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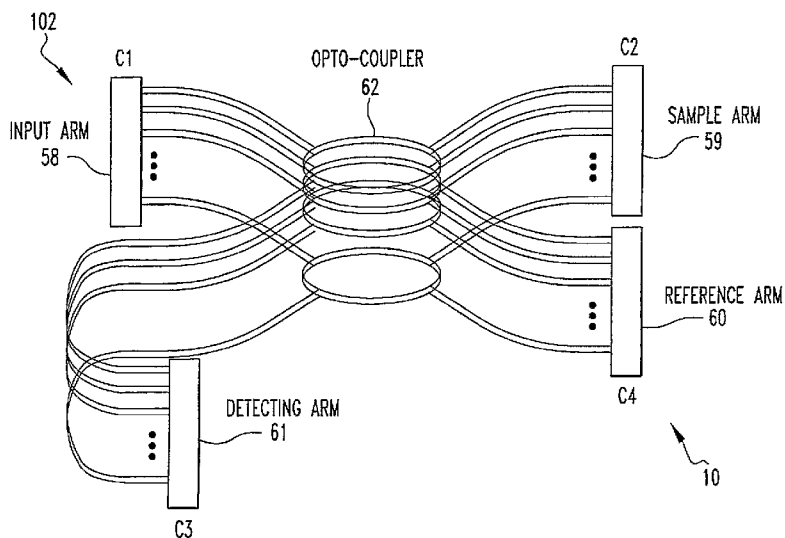
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[Continued on next page]

(54) Title: OCT USING SPECTRALLY RESOLVED BANDWIDTH

MULTI-PHASE ARRAY OCT SYSTEM



(57) Abstract: A system for optical coherence tomographic imaging of turbid materials utilizing multiple channels of information comprising spatial, angle, spectral and polarization domains. The multichannel optical coherence tomographic methods can be incorporated into an endoscopic probe for imaging a patient. The endoscope comprises an optical fiber array and can comprise a plurality of optical fibers adapted to be disposed in the patient. The optical fiber array transmits the light from the light source into the patient, and transmits the light reflected by the patient out of the patient. The plurality of optical fibers in the array are in optical communication with the light source. The multichannel optical coherence tomography system comprises a detector for receiving the light from the array and analyzing the light. The methods and apparatus may be applied for imaging a vessel, biliary, GU and/or GI tract of a patient.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC (8) - A61B 1/06 (2007.01)
 USPC - 600/160
 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)
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 USPC - 600/160

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 IPC(8) - A61B 1/06 (2007.01); USPC - 600/101, 600/160, 600/473, 600/476, 600/478, 600/114, 600/104, 604/22, 604/164.01, 604/164.02, 385/12; keywords: endoscope tomography channel groove surface optic

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 PUBWEST DB=PGPB,USPT,USOC,EPAB,JPAB; Search Terms:endoscope tomography channel groove surface optic
 Google: endoscope fiber groove; endoscope fiber longitudinal-groove; optical coherence tomography endoscope; fiber optic guide channel; fiber optic tip lens


C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,134,003 A (TEARNEY et al.) 17 Oct 2000 (17.10.2000), col 2, ln 60-62; col 4, ln 19-20; col 5, ln 31-63; col 5, ln 60-63; col 6, ln 9; col 8, ln 35-36; col 11, ln 1-24; col 11, ln 42-49; col 14, ln 25; col 14, ln 44-46; col 16, ln 46-55; col 18, ln 59-67; FIG. 2B	1-2, 21, 27-34 ----- 3-15, 20, 22-24
Y	US 5,367,591 A (SEIKE et al.) 22 Nov 1994 (22.11.1994), col 3, ln 17-20	3-15, 20, 22-24
A	US 6,485,413 B1 (BOPPART et al.) 26 November 2002 (26.11.2002), FIGS. 4a-5b	16-19, 25-26
A	US 2004/0097781 A1 (TOKUDA et al.) 20 May 2004 (20.05.2004), FIG. 9,	16-19, 25-26

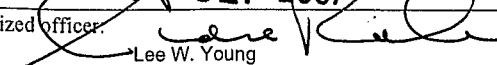
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 "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family

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