

Title (en)  
SECURED FIBER LINK SYSTEM

Title (de)  
GESICHERTES FASERVERBINDUNGSSYSTEM

Title (fr)  
SYSTÈME DE LIAISON PAR FIBRE SÉCURISÉ

Publication  
**EP 3881452 A4 20220824 (EN)**

Application  
**EP 19884210 A 20191108**

Priority  
• US 201816190801 A 20181114  
• US 2019060465 W 20191108

Abstract (en)  
[origin: WO2020102020A1] A system and method for securing communication over an optical fiber are disclosed. The system includes a transmit spatial multiplexer configured to couple optical signals into spatial paths of an optical fiber, a first of the plurality of optical signals is an optically modulated version of a desired sequence of information that is intended to be transferred over the optical fiber and it is coupled into a first of the spatial paths; a second one of the plurality of optical signals is an optical chaff signal and it is coupled into a second spatial path different from the first one, and a third optical signal is an optical signal for use by an optical time domain reflectometer (OTDR) that is coupled into one of the spatial paths of the optical fiber, whereby a tap along the fiber cannot determine the transmitted desired sequence of information.

IPC 8 full level  
**H04B 10/071** (2013.01); **H04B 10/25** (2013.01); **H04B 10/85** (2013.01)

CPC (source: EP)  
**H04B 10/071** (2013.01); **H04B 10/85** (2013.01)

Citation (search report)  
• [YA] US 2018159619 A1 20180607 - WEINER GARY M [US]  
• [YA] WO 2016145597 A1 20160922 - HUAWEI TECH CO LTD [CN]  
• [A] US 4217488 A 19800812 - HUBBARD WILLIAM M [US]  
• See also references of WO 2020102020A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2020102020 A1 20200522**; CN 113243089 A 20210810; CN 113243089 B 20240514; CN 118282492 A 20240702;  
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