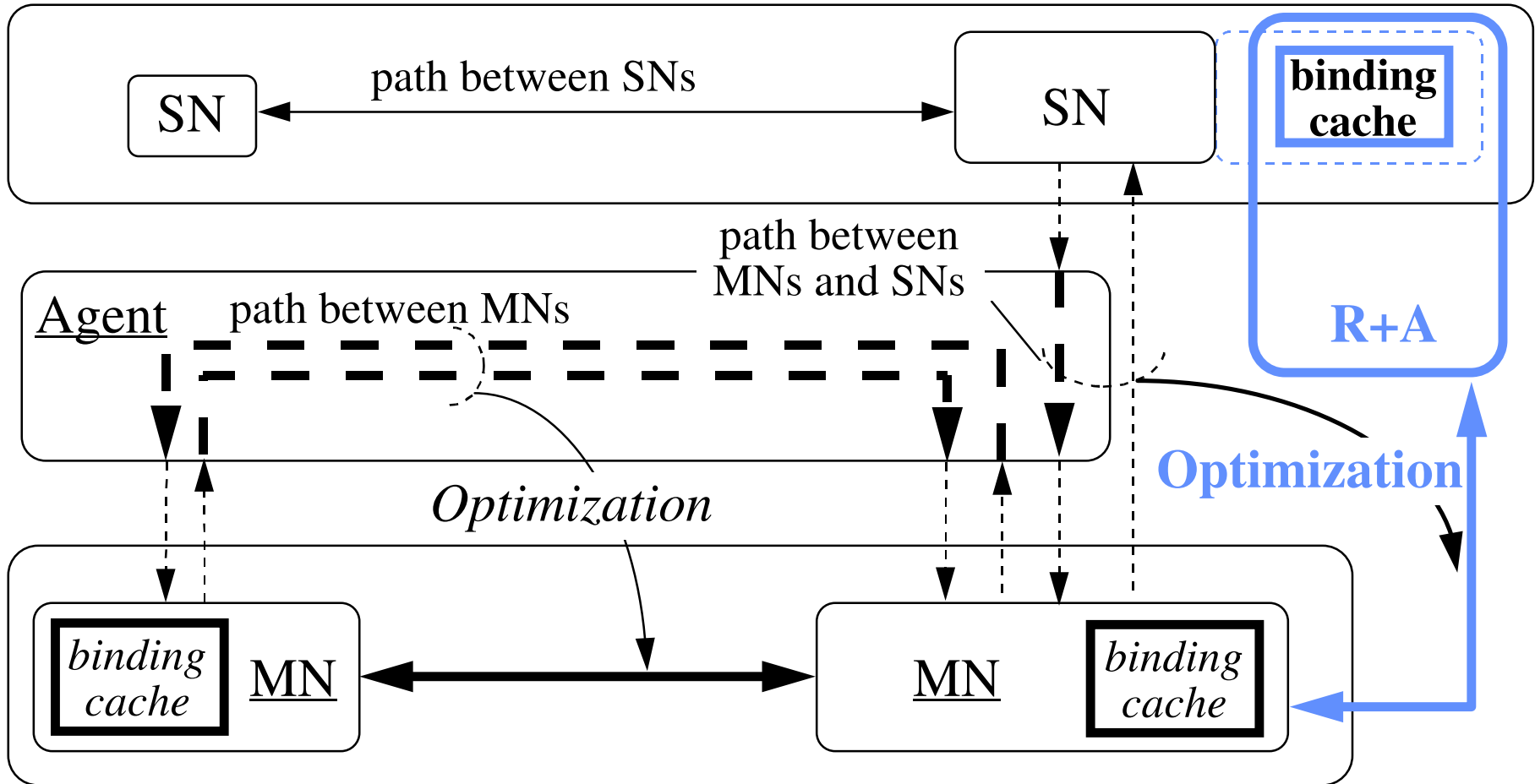


Routing optimization
by a router with cache agent functionality
<draft-okanoue-mobileip-R+A-00.txt>

