

Effortless Secure Wireless Enrollment

Jeff Shirley

David Evans

University of Virginia

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Solving the Enrollment Problem

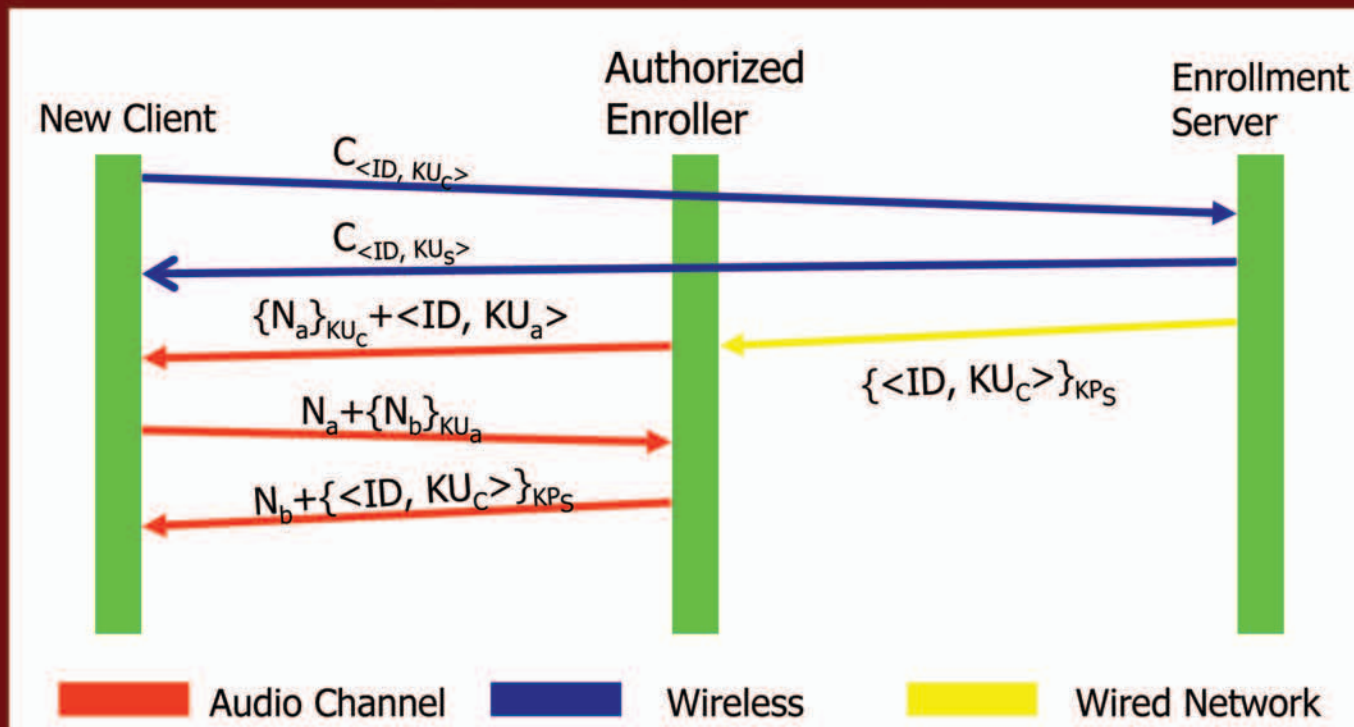
- Mutual authentication between network and wireless client during enrollment
 - Enrolling temporary users
 - Visitors
- How to verify that the enrollee is the newly authorized user?
- How to verify that the wireless network is the trusted network?

Location-Limited Channels

- USB, Audio [Balfanz+, NDSS 2002]
- Visual [McCune+, Oakland 2005]
- Audio tones
 - Human evident, relatively limited range
 - Available on a wide variety of devices (laptops, PDAs, cellphones, etc.)
- Network limits enrollment to clients physically present at specific location
 - Clients connect only to network verified through the same channel

Enrollment Protocol

- Authorized user acts as intermediary
- Audio challenge-response protocol



Current Status

- Working implementation: enroll on our network!
- Distributing client software securely
 - Signed Java applet available from insecure network
- Ensuring interoperability with existing systems
 - Initial implementation of the protocol enrolls users for standard EAP-TLS authentication
- Tradeoff between reliability of audio channel and transmission speed (4 bits per second)

Questions?

- Email: jshirley@cs.virginia.edu

