Abstracts

Digital and analog satellite/millimeter-wave transmission link

E. Suematsu, Y. Amano, A. Yamada, Yu Zhu, H. Sato, N. Hashizume, F. Kuroki and T. Yoneyama. "Digital and analog satellite/millimeter-wave transmission link." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1047-1050 vol.3.

The performance of a digital and analog satellite/millimeter-wave transmission link has been experimentally investigated in terms of the C/N ratio. This system, which wirelessly connected TV and its antenna using millimeter-wave signals, consists of a commercially available low noise converter with a parabola antenna and a millimeter-wave transmitter/receiver. The transmitter/receiver has built-in up/down-converters, which enables multi-channel TV signals with more than 100 channels to transmit and receive with air-interface bandwidth of about 1 GHz in the 60 GHz band. An output power of 1 dBm with a 20 dBi horn antenna in the transmitter and a noise figure of 11 dB with the same horn antenna in the receiver, make possible millimeter-wave multi-channel video transmission through the walls between two rooms in a Japanese house.

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