

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 July 2003 (03.07.2003)

PCT

(10) International Publication Number
WO 03/055153 A3

(51) International Patent Classification⁷: **H04L 12/46**,
12/24, 12/66, G06F 17/60

(21) International Application Number: PCT/IB02/05776

(22) International Filing Date:
17 December 2002 (17.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/342,270 21 December 2001 (21.12.2001) US

(71) Applicants and

(72) Inventors: **MUIRHEAD, Charles, S.** [GB/GB]; Flat 1,
3 Westbourne Crescent, London W2 3DB (GB). **PAGE,**
David, J. [GB/GB]; 23 Northampton Street, Bath BA1
25W (GB).

(74) Agent: **HALEY, Stephen**; Gill Jennings & Every,
Broadgate House, 7 Eldon Street, London EC2M 7LH
(GB).

(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, EC, 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, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU,
ZA, ZM, ZW.

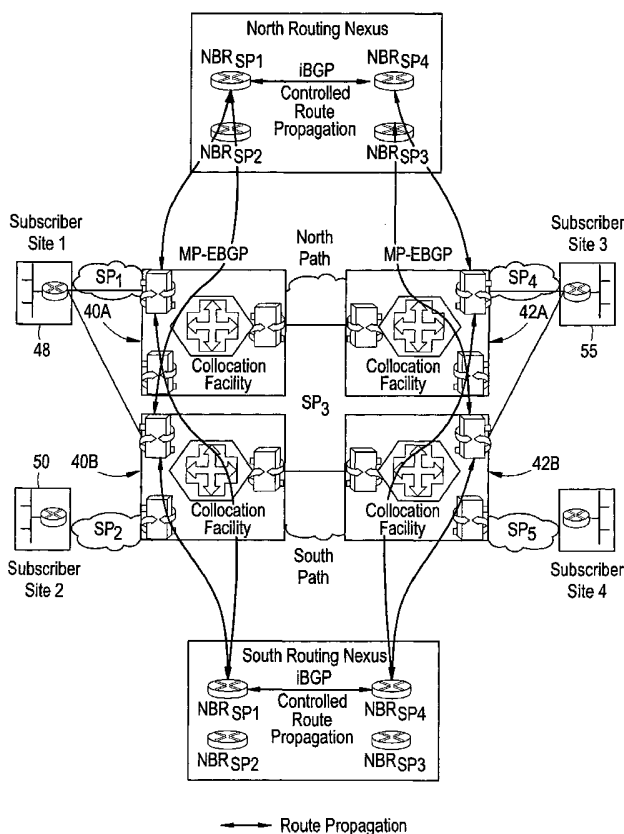
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

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

[Continued on next page]

(54) Title: SYSTEM FOR SUPPLY CHAIN MANAGEMENT OF VIRTUAL PRIVATE NETWORK SERVICES



(57) Abstract: The system for the supply chain management of network services, preferably virtual private network services, provides hardware, processes and application tools useful in configuring and/or delivering substantially measurable virtual private network services.



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

24 December 2003

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

International Application No.

PCT/TB 02/05776

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L12/46 H04L12/24 H04L12/66 G06F17/60

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 H04L 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)

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 6 084 892 A (BENASH RAY ET AL) 4 July 2000 (2000-07-04) abstract column 12, line 26 -column 26, line 35; figures 4-6	1-41
A	WO 01 31857 A (ROSE IAN ALEXANDER ;ASTRACON INC (US)) 3 May 2001 (2001-05-03) the whole document	22-41
X	WO 00 22792 A (JADOUL MARK ;PIROT JOHAN (BE); ROSCAM ROMBAUT J (BE); CONNELL PETE) 20 April 2000 (2000-04-20) abstract page 2, line 19 -page 7, line 19; figures 1-3	1-41
	--- -/--	

☒ 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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

