



communications

Satellite Networks

PROGRAM DESCRIPTION

Course:	Fundamentals of PSK Modems
Delivery Method:	Instructor-Led
Target Audience:	Engineers, Technicians, Project/Program managers, and Product Managers working in the satellite communications industry seeking to expand their technical knowledge of or to include PSK modems.
Course Length:	1 Day
Class Size:	up to 15
Description:	This course is designed to provide a thorough understanding of the technical characteristics and operation of PSK modems. Topics include, but are not limited to: ❖ How data is modulated onto a carrier ➤ BPSK, QPSK, OQPSK, 8PSK ❖ How the PSK signal is demodulated ➤ Eb/No defined ❖ Defining the purpose of encoding ➤ Viterbi ➤ Reed Solomon ➤ Turbo Code ➤ V.35 ➤ Differential ➤ Spread Spectrum ❖ IDR / IBS Service Standards ❖ DVB Standards ❖ Understanding the bandwidth relationship of the following:

- Data Rate
- Occupied Bandwidth
- Modulation Technique
- Coding
- Link Budget
- Satellite Bandwidth / Power Balance

Course Objectives: This course is designed to enable the participants upon completion to:

1. Visualize how data is transformed to the satellite signal
2. Understand the encoding and modulation options for PSK
3. Understand the relationship between modulation options and satellite bandwidth costs
4. Visualize the demodulation of signal + noise and understand how noise results in bit errors
5. Understand the differences between IDR/IBS and DVB
6. Empower the student to choose a modem with confidence