

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
19 August 2004 (19.08.2004)

PCT

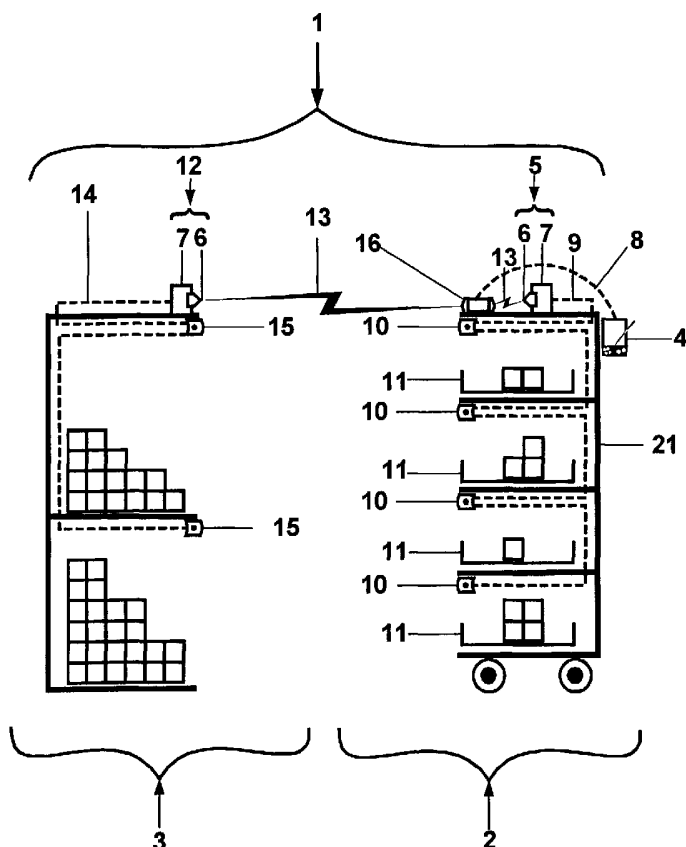
(10) International Publication Number  
WO 2004/070559 A3

- (51) International Patent Classification<sup>7</sup>: G06F 7/00
- (21) International Application Number: PCT/US2004/002774
- (22) International Filing Date: 30 January 2004 (30.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
 

60/443,584	30 January 2003 (30.01.2003)	US
10/617,157	10 July 2003 (10.07.2003)	US
- (71) Applicant (for all designated States except US): FOX-FIRE TECHNOLOGIES [US/US]; 105 N. Main Street, Six Mile, SC 29682 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): PECK, John, C. [US/US]; 1548 Fort Hill Drive, Seneca, SC 29678 (US).
- (74) Agent: GREGORY, Leigh, P.; P.O. Box 168, Clemson, SC 29633-0168 (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, PT, RO, SE, SI, SK,

[Continued on next page]

(54) Title: DISTRIBUTED INTELLIGENCE, WIRELESS, LIGHT-DIRECTED PICK/PUT SYSTEM



(57) Abstract: A system by which a portable computer (4) on a cart (2) translates warehouse locations to light addresses of locations on storage bays (3) in a storage facility and communicates instructions by means of a bi-directional, dual transmitter/receiver element (16) on the cart to a pick-controller unit positioned on each bay.

WO 2004/070559 A3



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*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.*

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

**(88) Date of publication of the international search report:**

24 February 2005

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US04/02774

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(7) : G06F 7/00  
 US CL : 700/214  
 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. : 700/214

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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US6,650,225 B2 (BASTIAN, II et al.) 18 November 2003, entire document.	
A	US 5,113,349 A (NAKAMURA et al.) 12 May 1992, entire document.	
A	US 5,505,473 A (RADCLIFFE) 09 April 1996, entire document.	
A	US5,812,986 A (DANELSKI) 22 September 1998, entire document.	
A	US 5,877,962 A (RADCLIFFE) 02 March 1999, entire document.	
A	US 6124800 A (BEARD et al.) 26 September 2000, entire document.	

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

<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>
Date of the actual completion of the international search 15 September 2004 (15.09 2004)	Date of mailing of the international search report <b>23 DEC 2004</b>
Name and mailing address of the ISA/US Mail Stop PCT, Attn ISA US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Khoi H. Tran <i>[Signature]</i> Telephone No. (703) 308-1143