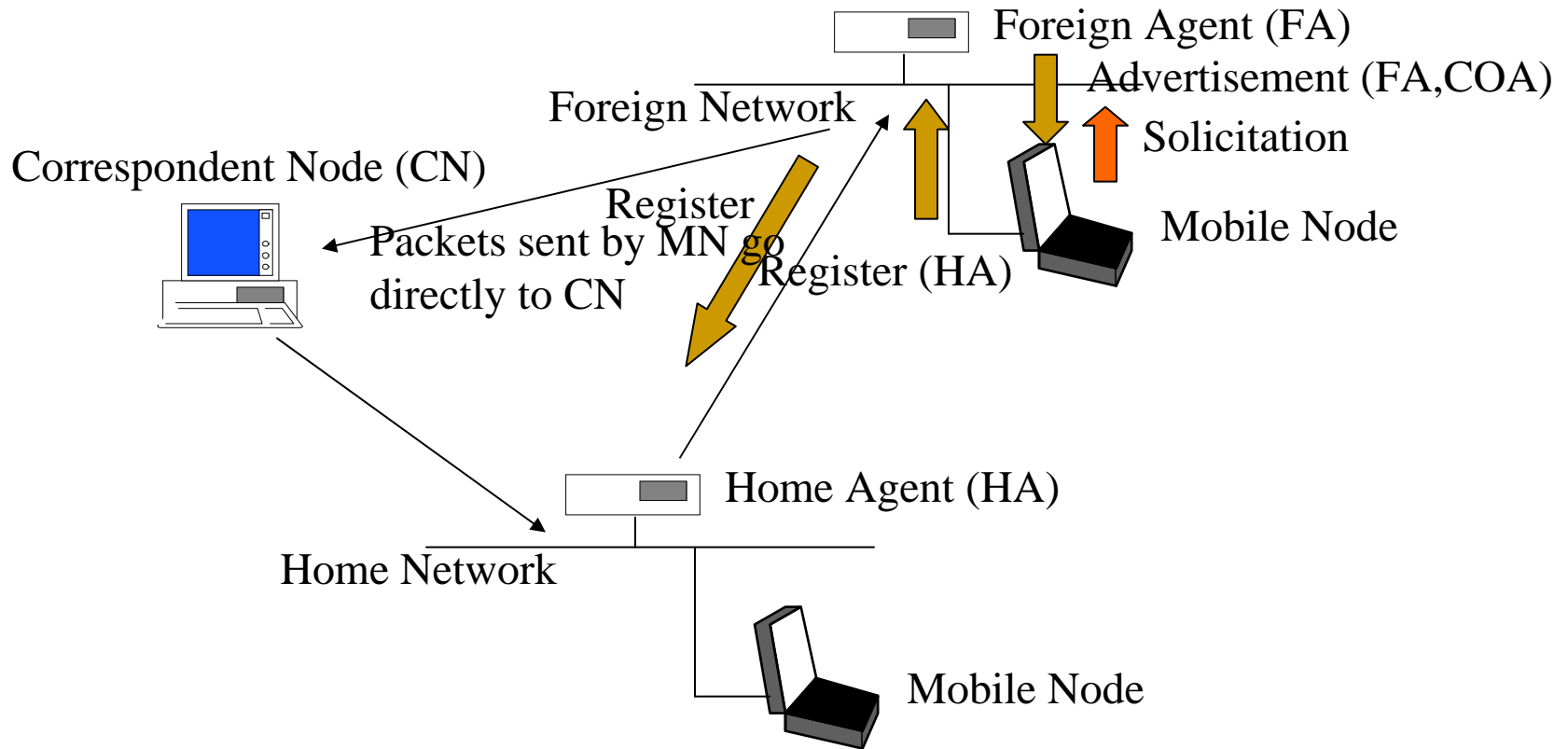

Mobile Multicast Problem Statement

Zhonglei Zou

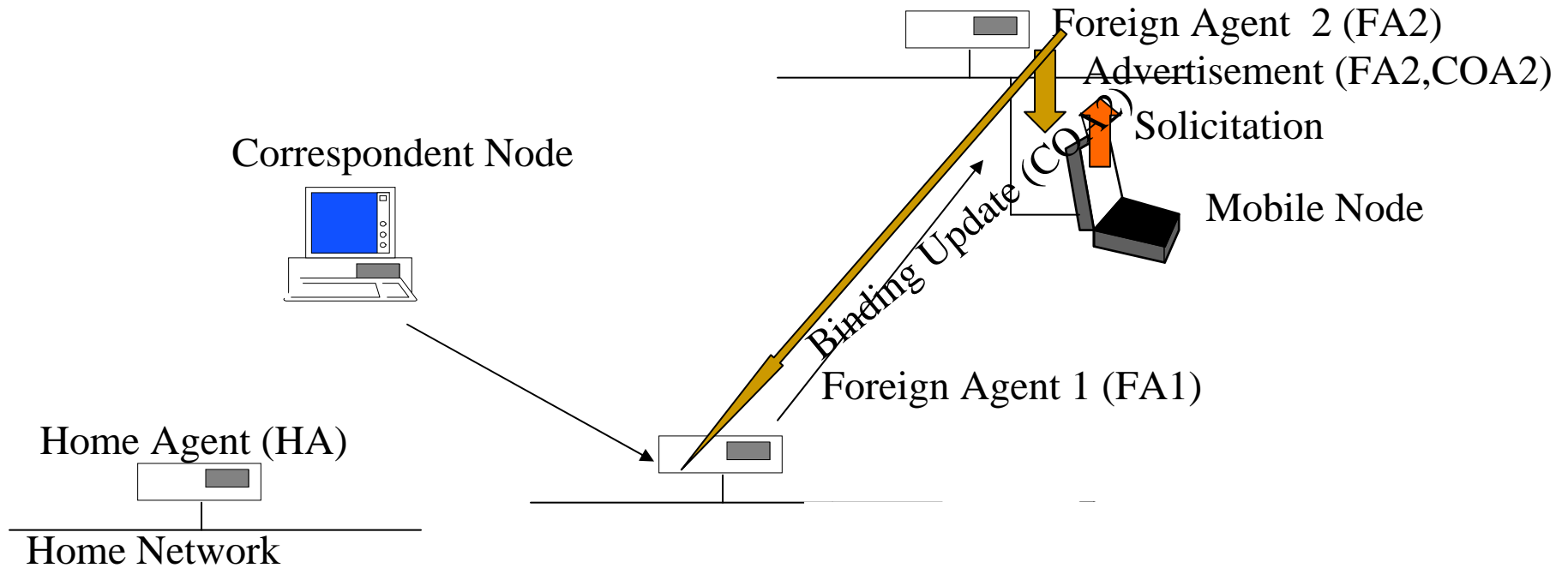
Agenda

- Mobile IP Architecture
 - Problems in Multicast with Mobile IP
 - Multicast Listener Mobility
 - Source Multicast mobility
 - ASM (any source multicast)
 - SSM (source specific multicast)
 - Deployment issues
-

Mobile IP Architecture (1)

