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(12) **United States Patent**
Wright

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(54) **SELECTION OF PEERS TO CLUSTER WITHIN A PEER-TO-PEER NETWORK**

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(51) **Int. Cl.**
G06F 17/00 (2006.01)

(52) **U.S. Cl.**
USPC **707/622; 707/227; 707/230**

(58) **Field of Classification Search**
USPC 707/622; 709/227, 230
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,415,280	B1 *	7/2002	Farber et al.	707/698
2003/0040316	A1 *	2/2003	Stanforth et al.	455/445
2004/0044790	A1 *	3/2004	Loach et al.	709/241
2006/0056336	A1 *	3/2006	Dacosta	370/328
2007/0016939	A1 *	1/2007	Leibovitz et al.	726/3
2007/0174443	A1	7/2007	Shaheen	
2007/0291715	A1 *	12/2007	Laroia et al.	370/338
2008/0040606	A1 *	2/2008	Narayanan et al.	713/169

OTHER PUBLICATIONS

Srivatsa, M; Liu, L, Large Scaling Unstructured Peer-to-Peer Networks with Heterogeneity-Aware Topology and Routing, IEEE Trans. on Parallel and Distr. Sys., v17, Nov. 2006.
Huang, Y; Chen, Y; Jana, R; Jiang, H; Rabinovich, M; Reibman, A, Wei, B; Xiao, Z; Capacity Analysis of MediaGrid: . . . , IEEE Jnl on Selected Areas in Comm; v25, Jan. 2007.
Ramaswamy, L; Gedik, B; Liu, L; A Distributed Approach to Node Clustering in Decentralized Peer-to-Peer Networks, IEEE Trans on Parallel and Distr. Sys, v16, Sep. 2005.
Chen, Y; Huang, Y; Jana, R; Jiang, H; Rabinovich, M; Wei, B; Xiao, Z; When is P2P Technology Beneficial for IPTV Services?, NOSSDAV 2007.
Technical White Paper Smart Card in IMS; Gemalto, Feb. 2007.
<http://en.wikipedia.org/wiki/IMSI>, last updated Feb. 12, 2008.
<http://en.wikipedia.org/wiki/MEID>, last updated Dec. 8, 2007.
<http://en.wikipedia.org/wiki/DOCSIS>, last updated Feb. 4, 2008.

* cited by examiner

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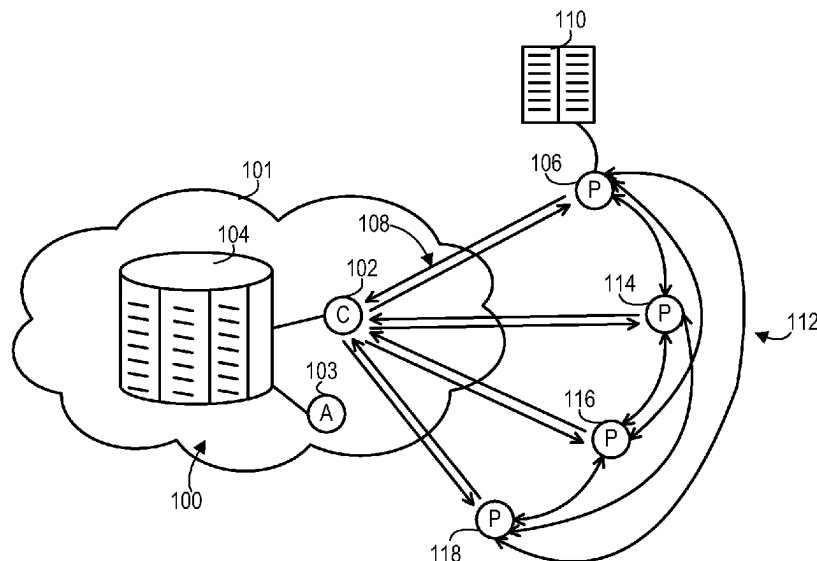
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(57) **ABSTRACT**

Peer-to-peer networks may be established by considering various characteristics of the peers when clustering the peers within the network. The characteristics may include operational criteria such as the cost of data transfer by each peer, the type and status of power being supplied to each peer, and the bandwidth available to each peer. The peer-to-peer networks may be established by requiring credentials to gain access to the peer-to-peer network, where those credentials may be a network access identifier that has previously been used to gain access to an underlying data network of the peer-to-peer network. The operational criteria used to select peers for clustering may be stored and accessed through association to the credentials used to gain access to the peer-to-peer network.

