

Eduroam JP
-May 2009-

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eduroam JP in UPKI

- An activity in NII's UPKI project
 - Promotion and Operation of eduroam JP
 - 10 Institutions connected
 - Tutorial documents
- R&D to solve problems
 - Easy configuration
 - IP address
 - Location privacy, etc.
- talk with commercial W-ISPs on roaming
 - shared access points?
 - unsuccessful negotiations

Last update: Jan 7, 2009

eduroam JP 参加機関マップ



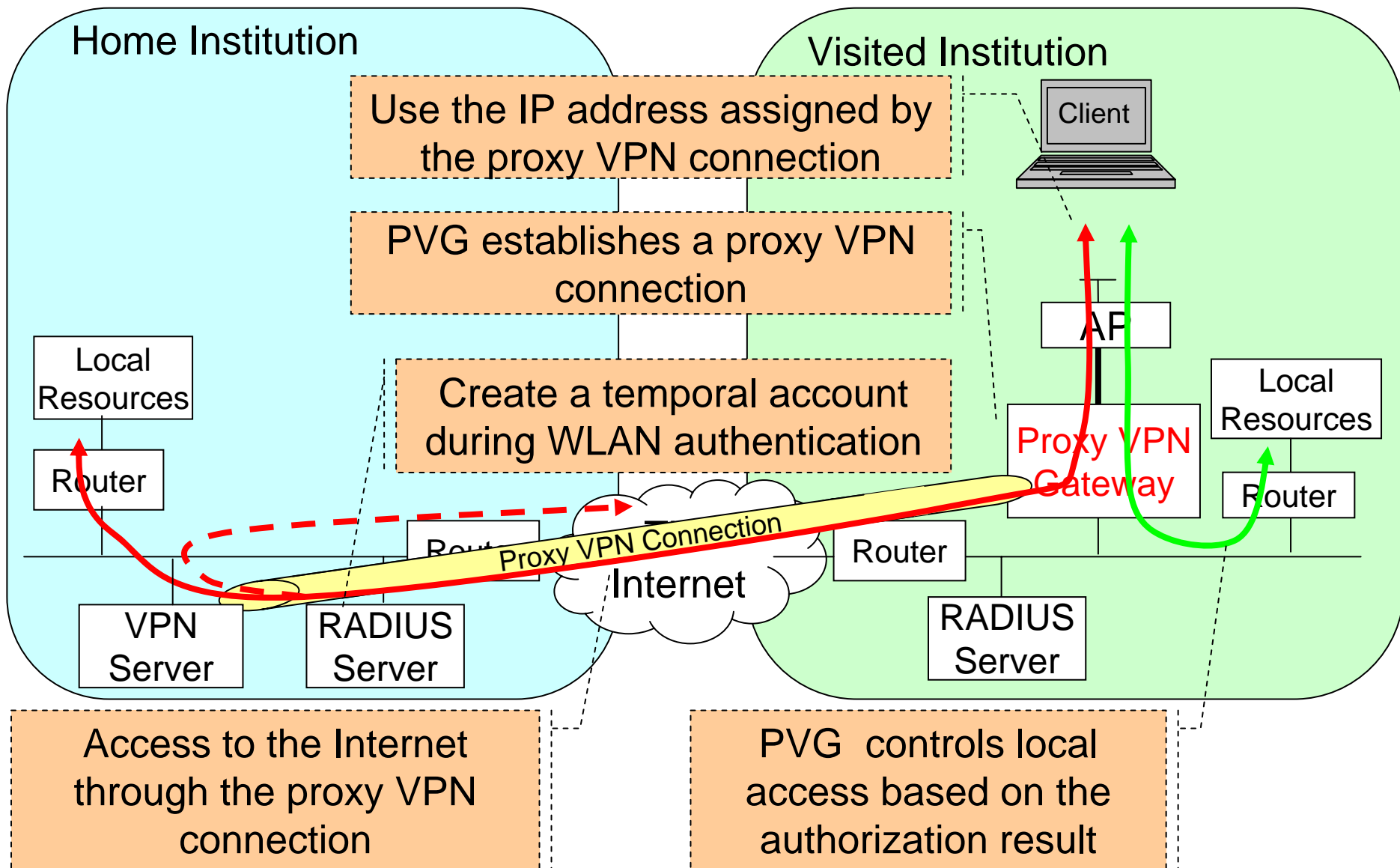
R&D in eduroam JP

- Problems
 - needs easy configuration for effective promotion
 - IP address assigned by visiting institution may cause abuse by guests (e-journal accesses, etc.)
 - roaming account and location privacy
- Solutions and new ideas
 - (1) Proxy VPN Gateway for easy configuration of laptop
 - (2) Admin-free configuration of APs
 - (3) UPKI federation and centralized RADIUS servers
 - (4) eduroam JP VPN

