

FIBER OPTIC DIGITAL WIDEBAND COMMUNICATION SYSTEM



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ABSTRACT

Industrial Data Link Corporation is presently installing a 3 phase, 30 Km fiber optic voice/data communication system for the Yuma Proving Ground (YPG) in Arizona. This system will provide a backbone communication system for YPG to transmit digital telemetry data and voice circuits between 3 test centers and the Base Dial Central Office. The fiber optic cable is being installed in three different modes; underground (direct burial), duct and aerial.

Our proposed paper would cover the following areas:

- a.) System requirements
 - data channels (up to 56 Kb/s)
 - voice channels
 - future growth (video)
- b.) System design - component description
- c.) Installation
- d.) Test and initial system operation
- e.) Pictures (slides) and video coverage of system installation to augment the presentation
- f.) Cost and technical trade-off studies between fiber optic cable and microwave link as the communication medium
- g.) Cost analysis (ratios) for laying of fiber optic cable, dollars per meter for burial, duct and aerial
- h.) Summary of state-of-the-art of fiber optic component and predictions of future component/system capabilities for range telemetry applications.
- i.) The special characteristics of fiber optic cable links as applied to secure telemetry requirements on Government Test Ranges.