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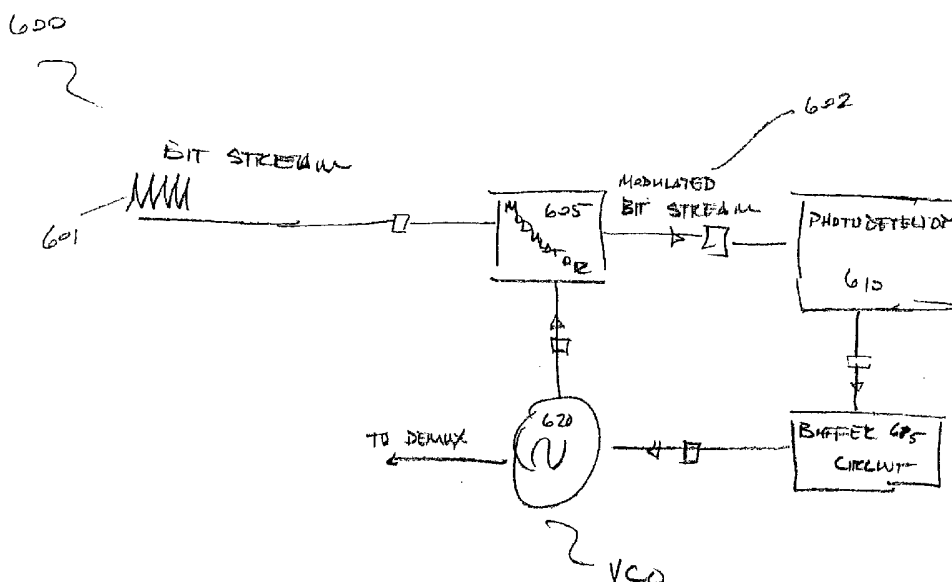
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[Continued on next page]

(54) Title: HIGH SPEED ELECTRO-OPTIC CLOCK RECOVERY CIRCUIT



(57) Abstract: An electro-optic clock recovery circuit comprising an electro-optic modulator circuit (605) operatively coupled to, a photodetector circuit (610), a buffer circuit (615) operatively coupled to the the photodetector circuit (610), a voltage controlled oscillator (620) operatively coupled to the buffer circuit (615) and to the electro-optic modulator circuit (605) wherein the electro-optic modulator circuit (605) receives and modulates a multi-channel input data stream (601), the photodetector circuit (610) responsive to the modulated input data stream (602) drives the voltage controlled oscillator in a phase locked loop through the buffer circuit (615), and the modulator circuit (605) is responsive to the voltage controlled oscillator (620) and is driven at a harmonic of the voltage controlled oscillator.



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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/19474

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04B 10/04; H04J 14/08; G01C 3/08  
 US CL : 359/187, 139; 356/5.09

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)  
 U.S. : 359/187, 139; 356/5.09

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 EAST, WEST, phase locked loop (PLL), modulator, voltage controlled oscillator (VCO).

**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 5,774,246 A (BULOW) 30 June 1998, figures 1 and 2, column 2, lines 20-67, column 3, lines 1-54.	1-3, 7-9, 13, 14, 16-21 ----- 4-6, 10-12, 15
Y	US 5,847,816 A (ZEDIKER et al) 08 December 1998, figures 1, column 11, lines 6-60.	4-6, 10-12, 15
Y	US 5,513,030 A (EPWORTH) 30 April 1996, figures 3 and 4, column 2, lines 55-67, from column 3, line 1 to column 4, line 40.	15
A	US 6,236,488 B1 (SHIMIZU et al) 22 May 2001, figure 1, column 10, lines 44-65.	1-21

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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