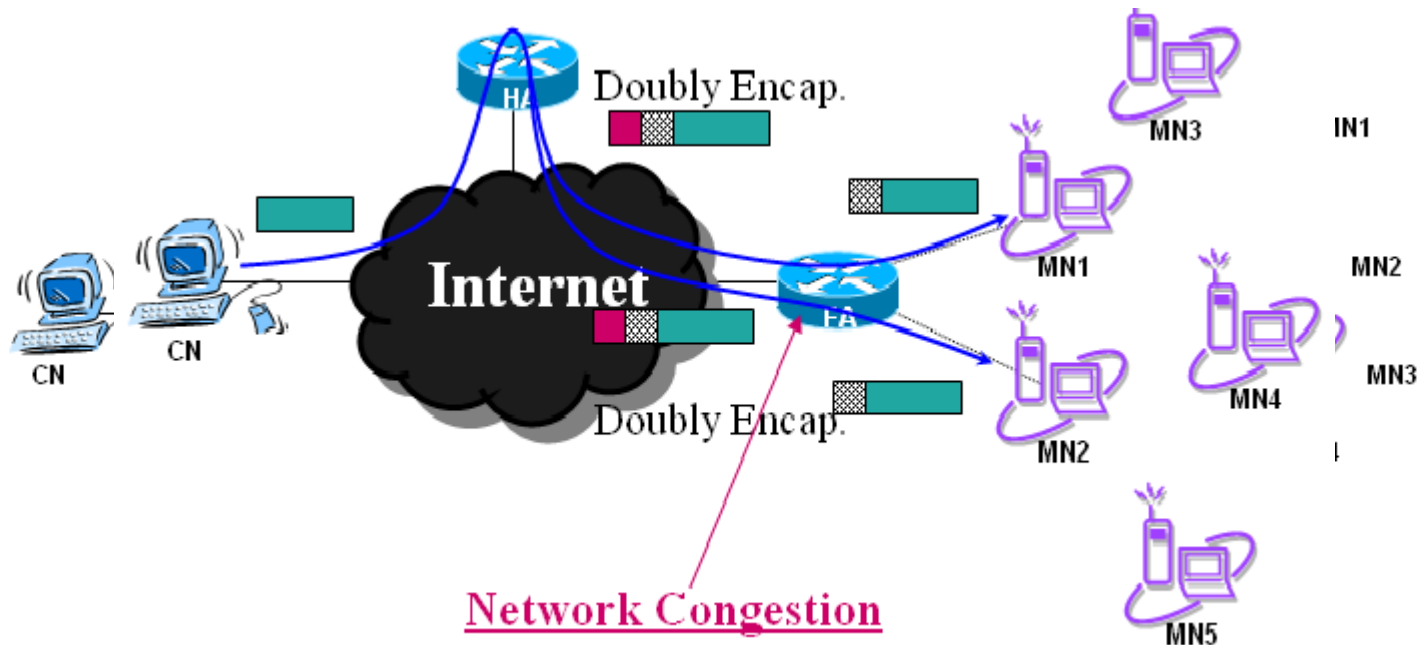


Mobile IP Architecture (2)



Multicast with Mobile IP

- ❑ Tunnel convergence
 - Multiple Mobile Nodes with Multiple Home Agents
- ❑ High handover latency
 - Inefficient Routing Path (Triangle Routing)
- ❑ Limited Scalability (A-Mass-of-Multicast)
 - A number of MN which Home Agent is same



Multicast Listener Mobility

Multicast Listener

are the nodes wishing to receive multicast packets.

