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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

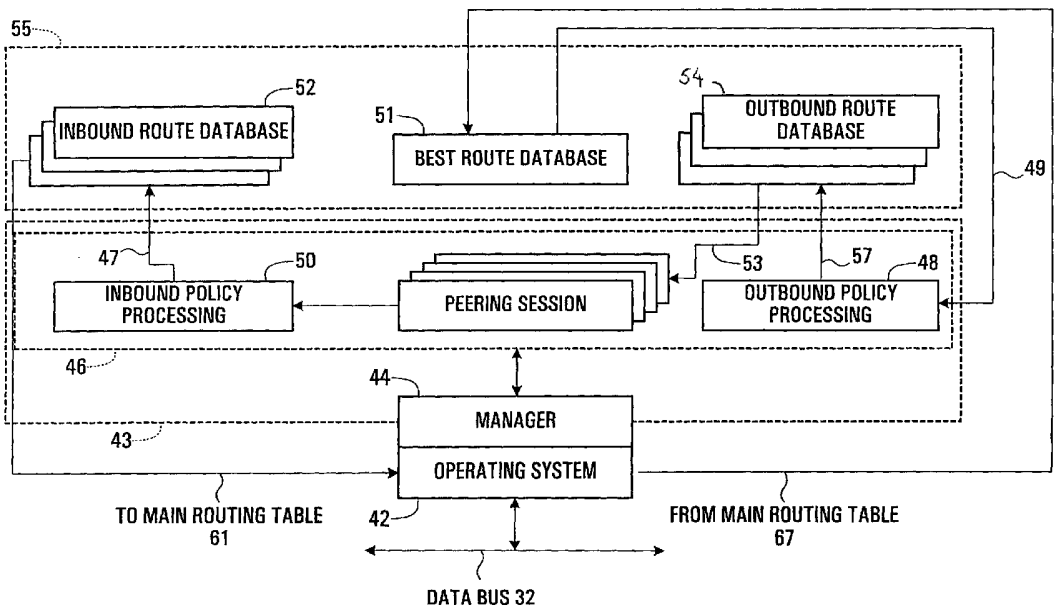
— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

[Continued on next page]

(54) **Title:** SCALABLE ROUTER



(57) **Abstract:** A router with a routing layer that supports single or multiple routing protocols. The routing layer has at least two routing protocol computing entities, namely a first and a second routing protocol computing entities. Each routing protocol computing entity includes a CPU, a data storage medium in communication with the CPU and a program data stored in the data storage medium for execution by said CPU. The program data in each routing protocol computing entity implements different or the same routing protocols. This routing layer architecture is highly scalable.

WO 2003/013056 A3

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13 May 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

International Application No
PCT/CA 02/01181

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/56

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 049 524 A (TSUKAKOSHI MASATO ET AL) 11 April 2000 (2000-04-11)	1-30
A	column 5, line 36 -column 6, line 6 column 7, line 29 -column 9, line 36 figure 1 claim 1	42-47
Y		31-41

X	EP 0 969 630 A (HITACHI LTD) 5 January 2000 (2000-01-05)	1-30
A	column 3, line 27 -column 4, line 20 column 11, line 57 -column 13, line 12 figures 1,18	42-47
Y		31-41

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[X] Further documents are listed in the continuation of box C.

[X] 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

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"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	Date of mailing of the international search report
6 August 2003	22. 08. 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 Kreppel, J

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Internat[redacted] Application No
PCT/CA 02/01181

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	AWEYA JAMES: "On the design of IP routres Part 1: Router Architecture" JOURNAL OF SYSTEMS ARCHITECTURE, vol. 46, no. 6, April 2000 (2000-04), pages 483-511, XP002237071 page 490, right-hand column -page 494, left-hand column, paragraph 2 page 495, right-hand column, paragraph 2 -page 498, left-hand column, paragraph 2 page 506, right-hand column, paragraph 3 -page 507, left-hand column, paragraph 4 ---	1-47
Y	US 5 802 278 A (ARUNKUMAR NAGARAJ ET AL) 1 September 1998 (1998-09-01) column 38, line 30 -column 39, line 49 figures 32,33 ---	31-41
Y	EP 1 111 850 A (ALCATEL USA SOURCING LP) 27 June 2001 (2001-06-27) paragraphs '0006!-'0020! figures 1-4 ---	31-41
A	PERLMAN R: "A COMPARISON BETWEEN TWO ROUTING PROTOCOLS: OSPF AND IS-IS" IEEE NETWORK, IEEE INC. NEW YORK, US, vol. 5, no. 5, 1 September 1991 (1991-09-01), pages 18-24, XP000248469 ISSN: 0890-8044 the whole document ---	31-41
A	GOBRIAL M N: "Evaluation of border gateway protocol (BGP) version 4 (V4) in the tactical environment" MILITARY COMMUNICATIONS CONFERENCE, 1996. MILCOM '96, CONFERENCE PROCEEDINGS, IEEE MCLEAN, VA, USA 21-24 OCT. 1996, NEW YORK, NY, USA,IEEE, US, 21 October 1996 (1996-10-21), pages 490-495, XP010203901 ISBN: 0-7803-3682-8 the whole document -----	31-41

INTERNATIONAL SEARCH REPORT

Int. ›nal application No.
PCT/CA 02/01181

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.:

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: 1-30,42-47

   A router comprising a control unit storing a master database to provide enhanced availablility of the routing protocols and routing database

2. Claims: 31-41

   A router providing a functional split between an interface layer and a routing layer.

INTERNATIONAL SEARCH REPORT

* information on patent family members

Internati[redacted] Application No
PCT/CA 02/01181

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