



Wireless Security

What's Working Now?

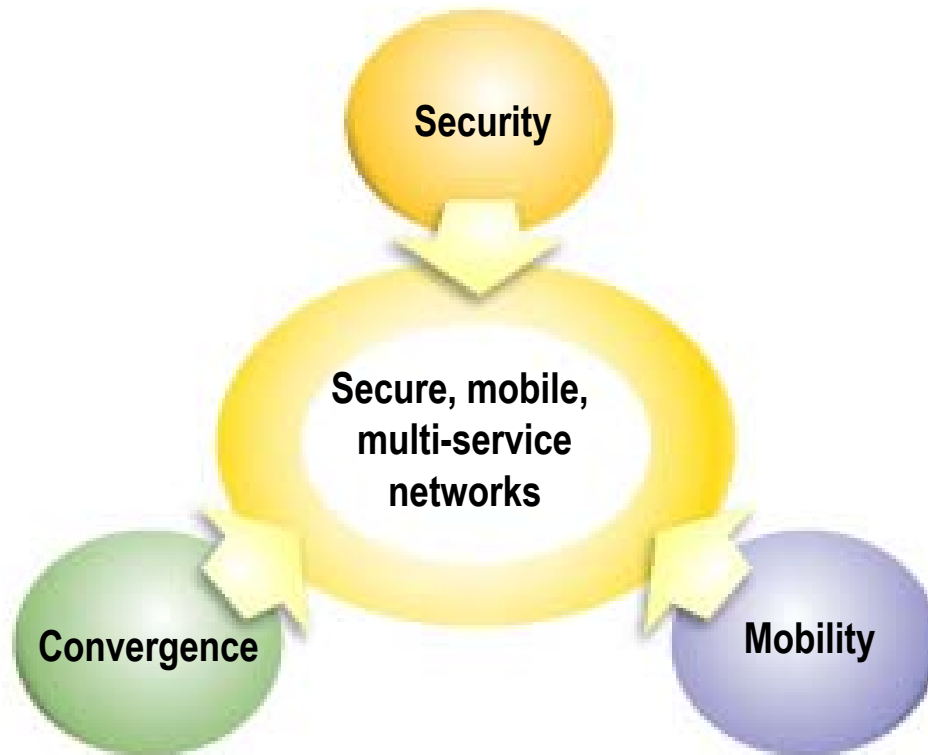
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Its Not Just About Security

