Abstracts

A photoconductive correlation receiver for time-hopped wireless spread-spectrum radio

E.E. Funk, S. Ramsey and C.H. Lee. "A photoconductive correlation receiver for time-hopped wireless spread-spectrum radio." 1998 Microwave and Guided Wave Letters 8.6 (Jun. 1998 [MGWL]): 229-231.

We present the first demonstration of a new receiver for digital time-hopped spread-spectrum wireless communications. The time-hopped system is based upon the transmission of short radio frequency (RF) pulses with bandwidths exceeding 200 MHz. The new receiver used photoconductive switching to perform front-end correlated reception. This type of receiver was designed to provide a large dynamic range in the presence of noise and interference. Results show a bit error rate of better than 10/sup -7/ at a 250-kB/s data rate.

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