PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶:
H04Q 3/00

A3

(11) International Publication Number: WO 96/05704

(43) International Publication Date: 22 February 1996 (22.02.96)

(21) International Application Number: PCT/GB95/01882

(22) International Filing Date: 9 August 1995 (09.08.95)

(30) Priority Data:

94305967.5 12 August 1994 (12.08.94) EP (34) Countries for which the regional or

international application was filed: GB et al.

(71) Applicant (for all designated States except US): BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY [GB/GB]; 81 Newgate Street, London EC1A 7AJ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WILBY, Mark [GB/GB]; University College London, Dept. of Electronic and Electrical Engineering, Torrington Place, London WC1E 7JE (GB). QUINTELA, Maria, Paula [GB/GB]; University College London, Dept. of Electronic and Electrical Engineering, Torrington Place, London WC1E 7JE (GB).

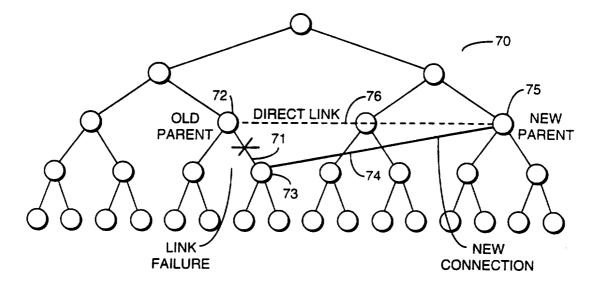
(74) Agent: DUTTON, Erica, Lindley, Graham; BT Group Legal Services, Intellectual Property Dept., 13th floor, 151 Gower Street, London WC1E 6BA (GB). (81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published

With international search report.

(88) Date of publication of the international search report:
18 April 1996 (18.04.96)

(54) Title: A CONFIGURATION METHOD FOR A DATA MANAGEMENT SYSTEM



(57) Abstract

Data elements stored in a distributed data structure are accessible by means of a hierarchical routing network in which routes through the network to individual data elements are flagged. The network comprises communicating links between nodes (1, 2, 3), extending from a "root node" (2) to a plurality of end nodes (3). The end nodes (3) contain the data elements. To find a data element, a search message entering the network at an end node (3) passes through the network towards the root node (2) until it encounters a flagged route to the relevant data element. Thereafter it passes along the route to the end node (3) containing the relevant data element. The invention is relevant to personal numbering services in a communications network. In this case, the data elements each comprise hardware addresses for users of the network. If a user moves in relation to the network, their hardware address will change and, in many cases, the relevant end node (3) will also change. However, the flagged route consequently changes and the routing network therefore provides automatic tracking of the user.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GB	United Kingdom	MR	Mauritania
AU	Australia	GE	Georgia	MW	Malawi
BB	Barbados	GN	Guinea	NE	Niger
BE	Belgium	GR	Greece	NL	Netherlands
BF	Burkina Faso	HU	Hungary	NO	Norway
BG	Bulgaria	IE	Ireland	NZ	New Zealand
BJ	Benin	IT	Italy	PL	Poland
BR	Brazil	JP	Japan	PT	Portugal
BY	Belarus	KE	Kenya	RO	Romania
CA	Canada	KG	Kyrgystan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic	SD	Sudan
CG	Congo		of Korea	SE	Sweden
CH	Switzerland	KR	Republic of Korea	SI	Slovenia
CI	Côte d'Ivoire	KZ	Kazakhstan	SK	Slovakia
CM	Cameroon	LI	Liechtenstein	SN	Senegal
CN	China	LK	Sri Lanka	TD	Chad
CS	Czechoslovakia	LU	Luxembourg	TG	Togo
CZ	Czech Republic	LV	Latvia	TJ	Tajikistan
DE	Germany	MC	Monaco	TT	Trinidad and Tobago
DK	Denmark	MD	Republic of Moldova	UA	Ukraine
ES	Spain	MG	Madagascar	US	United States of America
FI	Finland	ML	Mali	UZ	Uzbekistan
FR	France	MN	Mongolia	VN	Viet Nam
GA	Gabon		•		

INTERNATIONAL SEARCH REPORT

Interr vnal Application No PCT/GB 95/01882

A. CLASSIFICATION OF SUBJECT MATTER IPC 6 H04Q3/00

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 6 H04Q G06F

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)

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	US,A,5 400 338 (FLAMMER III) 21 March 1995 see column 3, line 35 - column 4, line 6; claim 1; figures 1,2	1-10
P,A	EP,A,O 614 322 (AT&T CORP) 7 September 1994 see column 4, line 31 - column 5, line 35; figures 1,4,5	1-10
A	DE,A,39 21 637 (SIEMENS AG) 3 January 1991 see abstract; figure see column 4, line 42 - column 5, line 22 see column 9, line 38 - column 11, line 15 -/	1-3,5, 8-10

Y Further documents are listed in the continuation of box C.	Y Further documents are listed in the continuation of box C.	ed in anne
--	--	------------

- * 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
- "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

24 January 1996

Date of mailing of the international search report

08.02.96

24 Dallaary 1990

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

Lambley, S

Form PCT/ISA/218 (second sheet) (July 1992)

1

INTERNATIONAL SEARCH REPORT

Intern rail Application No PCT/GB 95/01882

Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATION, vol. 11, no. 6, August 1993 NEW YORK, US, pages 850-860, XP 000403991 WANG 'A fully distributed location registration strategy for Universal Personal Communication systems' see page 856, right column, line 1 - page 857, left column, line 19; figures 1,12	1-3,5, 8-10
EP,A,O 556 515 (AMERICAN TELEPHONE AND TELEGRAPH COMPANY) 25 August 1993 see claims 1,5-9	1-3,8-10
IEEE TRANSACTIONS ON COMMUNICATIONS, vol. 42, no. 2/3/4, February 1994 - April 1994 NEW YORK US, pages 523-533, XP 000445956 BOULOUTAS ET AL. 'Alarm correlation and fault identification in communication networks' see section II 'System representation'	
	vol. 11, no. 6, August 1993 NEW YORK, US, pages 850-860, XP 000403991 WANG 'A fully distributed location registration strategy for Universal Personal Communication systems' see page 856, right column, line 1 - page 857, left column, line 19; figures 1,12 EP,A,O 556 515 (AMERICAN TELEPHONE AND TELEGRAPH COMPANY) 25 August 1993 see claims 1,5-9 IEEE TRANSACTIONS ON COMMUNICATIONS, vol. 42, no. 2/3/4, February 1994 - April 1994 NEW YORK US, pages 523-533, XP 000445956 BOULOUTAS ET AL. 'Alarm correlation and fault identification in communication networks'

1

INTERNATIONAL SEARCH REPORT

iformation on patent family members

Inter vital Application No PCT/GB 95/01882

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US-A-5400338	21-03-95	NONE		
EP-A-0614322	07-09-94	AU-B- AU-B- JP-A- US-A-	660865 5391094 7312770 5442683	06-07-95 28-07-94 28-11-95 15-08-95
DE-A-3921637	03-01-91	NONE		
EP-A-0556515	25-08-93	US-A- CA-A- JP-A-	5377262 2081169 6085907	27-12-94 01-07-93 25-03-94