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Shribman et al.

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(54) **SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION**

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This patent is subject to a terminal disclaimer.

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H04L 29/08 (2006.01)
H04L 12/24 (2006.01)

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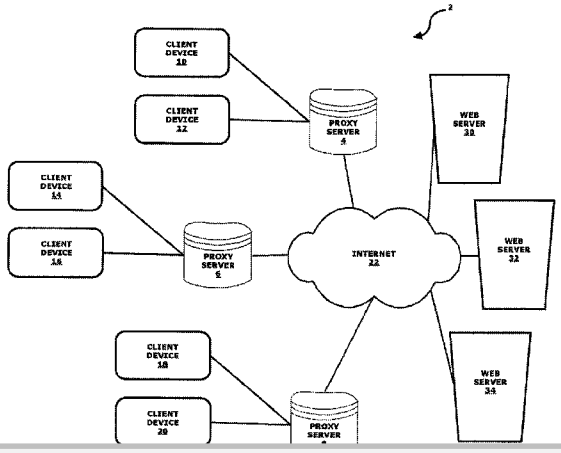
(57) **ABSTRACT**

A system designed for increasing network communication speed for users, while lowering network congestion for content owners and ISPs. The system employs network elements including an acceleration server, clients, agents, and peers, where communication requests generated by applications are intercepted by the client on the same machine. The IP address of the server in the communication request is transmitted to the acceleration server, which provides a list of agents to use for this IP address. The communication request is sent to the agents. One or more of the agents respond with a list of peers that have previously seen some or all of the content which is the response to this request (after checking whether this data is still valid). The client then downloads the data from these peers in parts and in parallel, thereby speeding up the Web transfer, releasing congestion from the Web by fetching the information from multiple sources, and relieving traffic from Web servers by offloading the data transfers from them to nearby peers.

23 Claims, 15 Drawing Sheets



Related U.S. Application Data

continuation of application No. 14/025,109, filed on Sep. 12, 2013, now Pat. No. 10,069,936, which is a division of application No. 12/836,059, filed on Jul. 14, 2010, now Pat. No. 8,560,604.

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(58) **Field of Classification Search**
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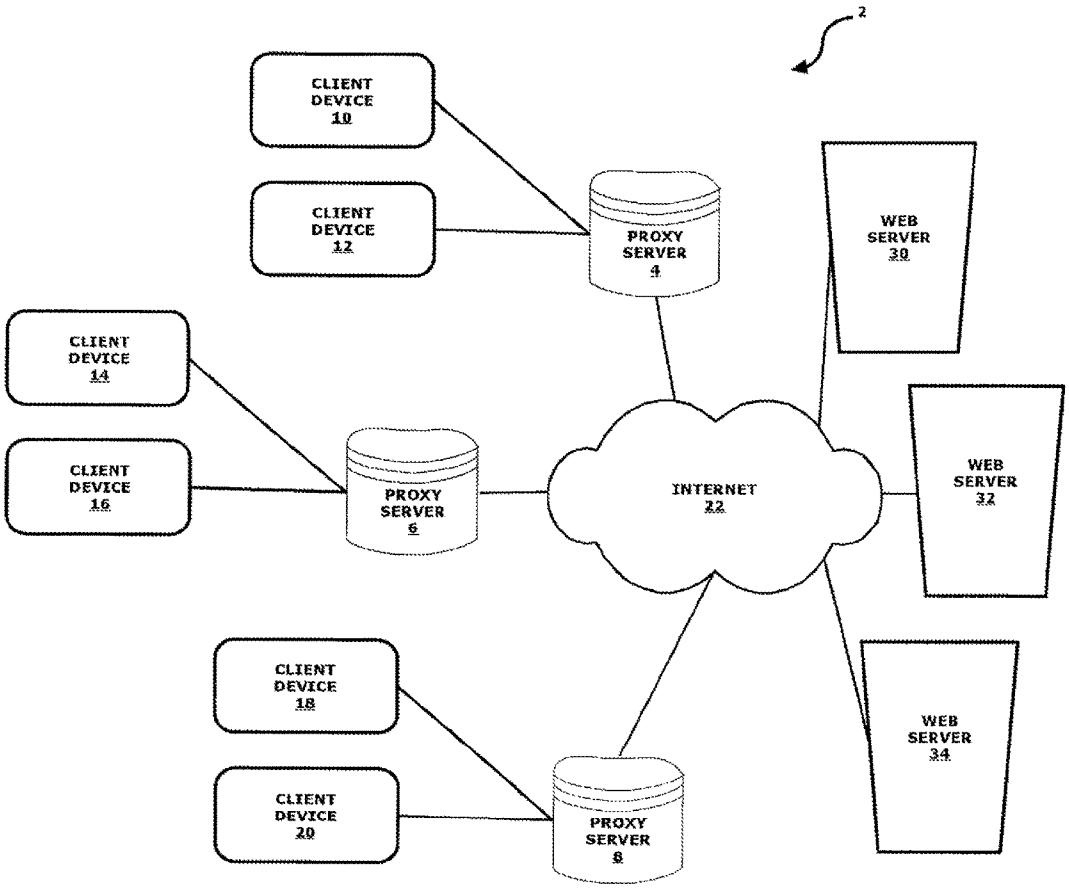

FIG. 1

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