(1) Proxy VPN Gateway for easy configuration of laptop

- Problem
 - Complicated and mysterious setup of 1x on laptop
 - IP address (= user attribution) problems
- “Proxy VPN Gateway” (talked at Umeå)
 - easy configuration of laptop supplicant
 - global IP address assigned by home institution
 - new problems
 - wireless access is not encrypted
 - bottleneck on max number of VPNs
 - still under R&D

Overview of Proxy VPN



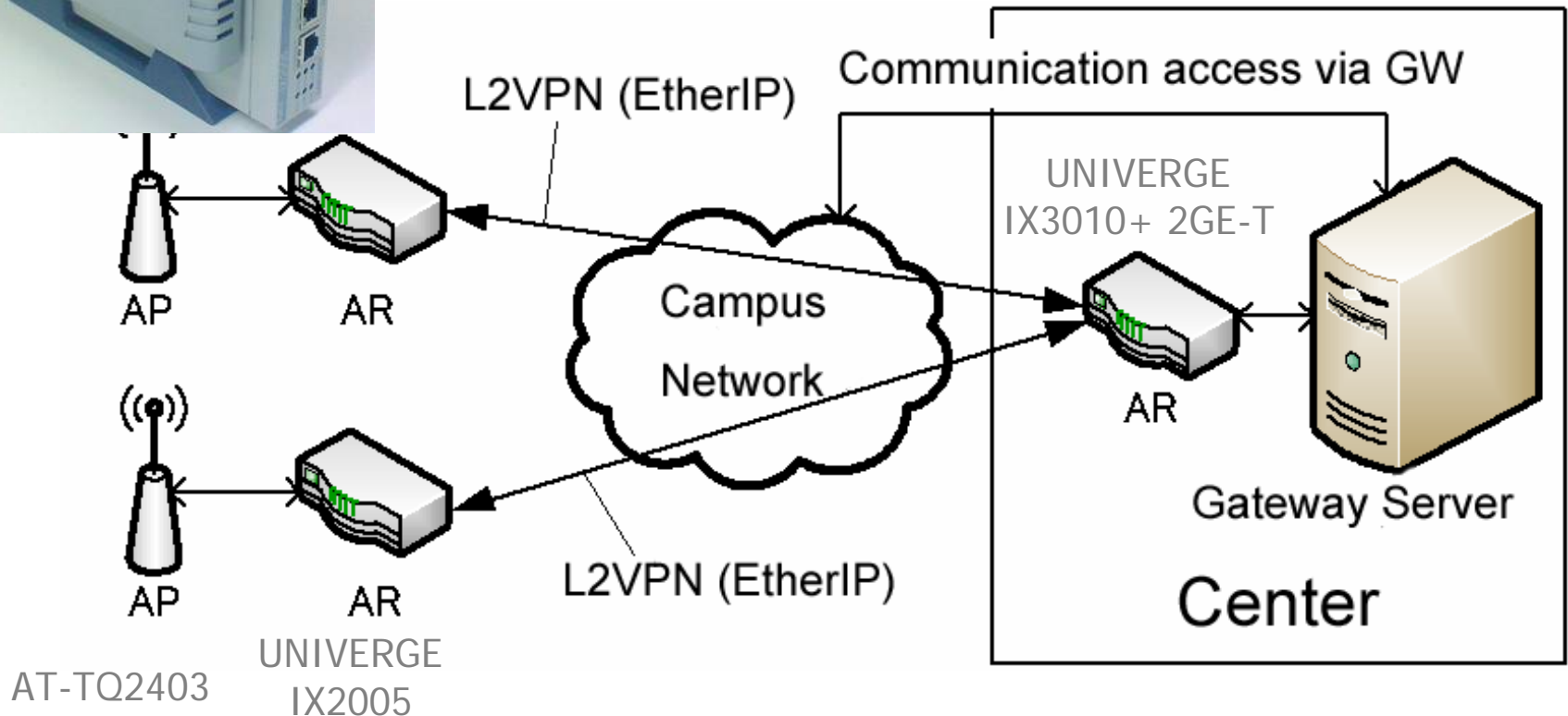
(2) Admin-free configuration of APs

- Problems
 - difficult configuration of APs and RADIUS against introduction of eduroam
- Admin-free AP
 - preconfigured L2-tunneling APs
 - centralized gateway connects to RADIUS server
- Trial
 - trial use in many cases
- details: to be continued in Málaga
 - Poster session (deadline: May 8)

