NAI resolution for Wireless Networks
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NAI resolution for Wireless Networks

• Background
  – Network Access Identifier (NAI) proposed in RFC 2468 for dial-up roaming at ISPs. A revised specification for using NAIs with mobile IP is available as a draft.
  – Current cellular mobiles use identifiers such as MIN (in AMPS, TDMA, CDMA systems) to identify its subscriber and access the home network.
  – This draft proposes a solution to resolve NAIs from traditional mobile node identifiers when the home network uses NAI to identify subscribers.
**NAI resolution for Wireless Networks**

- **Scenario for NAI resolution**
  - Subscriber A belongs to NAI enabled Wireless Home Network and access is provided by Wireless Access Network.

- * denotes Authentication and Registration messages may be separated
- ARF denotes Address Resolution Function in access/serving network
NAI resolution for Wireless Networks

- NAI resolution process (one solution presented)

  - Resolve “realm” of mobile home to create temporary NAI and route message to home
  - At home network, translate the temporary NAI to subscriber’s

Note: “Registration” is equivalent to what is required to register in IP networks
NAI resolution for Wireless Networks

- NAI resolution process (one solution presented)

Resolve temporary NAI and route message to home

Step 2: At Wireless Access Network

Note: “Registration response” is equivalent to what is required to register in IP networks
NAI resolution for Wireless Networks

- NAI resolution process (one solution presented)

Step 2: At Wireless Access Network

Registration resp. (MIN- 9726841000)

Database
MIN-Realm mapping

972-684-1000 to xyz.com (realm of home network)

"Registration"

NAI (temporary)
9726841000@xyz.com

xyz.com

Note: "Registration" is equivalent to what is required to register in IP networks
NAI resolution for Wireless Networks

- **NAI resolution process at Wireless Access Network**
  - NAI is of the form user@realm
  - Access network receives MIN (example 9726841000) in authentication and registration messages from mobile.
  - Access network uses NAIS to create ‘temporary NAI’ for registration and authentication.
    - 9726841000 converted to 9726841000@wsp.com by looking up “realm” for MIN provided
    - forwards registration message with 9726841000@wsp.com’as NAI for home to resolve
    - Home network uses this ‘temporary NAI’ to lookup the appropriate user and perform registrations and authentications
Two options for obtaining COA - Care of Address (RFC2002):

- FA COA (FACOA)
- Co-located COA (CCOA)