Three Part Adaptive Edge Architecture

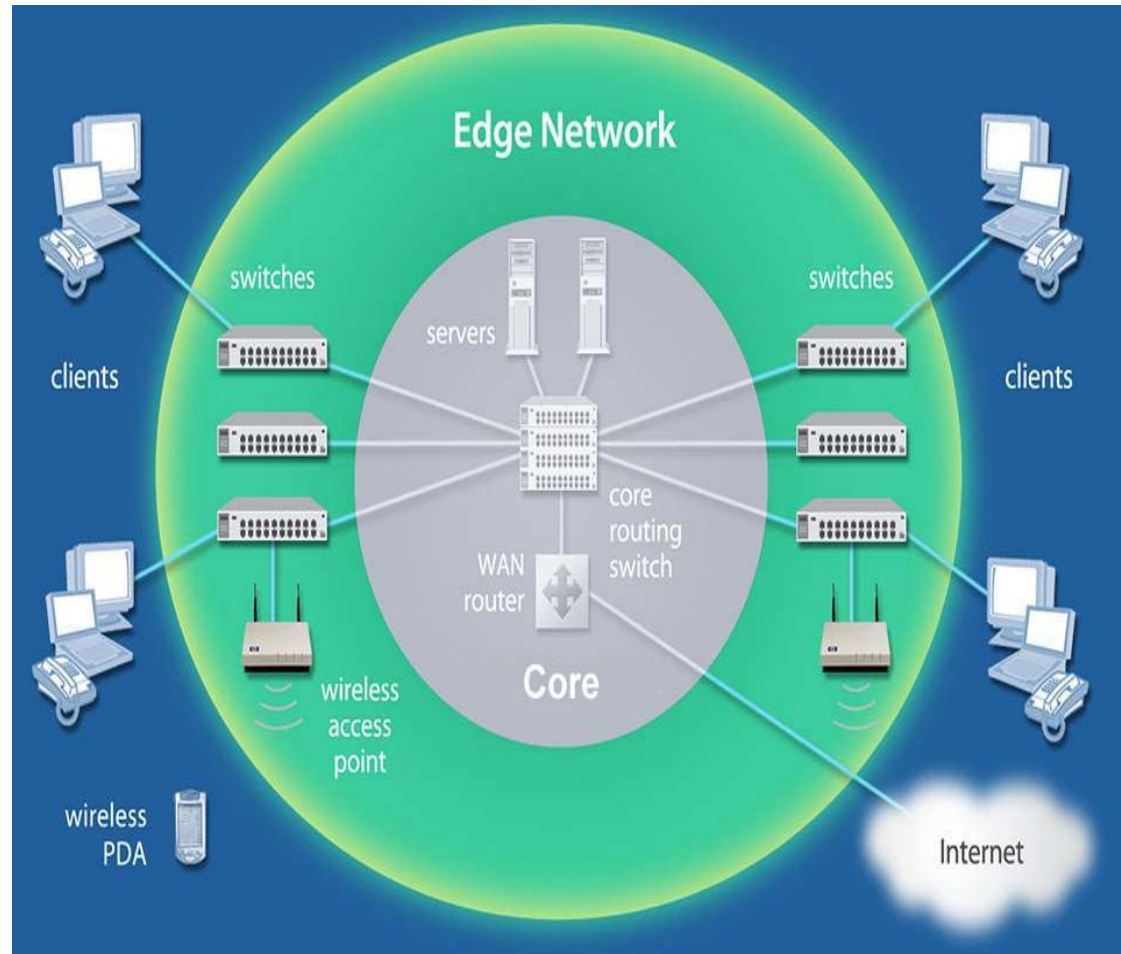


Solution approaches that focus on security, mobility and convergence independently are inherently insufficient.

Customers need a single network that provides an integrated approach to secure, mobile, converged networks.

