



US 20230231910A1

(19) **United States**

(12) **Patent Application Publication**

Barker, JR. et al.

(10) **Pub. No.: US 2023/0231910 A1**

(43) **Pub. Date: Jul. 20, 2023**

(54) **PRUNING A DISTRIBUTED DATABASE FOR AN AD-HOC PEER-TO-PEER (P2P) NETWORK**

H04L 12/18 (2006.01)

H04L 41/0654 (2006.01)

(52) **U.S. Cl.**

CPC *H04L 67/1095* (2013.01); *H04L 67/104*

(2013.01); *H04L 12/18* (2013.01); *H04L*

41/0654 (2013.01); *H04W 84/18* (2013.01)

(71) Applicant: **TurbineOne, Inc.**, San Francisco, CA (US)

(72) Inventors: **Charles R. Barker, JR.**, Orlando, FL (US); **Keith Joseph Goldberg**, Winter Park, FL (US)

(21) Appl. No.: **18/094,914**

(22) Filed: **Jan. 9, 2023**

Related U.S. Application Data

(60) Provisional application No. 63/299,828, filed on Jan. 14, 2022, provisional application No. 63/401,004, filed on Aug. 25, 2022.

Publication Classification

(51) **Int. Cl.**

H04L 67/1095 (2006.01)

H04L 67/104 (2006.01)

(57)

ABSTRACT

Embodiments may relate to pruning a distributed database for a peer-to-peer (P2P) network. A node may transmit a first multicast beacon over the P2P network. The node may receive a unicast synchronization request in response to the first multicast beacon, the unicast synchronization request comprising a removed list for the distributed database. The node may compare the removed list to a locally stored node list to determine a node removal. The node may determine if there is a failure in a node information call made to a node relating to the node removal. The node may, subsequent to a determination of the failure, update the locally stored node list based on the node removal. The node may transmit a second multicast beacon comprising the node removal. Nodes receiving the second multicast beacon may update a locally stored removed list using the node removal.

100

