

TECHNICAL TRAINING

PathLoss 5.0

PathLoss 5.0 Training Course TR-PathLoss- 01

Course Specifics

Duration:	3 days
Class capacity:	10 students
Location(s) for open enrolment:	N/A
Materials provided:	Student Guide
Target Audience:	Microwave engineers and experienced microwave technicians who have knowledge in microwave propagation and path design



Prerequisite

Participants should have a working familiarity with point-to-point microwave radio networks, propagation, and a good understanding of telecommunications fundamentals. Each student must bring a Windows compatible laptop PC and have a licensed copy of Pathloss 5 installed.

Objective

- This 3-day course includes a review of the basic concept of microwave theory and the design of a small microwave network using PathLoss 5.0. By designing the network with the instructor, the students will learn how to use the different modules of PathLoss 5.0 in a logical order and should be able to use the software on their own at the end of the course.

Course Content

Microwave Theory	Software Overview
<ul style="list-style-type: none"> ▪ Definitions: L2 Radio Technology Terms ▪ Microwave Design Formulas: k Factor, Fresnel Zones, Path Clearance, Free Space Loss, Link Budget, Receiver Threshold, Fade Margin, Outage, Thermal, Noise, Availability and Reliability, Rain Attenuation, Multipath, Antenna Theory ▪ Propagation and Meteorology ▪ Diversity Schemes: Space, Frequency, Quad, Hybrid, Ring, and Improvement Factors ▪ Terrain Profile and Reflection ▪ Performance and availability objectives 	<ul style="list-style-type: none"> ▪ General Program Operation ▪ Summary Module ▪ Terrain data ▪ Microwave Worksheet ▪ Rain Attenuation ▪ Diffraction / Reflection Analysis ▪ Multipath ▪ Network Overview ▪ Interference Calculation ▪ Profile Analysis ▪ Propagation Models ▪ Adaptive Coding and Modulation Techniques ▪ Interpretation of the Error Performance Objective (EPO)