

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