Automatic Configuration for NHRP Devices

- A Terminal accesses **ANY NHS via ATM anycast capability**.
- An NHS **forwards the NHRP Register packet towards the terminal's home NHS** if this packet is not originated by an terminal which this NHS serves.

$\Downarrow$

Each terminal does not have to know actual ATM address of its NHS.

Support for Mobile NHRP Devices

- A Terminal accesses the home NHS or foreign NHS via **ATM anycast capability**.
- An NHS **forwards the NHRP Register packet towards the terminal's home NHS** if this packet is not originated by an terminal which this NHS serves.

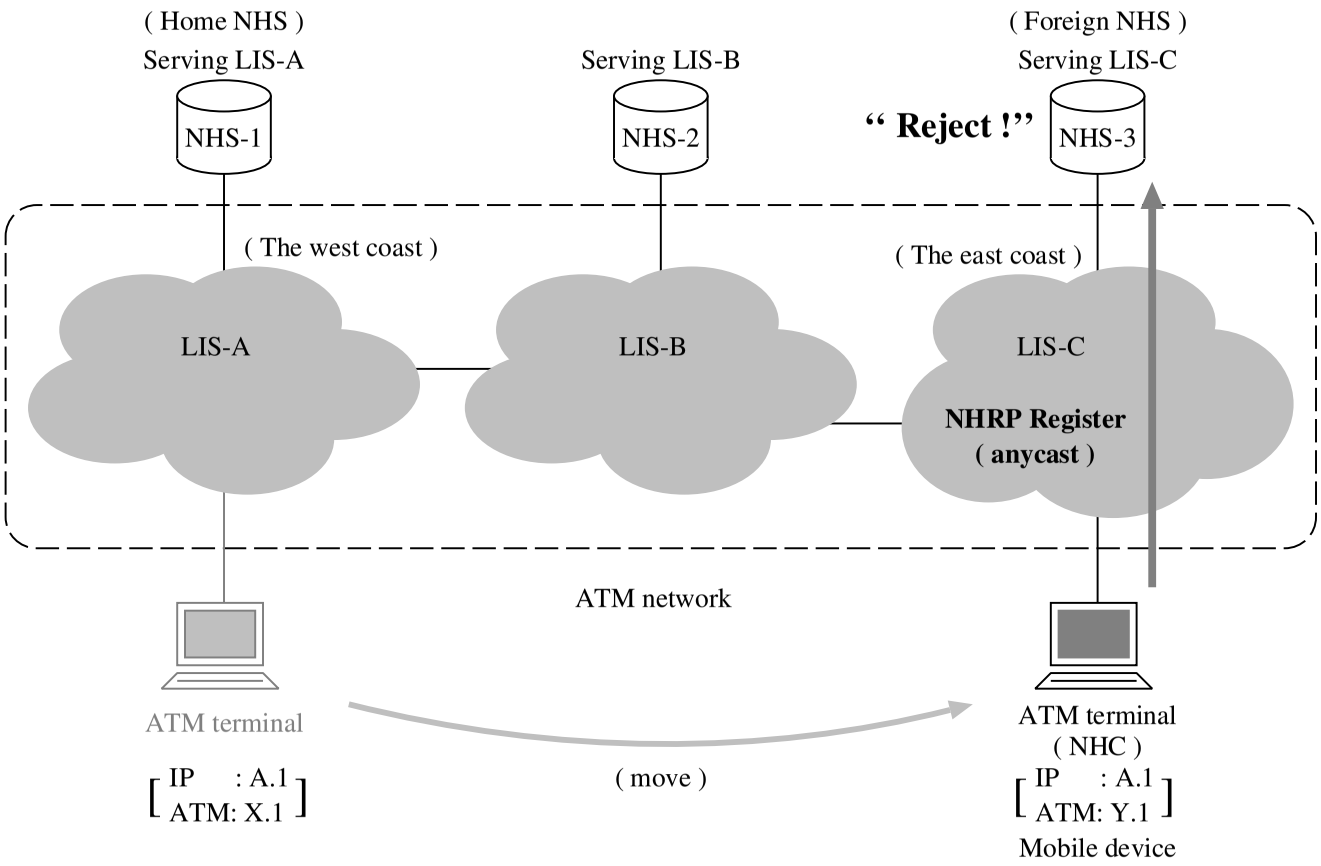

Fig. 1 One possible solution and problem when access an NHS by ANYCAST

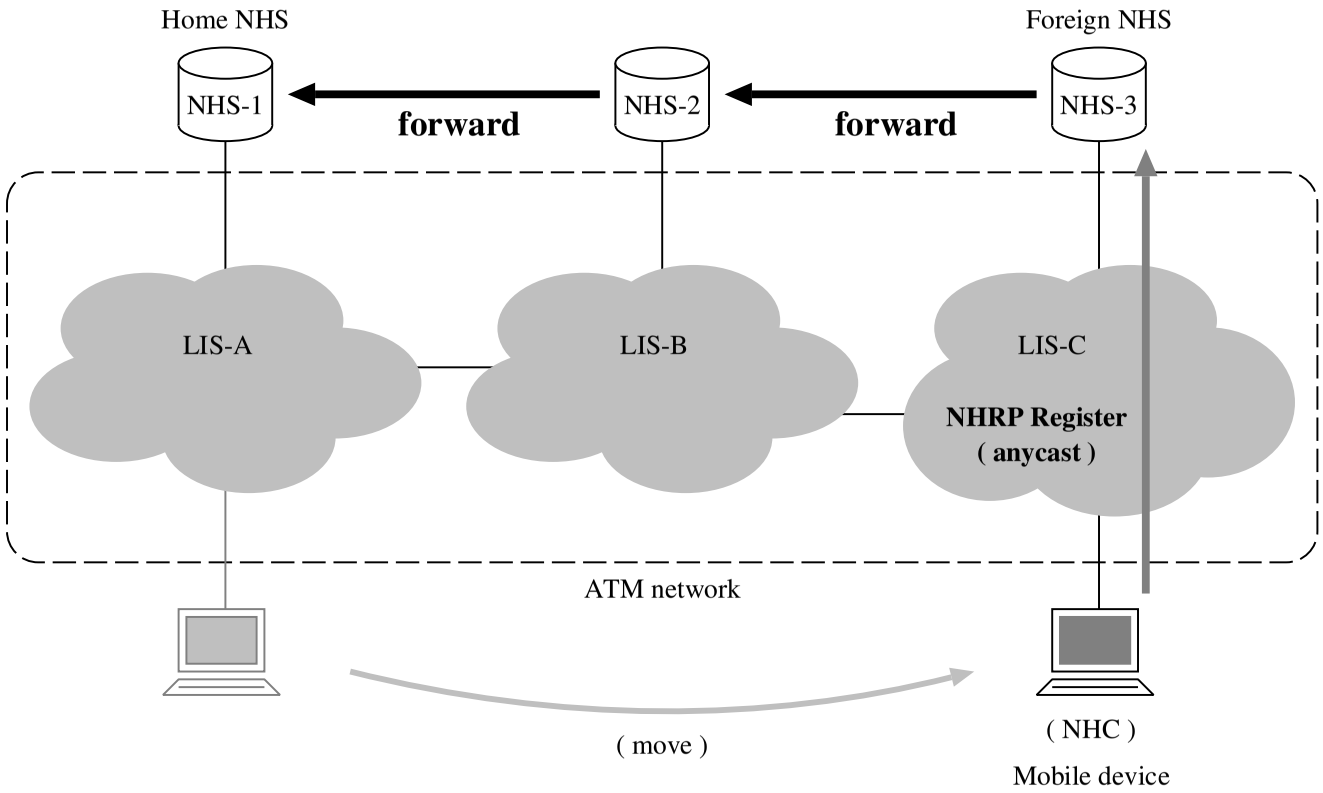

Fig. 2 Proposed Scheme

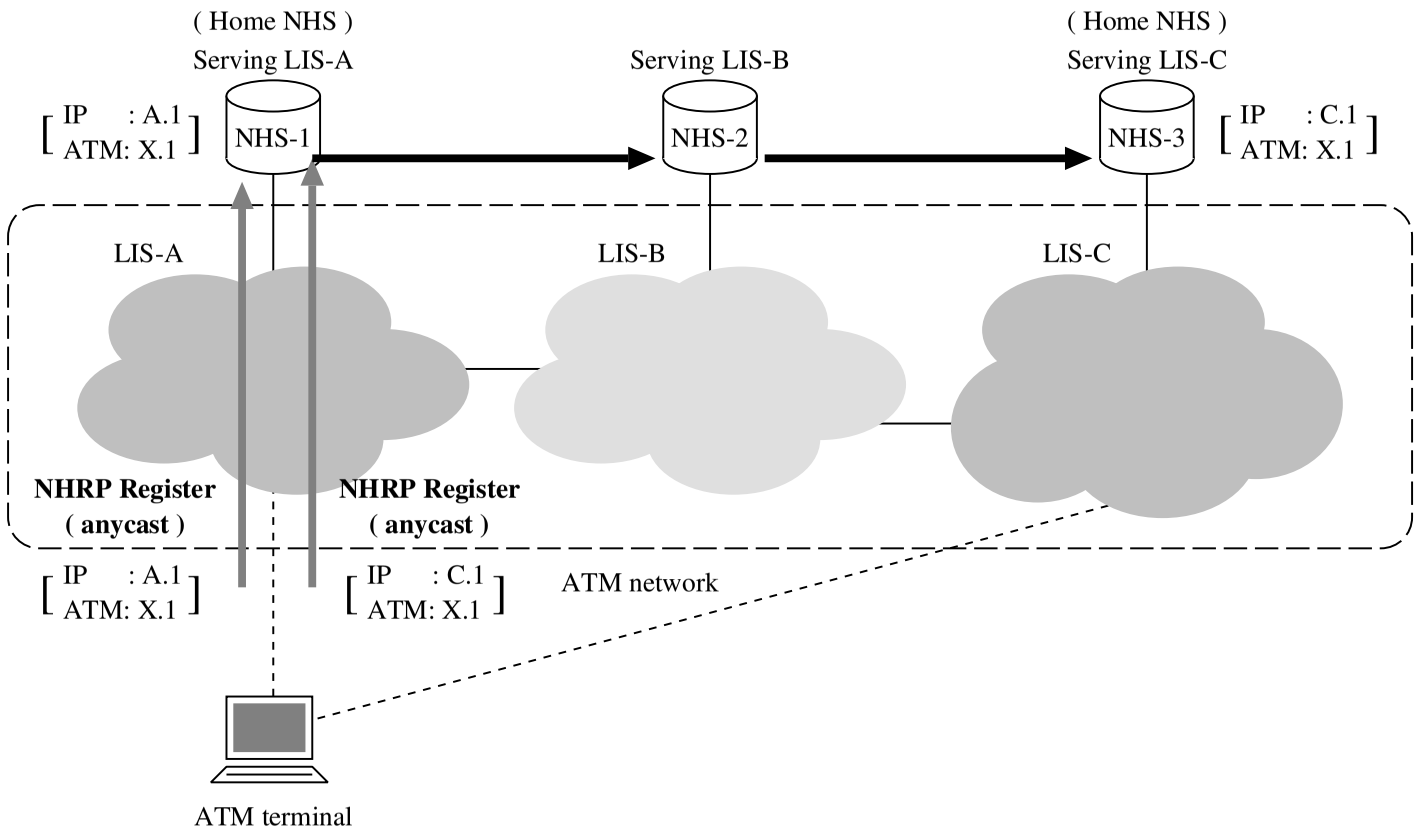

Fig. 3 Automatic Configuration for joining multiple LISs

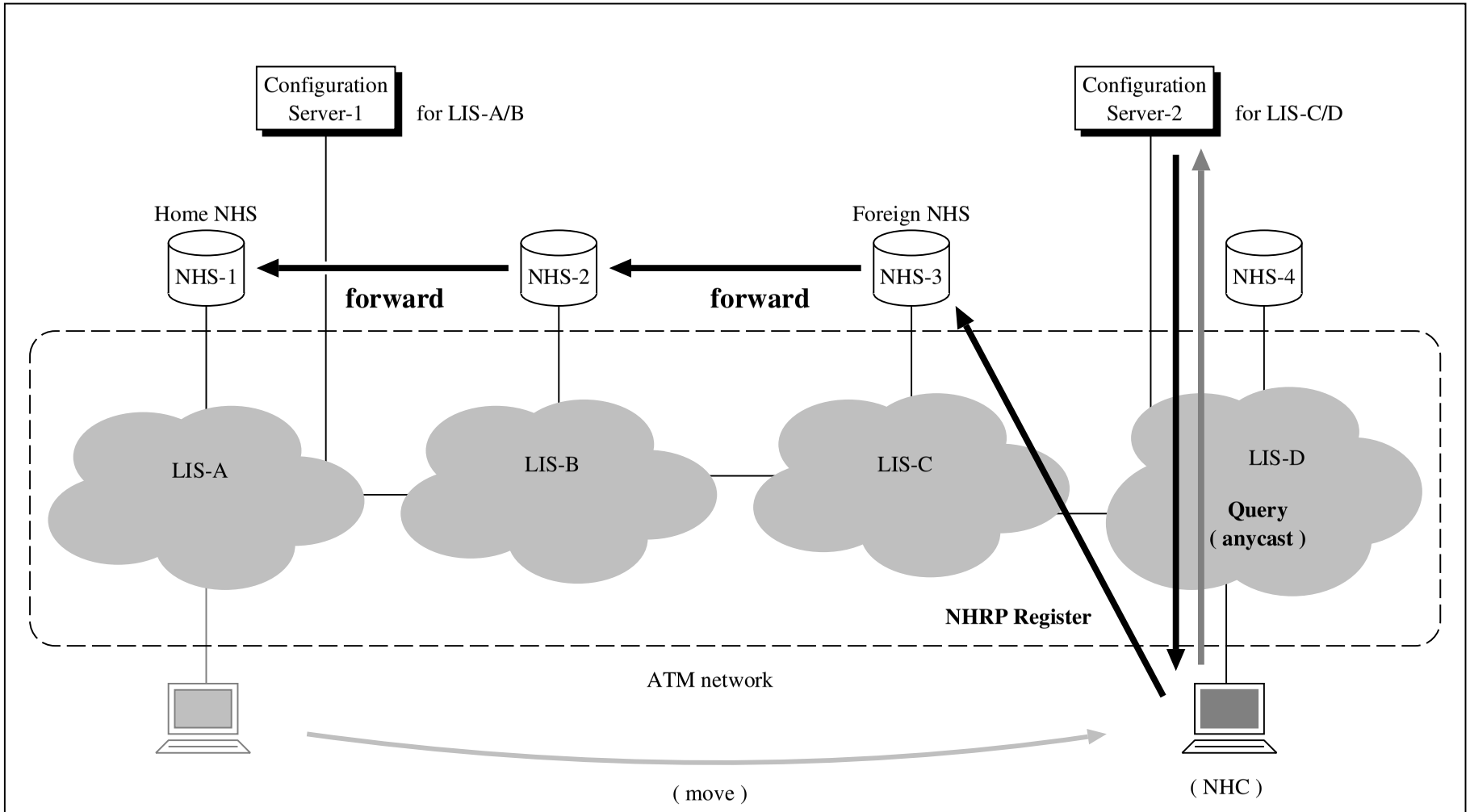

Fig. 4 Another Solution

Registration Forwarding

- Only “Registration Reqest” is forwarded via intermediate NHRP servers to the home server.
- But “Registration Reply” directly sent back to the source across the ATM networks

Authentication

- Since only the home NHRP Server should hold the secure authentication information for each terminal,
- the foreign NHRP server does not carry out Authentication extension for each
  " Registration Request"
- End-to-End Authentication Extension needed

Why we call “Mobile” ?

- Virtual LAN based on LIS capability provides “Terminal Mobility” as well.

- **M-NHRP = Logical ID (IP) + Location ID (ATM)**
- **Mobile IP = Logical ID (IP) +Location ID (IP)**

- **If we have auto-address registration mechanism everywhere in the same NBMA, we could easily extend LISs over inter- (building /campus / area) ATM nets.**

Mobile IP or Mobile NHRP ?

- “When you move and if you do not need to change your IP address, then use Mobile NHRP.
- When the terminal moves
  - **Within the same NMBA, you can use the same IP, so you can use M-NHRP**
  - **Over the different NBMAs, you may need the different IP Address, then must use Mobile-IP**
  - **Outside ATM networks, you may need the different IP Address, then must use Mobile-IP**