What Is Mobility?

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“99% of the research is about host mobility and 90% of that is Mobile IP”

-- Anonymous

Two problems:
1. Host mobility was solved long time ago
2. Host mobility not relevant for applications
GSM Terminal Mobility

HLR

VLR

Caller

Mobile Phone
Let’s Do It “On The Internet”!!!
Host Mobility: Research Problem

- Research questions solved long time ago
- Solution: ID/locator split

- Implementation details are “just engineering”
So, What’s Mobility?

- Host mobility important only when I need to be reachable by others in (semi) real-time
  - Read: Telephony and IM
  - Telephony a solved problem
  - IM not real-time by any means
  - Host mobility an “irrelevant” problem

- So, what kind of mobility is needed?
Mobility Is:

- **“Me accessing my stuff”:**
  - From different devices
  - At different times
  - With different (or no) network connections

- **“Caller” moves, “callee” stays “put”**
  - Host mobility solves the exact opposite...
  - Nomadic movement, handovers “irrelevant”
Have We Been Trying To Solve The Wrong Problem?

Do we even know what the right problem is?
Challenges

• Where to solve “me and my stuff”?  
  – Network architecture or higher layer?  
  – Might involve syncing, caching, …  
  – How much can be automated?

• Future network architectures & mobility  
  – Dude, where’s my stuff? Naming, storage, …  
  – Don’t break “Permanent ID, mapping, location”!

• New mobility paradigms?  
  – Besides “Permanent ID, mapping, location”
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This is the problem to solve!