

Deliverable C: Requirements for inter- NREN roaming

TERENA TF Mobility 2003-02-10

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High-level requirements

Objective:

Enable NREN users to use Internet (WLAN and wired) everywhere in Europe

- ▶ with minimal administrative overhead (per roaming)
- ▶ with good usability
- ▶ maintaining required security for all partners

Minimize admin overhead

- ▶ Very little admin work to enable roaming per user
 - (preferably none)
 - both for home network and even more so for visited network
- ▶ **No** admin work required per roaming occurrence
- ▶ Minimize the complexity of additional systems required
 - (consider architecture at the involved institutions)
 - must integrate with existing AAA systems, e.g., RADIUS
 - no n^2 work required when scaling system
- ▶ No regulatory entanglement

Good usability

- ▶ Available to most current WLAN (and wired) users
 - standards-based; low-cost
- ▶ **No additional software** required to enable roaming
 - (software may be required for local use beforehand)
 - consider both Laptop and PDA usage
- ▶ Enable all work
 - IPv4 and IPv6
 - Access to home institution networks
 - Enable use of home addresses while roaming
- ▶ Enable local work in visited network
 - SLP, authorization issues/user classes?

Security requirements

- ▶ Allow use only for approved [by who] NREN users
 - Legal binding to some common terms of use
- ▶ Provide accountability
- ▶ Nice to have: Provide reasonable basic ("like in wired access") security for individual user [cannot fulfill in all environments]
 - Confidentiality of traffic
 - (not necessarily with respect to current position!)
 - Integrity/guard against data manipulation and session hijacking
- ▶ Allow real security (e2e) on top (e.g., highlight the limitations of NATs)
- ▶ Don't aggravate security issues of visited networks

Security non-requirements

- ▶ No need to "protect" WLAN
 - ISM spectrum can't be protected anyway
- ▶ Hard to reliably conceal positioning information