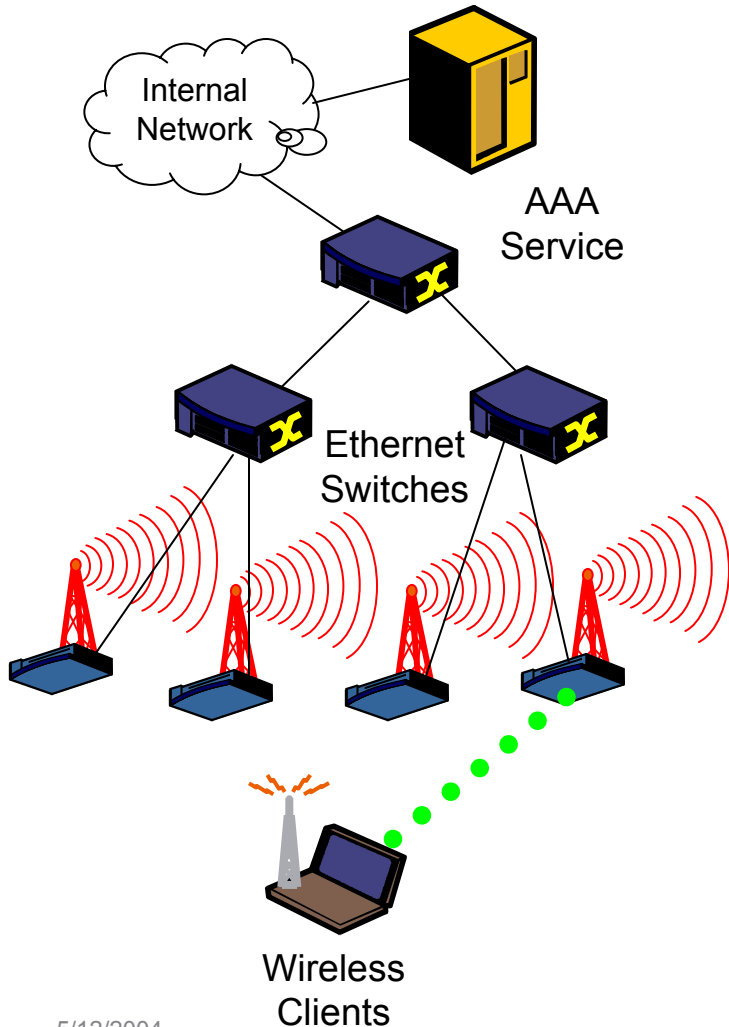
Edge-Centric Security

- Every EDGE device adds “decision making” capacity:
 - + linear scalability
 - + enforce security at point of access
 - + meet emerging application needs
- EDGE devices are standardized volume components:
 - + affordable scalability
 - + uniform policy management
- A simple high-bandwidth core is sufficient:
 - + reduced cost and complexity



