

Arrow Network Systems (www.arrownetworks.net)  
**Detailed Outline of WAN & WiFi Training Topics**

(\*Take Away Package now includes a WAN configured Tablet PC\*)

**THEORY AND PRACTICAL LESSONS OF ELECTRONIC DATA TRANSMISSION**

Twisted pair, coax, fiber  
satellite, microwave, voice cellular  
line-of-sight, non-line-of-sight data radio  
ISM Spread Spectrum  
Licensed Spectrum  
Fixed/mobile wireless  
Legacy Systems, Telephony  
Emerging Technologies  
Switched/Non-switched networks  
Packet switching  
Private/Public Networks, PSTN, PABX  
Digital Transmission - Signal Conversion, Pulse Code Modulation, Consternation, MiMo  
Codecs and Modems  
OSI Model on the WAN - ISO 7498  
WAN Technologies - Legacy and Emerging  
Integrated Networks - ISDN, xDSL, SONET/SDH, CATV, Frame Relay, ATM, TCP/IP, MPLS, GMPLS, VPLS, Cellular 3.x/4G/LTE  
Leased Line Dedicated Transmission  
Packet Transmission - X.25, SMDS, IP

Point-to-point, Point-to-Multipoint, WiFi, WIMAX technologies  
WiFi 802.11 a/b/g/n, link coverage and distance  
Line-of-sight, Non-line-of-sight transmission

Broadband, Narrowband Applications  
Copper, Wireless, VSAT, Cellular, Fiber, SDH/SONET Rates (OC-1...OC-192, STM-1...STM-64),  
ExtremeHighThroughputLowCostWirelessBroadband

Security & Maintenance  
Modems, VPN, MPLS, Tunneling, Authentication, Encryption/Decryption, Firewalling, Hardware-based, ping,  
throughput, ftp, traceroute

Network Survey & Design  
Installation conditions, application characteristics, bandwidth usage

Frequency Ranges  
MF, HF, VHF, UHF, SHF, EHF

POLICY: Telecom RFP (asking the right questions in your RFP to get the right solution from your contractors)  
Writing the telecom RFP to reduce network cost and maximize performance and reliability

**HANDS-ON PRACTICAL SESSIONS**

Equipment selection, Installing/Aligning antennae, Signal level/tuning, link configuration, routing,  
link commissioning. Actual hands-on link installation (Tablet PC shall be provided for each participant) [Back to top of page](#)

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Training Dates: August 24–28, 2015. Venue: Golden Tulip Hotel, Accra, Ghana (7am – 4pm each day).  
Registration Deadline: July 24, 2015

[Next Training Sessions are: November 16-20, 2015 January 18-22, 2016 April 18–22, 2016]

5-day Training Package Includes: Training Materials, WAN-configured Tablet PC, WiFi Device, Training Certificate, Lunches and Snacks