
Directories...
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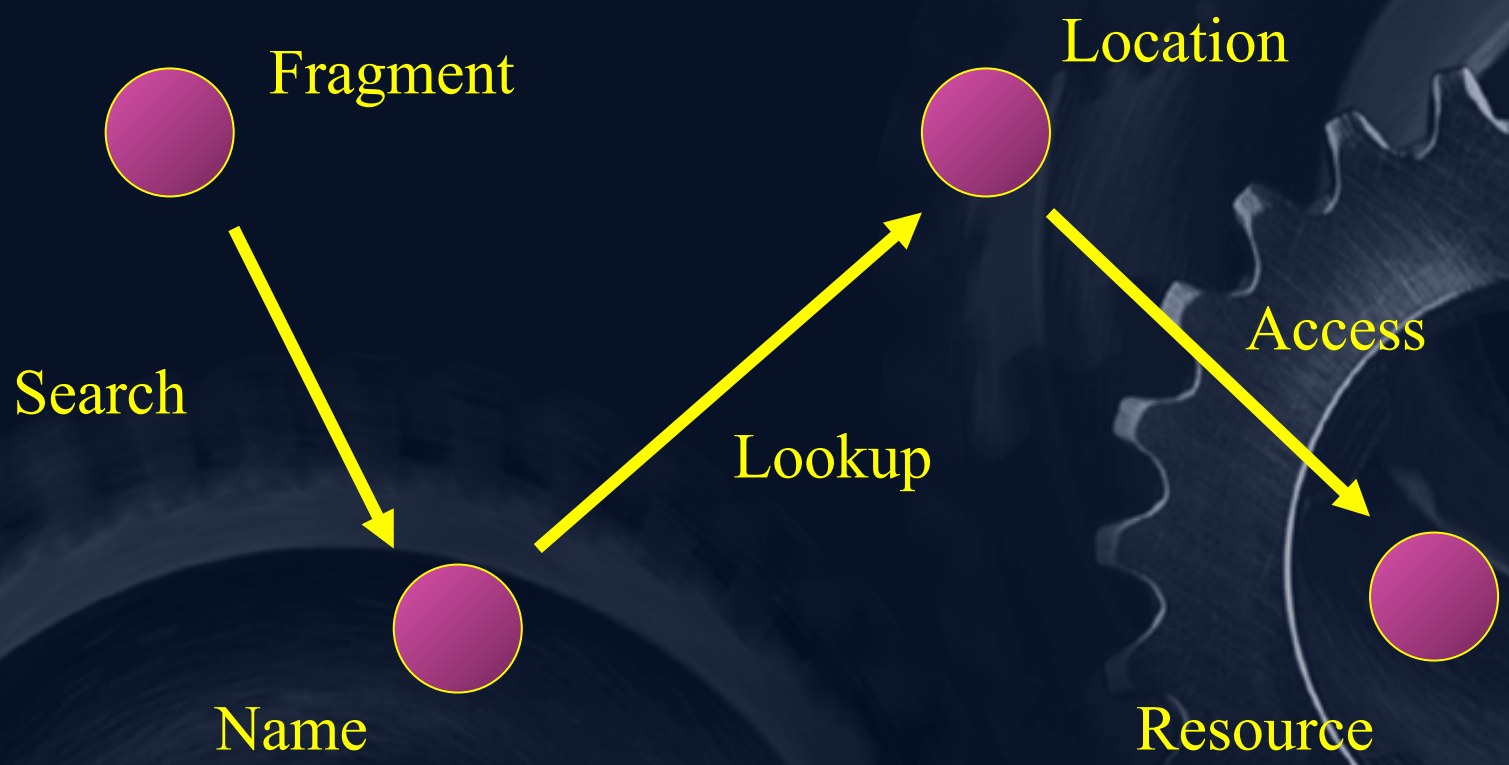
Strategy



1. Fragment

- Fragments of information which one hope will be enough to uniquely identify the resource
  - Name of a person
- Searches are used
  - Centralized
    - AltaVista, Archie
  - Decentralized
    - Index-based, Whois++, (LDAPv3)

1. Fragment - Problem

- The John Smith problem
- Distributed indices
  - Query Routing
  - Recursive process
- Collaboration
- Matching
- Speed
- Caching

2. Name

- Name of the object, which uniquely identifies it
  - A domainname
  - A URN (DOI for example)
  - A DN
- Lookups are used
  - Find the service (another lookup?)
  - Lookup at a resolution service

2. Name - Problem

- Finding the service
  - Given a base in LDAPv3, how to find the LDAP server?
- Fast services are needed
  - DNS?
- Given two names…
  - …are they referring to the same resource?

3. Location

- Unique location of the resource
  - URL
- Direct access using predefined protocols and services

3. Location - Problem

- Given a list of locations…
  - …which one to select?
    - Cost, speed, access policy
- Support for the access protocol
  - Protocol gateways?
  - Conversion of data?

TISDAG

- One piece of the puzzle can be…
  - …the TISDAG project
- It takes care of
  - Routing queries to the right destination
    - I.e. holds an index
  - Protocol translation between protocols
    - LDAPv2, LDAPv3, HTTP, SMTP, Whois++
  - Schema translation
- http://tisdag.sunet.se

Summary

- The Internet need directories
  - Otherwise we will forever use locations
- The problem is harder than what we thought
- Maybe start with lookups?
- Terminology problems
- Don't do everything at the same time!