What Is Mobility?

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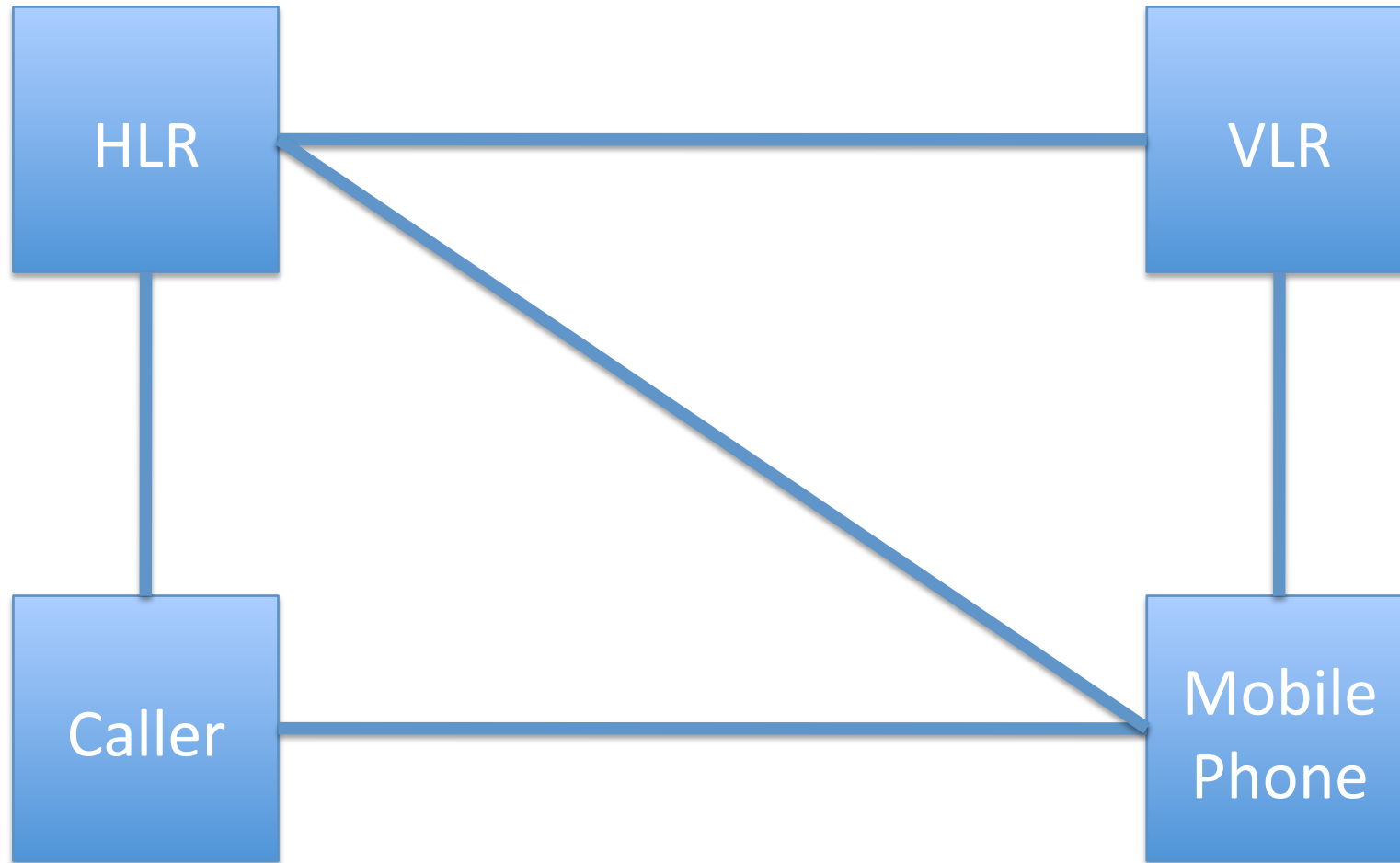
Mobility Research & Internet

