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Project Plan IK 2218 - The rumor protocol

The rumor protocol is a decetralized peer-to-peer gossip protocol that spreads rumors from peer-to-peer in the network. The idea is that it should be minimal and general purpose, rather than addressing a specific use.

Functionality

The Rumor Protocol should have the following functionality.
Peers should periodically send IP addresses and data to peers in the network.

Peer Exchange

A peer in the network should be able to send IP addresses from its IP list to any other peer in their list.

Send Data

A peer should be able to send data to any other peer in its list of peers. A hash of the data is included to ensure data integrity.

Request Data

A peer should be able to request data from any other peer in its list of peers.

Data

Data will be stored in a hash table with (key, value) where key is a hash of the data and value is the data.

Technology

- The protocol will be based on UDP.
- All communication should be simplex.

Possible extensions

- Group peer exchange, send data and request data together in one datagram.
- Onion routing.
- Signatures instead of hashes.

Possible usage

- Share git objects
- Twitter like social network (GUI)