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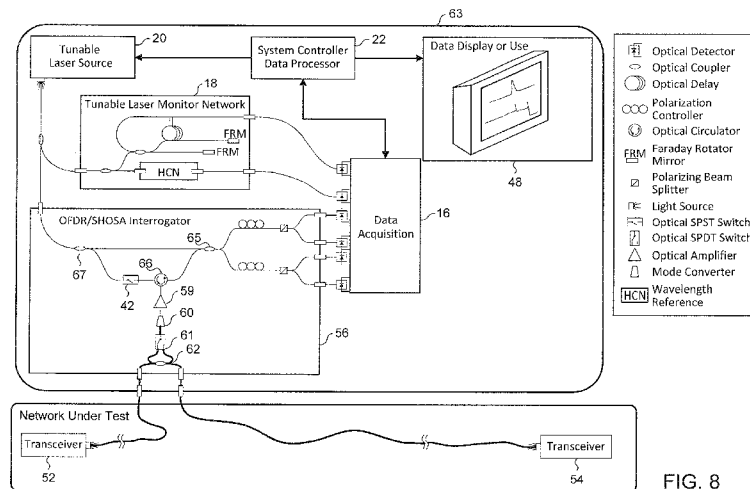


FIG. 8

(57) Abstract: A multi-function optical tool may be used for example for built-in fault detection and transceiver source characterization in local optical communication networks. A single device provides swept-heterodyne optical spectrum analysis (SHOSA) and optical frequency-domain reflectometry (OFDR) in an efficient, low-cost package by utilizing a common interrogation laser source, common optical components, and common, low-bandwidth acquisition hardware. The technology provides significant cost, space, and labor savings for network maintainers and technicians.

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A. CLASSIFICATION OF SUBJECT MATTER***H04B 10/08(2006.01)i, H04B 10/18(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H04B 10/08; H04L 27/22; G01N 21/55; G01N 21/17; G01B 9/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: optical, OFDR, heterodyne, spectrum

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002-0167670 A1 (DOUGLAS M. BANEY et al.) 14 November 2002 See abstract, Fig.5, paragraphs[0034]-[0044]	1-13
A	US 2006-0120483 A1 (WILLIAM MCALEXANDER et al.) 08 June 2006 See abstract, Fig.1, paragraphs[0022]-[0031]	1-13
A	US 2010-0097615 A1 (FAN XINYU et al.) 22 April 2010 See abstract, Fig.3, paragraphs[0089]-[0090]	1-13
A	US 2010-0014071 A1 (HARTOG ARTHUR H.) 21 January 2010 See abstract, Fig.1, paragraphs[0011]-[0027]	1-13

 Further documents are listed in the continuation of Box C. See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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