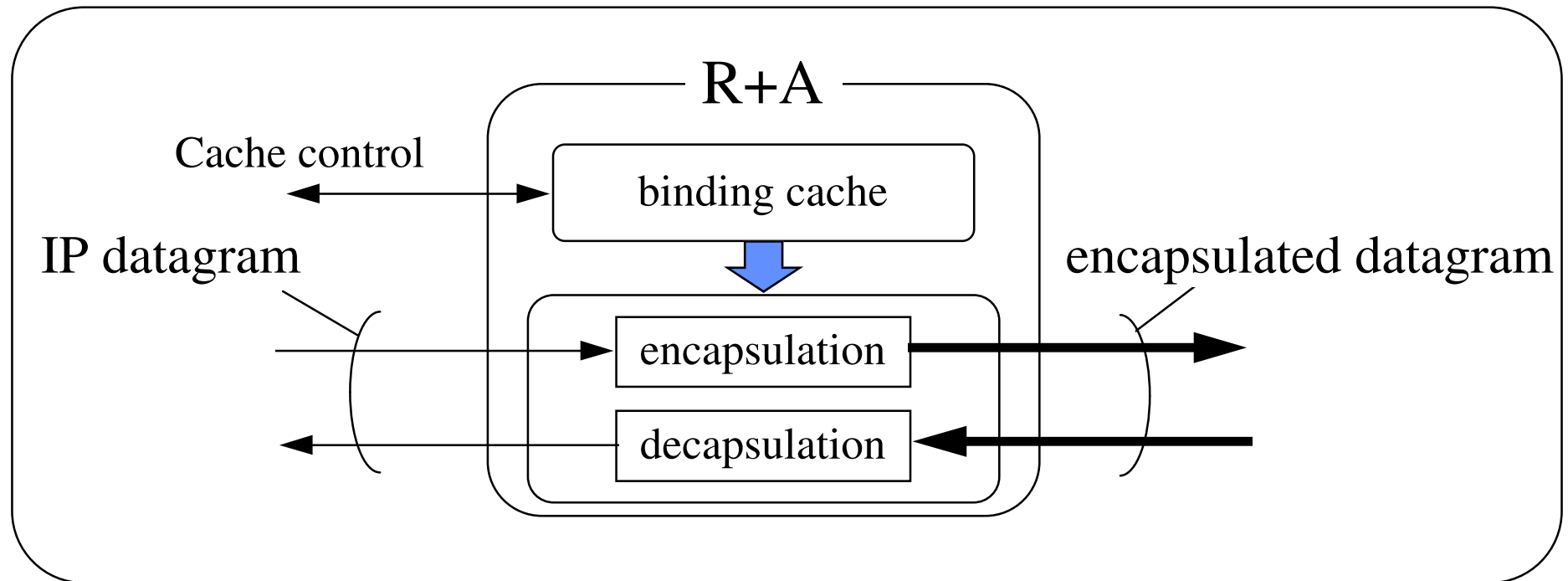
Kazuhiro Okanoue, Tomoki Ohsawa
okanoue@sics.se, ohsawa@nwk.CL.nec.co.jp

