Abstracts

Demonstration of dispersion-tolerant 34 Mbit/s data transmission in electro-optically upconverted 28 GHz LMDS fiber-optic link

V. Polo, F. Ramos, J. Marti and J.M. Fuster. "Demonstration of dispersion-tolerant 34 Mbit/s data transmission in electro-optically upconverted 28 GHz LMDS fiber-optic link." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1205-1208 vol.3.

It is shown experimentally that the dispersion-induced power penalty may be sharply reduced in electro-optical upconverted millimeter-wave optical links by biasing the Mach-Zehnder electrooptical modulators at the minimum transmission point rather than at the quadrature point. A 34 Mbits/s NRZ signal impressed on a 1 GHz subcarrier was optically upconverted to 28 GHz and transmitted through 73 km of standard single-mode optical fiber with minor impact of fiber dispersion.

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