

Meteor time transfer and meteor cryptography

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Abstract

We show that peculiar properties of meteor wave propagation allow construction of radio channel that may deliver transfer of data with theoretically perfect protection from eavesdropping. Method uses natural stochastic process that is generated only for two communicating participants so that it is not available for possible cryptanalysis. Possible eavesdropper can not reproduce measurements that have been performed by participants at their particular locations, due to mirror-like channel properties and random positions of each meteor trail. The suggested method of data protection can be used, for example, for theoretically absolutely secure way of key exchange. © 2007 IEEE.

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