

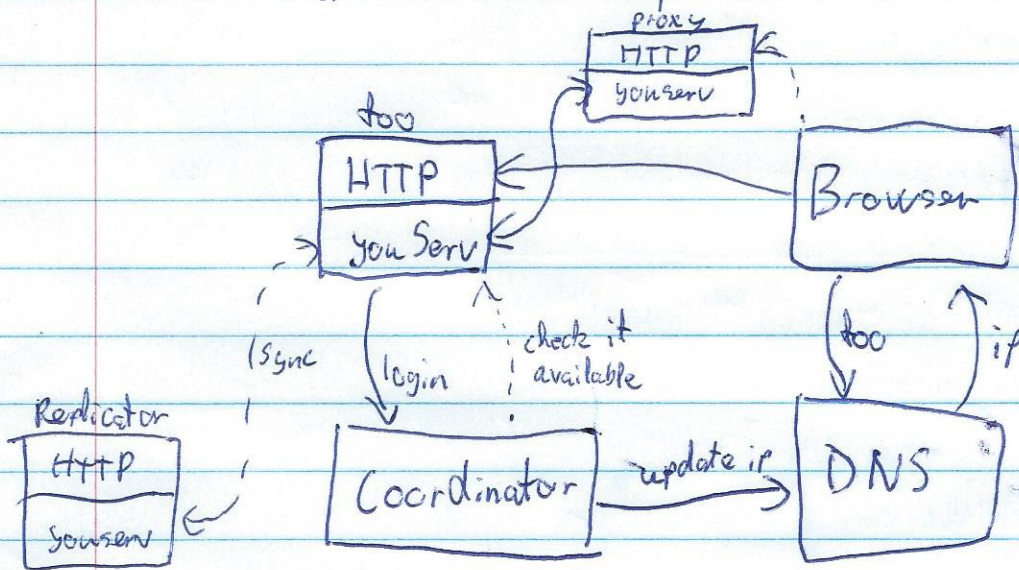
3 Applications for P2P

youServ

File sharing in companies

P2P superior to email, central web servers, shared file systems, cloud

Each user runs own peer (if he wants to share)



Use proxy if behind firewall

Use replication for when user is offline (manual setup)

- logcat registers replication host

Coordinator light work

Peers do heavy lifting

~~Use~~ Only browser required to browse content

youSearch

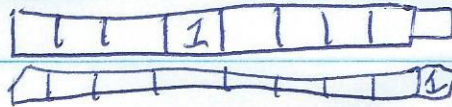
- Searching for files
- Crawling slow, never complete
- use P2P

inspector → indexer → summarizer

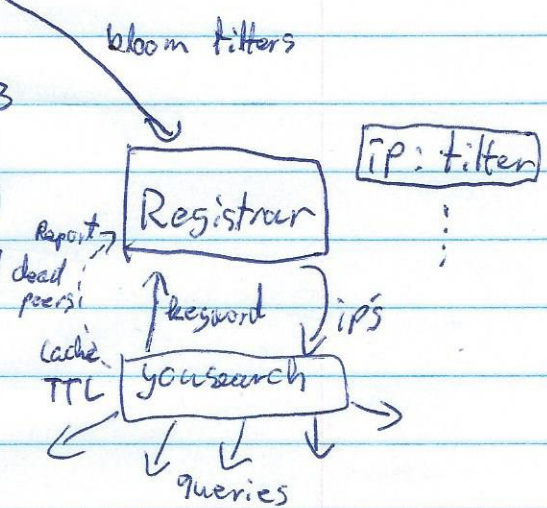
bloom filter

$$\text{hash}(\text{keyword}) = 3$$

$$\text{hash}(\text{keyword}) = 9$$

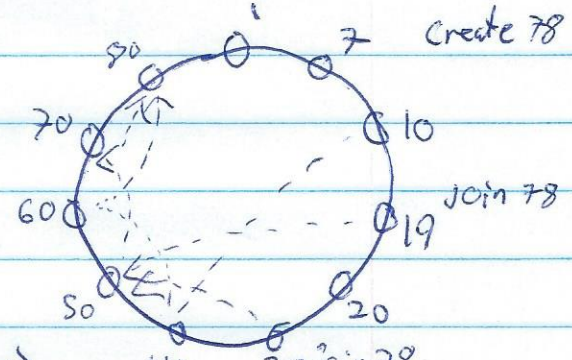
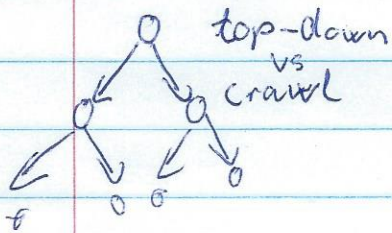


If bit is set, keyword might be present
 Registrars can handle 1 bloom filter each

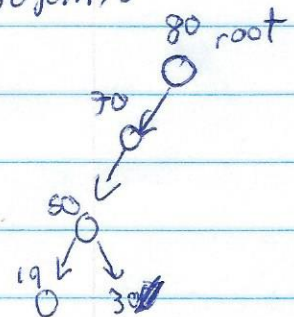


SCRIBE

P2P multicasting using Pastry



- Create group id = hash(name, creator name)
 route create message to id - who becomes root
- Joining
 - Send join message towards id
 - intermediate node becomes forwarder if not already
 - forwarders don't have to be members



- Leaving
 - mark locally as non-member
 - if no children, tell parent and leave
 - else, keep being forwarder
- Failures
 - Keep alive sent to children
 - if not seen, rejoin
 - root state replicated