



Security in the Next Generation Internet

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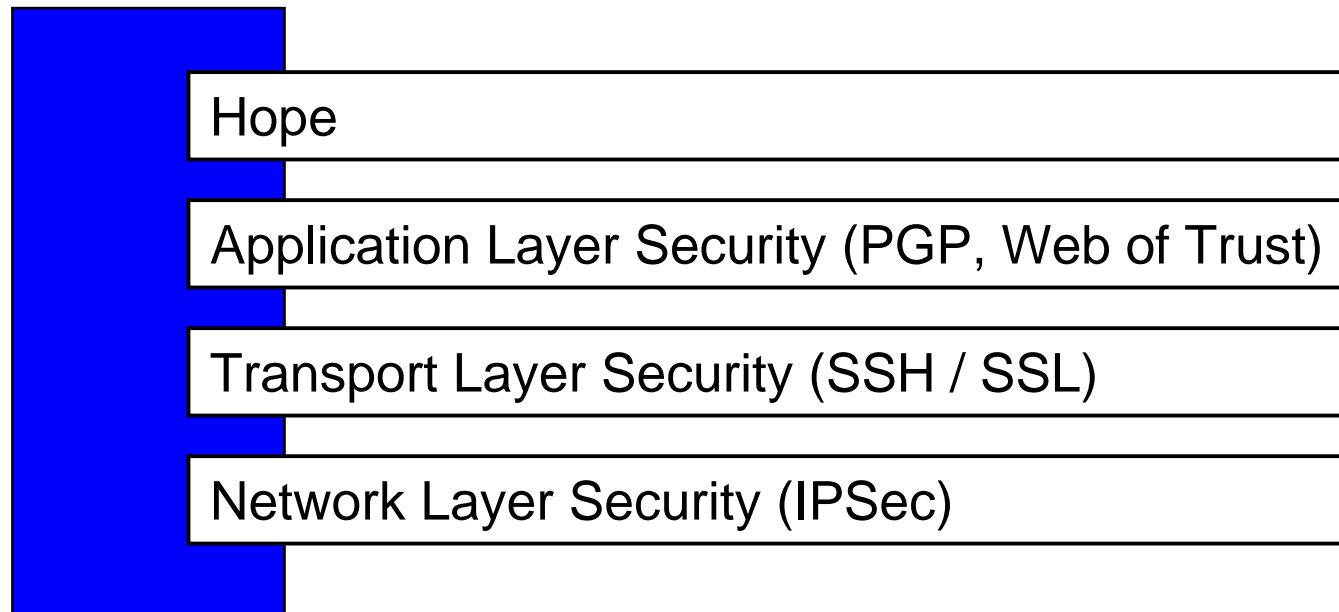


