

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 November 2006 (09.11.2006)

PCT

(10) International Publication Number  
**WO 2006/119108 A3**

(51) International Patent Classification:

G06F 11/00 (2006.01)

(21) International Application Number:

PCT/US2006/016442

(22) International Filing Date: 28 April 2006 (28.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/676,390 29 April 2005 (29.04.2005) US

(71) Applicant (for all designated States except US): **FAT SPANIEL TECHNOLOGIES, INC.** [US/US]; 2 West Santa Clara Street, Fifth Floor, San Jose, CA 95113 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BEEKHUIS, Christiaan, Willem** [US/US]; 648 South 12th Street, San Jose, CA 95112 (US).

(74) Agent: **MICHAELSON, Peter, L.**; Michaelson & Associates, P.O. Box 8489, Parkway 109 Office Center, 328 Newman Springs Road, Red Bank, NJ 07701-8489 (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, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

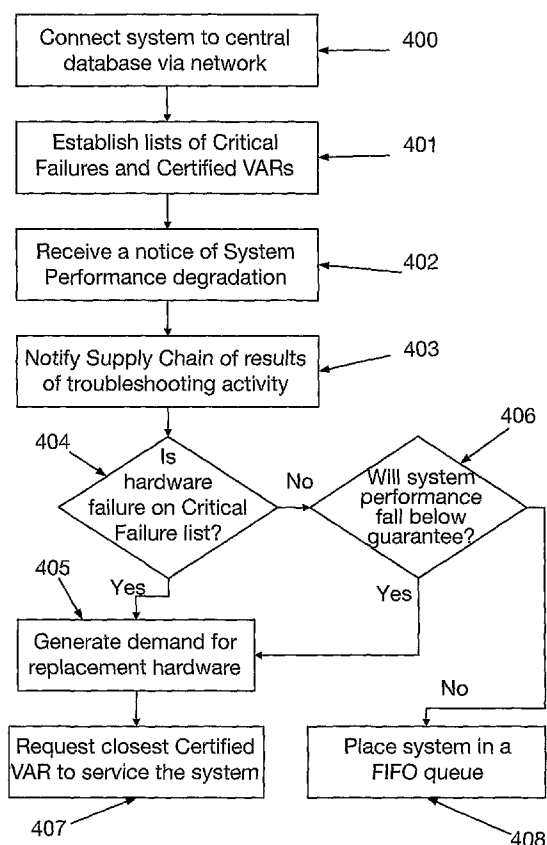
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, 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).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: COMPUTER IMPLEMENTED SYSTEMS AND METHODS FOR PRE-EMPTIVE SERVICE AND IMPROVED USE OF SERVICE RESOURCES



(57) Abstract: Systems and methods are provided for collecting, aggregating, and analyzing data associated with the installation and deployment of systems. Energy systems, (500) specifically renewable energy generation systems, are used as examples. The aggregated data serve as the basis for a variety of services that improve the system performance, improve the installation, lower the cost, and provide . monitoring and service to maintain optimum performance. Finally, services are provided that facilitate the optimization of responses to poor system performance based on criticality of the failure, servicing of the system by a Certified VAR, or other prioritization method.



**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:**

12 July 2007

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/16442

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G06F 11/00** (2006.01)

USPC: 714/2,4;709/223

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. : 714/2,4; 709/223;

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)

EAST files USPGPUB, USPAT, USOCR, EPO, JPO, DERWENT, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,519,730 B(ANDO et al) 11 February 2003 (11.02.2003), see entire document.	1-20
A	US 2004/0205403 A (MARKOW et al.) 14 October 2004 (14.10.2004), see entire document.	1-20
A	US 2003/0115251 A (FREDRICKSON et al.) 19 June 2003 (19.06.2003), see entire document.	1-20
A	US 2004/0143428 A (RAPPAPORT et al.) 22 July 2004 (22.07.2004), see entire document.	1-20
A	US 2004/0163011 A (SHAW) 19 August 2004 (19.08.2004), see entire document.	1-20
A	US 2005/0229039 A (ANDERSON et al.) 13 October 2005 (13.10.2005), see entire document.	1-20

☐ 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
"E" earlier application 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)	"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
"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	"&" document member of the same patent family

Date of the actual completion of the international search

30 March 2007 (30.03.2007)

Date of mailing of the international search report

**15 MAY 2007**

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. (571) 273-3201

Authorized officer

Dieu-Minh Le **Jacqueline A. Whitfield**  
Telephone No. (571) 273-3600 **Special Project Asst.**