

Title (en)

OPTICAL TRANSMISSION SYSTEM WITH COHERENT OPTICAL TIME DOMAIN REFLECTOMETRY

Title (de)

OPTISCHES ÜBERTRAGUNGSSYSTEM MIT KOHÄRENTER OPTISCHEN ZEITBEREICHREFLEKTOMETRIE

Title (fr)

SYSTEME DE TRANSMISSION OPTIQUE A REFLECTOMETRIE OPTIQUE TEMPORELLE COHERENTE

Publication

EP 0941587 A1 19990915 (FR)

Application

EP 98942801 A 19980831

Priority

- FR 9801869 W 19980831
- FR 9710841 A 19970901

Abstract (en)

[origin: FR2767995A1] The invention concerns a method for reducing interactions between the signal in the transmission direction (2) and the back scattered noise coming from the other transmission direction (1) in a link through non-bi-directional and amplified optical fibre, having an optical loop-back (18, 19, 21) of the amplifiers (13, 14; 15, 16) to enable COTDR (coherent optical time domain reflectometry). The method is characterised by a spectral broadening, for example by modulating the wavelength over at least one of the transmission directions. Said modulation is produced for example simply by modulating the injection current of a laser used as transmitter (3). A low frequency modulation - of the order of kHz - is suitable, thereby reducing interactions while enabling COTDR. The invention also concerns a link implementing the method.

IPC 1-7

H04B 10/08; **G01M 11/00**

IPC 8 full level

G01M 11/00 (2006.01); **H04B 10/071** (2013.01); **H04B 10/25** (2013.01); **H04J 14/00** (2006.01); **H04J 14/02** (2006.01)

CPC (source: EP)

G01M 11/3109 (2013.01); **H04B 10/071** (2013.01); **H04B 10/2589** (2020.05)

Citation (search report)

See references of WO 9912287A1

Designated contracting state (EPC)

DE GB IT

DOCDB simple family (publication)

FR 2767995 A1 19990305; **FR 2767995 B1 19991015**; EP 0941587 A1 19990915; JP 2001505312 A 20010417; WO 9912287 A1 19990311

DOCDB simple family (application)

FR 9710841 A 19970901; EP 98942801 A 19980831; FR 9801869 W 19980831; JP 51638199 A 19980831