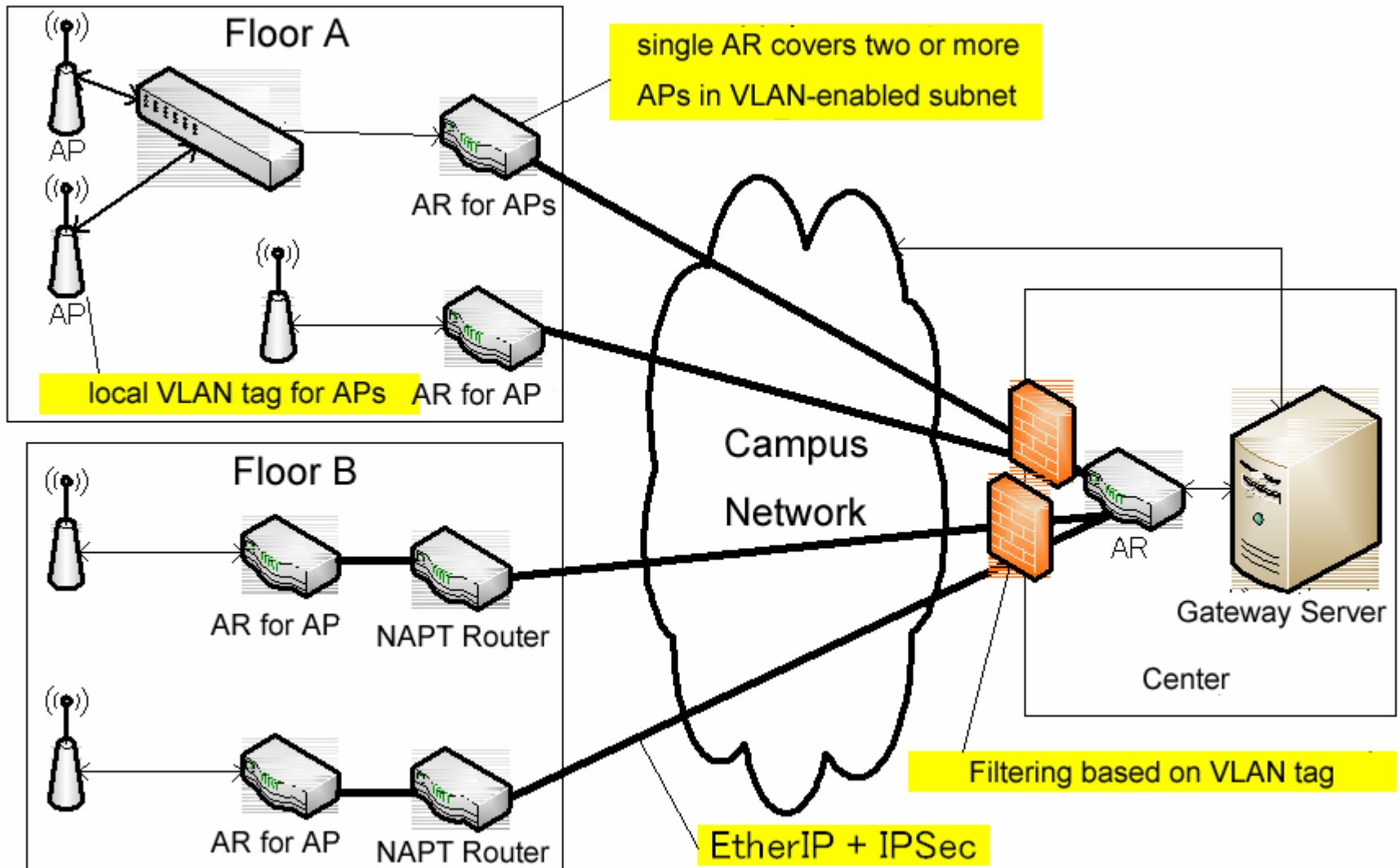
Basic configuration



**Field. AP+L2VPN Access Router
Center. L2VPN AR+Gateway Server**



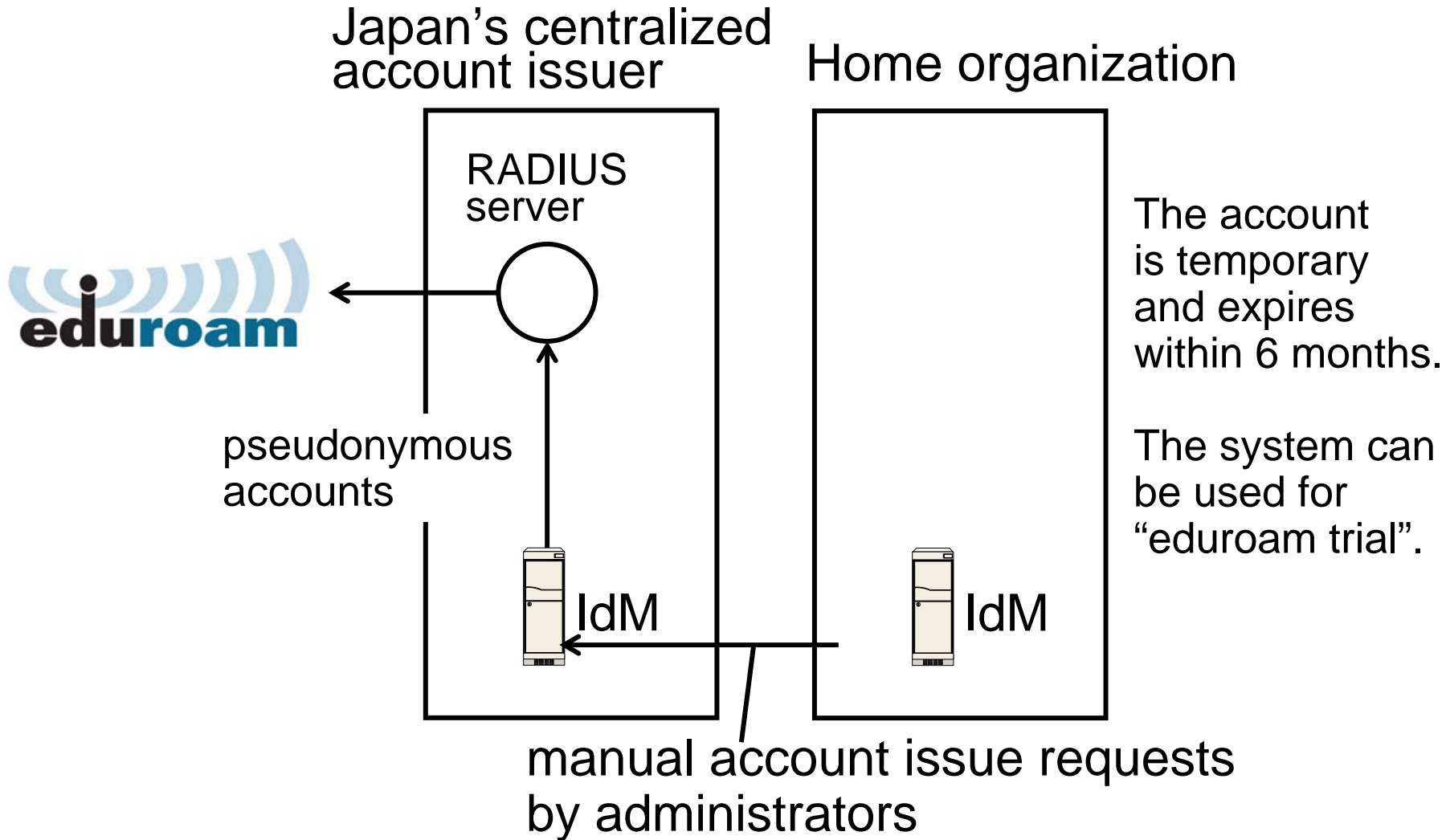
Extended configuration



(3) UPKI federation and centralized RADIUS servers

- Problems
 - configuration and operation of RADIUS
 - location privacy with roaming accounts logged at proxy
- Idea
 - Pseudo-anonymized, fixed-term, traceable roaming ID issued by a centralized RADIUS server
 - as an SP of UPKI inter-university federation
 - simplified RADIUM proxy tree
- Trial for two ways in Kyoto and Tohoku
 - account generator + RADIUS server

