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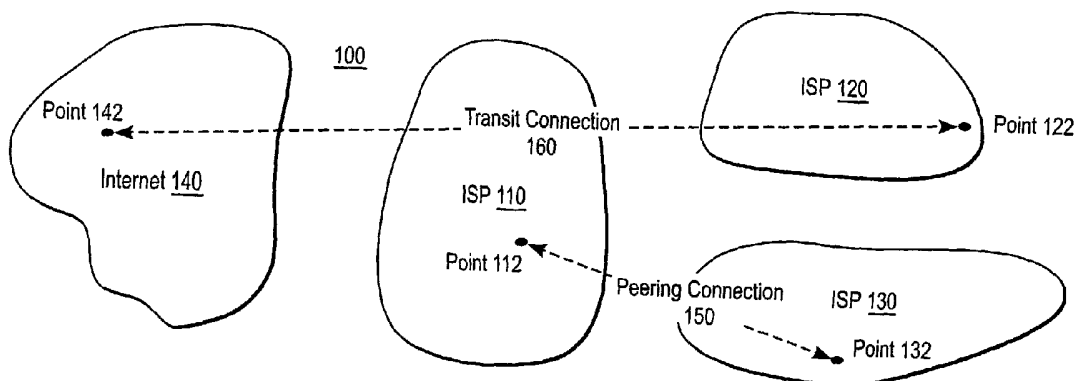
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[Continued on next page]

(54) Title: ROUTE SELECTION WITHIN A NETWORK WITH PEERING CONNECTIONS



(57) Abstract: A method and system for managing the routing of traffic within a network develops a topological address space map of the network to enable a "best route" selection process. The network is comprised of a backbone connected to a plurality of peering partners. Points on the network monitor traffic flows. A central facility analyzes the traffic and routes within the network and performs intelligent routing management. Intelligent routing management ensures that traffic is properly routed through preferred routes on the network and avoids inefficient routing. Intelligent routing management also selects new routes to be injected into the network in order to further improve the accuracy of the address space map of the network. Intelligent routing management ensures that bandwidth is requested and delivered topologically closely to peering partner networks, and that traffic is carried by the backbone for long haul data distribution in both directions.



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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/US 01/19080

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04L12/28 H04L12/24		
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, WPI Data, PAJ, INSPEC		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 009 081 A (WHEELER CHRISTOPHER D ET AL) 28 December 1999 (1999-12-28) column 4, line 36 -column 5, line 11 column 5, line 25 - line 63 column 13, line 59 -column 15, line 9	1,4-6, 58-61
Y	---	2,3
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> 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 20 February 2002		Date of mailing of the international search report 05.07.02
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 Tous Fajardo, J

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document; with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>PAXSON V E: "Measurements and Analysis of End-to-End Internet Dynamics, Chapter 8, Routing Symmetry" PHD THESIS, UNIVERSITY OF CALIFORNIA AT BERKELEY, [Online] - 4 June 1997 (1997-06-04) pages 92-100, XP002190886 Retrieved from the Internet: <URL:http://www.tux.org/pub/net/ftp.ee.lbl.gov/papers/vp-thesis/rt-symmetry.pdf> [retrieved on 2002-02-20] page 94, line 29 -page 95, line 8 ---</p>	2,3
P,X	<p>WO 00 38381 A (DIGITAL ISLAND INC) 29 June 2000 (2000-06-29) page 2, line 19 - line 24 page 3, line 10 - line 20 page 4, line 9 -page 5, line 2 page 6, line 24 -page 8, line 3 ---</p>	1,4-6, 58-61
A	<p>WO 98 20724 A (STARGUIDE DIGITAL NETWORKS) 22 May 1998 (1998-05-22) the whole document -----</p>	1-6, 58-61

INTERNATIONAL SEARCH REPORT

International application No.
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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.:

1-6, 58-61

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: 1-6, 58-61

A method for controlling the quality of a path followed in the most part of it

2. Claims: 7-45

A method for finding out the source addresses closer to a message entry point

3. Claims: 46-57

A method for managing routing

4. Claims: 62-72

Method for centralizing the decision of routing improvement

INTERNATIONAL SEARCH REPORT

International Application No

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