Exhibit 1020

(12) **United States Patent**
Gaddis et al.

(10) Patent No.: **US 7,554,930 B2**
(45) Date of Patent: **Jun. 30, 2009**

(54) **INTERNET ROUTE DEAGGREGATION AND ROUTE SELECTION PREFERENCING**

(75) Inventors: **Michael E. Gaddis**, DeFiance, MO (US); **Peter N. Hicks**, Webster Groves, MO (US); **David Barmann**, Valley Park, MO (US); **Steven T. Nunes**, Edwardsville, IL (US)

(73) Assignee: **Level 3 Communications, LLC**, Broomfield, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 682 days.

(21) Appl. No.: **11/084,804**

(22) Filed: **Mar. 18, 2005**

(65) **Prior Publication Data**

US 2005/0201302 A1   Sep. 15, 2005

Related U.S. Application Data

(62) Division of application No. 09/594,461, filed on Jun. 14, 2000, now abandoned.

(51) **Int. Cl.**
H04L 12/28   (2006.01)
H04L 12/56   (2006.01)

(52) **U.S. Cl.** **370/254**; 370/389; 370/395.31; 707/1; 707/100; 709/224; 709/229; 713/1; 713/185; 726/3; 726/22

(58) **Field of Classification Search** .... None
See application file for complete search history.

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Primary Examiner—Gregory B Sefcheck
Assistant Examiner—Salvador E Rivas
(74) *Attorney, Agent, or Firm*—Fellers, Snider, Blankenship, Bailey & Tippens

(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 flows 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.

