

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 June 2001 (21.06.2001)

PCT

(10) International Publication Number
WO 01/044082 A3

(51) International Patent Classification⁷: G06F 17/60, G06K 17/00

(72) Inventors; and

(21) International Application Number: PCT/CA00/01537

(75) Inventors/Applicants (for US only): HORWITZ, Clifford, A. [CA/CA]; 385 Beverley Glen Blvd., Thornhill, Ontario L4J 7S5 (CA). DAVIDSON, William, E. [CA/US]; 3530 Hamstead Court, Durham, NC 27707 (US).

(22) International Filing Date:
15 December 2000 (15.12.2000)

(74) Agents: VASS, William, B. et al.; Ridout & Maybee, Suite 2400, One Queen Street East, Toronto, Ontario M5C 3B1 (CA).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/464,071 16 December 1999 (16.12.1999) US

(81) Designated States (national): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW.

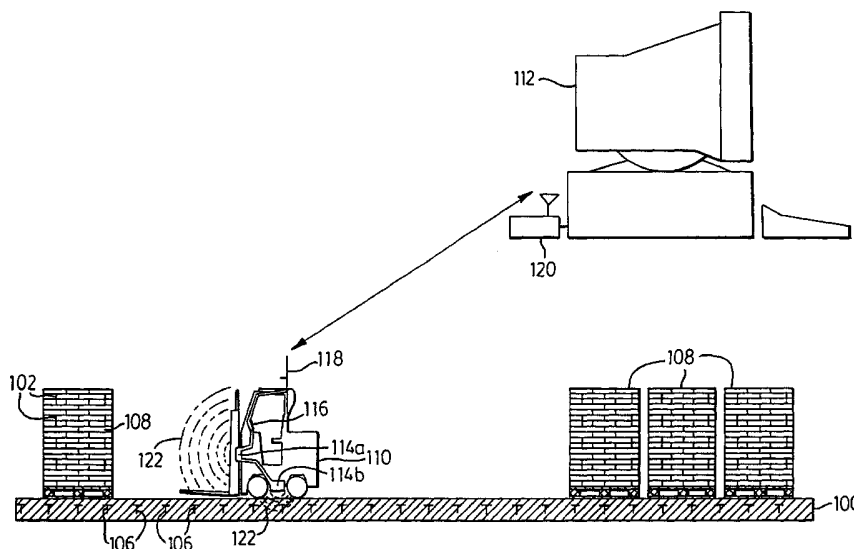
(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/464,071 (CON)
Filed on 16 December 1999 (16.12.1999)

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,

(71) Applicant (for all designated States except US): SAMSYS TECHNOLOGIES INC. [CA/CA]; 44 East Beaver Creek Road, Unit #11, Richmond Hill, Ontario L4B 1G8 (CA).

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR TRACKING CLUSTERED ITEMS



(57) Abstract: A method and system for tracking each item in a cluster of items. Each item has an associated item ID. The method and system involve the following steps. Storing a plurality of item records. The plurality of item records includes, for each item in the cluster of items, an associated item record for storing the associated item ID for the item. Each item record in the plurality of records is then linked to the other item records in the plurality of item records. Using the associated item record for each item in the threshold number of items, and the link between each item record and the other item records, the item records for the associated item ID of the each item in the cluster that are not in the threshold number of items are determined.



WO 01/044082 A3



IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
30 January 2003

Published:

— *with international search report*

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.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/CA 00/01537

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06F17/60 G06K17/00</p>		
<p>According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p>B. FIELDS SEARCHED</p>		
<p>Minimum documentation searched (classification system followed by classification symbols) IPC 7 G06F G06K G07G</p>		
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC</p>		
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>CODD E F: "A relational model of data for large shared data banks" COMMUNICATIONS OF THE ACM, JUNE 1970, USA, vol. 13, no. 6, pages 377-387, XP002219025 ISSN: 0001-0782</p>	25-28
A	<p>page 379, left-hand column, paragraph 1.3 -page 381, left-hand column --- -/--</p>	1,2,13, 14
<p><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.</p>		
<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>*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>*G* document member of the same patent family</p>
<p>*E* earlier document but 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>Date of the actual completion of the international search</p> <p>31 October 2002</p>		
<p>Date of mailing of the international search report</p> <p>12/11/2002</p>		
<p>Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016</p>		<p>Authorized officer</p> <p>Nicoli, F</p>

INTERNATIONAL SEARCH REPORT

 Inter | Application No
 PCT/CA 00/01537

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 4 688 026 A (CARACCILO JR ANTHONY ET AL) 18 August 1987 (1987-08-18) abstract column 1, line 66 -column 3, line 53 column 4, line 17 - line 52 column 5, line 64 -column 6, line 62 column 7, line 51 -column 8, line 26 figures 1,2,8	1-28
A	US 5 804 810 A (WEIMAR JAMES H ET AL) 8 September 1998 (1998-09-08) abstract column 1, line 42 -column 2, line 10 column 3, line 3 - last line column 16, line 46 -column 17, line 43 column 19, line 6 - line 11 column 19, line 57 - line 61 column 28, line 32 - line 61 column 56, line 55 -column 58, line 61 figures 1-3,23	1-28
A	US RE36109 E (KIPP LUDWIG) 23 February 1999 (1999-02-23) abstract column 1, line 63 -column 2, line 15 column 3, line 35 - line 59 figure 1	1,2,13, 14,25
A	US 5 780 826 A (HAMADA HIDEKI ET AL) 14 July 1998 (1998-07-14) abstract column 3, line 45 -column 6, line 61 figures 2-5,16	10-12, 22-24
A	FR 2 764 077 A (IND ET SPORT SA) 4 December 1998 (1998-12-04) abstract page 2, line 16 - last line figures 1-4	10-12, 22-24
A	US 4 897 859 A (TSUKAMOTO HIDEO ET AL) 30 January 1990 (1990-01-30) column 1, line 61 -column 2, line 12	1,2,13, 14,25

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 00/01537

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 4688026	A	18-08-1987	NONE	
US 5804810	A	08-09-1998	AU 3593297 A CA 2259000 A1 WO 9750057 A1	14-01-1998 31-12-1997 31-12-1997
US RE36109	E	23-02-1999	US 5239167 A CA 2053565 A1 DE 69124991 D1 DE 69124991 T2 EP 0513456 A1 EP 0724241 A2	24-08-1993 31-10-1992 10-04-1997 25-09-1997 19-11-1992 31-07-1996
US 5780826	A	14-07-1998	WO 9630288 A1 AU 699013 B2 AU 2084095 A HK 1008986 A1 JP 3085468 B2 NZ 282896 A	03-10-1996 19-11-1998 16-10-1996 13-07-2001 11-09-2000 29-03-1999
FR 2764077	A	04-12-1998	FR 2764077 A1 AU 7661298 A WO 9855905 A1	04-12-1998 21-12-1998 10-12-1998
US 4897859	A	30-01-1990	JP 1939222 C JP 6068779 B JP 63198186 A DE 3804307 A1	09-06-1995 31-08-1994 16-08-1988 25-08-1988