

Link Security Architecture

Architecture Notes

mick_seaman@ieee.org

Summary

- The (assumed) problem
- Nature of solution
- 802.1x architecture starting point
 - Network access
 - Growing networks
 - Network to network attachment
 - Traffic segregation
- Keys to a successful solution

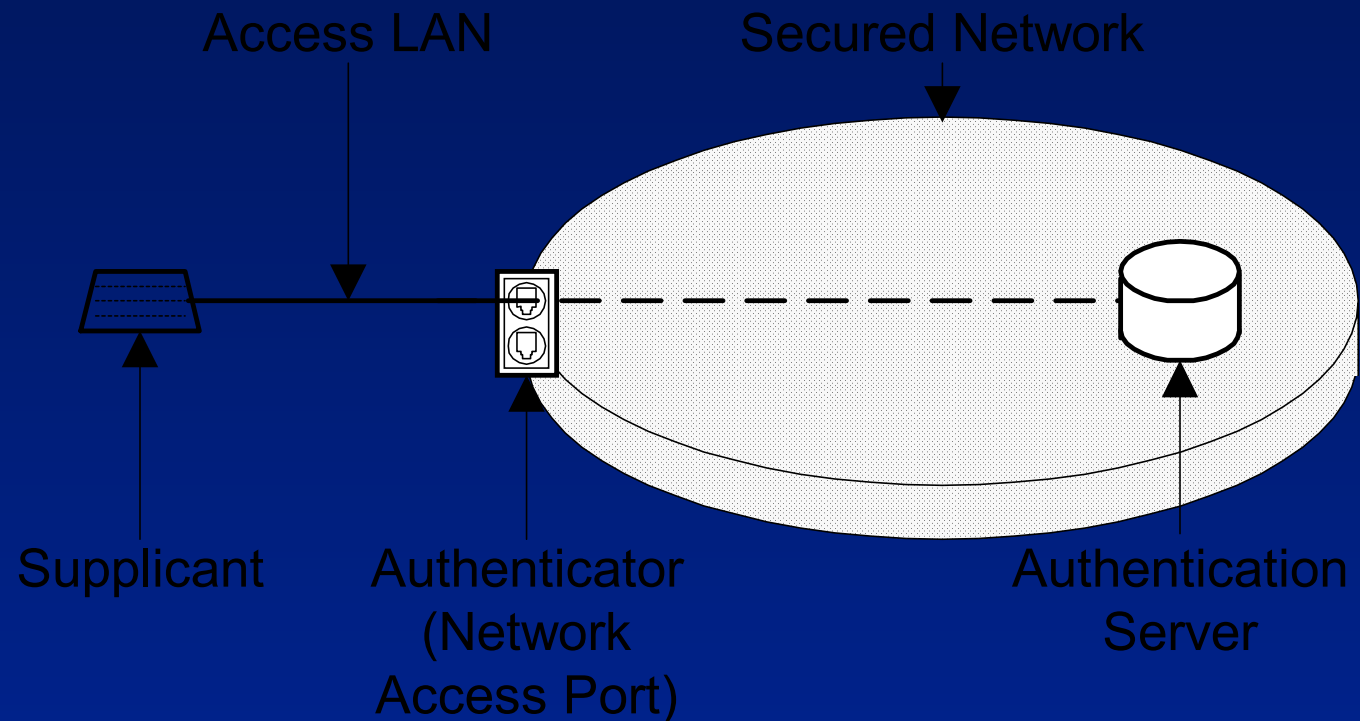
Assumed problem

- Interconnecting networks
 - End station to network is a special case
- Layer 2 connected networks
- Theft of service and failure of due care
 - Even the sophisticated customer doesn't want an attack to be physically possible
- Not disruptive
 - to existing network
 - to existing network management
 - to network performance, availability, reliability
- Craft compatible (field deployable – minimal opex)