16 Claims, 16 Drawing Sheets
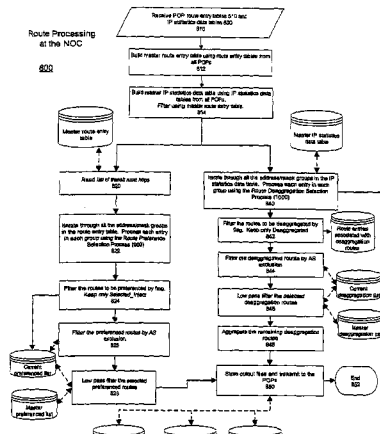
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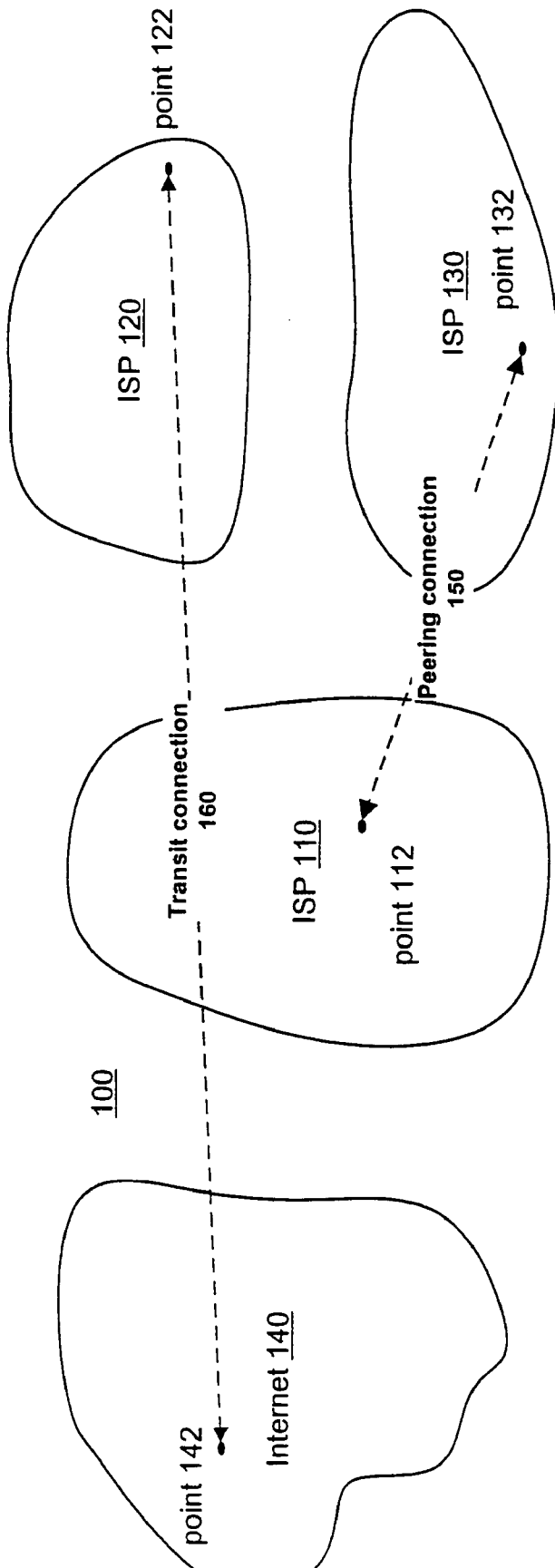
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Figure 1A
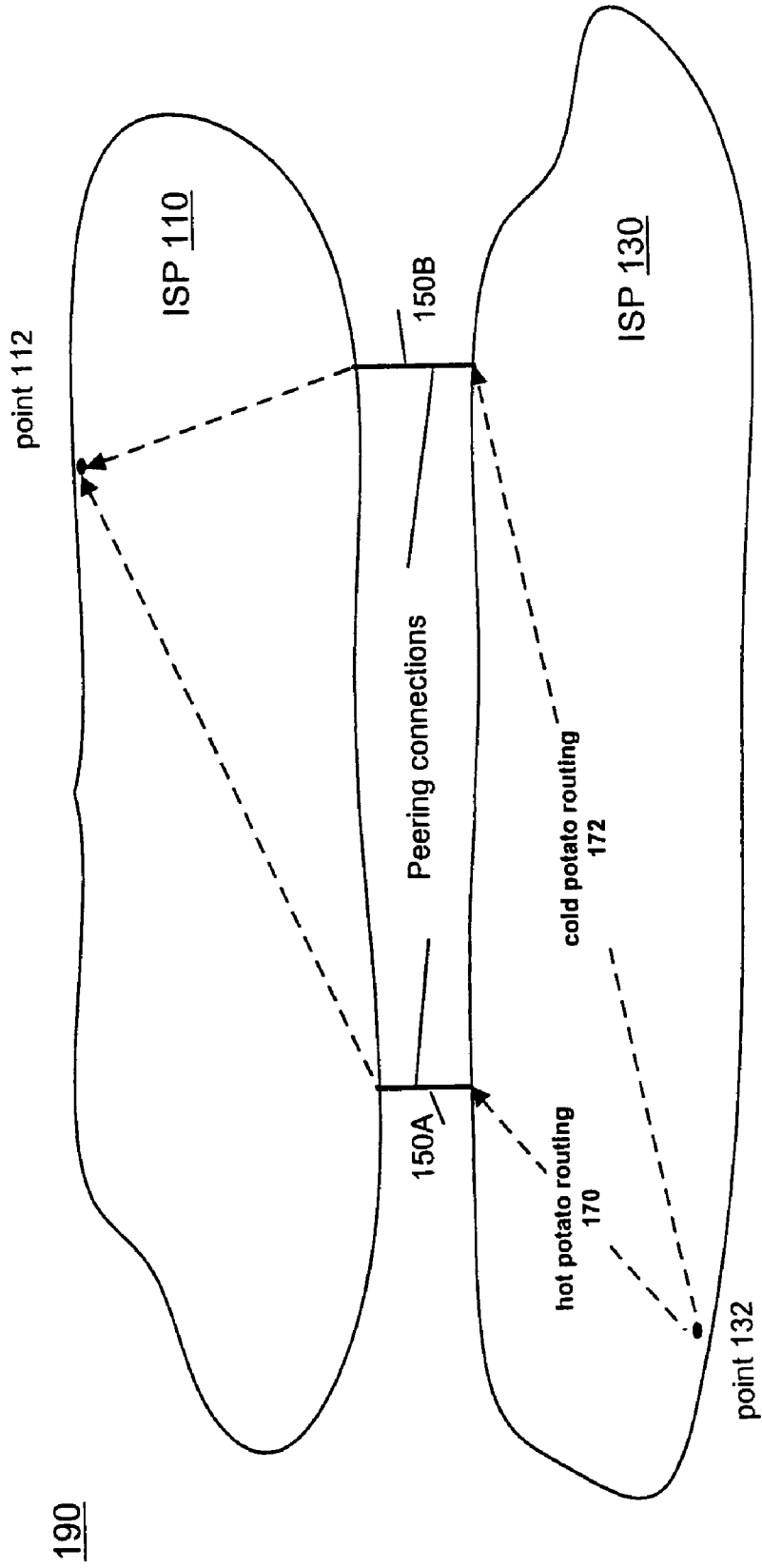
ISP 110

point 112

150B

Peering connections

150A

cold potato routing 172

hot potato routing 170

ISP 130

point 132

190

Figure 1B

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