

# Topics for Home Networking Seminar

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# Local name resolution

- Name resolution that can work when the home network is disconnected from the Internet
    - Browse local cache of web pages
  - Local DNS cache for disconnected mode
  - How about resolution of flat names
    - E.g. file hashes in P2P systems
    - Hash of Host Identities (HITs)
  - Resolution of flat names typically done with a Distributed Hash Table (DHT)
    - Become unavailable upon disconnection
    - Maintain a local cache/set of DHT servers at home
- draft-ahrenholz-hiprg-dht-00.txt, draft-ietf-hip-dns-

# High-speed home LAN

- How to transfer e.g. DVD images (8 GB) to HD DVD (30 GB) between home hosts in a fast way
  - Wireless is not really enough
- Now 1 Gbps switches
  - Cannot really switch all ports at full speed
- Several parallel interfaces
  - How to map those to a single wall socket?
- 10 Gbps switches are coming
  - Can existing cat5e/cat6 cabling handle that?

<http://grouper.ieee.org/groups/802/3/ae/index.html>

<http://www.sterbenz.org/jpgs/tutorials/hsn/>

<http://www.redbooks.ibm.com/abstracts/gg243816.html>

# Local service discovery

- How to locate nearby devices (in the same home LAN)
  - Generic protocols such as SDP...
- Assume the devices use Host Identity Protocol
  - How to announce its identity to peers
  - Modified ARP and DHCP?
  - HIP Bootstrap packet (BOS)  
draft-moskowitz-hip-08.txt
  - draft-jokela-hip-service-discovery-00.txt
- Suitable frequency for announcements?
- Working in disconnected mode? Can leak out the information to Internet?