Mobility: The Problem

“If a host were to move, its network (and host) addresses would change and this would affect the connection identifiers used by the TCP. This is rather like a problem called "dynamic reconnection" which has plagued network designers since the inception of the ARPANET project in 1968.”

-- Vint Cerf, “The DoD Internet Architecture Model, 1983
Mobility solutions at many layers

- Network layer (Mobile IP)
- Layer 2 (e.g., mobility in Wi-Fi)
- Transport layer (e.g., TCP Migrate for connection migration)
- Application layer (e.g., Mosh mobile shell app)
- Application layer (e.g., migrating web and video sessions)
Mobile IP: Terminology
Mobile IP: Basic Packet Forwarding
Questions

• How does mobile host know if it is in the home network or a foreign network?
• How does the tunnel work?
• When roaming, why must mobile send authenticated message to home agent?
• How does home agent intercept packets when mobile is roaming in foreign network?
• How does the foreign agent “detunnel” packet for mobile host?
• How does the reverse path work?