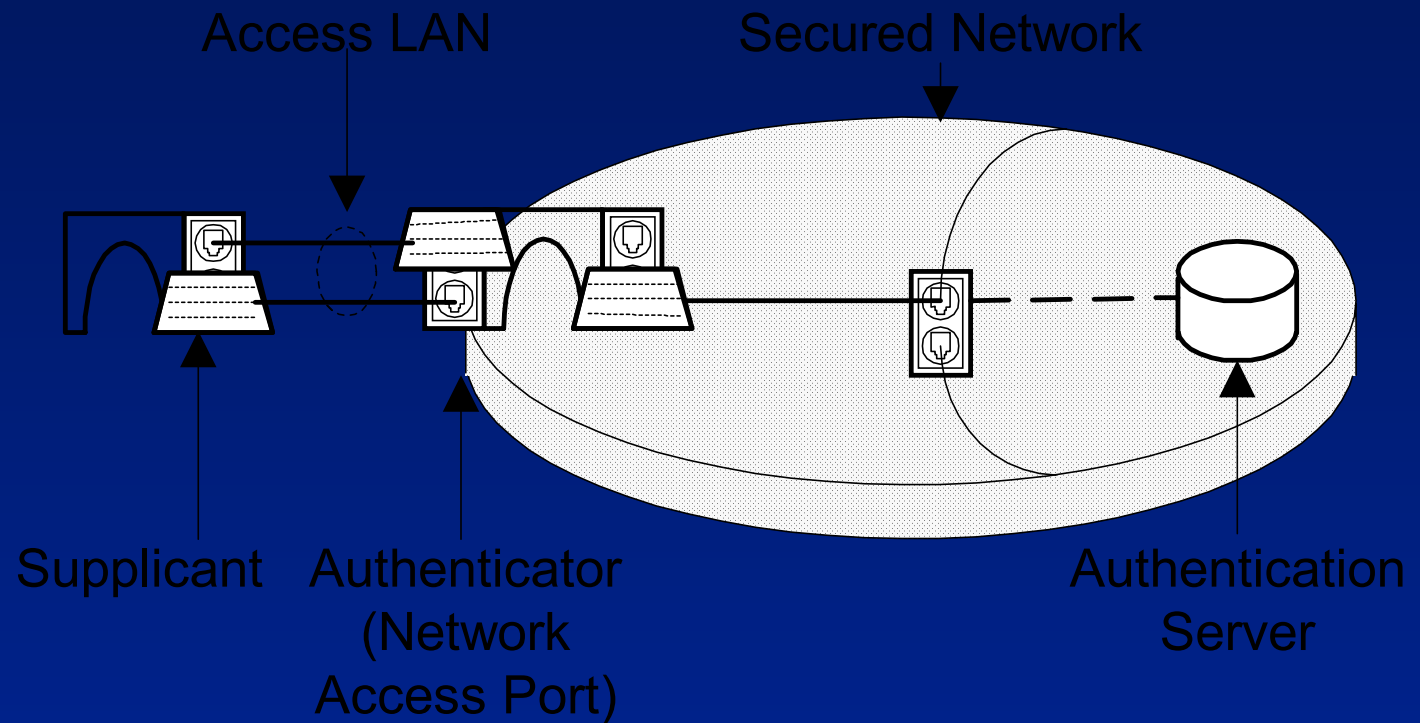
Nature of a solution

- Not end-to-end anything
 - Security coverage typically subsets L2 connection
 - Not an Ipsec replacement
- Perimeter/firewall oriented
- Multi-layer
 - Authentication by many methods
 - Encryption at lowest possible layer
- Leverage existing solution components

