Abstracts

Security system for optical communication signals with fiber Bragg gratings

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A security system for optical communication signals based on Bragg grating structures is presented in this paper. The technique can be implemented in different levels of sophistication with corresponding cost and technical difficulty. The technique is demonstrated in its simplest version with an array of two fiber Bragg gratings in each side of the optical link. The principle has been tested with a periodic pulse train of 1.4-GHz repetition rate. A simulation that allows the design of more sophisticated systems is also presented and show very good agreement with experimental results.

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