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Methods of Security



IPSec Protocol Suite



IKE-Daemons negotiate Security Associations

Match Security Policy

Choose algorithms for authentication and encryption

Authenticate each other

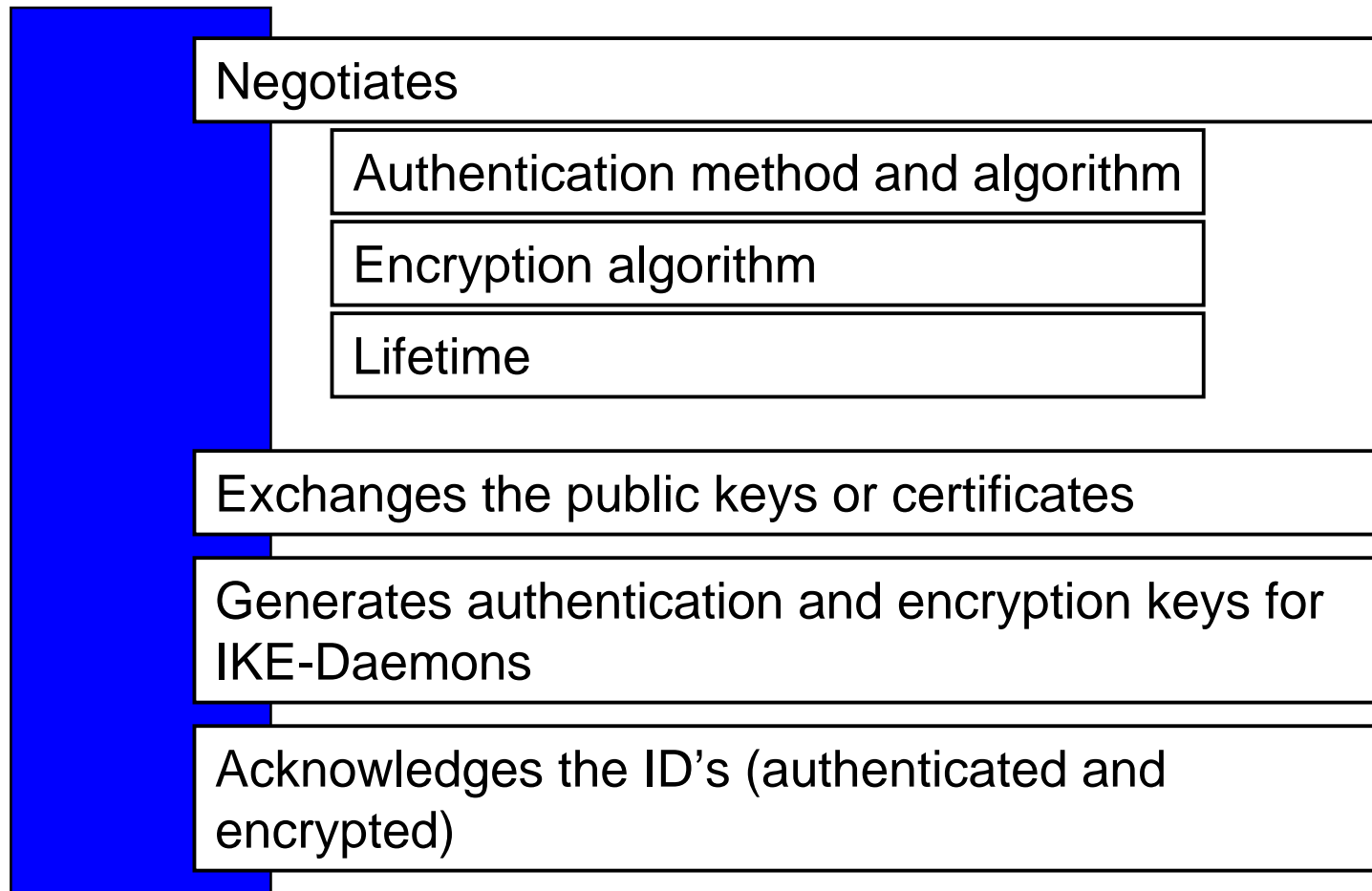
Generate authentication and encryption keys

Security Association with keys is stored in the OS

Every application that uses IP to communicate is secured via IPSec

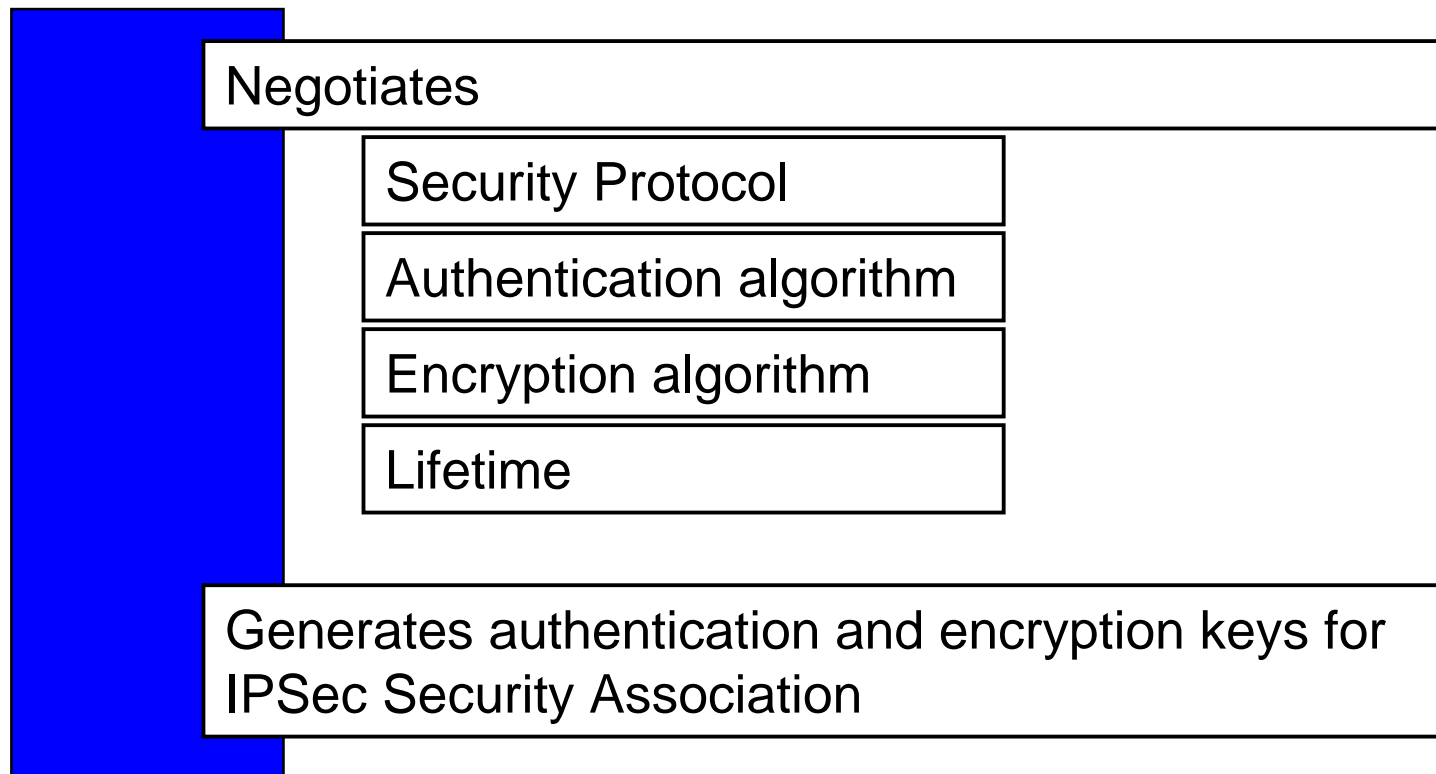
IPSec Protocol Suite (more detailed 1)