"99% of the research is about host mobility and 90% of that is Mobile IP"
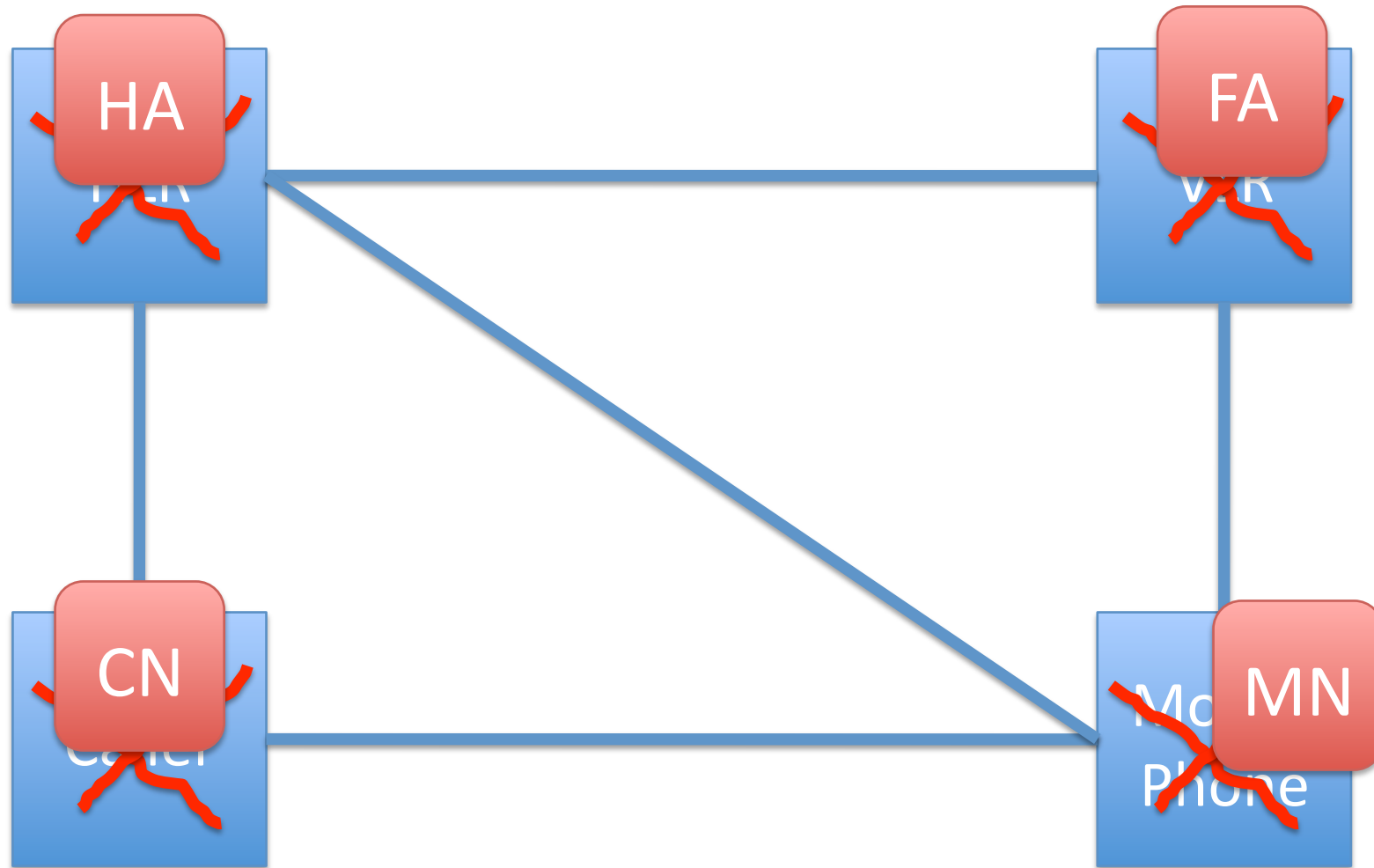
-- Anonymous

Two problems:

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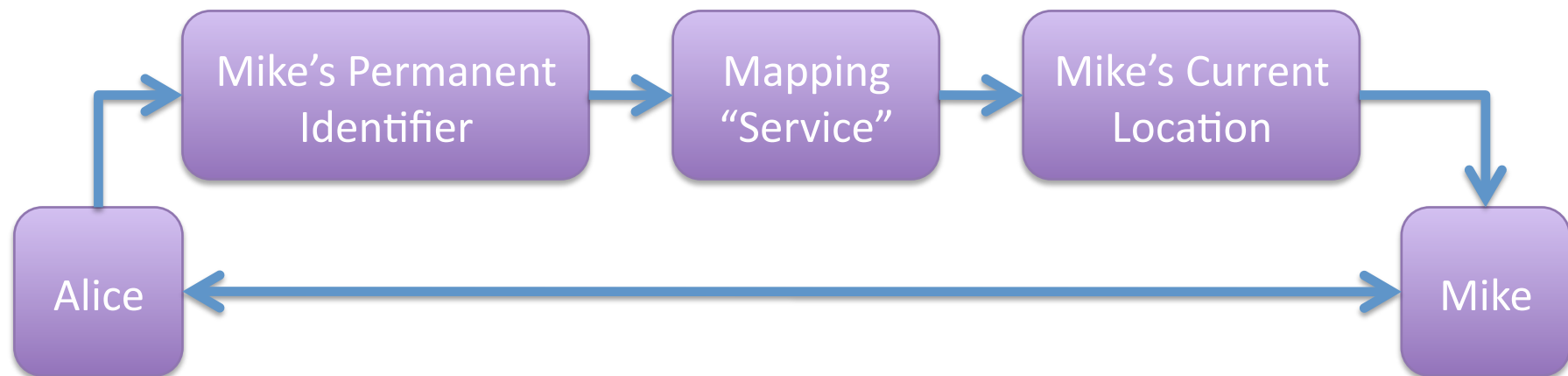
GSM Terminal Mobility

Let's Do It "On The Internet"!!!

