

Collect replica update  
and query requests

Observe possible  
routes

Intermediate user  
information

Behavior Assessment

Compare social  
willingness level

Autoinducer count of  
each intermediate user

Forwarding, updating  
and querying events

User score ( $A_i$ )

User Classification

Compare each user  
score to Threshold

Identify selfishness and  
minimum value of query  
and update forwards

Selfish  $E_{rf(min)}$

User selection & reaction

Perform data operations  
using cooperative users

Notify other users about  
selfish users