10 October 2003

Date of mailing of the international search report

28.10.03

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

Jimenez Hernandez, P

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 02/05776

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 666 670 A (IBM) 9 August 1995 (1995-08-09) abstract; figures 1,2 ---	1
A	US 5 825 772 A (FEE BRENDAN ET AL) 20 October 1998 (1998-10-20) the whole document ---	1-41
A	WO 01 60000 A (CONVERGENT NETWORKS INC ; STEVENS DEL (US); BUTLER DAVID (US); FREE) 16 August 2001 (2001-08-16) the whole document ---	1-41
A	WO 01 14983 A (INROADS TECHNOLOGY INC) 1 March 2001 (2001-03-01) the whole document ---	50-76
A	WO 98 36369 A (I2 TECHNOLOGIES INC) 20 August 1998 (1998-08-20) the whole document ---	50-76
A	US 6 216 117 B1 (HALL ERIC P) 10 April 2001 (2001-04-10) the whole document ---	50-76
A	LEWIS L: "Spectrum Service Level Management Definition, Offerings, and Strategy" TECHNICAL NOTE LML-CTRON-98-02, 30 March 1998 (1998-03-30), XP002150696 Retrieved from the Internet: <URL:www.aprisma.com/white-papers/spectrum /slm.pdf> 'retrieved on 2000-10-20! the whole document -----	50-76

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 02/05776

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-41, 50-76

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-41

Network device for providing standardized interconnectivity comprising router/s, switch/es and device/s providing connectivity functions or services.

2. Claims: 42,43

Network node simplifying interconnection of service providers to a communication network comprising gateways, route propagation system and a management network

3. Claims: 46,47

Delivery system for providing measurable network service according to user requirements.

4. Claims: 48,49

Requirement planning system for providing managed network service

5. Claims: 50-76

System for providing performance-based network service comprising modeling tools and workflow engine

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern Application No

PCT/GB 02/05776

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6084892	A	04-07-2000	NONE	
WO 0131857	A	03-05-2001	WO 0131857 A1 AU 1116501 A	03-05-2001 08-05-2001
WO 0022792	A	20-04-2000	AU 1116700 A WO 0022792 A2	01-05-2000 20-04-2000
EP 0666670	A	09-08-1995	US 5491693 A CA 2130412 A1 EP 0666670 A2 JP 2571679 B2 JP 7212405 A	13-02-1996 01-07-1995 09-08-1995 16-01-1997 11-08-1995
US 5825772	A	20-10-1998	US 5684800 A AU 697850 B2 AU 1460697 A EP 0873626 A2 WO 9718637 A2 AT 192887 T AU 697935 B2 AU 1053997 A DE 69608300 D1 DE 69608300 T2 EP 0861544 A1 WO 9718657 A1 US 2003170680 A1 US 6147995 A US 5946308 A	04-11-1997 15-10-1998 05-06-1997 28-10-1998 22-05-1997 15-05-2000 22-10-1998 05-06-1997 15-06-2000 21-12-2000 02-09-1998 22-05-1997 11-09-2003 14-11-2000 31-08-1999
WO 0160000	A	16-08-2001	AU 3691501 A AU 3815301 A CA 2399715 A1 CA 2399720 A1 WO 0160000 A1 WO 0159999 A1	20-08-2001 20-08-2001 16-08-2001 16-08-2001 16-08-2001 16-08-2001
WO 0114983	A	01-03-2001	US 6253206 B1 AU 7061000 A CA 2382006 A1 EP 1221102 A1 WO 0114983 A1 US 2002073107 A1 US 2001013033 A1	26-06-2001 19-03-2001 01-03-2001 10-07-2002 01-03-2001 13-06-2002 09-08-2001
WO 9836369	A	20-08-1998	US 5943244 A AU 728154 B2 AU 6278098 A EP 0906599 A1 GB 2324180 A JP 2000510272 T TW 421751 B WO 9836369 A1	24-08-1999 04-01-2001 08-09-1998 07-04-1999 14-10-1998 08-08-2000 11-02-2001 20-08-1998
US 6216117	B1	10-04-2001	NONE	