Phase 1: ISAKMP SA Establishment (Main Mode)



IPSec Protocol Suite (more detailed 2)

Phase 2: IPSec SA Establishment (Quick Mode)



Security / IPSec for IPv6

In principle the same as in IPv4, but

More real addresses

Integral part of IPv6, applications don't have to care of security

Used by other protocols, e.g. authenticate Binding Updates in Mobile IPv6

Products:

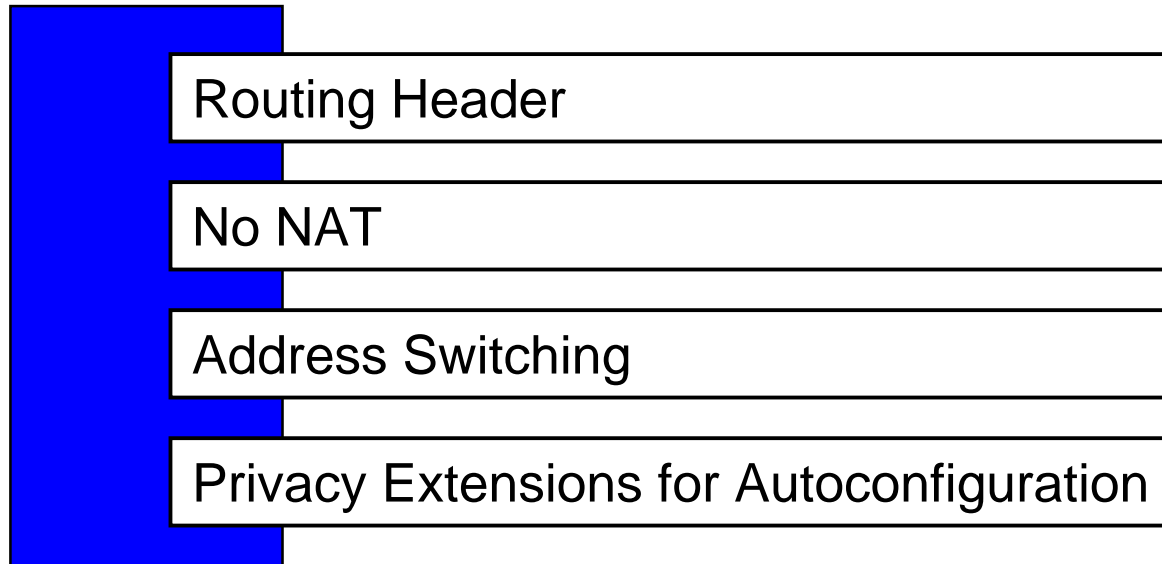
FreeS/WAN



KAME (Wide Project)

