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(54) Title: OPTICAL RECEIVER CONFIGURABLE TO ACCOMMODATE A VARIETY OF MODULATION FORMATS

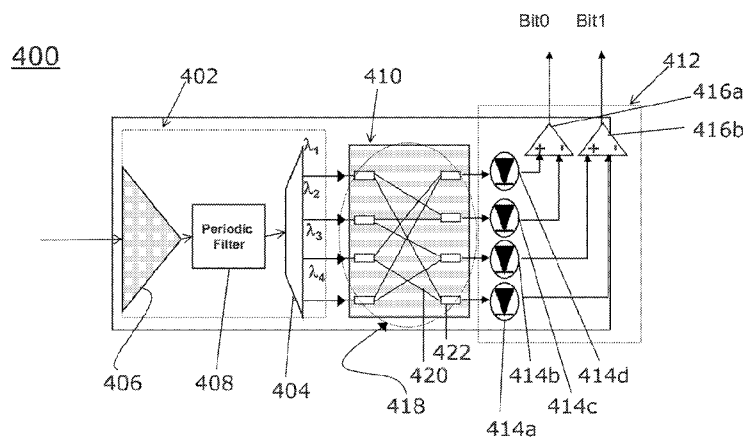


FIG. 6A

(57) Abstract: The present invention provides a simple means of demodulating optical signals, e.g. wideband M-ary orthogonal. The demodulator comprises an optical processor and a comparison module. The optical processor transforms M input optical signals into $2\log_2(M)$ intermediary optical signals and the comparison module determines the logical representation of the input data based on $\log_2(M)$ binary comparisons of the optical power of the intermediary signals. Example embodiments may be reconfigurable to receive optical signals using M-FSK, M-PPM, M-PolSK, and hybrid M-ary orthogonal modulation formats. Example embodiments also offer small size, weight and power consumption for both free-space and fiber optic environments as well as improved receiver sensitivity and reduced electron bandwidth requirements.

INTERNATIONAL SEARCH REPORT

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

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 2007/216988 A1 (CAPLAN DAVID O [US]) 20 September 2007 (2007-09-20) paragraph [0008] paragraph [0028] - paragraph [0032] paragraph [0049]; figure 1A -----	1-31
X	WO 2007/103410 A2 (MASSACHUSETTS INST TECHNOLOGY [US]; CAPLAN DAVID O [US]) 13 September 2007 (2007-09-13) page 3, line 1 - page 3, line 28 page 7, line 9 - page 9, line 10; figure 1A -----	1-31
A	US 2006/056845 A1 (PARSONS NICHOLAS J [GB] ET AL PARSONS NICHOLAS JOHN [GB] ET AL) 16 March 2006 (2006-03-16) abstract; figure 2 ----- -/-	1-31



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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2004/258423 A1 (WINZER PETER J [US]) 23 December 2004 (2004-12-23) abstract; figure 2 -----	1-31
A	US 2010/232795 A1 (WANG CHONGGANG [US] ET AL) 16 September 2010 (2010-09-16) abstract; figures 1,2 -----	1-31

INTERNATIONAL SEARCH REPORT

Information on patent family members

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