A Study on the Global Configured Method of Blueweb Routing Protocol

余誌民
Communication Engineering
Engineering
ycm@chu.edu.tw

Abstract

Blueweb is a self-organizing Bluetooth-based multihop network equipped with a scatternet formation algorithm and a hybrid routing protocol.
The hybrid routing protocol can be configured for a particular network through
adjustment of a single parameter, the number of routing tier. In this paper, a
global configured method is proposed to determine the desired configuration for
Blueweb routing protocol. The global configured method is used in the route
master and designs three blocks including the traffic generator, the query packet
estimator, and the global tier decision blocks. The traffic generator block uses a
uniform end-to-end traffic model in each master to generate the query packets for
various N-tiers. The query packet estimator block measures the local and global
query packets to compute the local query probability. The global tier decision
block uses the parameter of local query probability to determine the proper
number of routing tier. Computer simulation results show that this method can
efficiently improve the routing performance and make the routing tiers
configurable for a Blueweb routing protocol.

Keyword：Bluetooth, scatternet formation, hybrid routing protocol