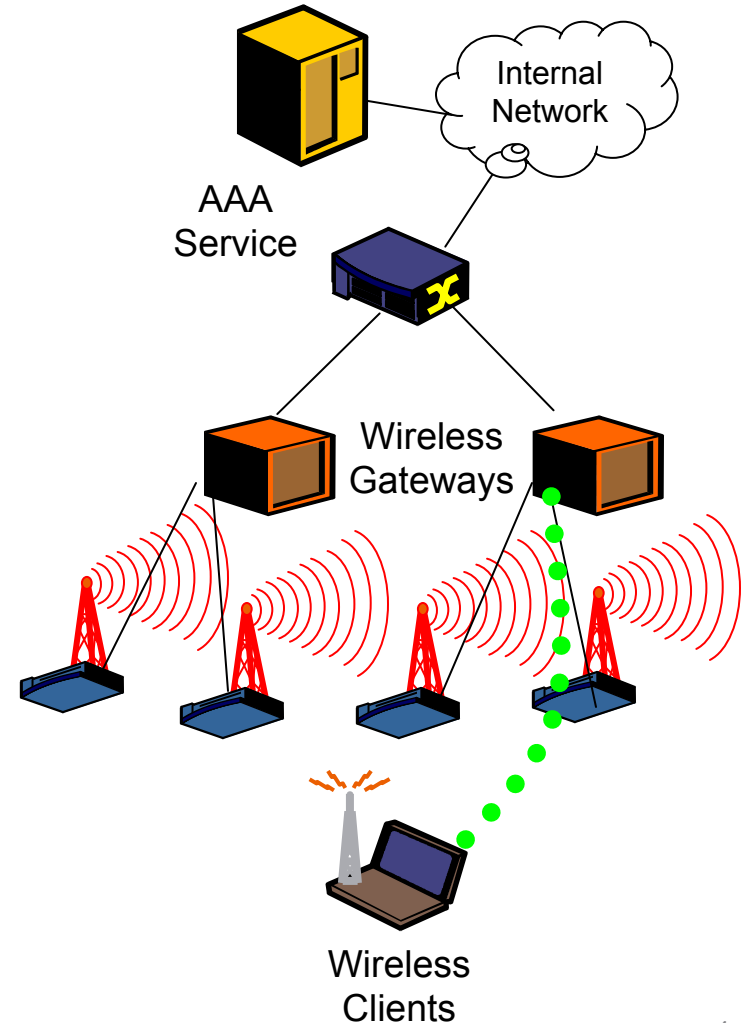
Two Wireless Security Approaches

802.1X with WPA



VS

Wireless Gateway

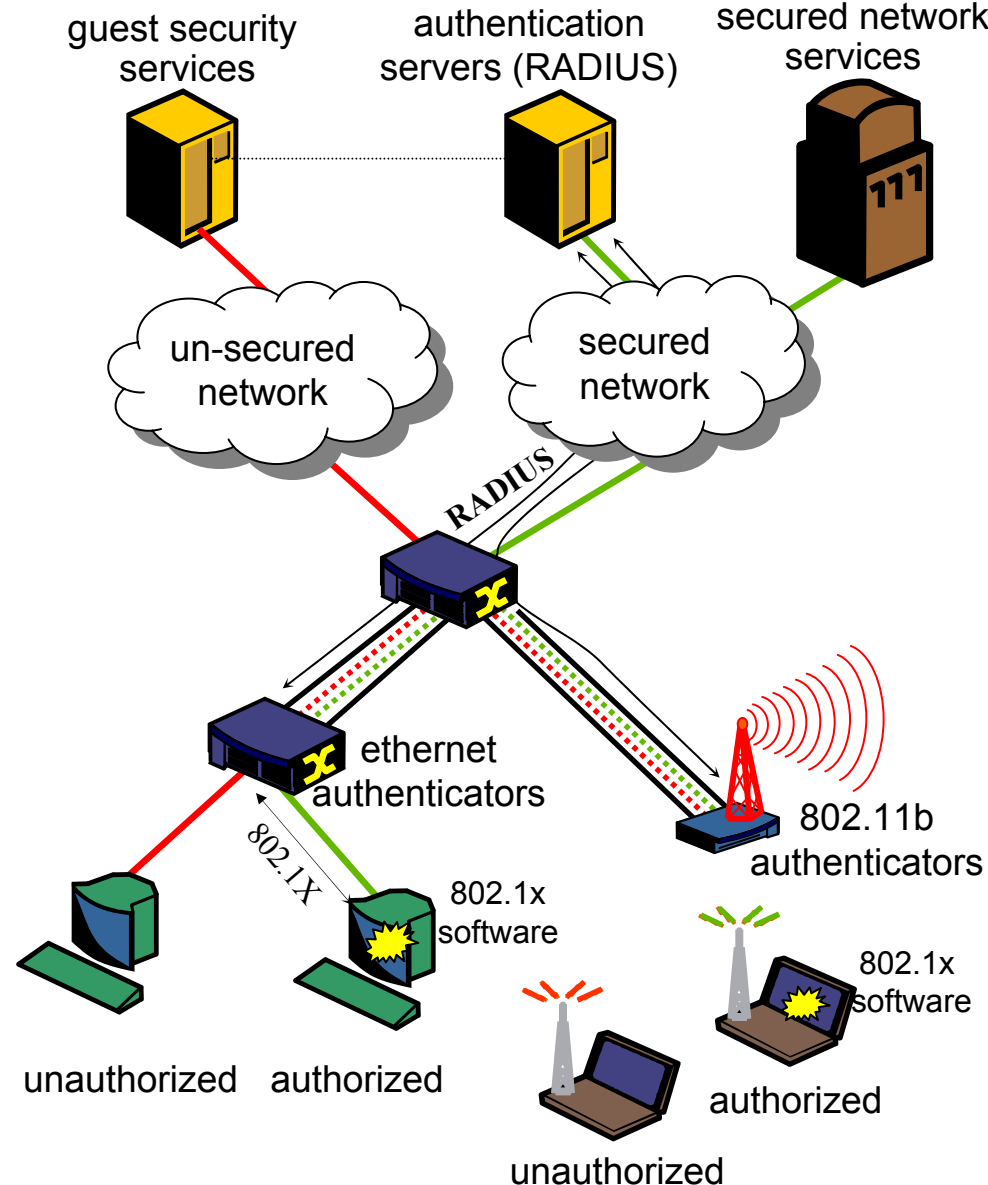


State-of-the-Art 802.1X



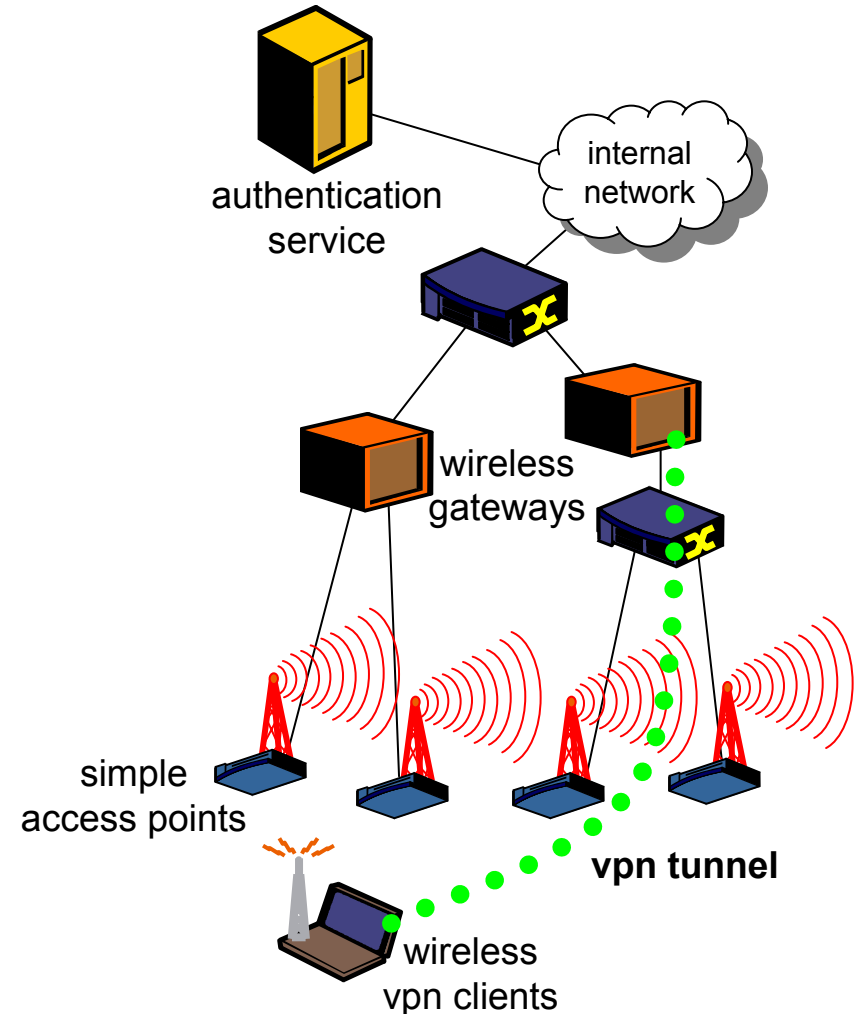
invent

- Mutual authentication using EAP
- Guest networking using VLANs
- Client integrity checks are incorporated within EAP exchange
- Dynamic configuration of keys, VLANs, Bandwidth and ACLs using Radius attributes
- Built-in encryption protects over-air traffic
- Secure handoff schemes under development
- Encryption at the edge for highest performance



Wireless Gateway

- Many authentication schemes
- Guest networking allows miss-configured clients.