18 Claims, 6 Drawing Sheets



Data Co Exhibit 1043

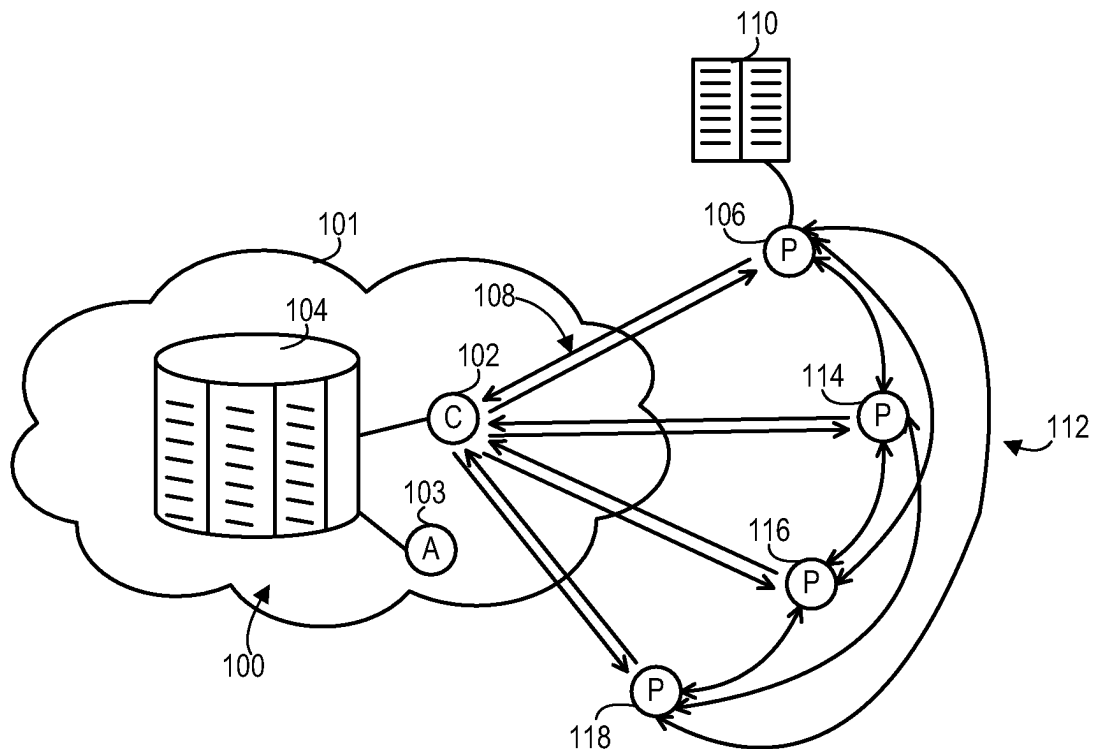


FIG. 1A

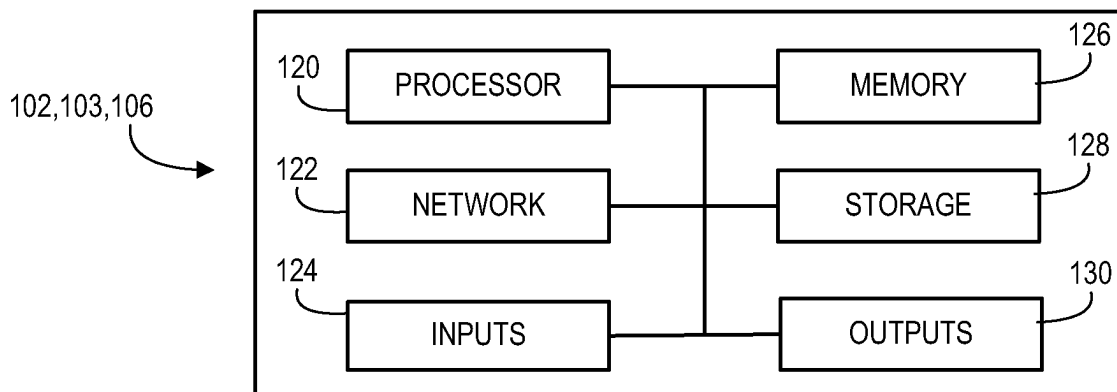