Routing path and introduced entities



SN: Stationary node, MN: Mobile node
R+A: Router with cache agent functionality

Technical Issues for R+A

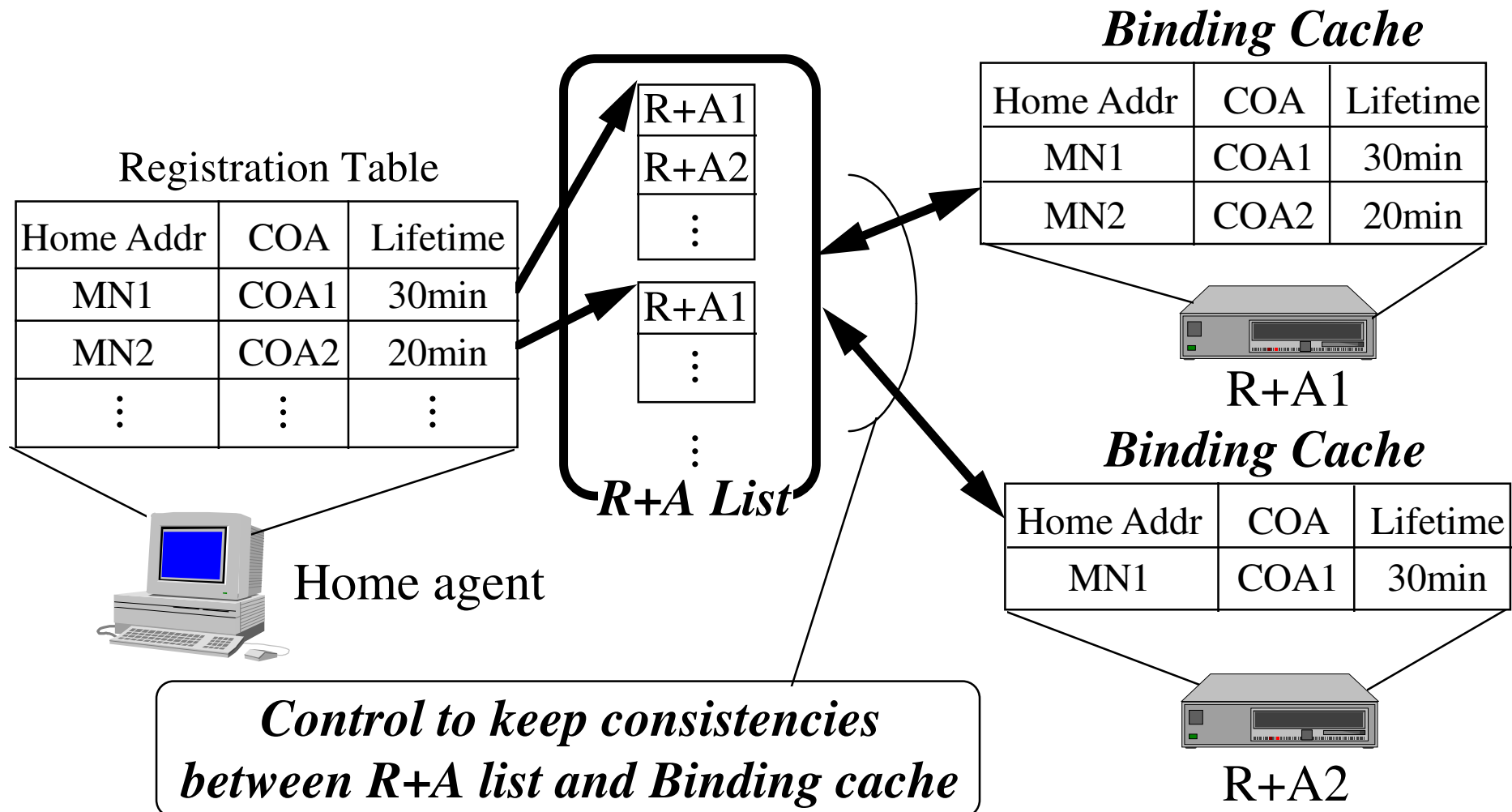


How to keep consistency of binding cache

How to control load balance for routing optimization

Ideas for the issues

- Flexible and consistent binding cache control



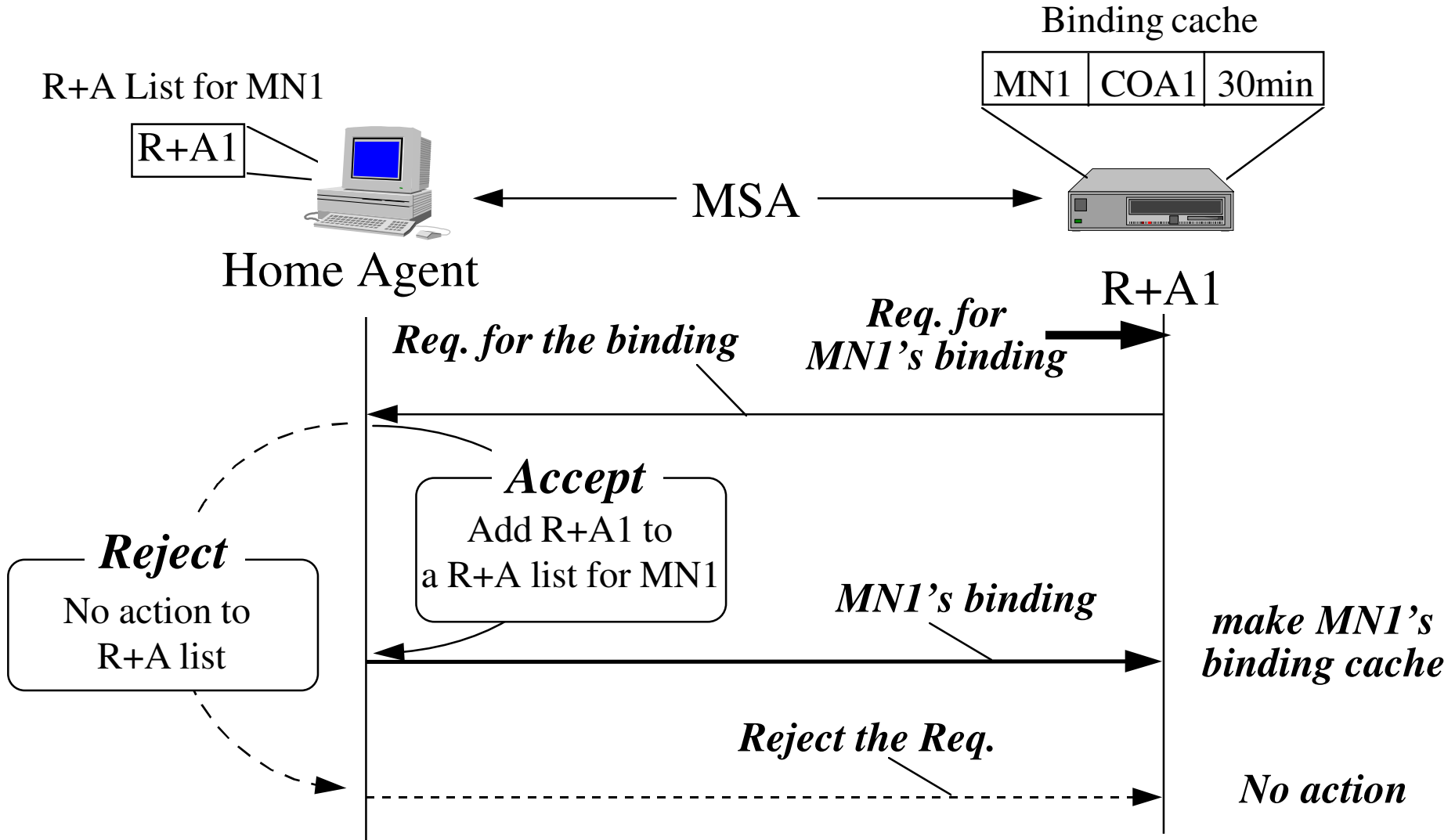
Functionality for binding cache control

- Creating a binding cache entry
 - Initiated by a R+A
 - A HA has a responsibility in updating and deleting the entry, if the HA accepts the creation.
- Updating a binding cache entry
 - Initiated by a HA based on a MN's registration request
- Deleting a binding cache entry
 - Initiated by either a HA or a R+A by its high load balance and so on

