

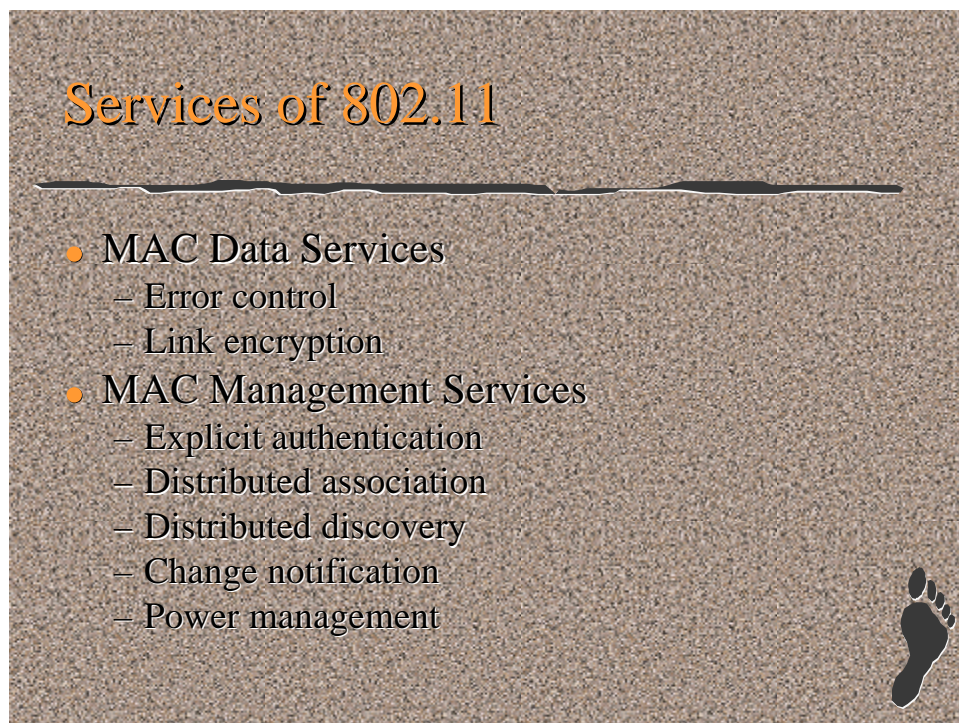
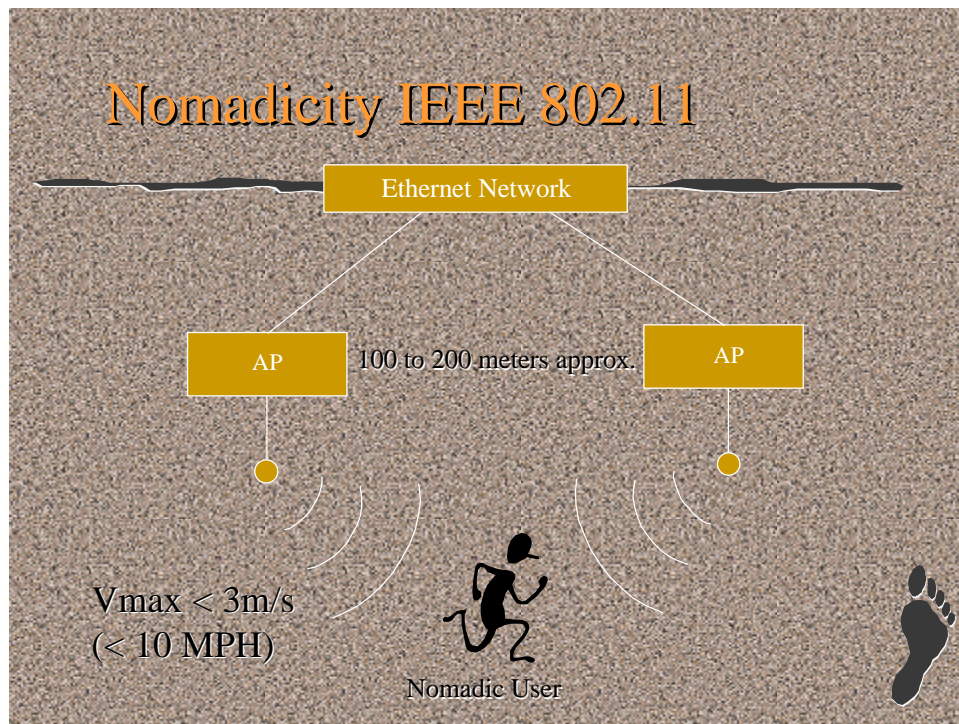
Support for Nomadicity with IEEE 802.11

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Wireless LAN Standards

- IEEE 802.11 Standard is currently being developed will be released end 1997. Will work in conjunction with standard Ethernet.
 - Spread Spectrum Direct Sequence
 - 1 And 2 MB/s Transfer Rate at 2.4 Ghz
 - Spread Spectrum Frequency Hopping
 - 1 And 2 MB/s Transfer Rate at 2.4 Ghz
 - Infrared





MAC Data Services

- Error control
 - Retry failed transmissions in the MAC
 - Direct acknowledgment of receipt
 - Duplicate frame detection and removal
- Link encryption
 - RC4 encryption algorithm with 40-bit key and 24-bit IV



MAC Management Services

- Explicit authentication
 - Authentication required prior to being able to access data services
 - Two mechanisms currently provided
 - “Open System”, i.e., none
 - “Shared Key”
 - Extendible to additional mechanisms



MAC Management Services

- Distributed association
 - Mobile station requests association
 - Includes capability and rate information and location of last association



MAC Management Services

- Distributed discovery
 - Two mechanisms provided
 - Passive scanning
 - Active scanning
 - Information is acquired that allows other stations to be found in time-frequency space



MAC Management Services

- Change notification
 - Service indications are provided when
 - losing an association
 - establishing an association
 - failing to establish an association



MAC Management Services

- Power management
 - Stations operate in either Active or Power Saving modes
 - Active mode: receiver is always on
 - Power Saving mode: receiver may be turned off for arbitrary lengths of time
 - Stations buffer traffic for other stations in Power Saving mode