- Client integrity checks are out-of-band or web-based
- Gateway enforces rich set of access rights (BW, QoS, ACLs, Location)
- VPN based encryption protects over-air and uplink traffic
- Secure intra-gateway and inter-gateway roaming
- Encryption performed in software and aggregated across multiple APs



Choice and Usage Considerations

- Client availability and ease of deployment
- Performance
- Total Cost
- Policy enforcement
- Mobility support
- Protocol and application support

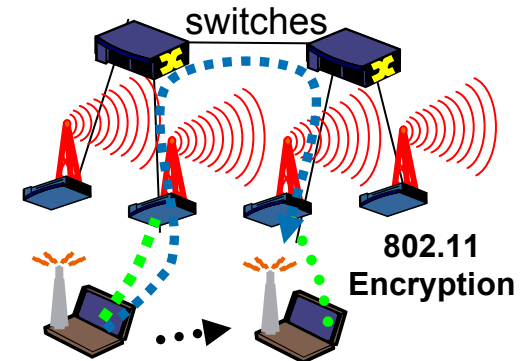
So What's Left To Do?

Solving the Hard Problems

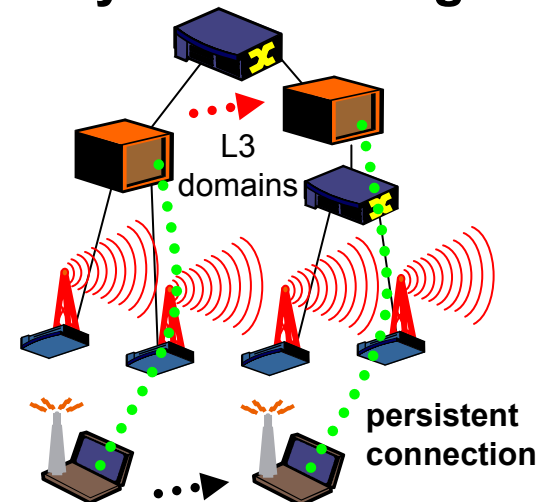
- Security Plus Fast L2 Roaming
 - Pre-Authentication
 - Key caching proposals