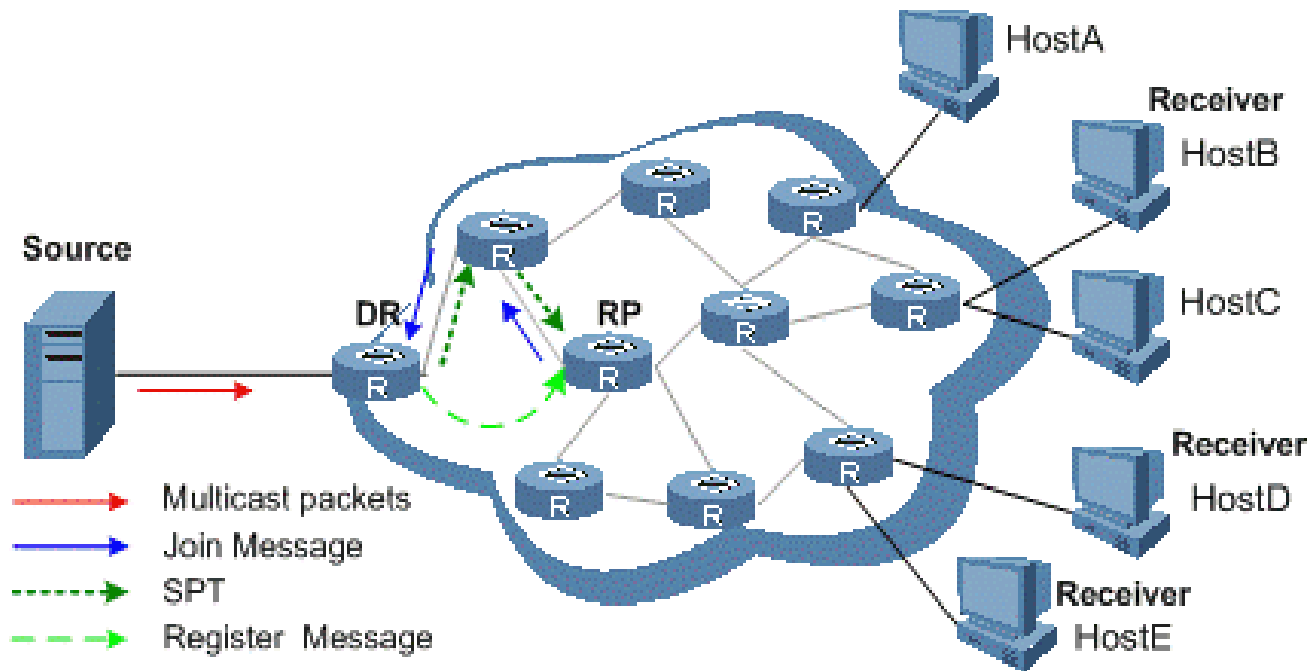
Handover

should happen in real time when the mobile multicast listener entering a new IP subnet.

Main Tasks to achieve seamless multicast listener handover:

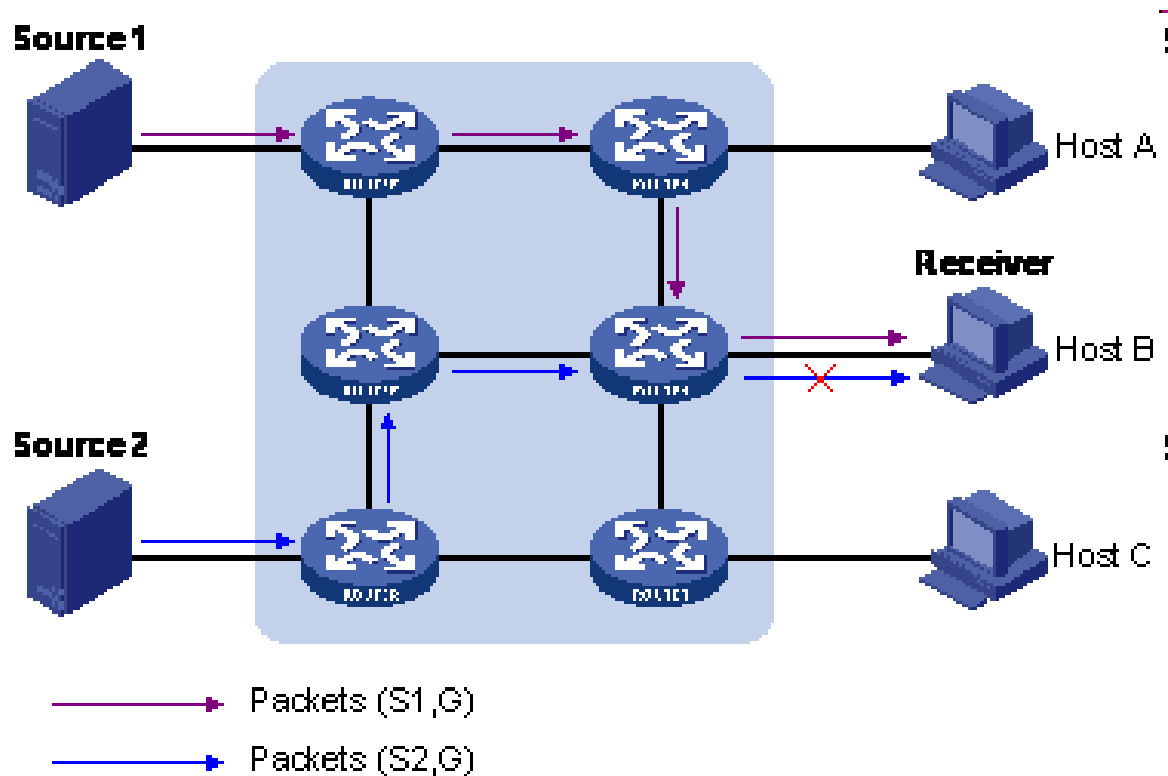
- ensure multicast reception
 - minimize multicast forwarding delay
 - minimize the packet loss
-

