Formula Sheet for Documentation

(1)

* is the reward probability for chosen route e of user *m* for the current timeslot *t.*
* is the evacuation rate for escape route *e* at timeslot *t* (when rate is being changed dynamically every time slot)
* is the number of users in route *e* at timeslot *t*.
* is the distance between route *e* and user *m*.
* is the sum of the QoSs of every timeslot for escape route *e*

(2)

(3)

(4)

* is the action probability for route *e* of user *m* calculated in the previous iteration.
* *b* is the learning rate
* is the normalized reward probability for user *m*’s chosen route *e* in timeslot *t*.
* is the chosen route

(5)

* is the reward probability for chosen route e of user *m* for the current iteration *i.*
* is the number of users in route *e*’s cluster *v* at iteration *i*.

Equations 6,7,8 do not require information from the timeslot.

(6)

(7)

(8)

\*information about equations 2,3,4 apply to equations 6,7,8, however equations 6,7,8 are not used between timeslots.

(9)

* is the number of users in route *e* at timeslot *t*.
* is the evacuation rate for escape route *e* at timeslot *t* (when rate is being changed dynamically every time slot)
* is the capacity of escape route *e*.

if (10)

if (11)