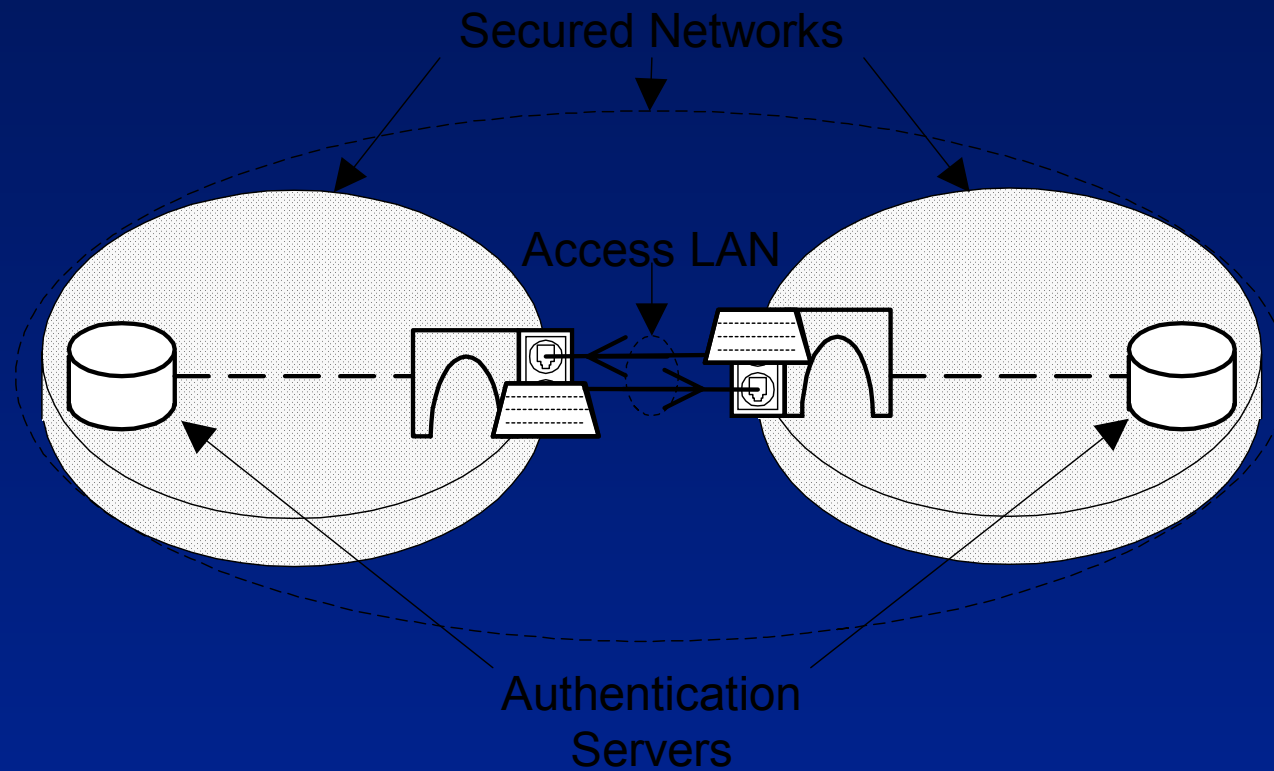
.1X architecture starting point



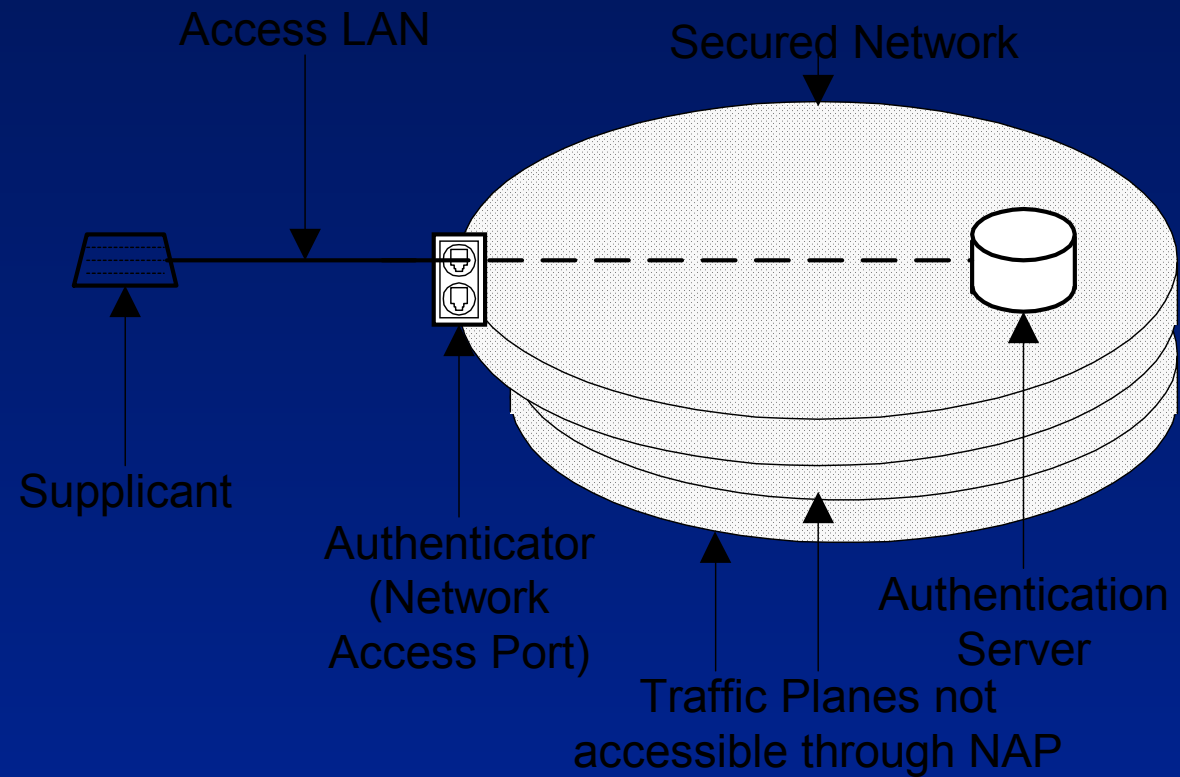
Growing networks



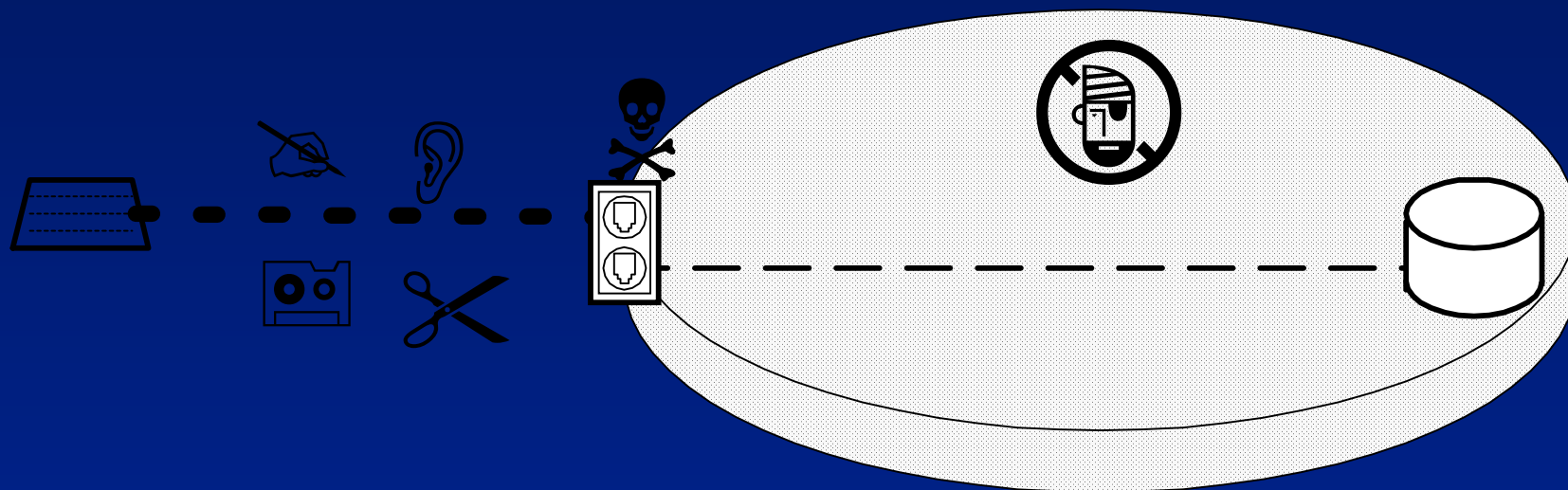