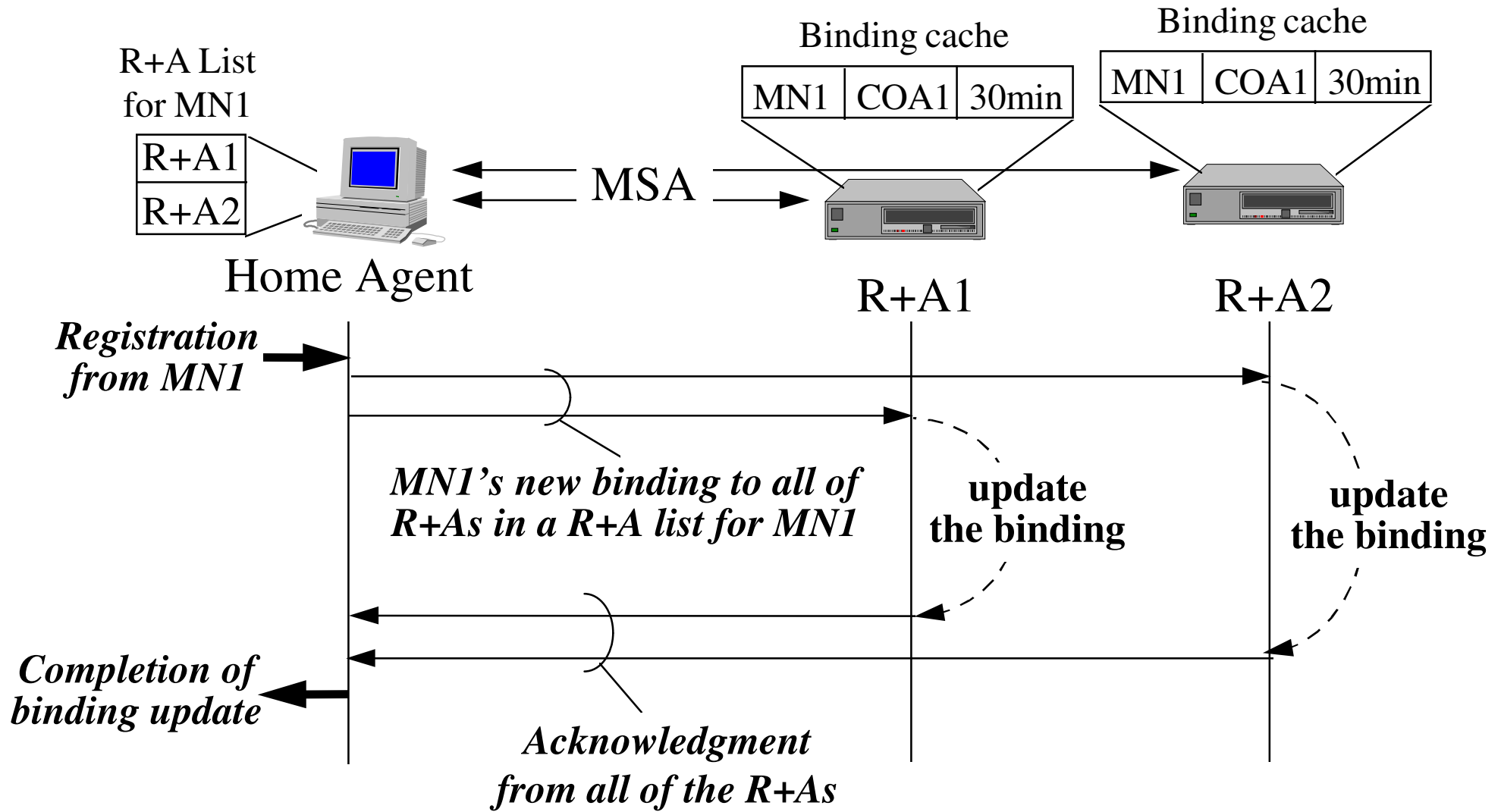
HA: Home agent, MN: Mobile node

R+A: Router with cache agent functionality

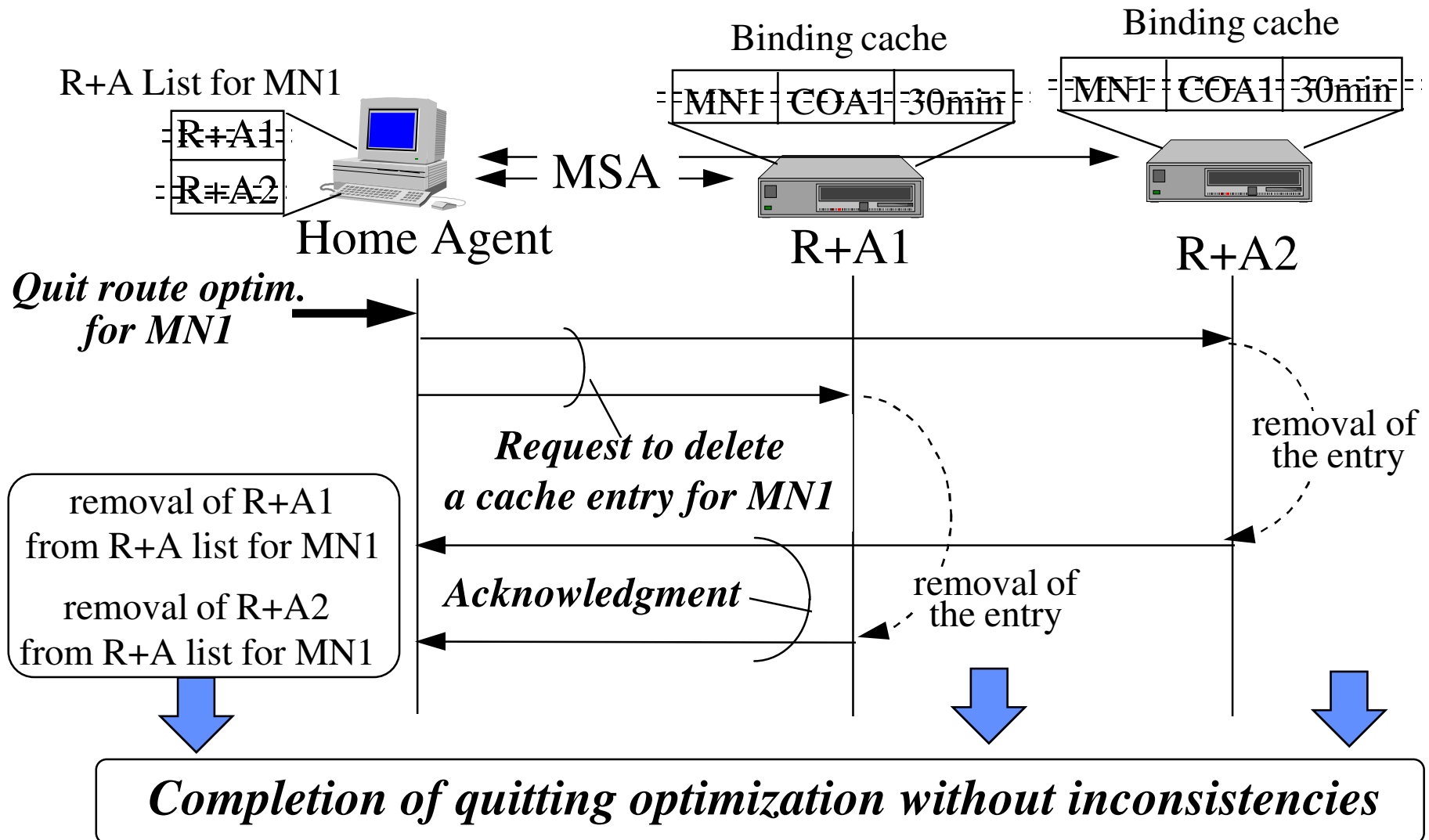
Create binding cache



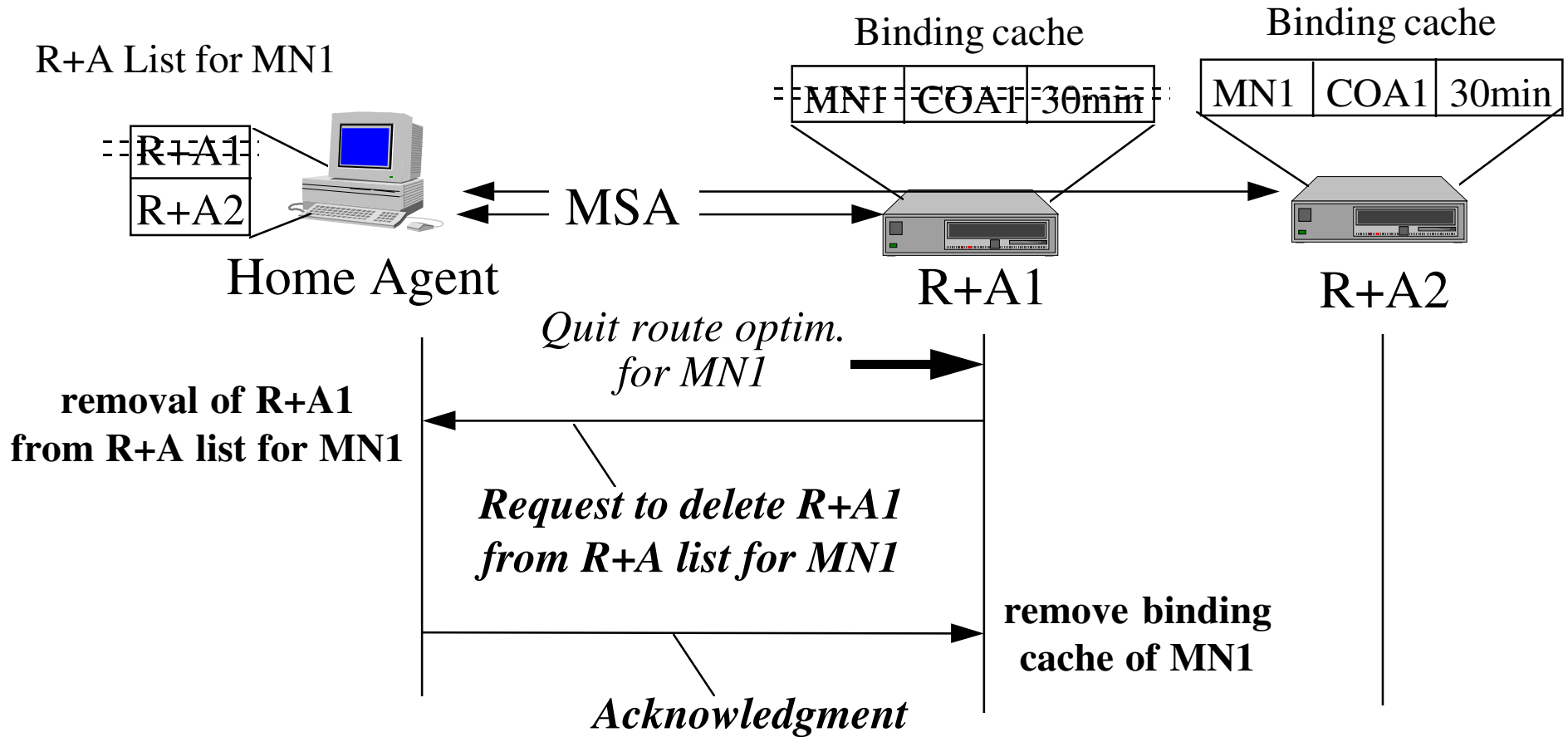
Updating a binding cache



Deleting binding cache initiated by Home Agent



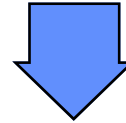
Deleting binding cache initiated by R+A



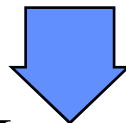
Completion of quitting optimization without inconsistencies

Conclusions

Routing optimization between SNs and MNs



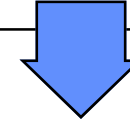
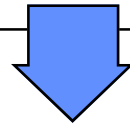
Router with cache agent functionality (R+A)
en/de-capsulation based on binding cache
as a proxy of SNs



Issues

Consistency in binding cache

Load balance control



Flexible and consistent binding cache control