- Session Persistence and Media Independent Handoff
 - IEEE 802.21 handoff
 - Mobile-IP
 - Session Gateway's

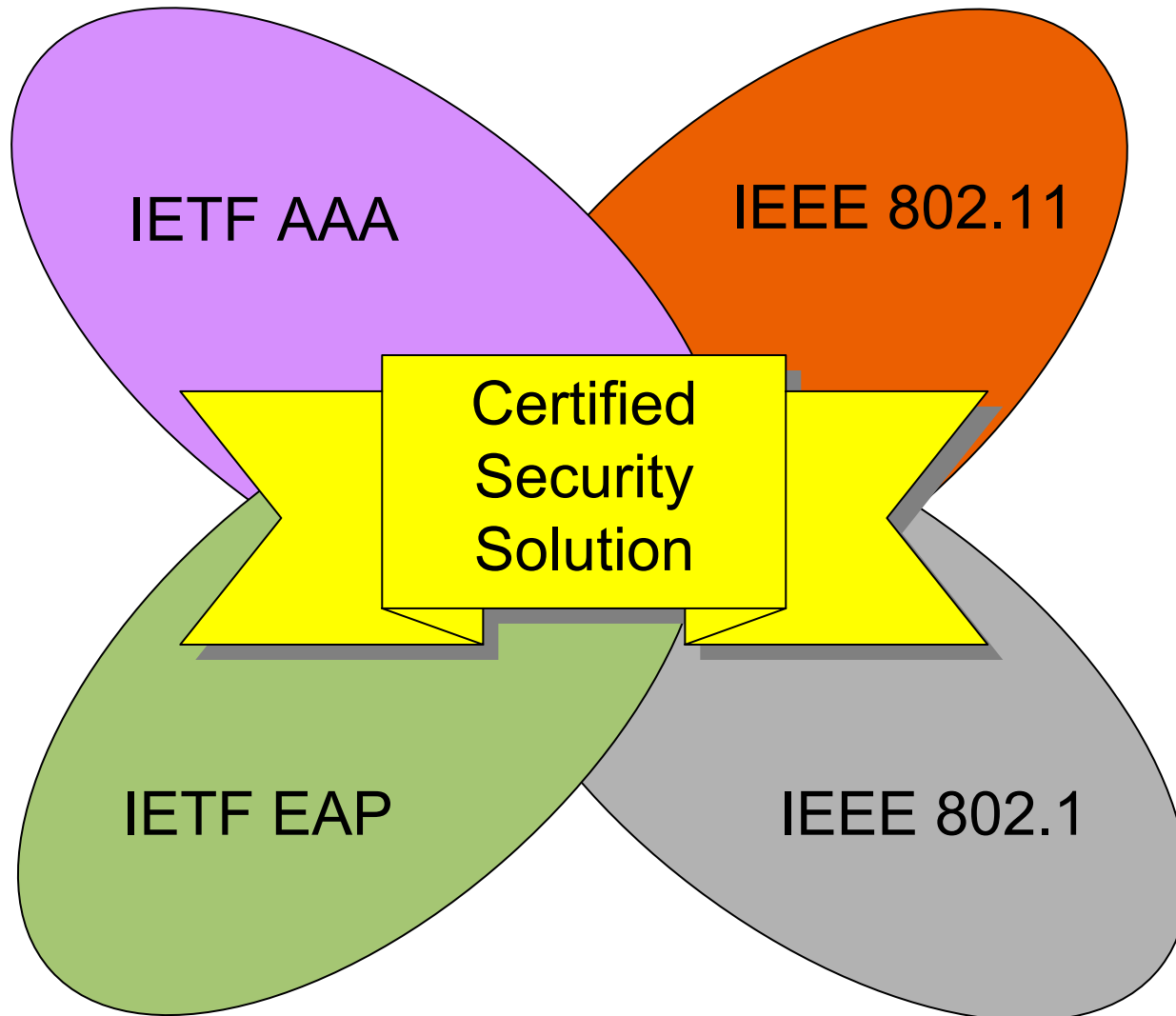
Layer-2 Roaming



