(19) World Intellectual Property Organization International Bureau



24 January 2008 (24.01.2008)

(43) International Publication Date

(51) International Patent Classification: H04M 3/42 (2006.01) H04L 12/66 (2006.01)

(21) International Application Number:

PCT/US2007/016332

(22) International Filing Date: 18 July 2007 (18.07.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/489.831 20 July 2006 (20.07.2006) US

- (71) Applicant (for all designated States except US): MI-CROSOFT CORPORATION [US/US]; One Microsoft Way, Redmond, Washington 98052-6399 (US).
- (72) Inventors: MAXIMO, Rui Y.: One Microsoft Way. Redmond, Washington 98052-6399 (US). KNUDSON, Dan A.; One Microsoft Way, Redmond, Washington

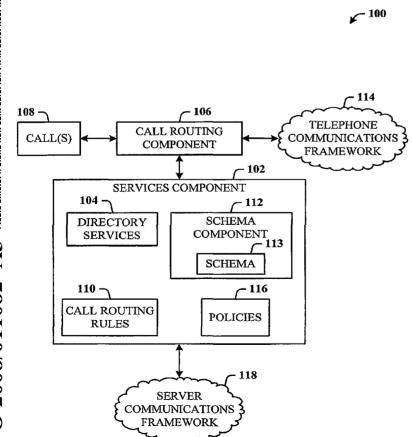
(10) International Publication Number WO 2008/011082 A3

98052-6399 (US). EYDELMAN, Vadim; One Microsoft Way, Redmond, Washington 98052-6399 (US). SEKARAN, Mahendra; One Microsoft Way, Redmond, Washington 98052-6399 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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,

[Continued on next page]

(54) Title: MANAGEMENT OF TELEPHONE CALL ROUTING USING A DIRECTORY SERVICES SCHEMA



(57) Abstract: Directory services schema for telephone call management. schema facilitates the development of call routing rules as one or more instances of one or more classes. Once created, the rules can be propagated to all other director services servers, and any subsequent updates and system changes are readily propagated to maintain optimum call system management. The rules can be stored in a routing table allowing administrators to define phone routes for various scenarios. changes System hardware/software can be managed using distinguished names and automatically propagated (or replicated) to the other directory services servers on an enterprise network. The architecture includes a schema component for generating a directory services schema, and a call routing component that routes telephone calls according to call routing rules defined by the directory The rules can be services schema. processed in combination with policies of usage attributes and phone number patterns/ranges to manage call routing.

WO 2008/011082 A3



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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: 13 March 2008

International application No. PCT/US2007/016332

CLASSIFICATION OF SUBJECT MATTER

H04M 3/42(2006.01)i, H04L 12/66(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 8: H04M 3/42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean Utility models and applications for Utility models since 1975 Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKIPASS(KIPO internal) "directory services", "schema", "call", "telephone", "routing", "management"

DOCUMENTS CONSIDERED TO BE RELEVANT C.

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6000031 A (BINGAMAN, K. B. et al.) 07 December 1999 See the abstract; claims 1-6; figures 1-2.	1-20
A	US 6539077 B1 (RANALLI, D. J. et al.) 25 March 2003 See the abstract; column 7, line 50 - column 8, line 24; figures 1 and 3.	1-20
A	US 6909708 B1 (KRISHNASWAMY, SRIDHAR et al.) 21 June 2005 See the abstract; claims 1-12; figure 1.	1-20
A	US 5724408 A (MORGANSTEIN, S. J.) 03 March 1998 See the abstract; claims 1-5; figure 1.	1-20

Further documents are listed in the continuation of Bo	x C
--	-----

See patent family annex.

- Special categories of cited documents:
- document defining the general state of the art which is not considered to be of particular relevance
- earlier application or patent but published on or after the international filing date
- document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- document referring to an oral disclosure, use, exhibition or other
- 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
- 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 Date of mailing of the international search report 10 JANUARY 2008 (10.01.2008)

10 JANUARY 2008 (10.01.2008)

Name and mailing address of the ISA/KR



Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SONG, Hyun Chae

Telephone No. 82-42-481-5786



INTERNATIONAL SEARCH REPORT

International application No.

Information on patent family members

PCT/IIS2007/016332

Information on patent family members			PCT/US2007/016332	
Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
US 6000031 A	07.12.1999	CA 2230339 C EP 0876042 A2 EP 0876042 A3	19.06.2001 04.11.1998 13.03.2002	
US 6539077 B1	25.03.2003	US 20030076933 A1 US 20040192364 A1 US 20040218747 A1 US 6748057 B2	24.04.2003 30.09.2004 04.11.2004 08.06.2004	
US 6909708 B1	21.06.2005	WO 9823080 A2 WO 9823080 A3 AP 9901547 A0 AU 199856867 A1 AU 725933 B2 AU 725933 C BR 9714315 A CA 02279845 A1 CN 1294812 A EP 0950308 A2 IL 129974 A0 KR 1020000069024 A MX PA99004611 A NO 992354 A NZ 335509 A RU 2193823 C2 TR 9901094 T2	28.05.1998 07.01.1999 30.06.1999 10.06.1998 26.10.2000 26.07.2001 08.02.2000 28.05.1998 09.05.2001 20.10.1999 29.02.2000 25.11.2000 25.01.2005 16.07.1999 27.04.2001 27.11.2002 22.04.2002	
JS 5724408 A	03.03.1998	US 5029196 A US 5109405 A US 5347574 A	02.07.1991 28.04.1992 13.09.1994	