Can We Exploit the Wisdom of Large Ad Hoc Crowds?

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When people are joined together over communication networks, it is possible to ask questions and retrieve high quality answers using the wisdom of the crowd. But locating a suitable candidate for answering a given question within a large ad hoc crowd is non-trivial. We wish to source the best answers possible from the network, while at the same time controlling the levels of attention required from the crowd (a novel routing metric). We envisage the concept of a distributed question and answer service over ad hoc networks, focusing on fully decentralised methods and protocols to route questions towards members of the network who may be able to answer well. We are motivated by solving user privacy concerns, by allowing both question asking and answering to be plausibly deniable.

We thus define our application scenario: *Active network members may submit textual questions into the network at any time. Questions will use single hop routing tactics to jump between pairs of nodes aiming to find a suitable answerer. When a question reaches a node which is interested, it is recorded and dealt with as and when the user has time to do so. Generated answers will follow the same route that the original question took back to the originating node. The choice of tactics used for routing questions will adjust the resulting quantity and quality of answers and also the path lengths. We assume users require the highest possible answer quality while reducing the overhead in terms of user attention.*

Our poster will present details of our approach and simulations including sections on i) the modeling of Q&A users including their associated traits and behaviors which we have extrapolated from our Yahoo! answers dataset[1]. ii) our single hop routing tactics which provide plausible deniability iii) an overview of our ant like trail laying/following stigmergic routing based approaches iv) high level details of simulations including key metrics finally section v) with a selection of graphs.

References

[1] Y. W. D. C. (L6), "Yahoo! answers comprehensive questions and answers version 1.0," 2009.