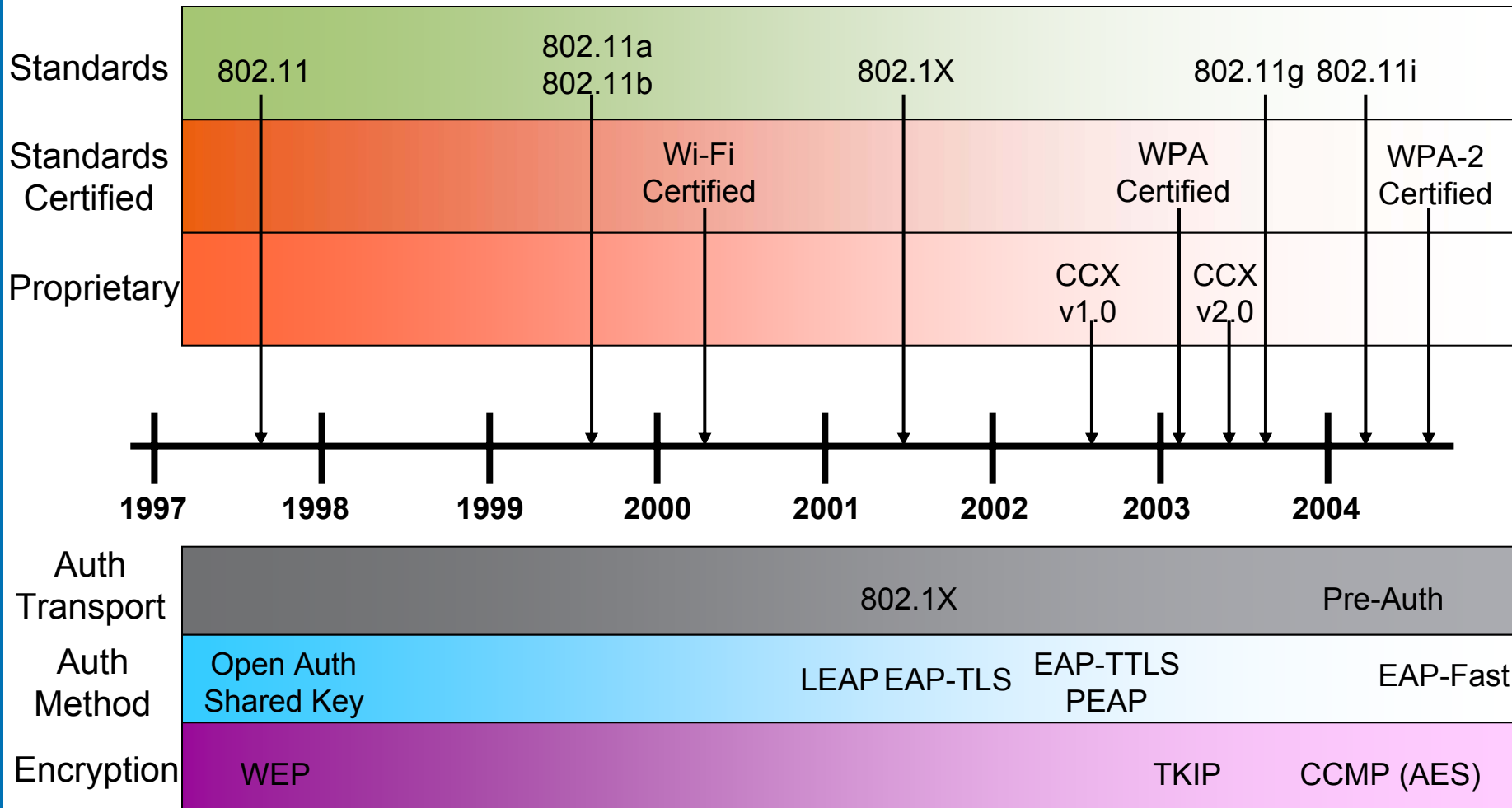
Layer-3 Roaming



The WLAN Security Standards



Wireless Security Timeline



Thank You!

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