## (19) World Intellectual Property Organization

International Bureau





PC'

## (10) International Publication Number WO 2004/095706 A3

(43) International Publication Date 4 November 2004 (04.11.2004)

(51) International Patent Classification: *H03M 7/00* (2006.01)

(21) International Application Number:

PCT/US2004/012207

(22) International Filing Date: 21 April 2004 (21.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/464,095 21 April 2003 (21.04.2003) US

(71) Applicant (for all designated States except US): PORTAVISION LLC [US/US]; 8186 Inverness Ridge Road, Potomac, MD 20854 (US).

(72) Inventor: KILBANK, Daniel; 8186 Inverness Ridge Road, Potomac, MD 20854 (US).

(74) Agent: NIXON, William, F.; Squire, Sanders & Dempsey, L.L.P., 8000 Towers Crescent Drive, 14th Floor, Tysons Corner, VA 22182-2700 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

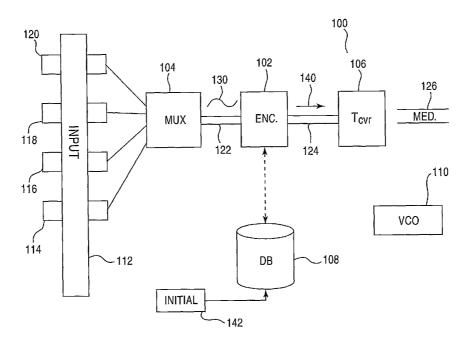
## **Published:**

with international search report

(88) Date of publication of the international search report: 5 October 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR USING A MICROLET-BASED MODEM



(57) Abstract: A system and applicable methods use an oscillator circuit in conjunction with a modem to encode and exchange information. The oscillator circuit provides a reference signal having a phase. The reference signal is selected according to the phase, and corresponds to the probability state of a quantum representation, such as an electron in an encoded bit within an output signal. The probability states are used to represent original data in a lossless manner.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12207

				·
A. CLASSIFICATION OF SUBJECT MATTER IPC: H03M 7/00( 2006.01)				
USPC: 341/107,155,143,144,105 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.: 341/107,155,143,144,105				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)				
	TA CENTER CONCERNED TO BE DELEVANT	<del></del>		
	UMENTS CONSIDERED TO BE RELEVANT		to of the relevant pages as	Relevant to claim No.
Category *	Citation of document, with indication, where appropriate, of the relevant passages  US 6,298,160 (Goertzen, Kenbe D) June 2003 (06.2003) whole document.			1,4-5,8,11,15-16
X	05 0,298,100 (Goeffzell, Kelibe D) Julie 2003 (00.2003) Whole document.			1,4-3,6,11,13-10
x	US 6,298,160 (Goertzen, Kenbe D) OCt 2001 (10.2001) Whole document.			1,4-5,8,11,15-16
French	decuments are listed in the continuation of Poy C		See notant family appay	
Further documents are listed in the continuation of Box C.		<u> </u>	See patent family annex.  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	
Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance		•		
"E" earlier ap	pplication or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone		
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means		"Y"		
"P" document published prior to the international filing date but later than the priority date claimed		"&"		
Date of the actual completion of the international search		Date of mailing of the international search report		
16 April 2006 (16.04.2006)		Authorized officer		
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US		Authorized officer		
Commissioner for Patents		Lam T. Mai flefflill flestill		
P.O. Box 1450 Alexandria, Virginia 22313-1450		Telephone No. (571)272-1807		
Facsimile No. (571) 273-3201				
Form PCT/ISA/210 (second sheet) (April 2005)				