

PROGRAM DESCRIPTION

Course:	Fundamentals of Digital Television
Delivery Method:	Instructor-Led
Target Audience:	Engineers, Technicians, Operators, Program/Project Managers, Sales Engineers, Systems Engineers and Product Managers seeking to understand the basic concepts in the digitization of video signals.
Course Length:	1 Day
Class Size:	up to 15
Description:	The course provides a fundamental, technical overview of the technology, technical standards and the transport issues associated with the digitization and transmission of video signals via satellite. Real-world case studies are used. Topics include, but are not limited to: ❖ Overview of the Evolution of Video Transmissions ❖ Differences between Analog Video Standards such as NTSC, Secam, and PAL ❖ Digitization Formats such as 4:2:2, 4:2:0, SIF, CIF, D1, and D2 ❖ Transport Problems associated with various Digitization Formats ❖ Source Coding and the Compression of Video and Audio Signals ❖ Fundamentals of the MPEG-1 and MPEG-2 Moving Picture Compression Standards ❖ Conditional Access Systems ❖ Forward Error Correction Principles

- ❖ The DVB and MPEG-4 Standards
- ❖ Case Studies of Digital Television Applications

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

1. Understand the reason for relationships between the NTSC and PAL video standards
2. Understand the digitization process of analog video and audio signals
3. Understand MPEG-2 and other compression standards
4. Understand DVB and other transport considerations
5. Understand how digital television networks are being implemented today