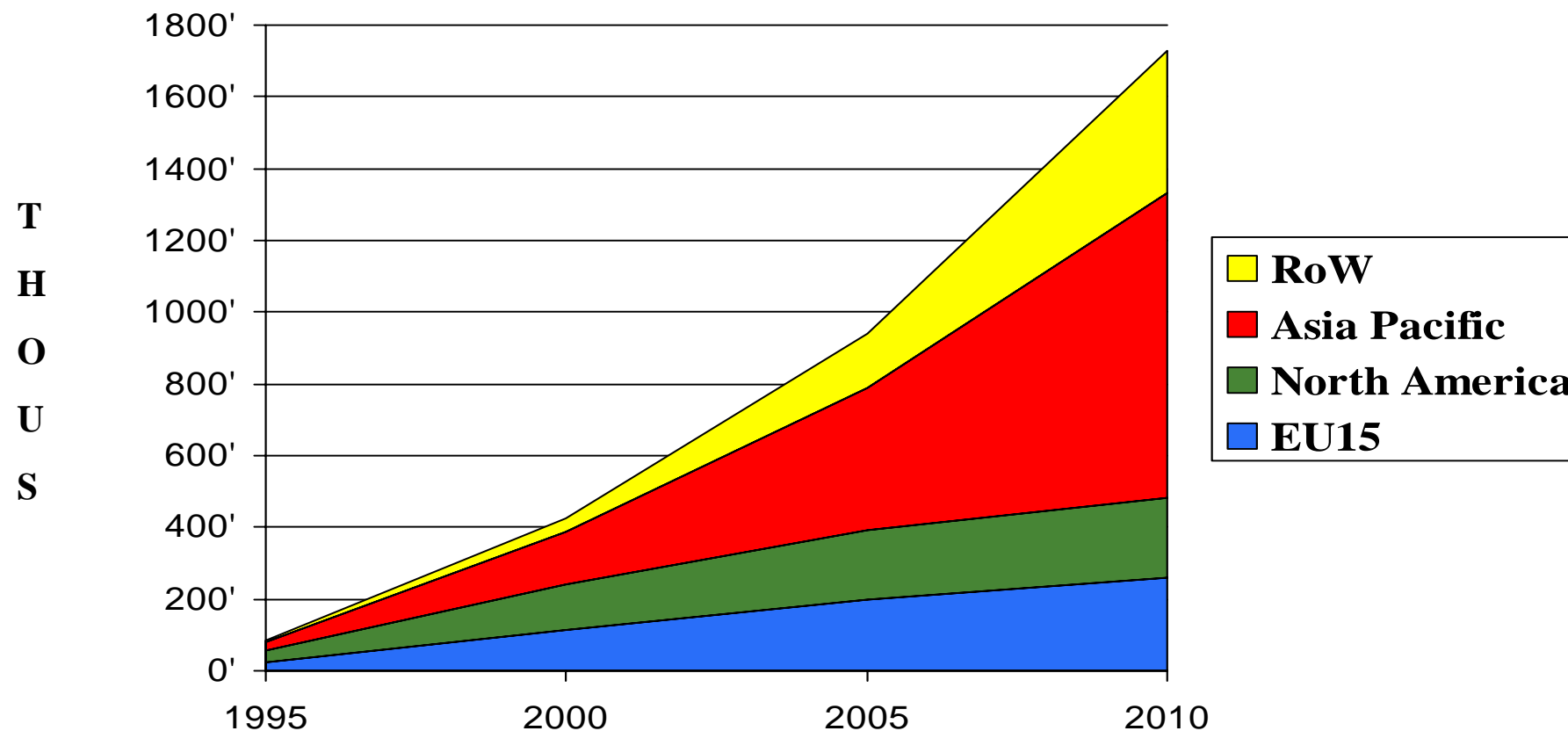


More Security Features of IPv6

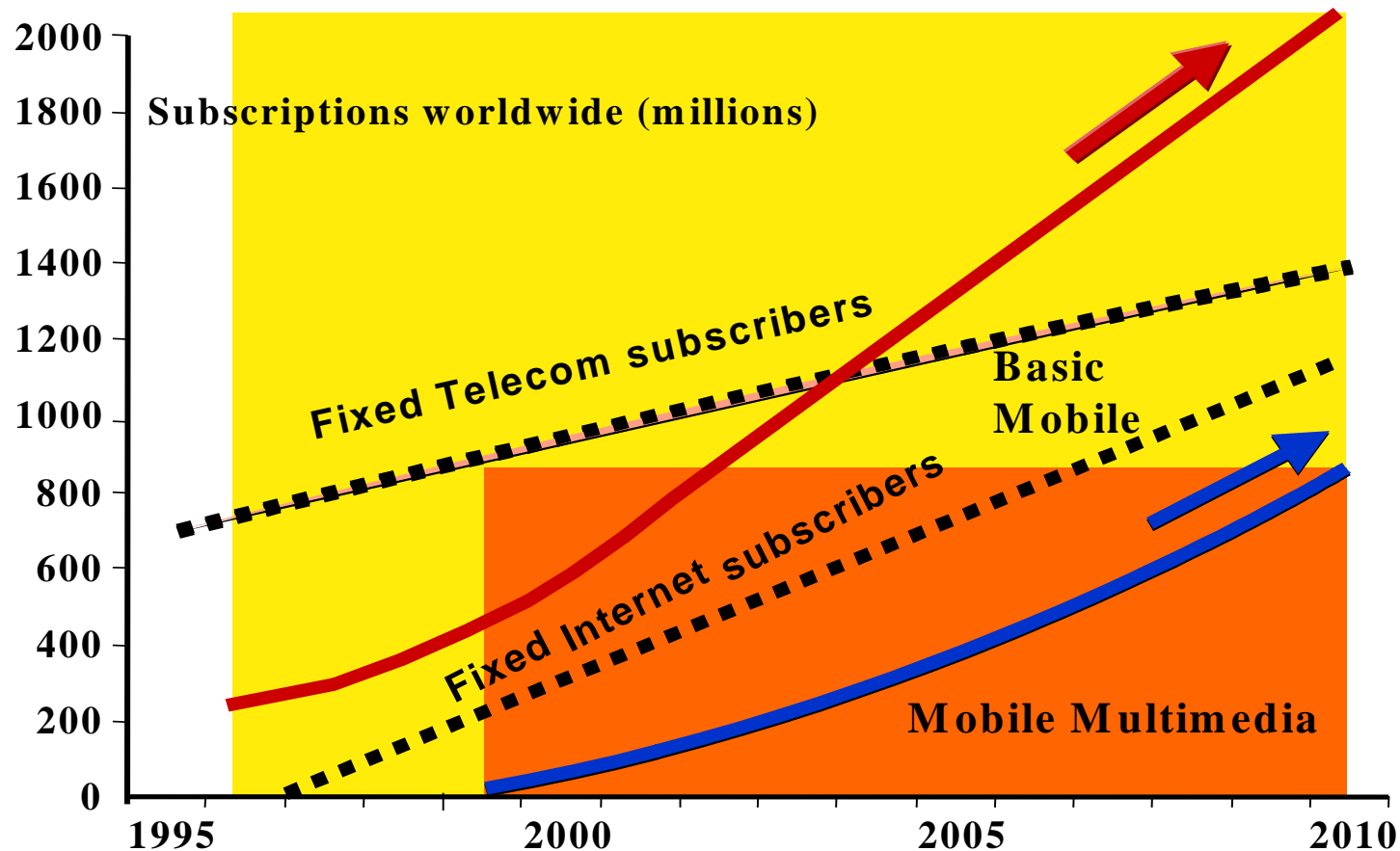


Wireless Next Generation Internet

Mobile Growth Estimate (Ericsson)