FIG. 1B

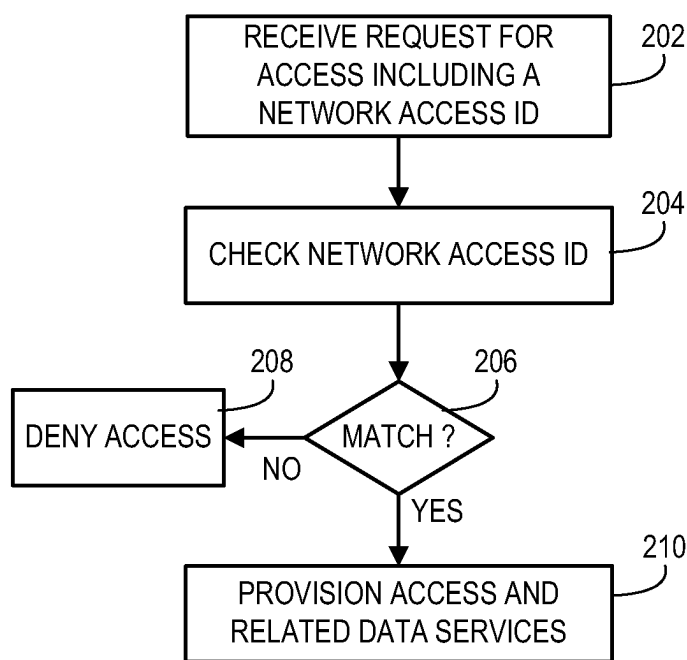


FIG. 2

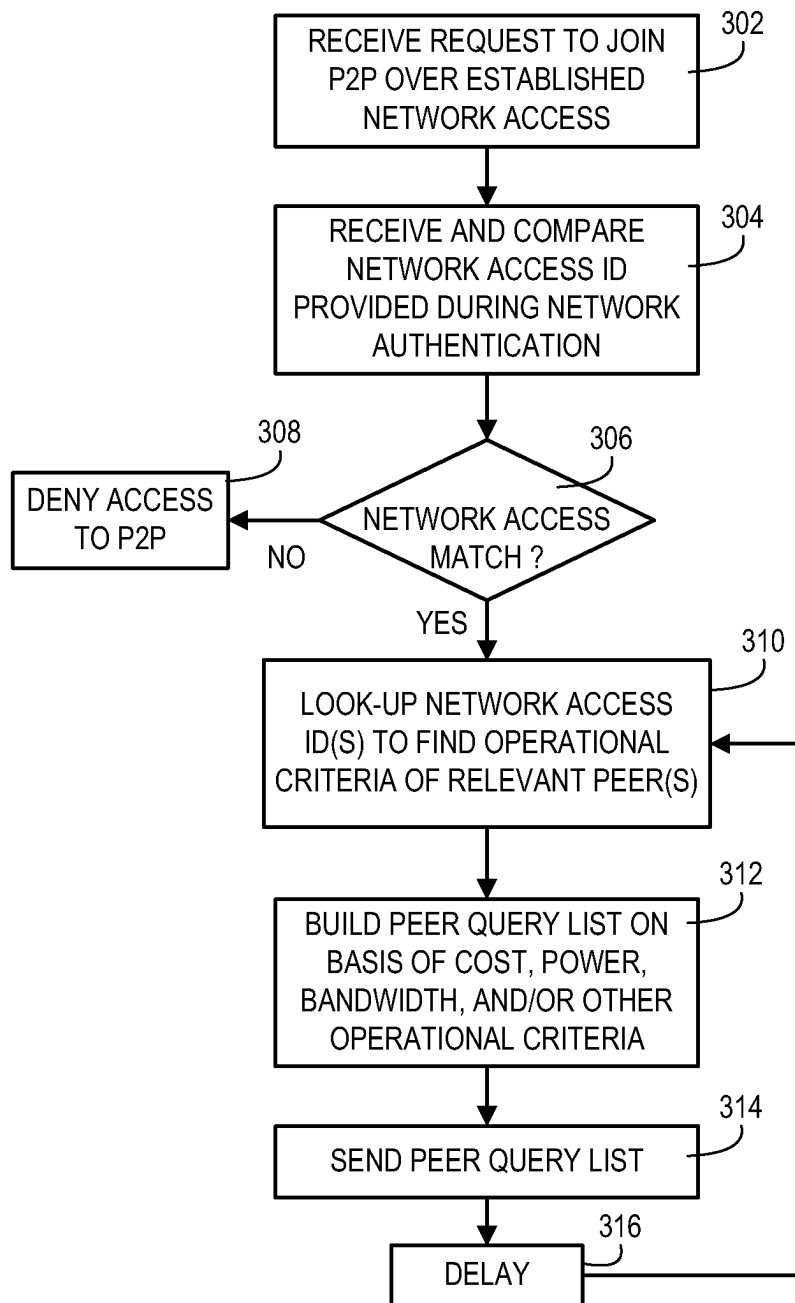


FIG. 3