ASM (any source multicast)



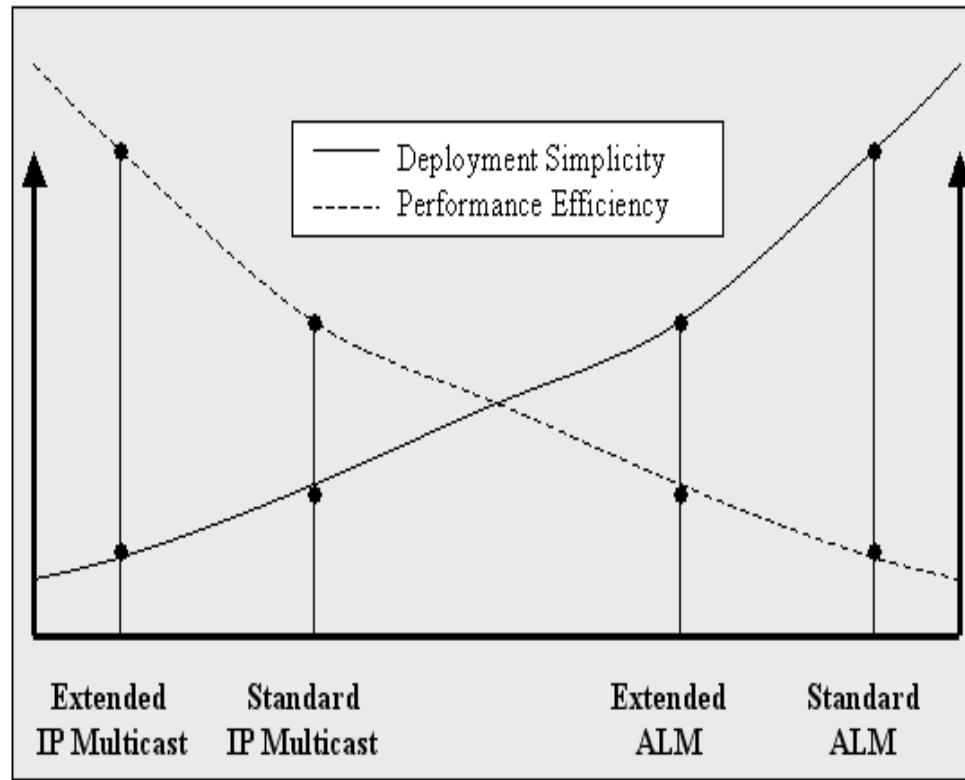
SSM (source specific multicast)

- Source Specific Multicast has been designed for changeless addresses of multicast senders.



Deployment Issues

- Complexity versus efficiency



Reference

- **Multicast Mobility in MIPv6: Problem Statement**
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- **IPv6 PIM Introduction**
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- **Mobile Multicast**
http://whsnl.csie.ndhu.edu.tw/jlchen_bak/class/mobile/multicast_1-1.PPT
- **A Multicast-based Protocol for IP Mobility Support**
<http://ceng.usc.edu/~helmy/MNM.ppt>
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<http://imj.ucsb.edu/papers/BROADWIM-04.pdf.gz>