*G. Ding, B. Bhargava, Peer-to-Peer File-Sharing over Mobile Ad hoc Networks. In Proc. of the 2nd IEEE PERCOM-W, Orlando, FL, USA,2004*

DHT for P2P overlay level/file look-up

File name and peer ID is hashed to a key<hashing algorithm>. Routing protocol based on this DHT generates a routing table which is maintained at each of the peers. Each peer in this routing table would direct to an intermediate peer closer to the requested key. The peer closest to the requested key knows the address of the actual peer storing the requested file. Thus eventually we will have a peer route.

In DHT the peers are assigned to store certain section of the key space, hashing is responsible for ensuring that these keys are distributed randomly among the peers. Then the DHT efficiently routes the request to the peers with the required keys.

The particular key would be searched in the ring with O(logn) routing complexity.

DHT in a way helps you map nodes in a virtual space and then depending upon the routing protocol a route for the same could be worked upon.

And in order to get to these peers at the underlying level (MANET) the peer route has to go through the physical neighbors. Therefore we need routing protocol at the MANET level for the same.

For updating DHTs I have been referencing BitTorrent, to look into how updating of DHT works.

Kindly respond with your feedback so that I can look further onto those lines.