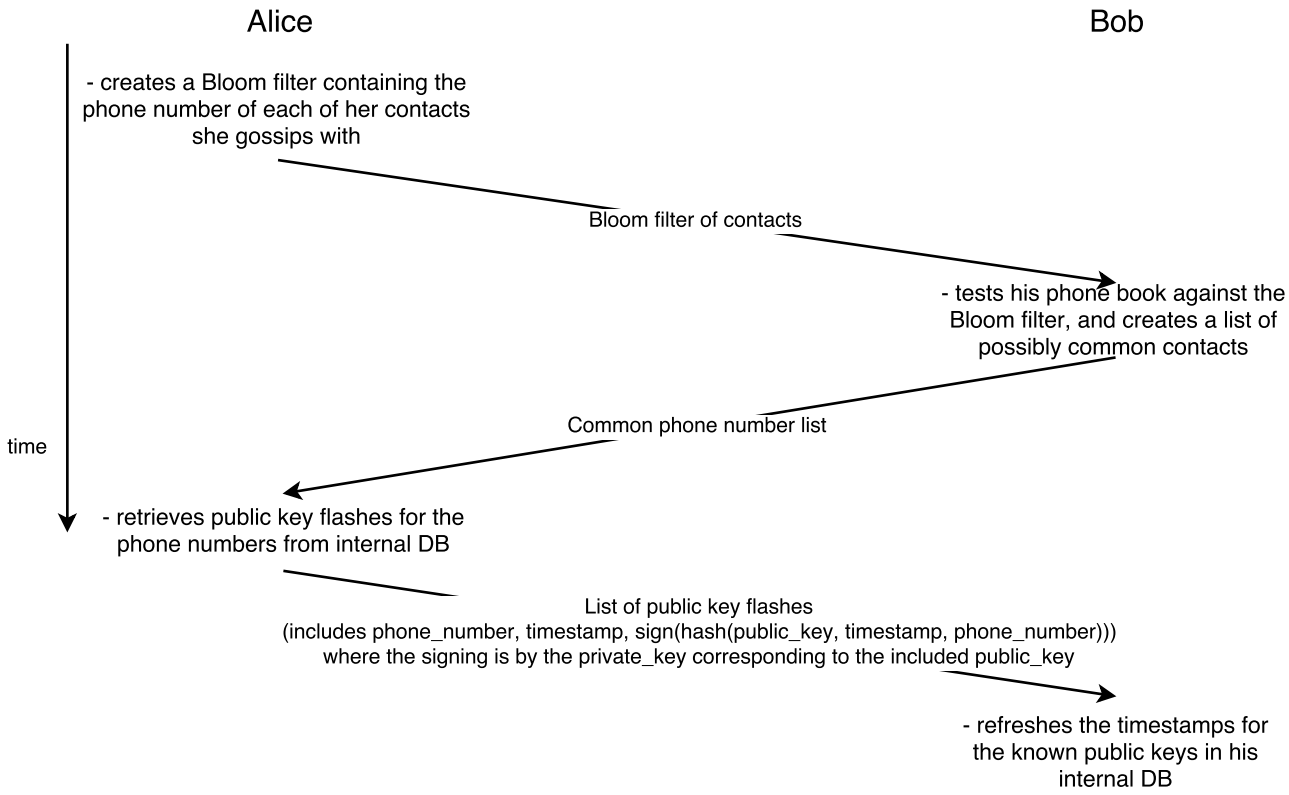
Alice
Bob
- creates a Bloom filter containing the phone number of each of her contacts she gossips with
Bloom filter of contacts
- tests his phone book against the Bloom filter, and creates a list of possibly common contacts
Common phone number list
time
- retrieves public key flashes for the phone numbers from internal DB
List of public key flashes
(includes phone_number, timestamp, sign(hash(public_key, timestamp, phone_number)))
where the signing is by the private_key corresponding to the included public_key
- refreshes the timestamps for the known public keys in his internal DB