Multi-Homing and Mobility:
Baseline Tidbits

- **Shoch, et al**

  Name: What   (identity)

  Address : Where (location)

  Route: How   (sequence)

- **Infrastructure**
  - Adoption/Change is very expensive
  - Third-party service are infrastructure

- **30 years of routing, management, etc.**
  - Works well
  - More to do, e.g., performance-based adaptability
  - We do *not* want to start over.

- **IPv4 = IPv6**
  - For addressing, routing, etc. constructs

Where is the problem?

- **IP**
  - Address = Topology interface Point of Attachment (TIPA)
    Multi-home: *Multiple TIPAs at the same time*
    Mobility: Multiple TIPAs over time

- **Degrees of mobility (rate & scale of change)**
  - We need some standard terms of reference

- **TIPAs are addressing works pretty well**
  - Think of address as location of *network's* interface, not really end-system's address

Problem:
Can we move the Problem?

- **Transport tied to single TIPA**
  - What if it weren't?   *(like SCTP)*
  - End-system vs. Infrastructure

- **Challenges to Mobile/multi-homed transport**
  - Security of address add/remove ops
  - Connectivity interrupts (no address overlap)
  - Dynamics of choosing address to use
  - Retrofit to existing transport usage