Christian Wimmer

Wireless LAN Security in a SOHO Environment: A Holistic Approach

Bachelor Thesis

Examicus

Wireless LAN Security in a SOHO Environment: A Holistic Approach

Christian Manfred Wimmer

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School of Computing & Communications Technology

North East Wales Institute, Wrexham

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AES	Advanced Encryption Standard
AP	Access Point
BSS	Basic Service Set
BSSID	Basic Service Set ID
CCMP	Counter Mode with CBC-MAC Protocol. AES based protocol 802.11i
DHCP	Dynamic Host Configuration Protocol
DoS	Denial of Service
dBm	decibel (db) in relation to 1 milli-watt (mW)
EAP	Extensible Authentication Protocol
ESS	Extended Service Set
FHSS	Frequency Hopping Spread Spectrum
FMS	Fluhrer-Mantin-Shamir. Used to reference a key recovery attack against WEP.
HR/DSSS	High-Rate Direct Sequence Spread Spectrum
HTTP	HyperText Transfer Protocol
HTTPS	HTTP Secure
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
IPsec	IP security. Framework of security protocols, often used for VPN
IR	InfraRed
ISO	ternational Organization for Standardization
ISM	Industrial, Scientific, and Medical Bands
IV	Initalization Vector
LAN	Local Area Network
LEAP	Leightweight Extensible Authentication Protocol).
MAC	Medium Access Control
OFDM	Orthogonal Frequency Division Multiplexing
OSI	Open Systems Interconnection, also known as the ISO – OSI modell
PHY	PHYsical Layer
PMK	Pairwise Master Key
PSK	PreShared Key
RADIUS	Remote Authentication Dial In User Service
RC4	Rivest Cipher 4, a streaming cipher devloped by Ron Rivest, RSA labs

RSN	Robust Security Network, part of 802.11i
SNR	Signal to Noise Ratio
SSH	Secure Shell
SSID	Service Set IDentifier
SSL	Secure Socket Layer
SOHO	Small Office / Home Office
TCP	Transmission Control Protocol
TGi	802.11 Task group i
TK	Temporal Key
TKIP	Temporal Key Integrity Protocol. RC4 based protocol introduced in 802.11i
VPN	Virtual Private Network
WAN	Wide Area Network
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless-Fidelity
WiMAX	Worldwide Interoperability for Microwave Access, also known as IEEE 802.16
WLAN	Wireless LAN
WPA	Wi-Fi Protected Access
WPA2	WPA v2