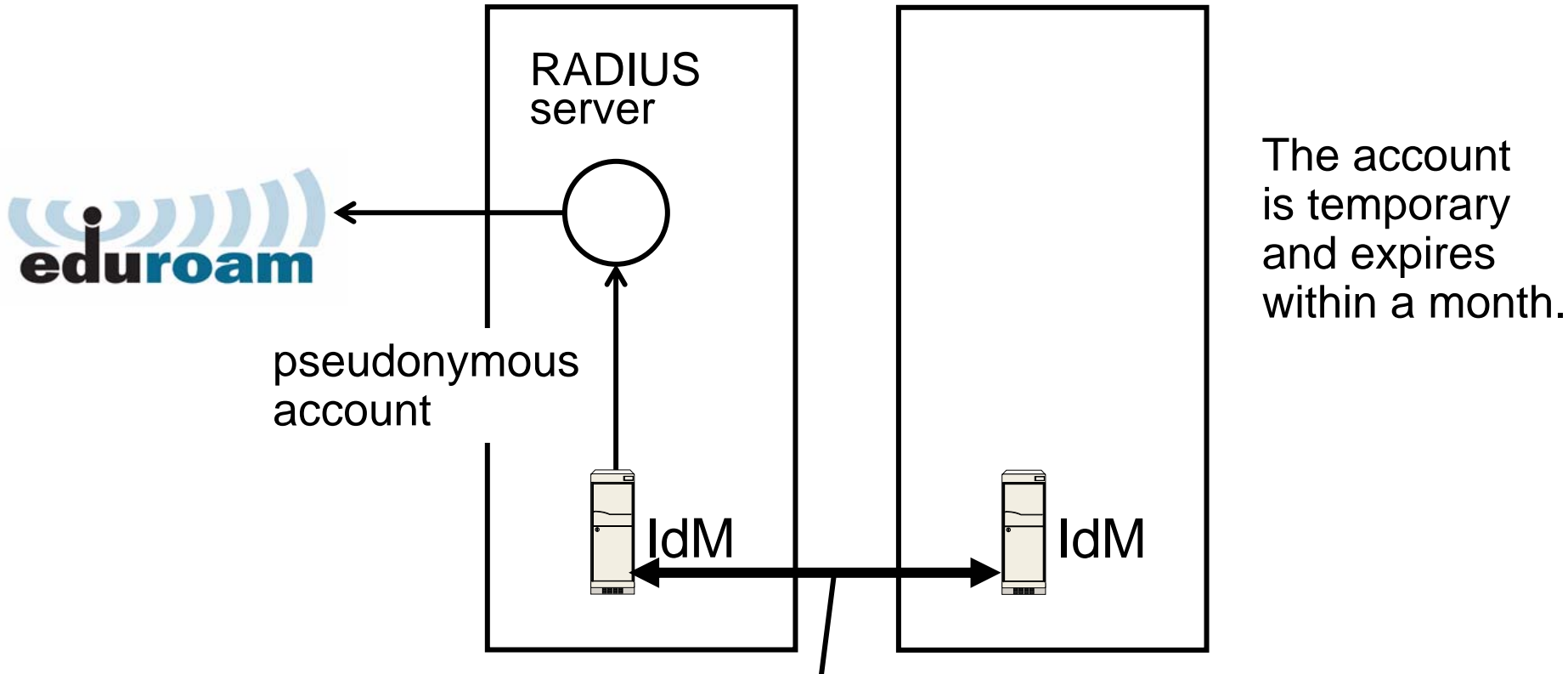
First experimental system by Tohoku Univ.



Planned experimental system by Kyoto Univ.

Japan's centralized
account issuer

Home organization



ID federation using Shibboleth/SAML

End users request for their own accounts.

(4) eduroam JP VPN

- Problems
 - IP address as a user attribute; access ctrl
 - conflict against network policy of the institute
- New idea
 - nation-wide L3VPN on SINET for eduroam AP
 - IP address block only for eduroam JP
 - APs in VPN subnet extensions in universities, buildings, floors, ...
- Trial
 - with a part of eduroam APs in some universities