Host Mobility: Research Problem

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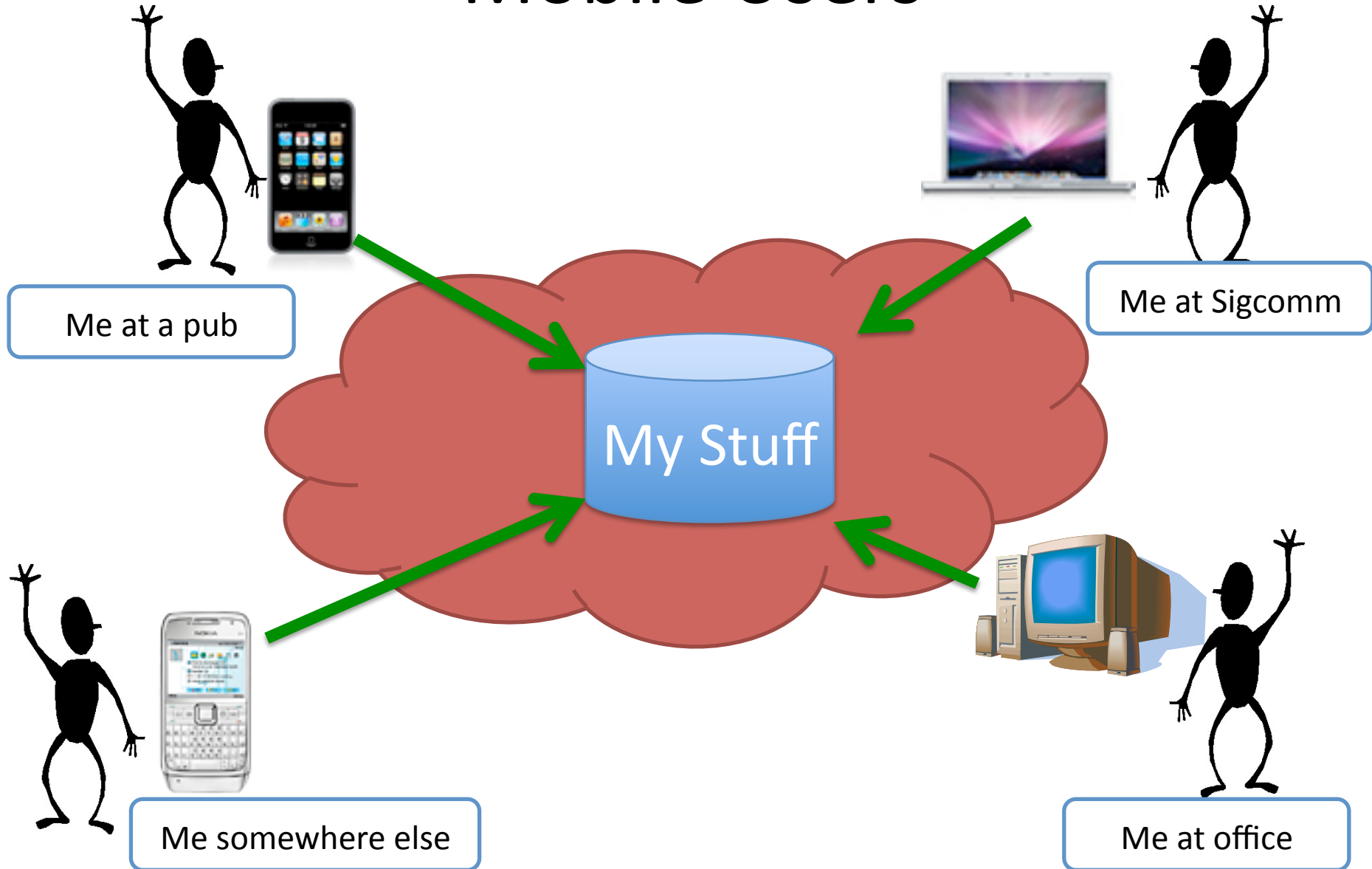- Solution: ID/locator split

- 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?

Mobile Users

Me at a pub

Me at Sigcomm

My Stuff

Me somewhere else

Me at office

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"

Mobility Is:

- **"Me accessing my stuff":**
  - From different devices
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This is the problem to solve!