DMM: Distributed Mobility Management - Towards Efficient and Scalable Mobile Networks

Special Session along with ICN 2017
Problem Statement

- Centralized Mobility Management (CMM)
  - MIP - Home Agent
  - 4G – PDN-GW
  - Single point of failure
  - Bottleneck in data path
  - Scalability issues
DMM Issues (by IETF)

• Distributed mobility management
  – Tunneled x host based DMM
  – Split anchor functions
• Bypassable network-layer mobility support for each application session
• IPv6 deployment
• Existing mobility protocols
• Coexistence with deployed networks/hosts and operability across different networks
• Operation and management considerations
• Security considerations
• Multicast considerations
  – Per-flow multicast routing support
Today

• Inter-domain handover
  – CI-PMIPv6

• Expressive Modeling
  – Timed Petri Nets (work in progress)