Nomenclature

Commonly Used Terms

avgDelay Average propagation delay

\( \beta \) Shape parameter in Weibull distribution

\( b_{ij} \) MN\(_i\)’s belief in MN\(_j\)’s behavior as safe host site for agents deployed by MN\(_i\)

\( c_{ij} \) Capacity of the link between MN\(_i\) and MN\(_j\)

\( \Delta t \) Time increments

\( d_{ij} \) MN\(_i\)’s disbelief in predicting MN\(_j\) as a safe host site for its agents

\( D_{max} \) Limit for delay tolerance

\( ds_{ij} \) The distance between nodes i and j

\( G_t, G_r \) Transmitter and receiver gain respectively

\( h_t, h_r \) Height of the transmitting and receiving antenna

\( L \) Length of Priority List

\( \lambda_i(t) \) Task route reliability of \( i^{th} \) agent in a step of simulation

\( \lambda(t) \) Average reliability of all the agents

\( m(t) \) No. of agents alive at time t

\( N \) No. of mobile nodes

\( n \) No. of nodes successfully visited by an agent

\( NoM \) No. of Mobile Support Stations

\( \omega_i(t) \) Connectivity of MH\(_i\) to the network
NOMENCLATURE

$PL_j$  Priority List of agent $j$

$P_{\text{link}}$  Link existence probability

$P_{\text{node}}$  The probability that MN$_j$ is working correctly at time $t$ that is the individual software reliability of MN$_i$

$Q$  No. of simulation steps

$r_i(t)$  The probability that agent $m_i$ is working correctly at time $t$ that is the individual software reliability of $m_i$

$R_s$  Reliability of $S$

$re_i(t)$  Reliability of MN$_i$

$ret_{\text{max}}$  Maximum number of retries

$M$  No. of mobile agents that constitutes $S$ and are deployed in the network thus $S=(m_1, m_2, ..., m_M)$

$S$  A Mobile agent based system

$\theta$  Scale parameter in Weibull distribution

$u_{ij}$  MN$_i$’s uncertainty of predicting MN$_j$ as a safe host site for its agents

Acronyms

2TR  Two Terminal Reliability

AOTR  All Operating Terminal Reliability

ATR  All Terminal Reliability

$(V, E)$  The graph (G) representation of our network

MANET  Mobile Ad hoc NETwork

MAS  Mobile Agent based System

MC  Monte Carlo

MH  Mobile Host

MN  Mobile Node
NOMENCLATURE

*MSS* Mobile Support Station

*NC* Network Coverage

*NHPP* Non Homogeneous Poisson Distribution

*QoS* Quality of Service

*SA* Stationery Agent

*SD* Standard Deviation

*TA* Travel Agent