Mobile growth and Internet Access Capability



Source: UMTS Forum

New Challenges

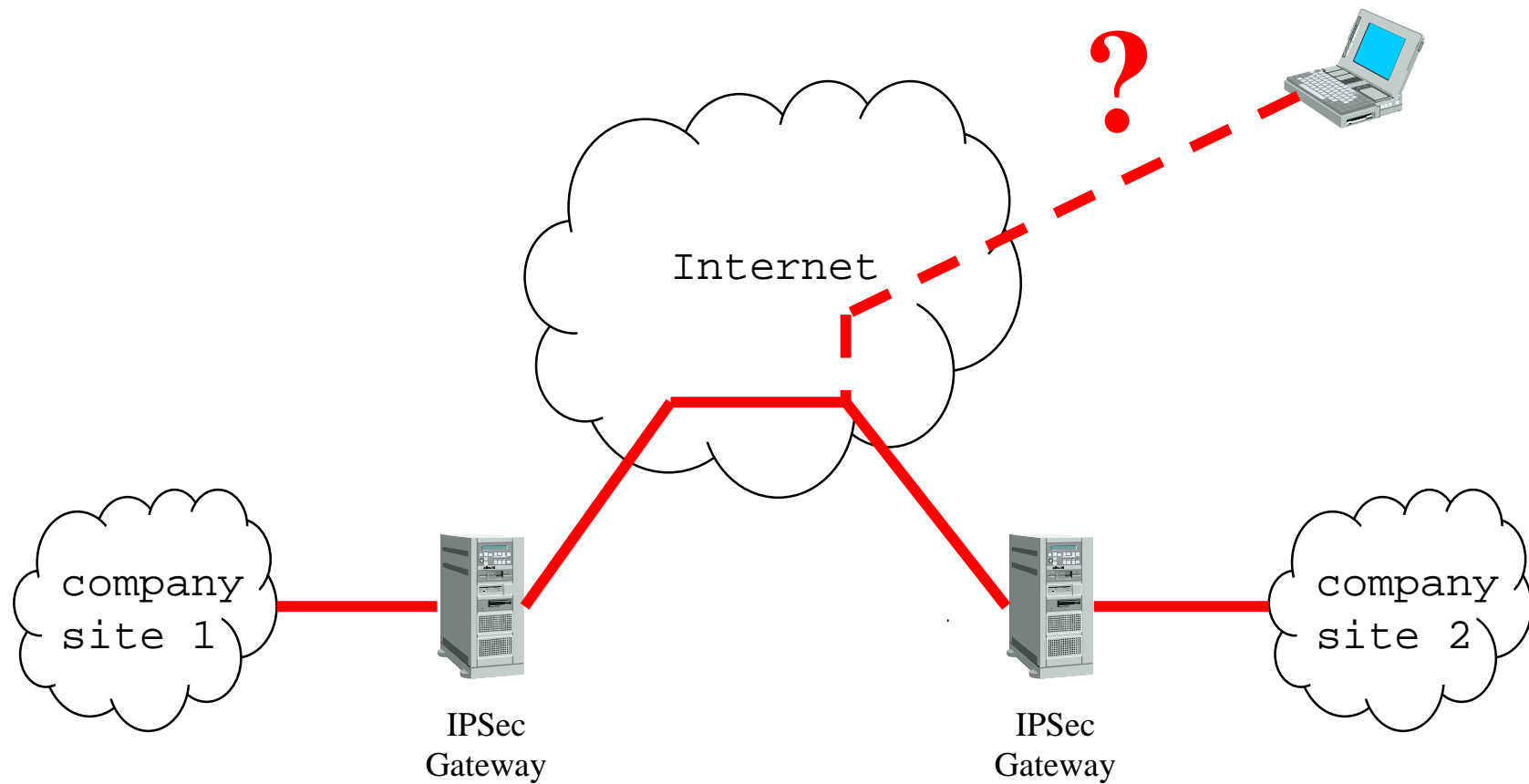


IAB / IETF recommend IPv6 / Mobile IPv6 for 3G networks

Security is more in danger in wireless networks

Road Warrior support

Road Warrior Application



6WINIT

Main Statistics

Has started: 1/1/2001

Period 24 months - 2001/2002

EC Project Budget - 5,9 MEuro

EC Participants - usual terms (including Poland)

Canadian, Japanese, Korean, Swiss and US partners self-financed

Topics Addressed

Provision of Seamless Services

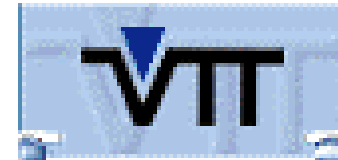
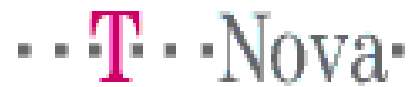
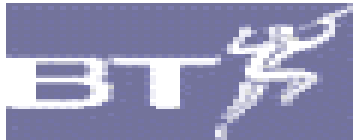
Use Fixed and Wireless Transmission (Wireless LAN and Cellular)

Complete End-to-End Services

Both personal and terminal mobility

Full range of IPv6 Facilities (including IPSec)

6WINIT - Partners



CRC, TZI, UoS, UKT, 6WIND



NTT



Additional Links

www.ipv6.iabg.de



<Coming soon>



www.freeswan.org



www.kame.net

