Software Specification „Folder Sync“

## 3-Layer-Architecture

receive

send

with neighbor list

* send messages
* receive messages
* file transfer
* receive ping and react with pong for peer exploration
* {build-up connection}
* {terminate connection}
* refresh neighbor list (delete neighbors with expired timeouts)
* analyze messages from application and outreach them to the network
* periodically sending file list to neighbors
* sending request for file x from neighbor y
* sending file x to neighbor y

n2o

Queue

o2a

a2o

o2n

Message specification:

incoming Ping (n2o) := ("Ping", PingID, TTL, Hops, senderUsername, senderIP)

outgoing Ping (o2n) := ("Ping", PingID, TTL, Hops, ownUsername, ownIP, targetIP)

incomingPong (n2o) := ("Pong", ID, [(Username, IP), (Username2, IP2), ...])

outgoingPong (o2n) := ("Pong", ID, [(Username, IP), (Username2, IP2), ...], targetIP)

incomingRefFL (n2o) := (msgType, fileList, senderUsername, senderIP)

incomingRefFL (o2a) := (msgType, fileList, senderUsername, urgentFlag)

outgoingRefFL (a2o) := (msgType, fileList)

outgoingRefFL (o2n) := (msgType, fileList, ownUsername, targetIP)