

Tutorial M14 Outline

- I. Introduction
 - a. Overview of I-WIRE infrastructure
 - b. Description of how I-WIRE has been applied
 - c. Vision of a future where optical networks are common
- II. Strategy
 - a. Transformation: Viewing network links as assets instead of liabilities
 - b. Fiber
 - i. Owning vs. Leasing the fiber plant
 - ii. Sources of Fiber
 - iii. Working with multiple fiber providers
 - c. Equipment
 - i. Lambdas are not free
 - ii. Capacity planning
 - iii. Redundancy/protection
 - d. Financials and Legal issues
 - i. You and your provider can survive bankruptcy
 - ii. Some terms to watch for in lease or IRU contracts
 - iii. Maintenance and operations considerations
 - iv. Governance and Business model issues
- III. Implementation
 - a. Fiber types and what they mean
 - i. Single mode (what is that?)
 - ii. Dispersion, why it's bad, and how fiber makers deal with it
 - b. Construction issues
 - i. Buried versus aerial
 - ii. What's a "lateral"?
 - iii. Trenching? Direct-bore?
 - c. Documentation
 - d. Fiber standards
 - i. Loss, dispersion, etc
 - ii. Test equipment and procedures
 - e. Equipment selection
 - i. LAN switches through Ultra-Long-Haul DWDM
 - ii. Capacity: lots of fiber versus expensive DWDM
 - f. Execution
 - i. Planning
 - ii. Fiber procurement and testing
 - iii. Equipment procurement and testing
 - iv. Network turn-up
 - g. Operation and Maintenance
 - i. Reliability and what it costs
 - ii. Staff requirements (numbers, skills, locations)
 - iii. What can and should be outsourced?