Network to network attachment



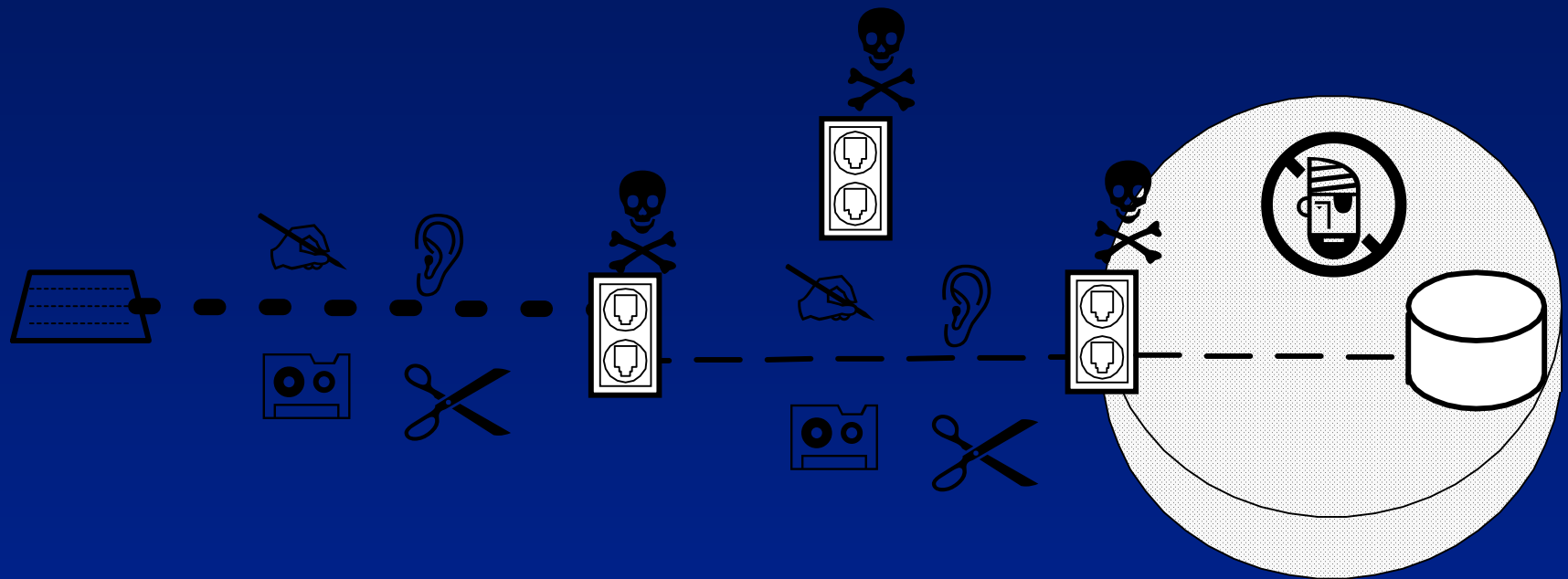
Traffic segregation



Extending solution (1)



Extending solution (2)



Keys to a successful solution

- Completely specified solution
- Sufficiently broad appeal
 - Covers a spectrum of technologies
- Most of it built already and available as standard components
 - Satisfies someone else's agenda