

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
17 January 2002 (17.01.2002)

PCT

(10) International Publication Number  
WO 2002/005085 A3

(51) International Patent Classification<sup>7</sup>: G06F 9/46

(21) International Application Number:  
PCT/US2001/020885

(22) International Filing Date: 28 June 2001 (28.06.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/612,141 7 July 2000 (07.07.2000) US

(71) Applicant: SUN MICROSYSTEMS, INC. [US/US]; 901 San Antonio Road, Palo Alto, CA 94303 (US).

(72) Inventors: RUBERG, Alan, T.; 605 Emerald Bay Lane, Foster City, CA 94404 (US). HANKO, James, G.; 2746 Ohio Avenue, Redwood City, CA 94061 (US). LAU, Manpop, A.; 936 Couer D'Alene Way, Sunnyvale, CA 94087 (US).

(74) Agent: BERLINER, Brian, M.; O'Melveny & Myers LLP, 400 South Hope Street, Los Angeles, CA 90071-2899 (US).

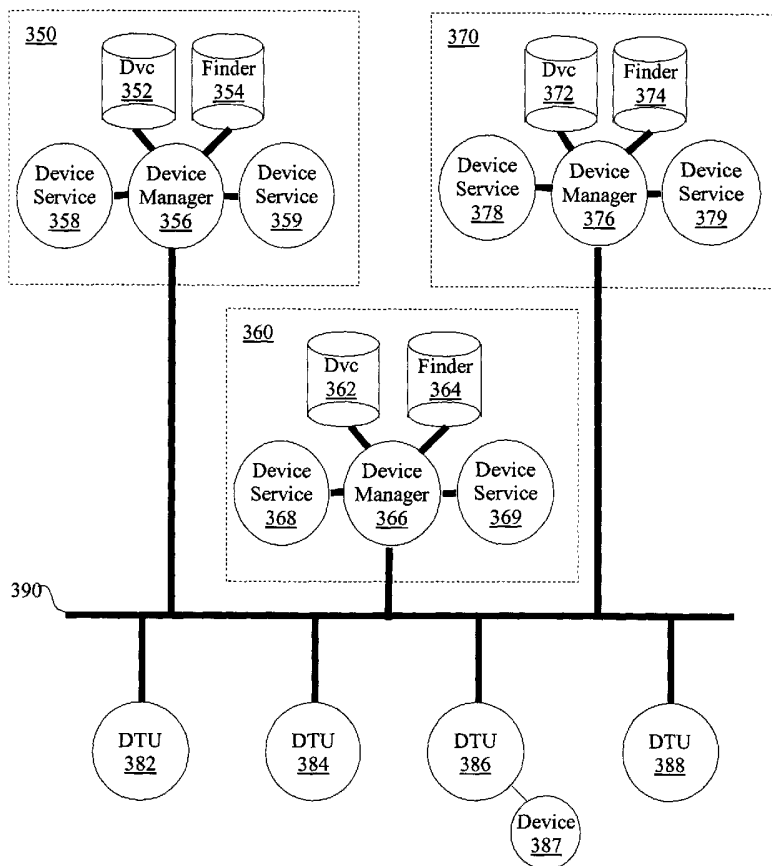
(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

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

Published:  
— with international search report

[Continued on next page]

(54) Title: REMOTE DEVICE MANAGEMENT IN GROUPED SERVER ENVIRONMENT



(57) Abstract: Methods and apparatus for data distribution among servers in a grouped server system. Each server in the group includes a device manager which is responsible for brokering devices to services. A service communicates to a device manager on the same server through an inter-process communication mechanism. A desktop unit, having persistent connections with a single device manager, switches to a peer (other device managers in the group) when the desktop unit is reset or when a device manager fails. At least one device is connected to the desktop unit. When the desktop unit is connected to the new device manager, ownership of the devices may change. The new device manager notifies its peers of any device status changes.

WO 2002/005085 A3



---

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

26 February 2004

*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

Intern:      Application No  
PCT/US 01/20885

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7    G06F9/46

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)  
IPC 7    G06F    G06K

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 practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 341 477 A (MORENCY JOHN P ET AL) 23 August 1994 (1994-08-23) abstract column 1, line 11 -column 11, line 32 figures	1-51
X	EP 0 694 837 A (IBM) 31 January 1996 (1996-01-31)  abstract page 3, line 9 -page 5, line 55 figure 7	1,21,28, 35,39, 44,50,51
A	GB 1 443 176 A (INT CORPUTERS LTD) 21 July 1976 (1976-07-21) abstract column 1, line 9 -column 9, line 59 figure 1	1-51
-/--		

Further documents are listed in the continuation of box C.

Patent family members are listed in 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 document but 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 October 2003

Date of mailing of the international search report

06/11/2003

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

Authorized officer

Aguilar Cabarrus, E

## INTERNATIONAL SEARCH REPORT

Internationa Application No  
PCT/US 01/20885

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	EP 1 043 876 A (SUN MICROSYSTEMS INC) 11 October 2000 (2000-10-11) abstract paragraph '0003! - paragraph '0017! paragraph '0025! - paragraph '0086! figures -----	1-51

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat	Application No
PCT/US 01/20885	

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
US 5341477	A	23-08-1994	AT 151183 T	15-04-1997
			AU 611605 B2	13-06-1991
			AU 4996190 A	13-09-1990
			AU 630291 B2	22-10-1992
			AU 7603391 A	15-08-1991
			CA 2010762 A1	24-08-1990
			DE 69030340 D1	07-05-1997
			DE 69030340 T2	20-11-1997
			EP 0384339 A2	29-08-1990
			JP 3116262 A	17-05-1991
EP 0694837	A	31-01-1996	EP 0694837 A1	31-01-1996
			JP 8044576 A	16-02-1996
			US 5799173 A	25-08-1998
GB 1443176	A	21-07-1976	NONE	
EP 1043876	A	11-10-2000	EP 1043876 A2	11-10-2000