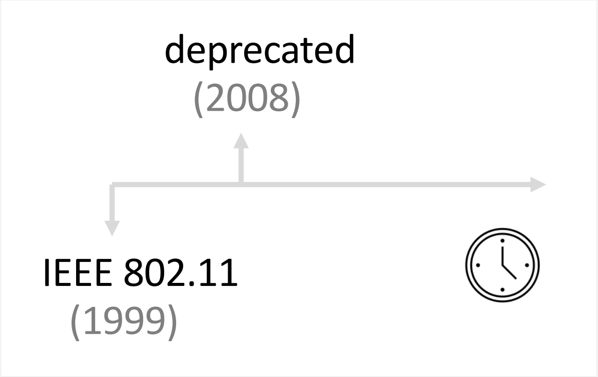
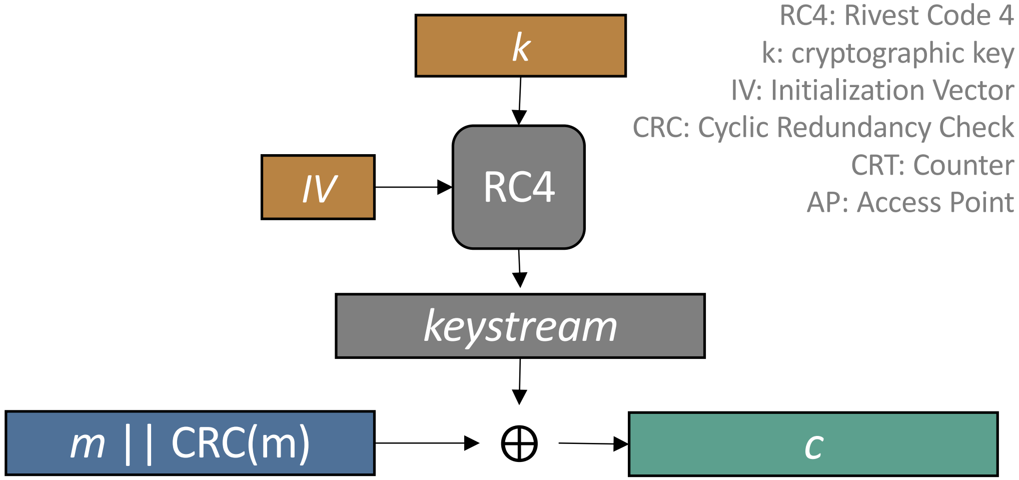
Wired Equivalent Privacy (WEP) -

https://pagesonsecurity.blogspot.com/



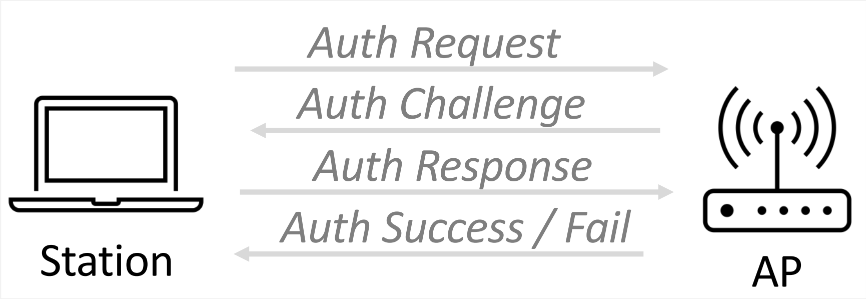
Sizes	
	k: 104 bits (40 bits export)
	IV: 24 bits (used in CTR mode)

- − *Confidentiality:* short k, short IV, linearity / bit flipping, …
- − *Integrity:* CRC is not a MAC/MIC
- − *Key management:* a single key for all devices
- − *Authentication:* not mutual, $\mathcal{A}$ can passively find the keystream for used IV
- + *Open standard*

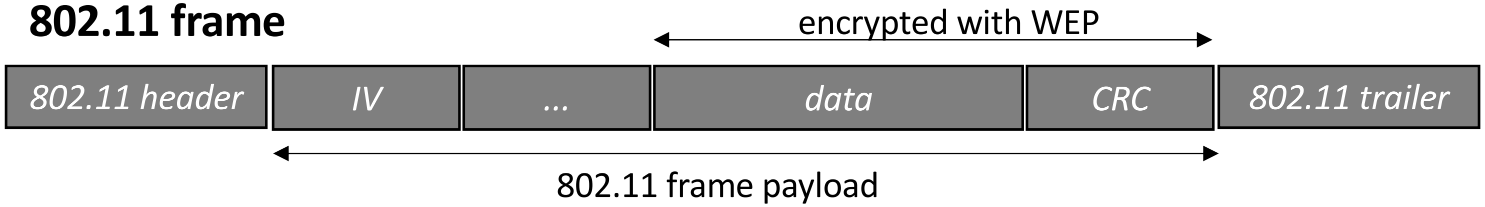


RC4: Rivest Code 4
k: cryptographic key
IV: Initialization Vector
CRC: Cyclic Redundancy Check
CRT: Counter
AP: Access Point

Encryption: $c = (IV, RC4(k,IV) \oplus m||CRC(m))$
Decryption: $m\,||CRC(m) = RC4(k,IV) \oplus c$



802.11 frame



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