

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 November 2004 (18.11.2004)

PCT

(10) International Publication Number
WO 2004/100424 A3

(51) International Patent Classification⁷: **G06F 15/16**

96825 (US). **ROSENTHAL, Lawrence, Alan** [US/US];
1145 Oxford Street, Berkeley, CA 94707 (US).

(21) International Application Number:
PCT/US2004/012952

(74) Agents: **BERNSTEIN, Frank** et al.; Sughrue Mion,
PLLC, 401 Castro Street, Suite 220, Mountain View, CA
94041-2007 (US).

(22) International Filing Date: 27 April 2004 (27.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/426,125 28 April 2003 (28.04.2003) US

(71) Applicant (for all designated States except US): **FIRE-
TIDE, INC.** [US/US]; 928 Nuuanu Avenue, #200, Hon-
olulu, HI 96817 (US).

(72) Inventors; and

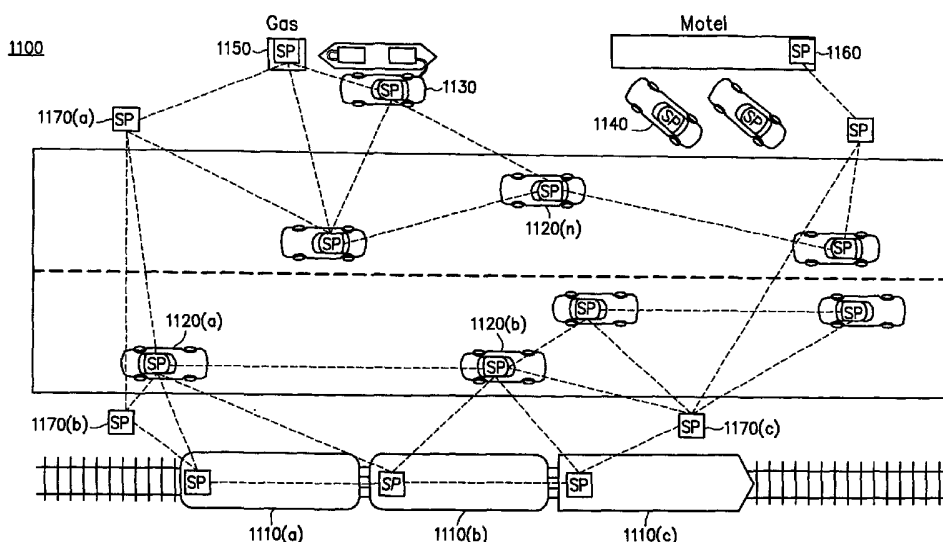
(75) Inventors/Applicants (for US only): **KLEMB, Keith,
Stuart** [US/US]; 3319 Vernon Terrace, Palo Alto, CA
94303 (US). **NASSI, Isaac, Robert** [US/US]; 14560 La
Rinconada Drive, Los Gatos, CA 95032 (US). **CORNEJO,
David, Neil** [US/US]; 9609 Kaahue Street, Honolulu, HI

(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, NA, 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).

[Continued on next page]

(54) Title: WIRELESS SERVICE POINT NETWORKS



(57) Abstract: System, apparatus, and methods are disclosed wherewith a group of independent wireless routing devices known as Service Points work cooperatively to form an ad hoc mesh communication network. The resulting Service Point Network is used to provide reliable address-directed communication services between devices attached by conventional means (wired or wireless) to respective Service Ports on any of the Service Points. Services for Utilizing Devices include both point-to-point as well as point-to-multi-point communication. To protect the security of network communications and the integrity of the network, the Service Points are assigned internal IP addresses and unique identifiers that need not be disclosed to the Utilizing Devices. The unique identifiers in turn are used to derive public and private encryption key pairs for each Service Point.



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

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.

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

7 July 2005

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12952

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : G06F 15/16 US CL : 709/200 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. : 709/200 709/227;380/270;370/388,465,475;455/432.2;342/359 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) Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,E ---	US 2004/0090943 A1 (DaCosta et al.) 13 May 2004, see entire document.	1-22 and 25-28
Y,E		23-24 and 29-32
Y	US 6,201,962 B1 (Sturniola et al.) 13 March 2001, see entire document.	23-24 and 29-32
A,P	US 6,707,425 B2 (Louhi) 14 March 2004.	1-32
A,E	US 6,771,666 B2 (Barker, Jr.) 03 August 2004.	1-32
A,E	US 6,842,460 B1 (Olkkonen et al.) 11 January 2005.	1-32
☐ 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 "E" earlier application or patent published on or after the international filing date "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 "P" document published prior to the international filing date but later than the priority date claimed "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 "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 "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 "&" document member of the same patent family		
Date of the actual completion of the international search 28 April 2005 (28.04.2005)		Date of mailing of the international search report 16 MAY 2005
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 BRIAN JOHNSON <i>Brian R. Johnson</i> Telephone No. (571) 272-3595

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/12952

Continuation of B. FIELDS SEARCHED Item 3:
PGPB;USPT;USOC;EPAB;PJPAB;DWPI;TDBD
subnet,automatic,dynamic,organiz,print,gateway,frequency,unicast,multicast,broadcast