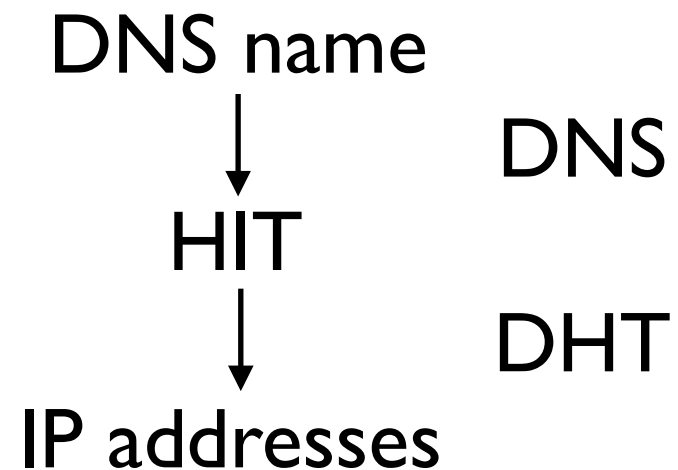
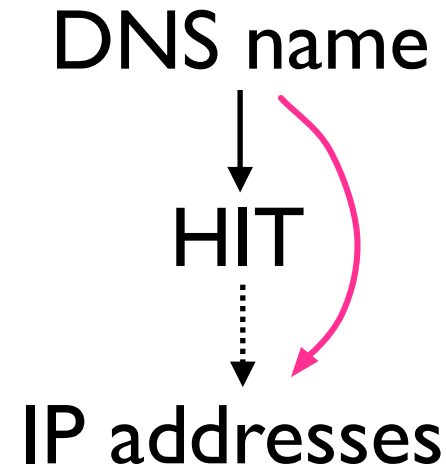


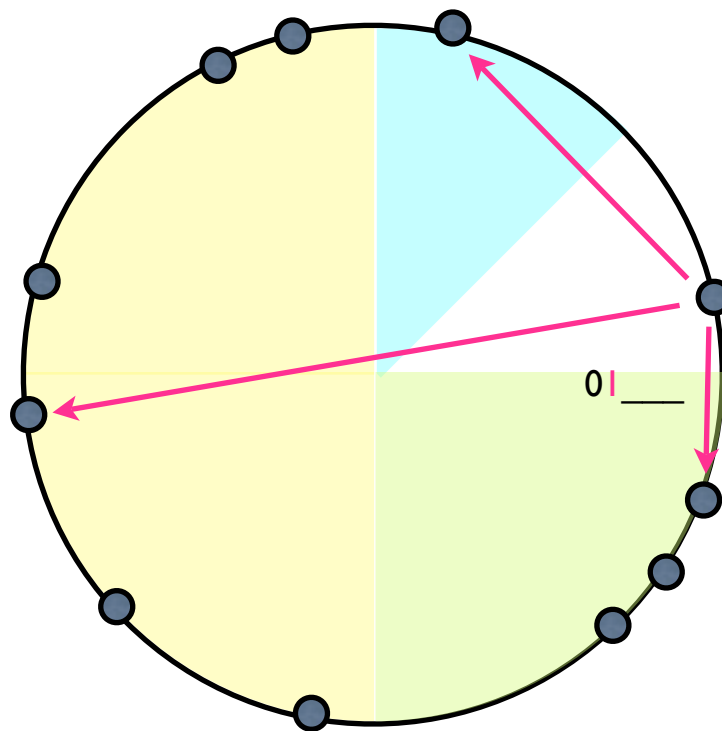
Referrals Problem Statement

- Currently a DNS name resolves into a HIT **and** a (set of) IP address(es)
- Fails on protocols that send only identifier in the payload
 - Third party FTP, SIP, some P2P systems
- Problem to solve: How to resolve a HIT into a (set of) IP address(es)



Distributed Hash Tables

- Mostly used for P2P and overlay routing
- Decentralized database for flat data
- Storage per node: $\log |N|$
- Lookup time: $\log |N|$
- A number of solutions differing in details



Distributed hash tables

- Already solved problems:
 - Basic lookup based on flat key space
 - Robustness against no-such-data attack
 - Security against falsified-records attack
- Open problems:
 - Incentive models for scalable deployment
 - Robustness against collusion