- VSAT Dish Pointing Concepts
- VSAT Footprints
- Polarization

Day 5

VSAT Subsystem & Launching

- Fundamentals of VSAT Installation and operation
- The key installation steps
- Troubleshooting and maintenance
- Preventive Maintenance

Day 6

The VSAT Market

- VSAT Systems
- Underlying objectives
- Benefits & applications of VSATs

Day 7

VSAT Earth Station Engineering

- Schematic and functionality of remote VSAT and Hub Master Control Station components
- Signal flow - outbound and inbound directions
- Configuration of Front-end and offset-fed antennas-polarization

Day 8

VSAT Network Implementation

- One-way, two way
- Star and mesh topologies
- Hub Implementations

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- Classes of Mesh Connectivity: CBR and VBR applications

Day 9

VSAT System Description

- Network Control Centre: NCT and NMS
- Gateway systems
- Remote Terminal Units: RTU-V, RTU-O, RTU-C

Day 10

VSAT Installation and Commissioning

- Pre-installation site survey
- Installation
- Antenna alignment and commissioning procedures

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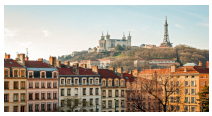
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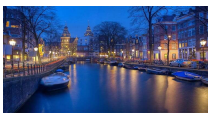
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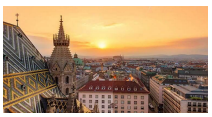
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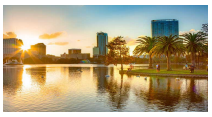
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