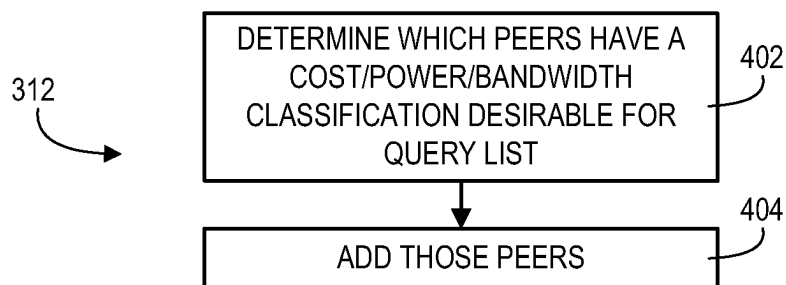


FIG. 4

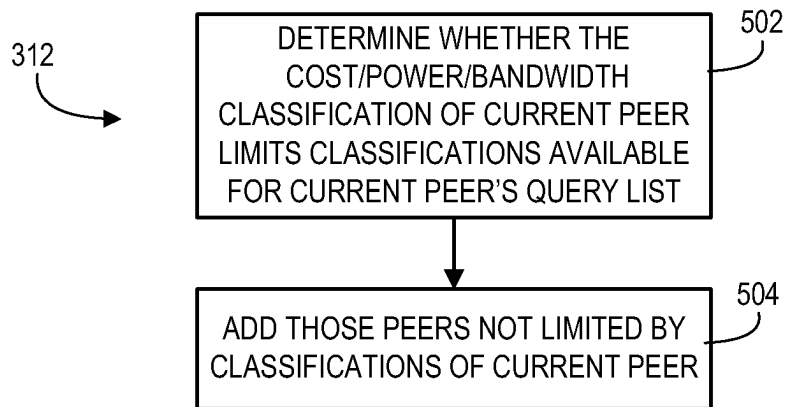


FIG. 5

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