WIRELESS LAN AND PERSONAL AREA NETWORK PROTOCOLS

<u>Lesson 02</u> Wi-Fi

© Oxford University Press 2018. All rights reserved.

WI-FI

- Wi-Fi is an implementation and a trademark of Wireless Fidelity (Wi-Fi) Alliance.
- Wi-Fi Alliance certifies the products based on IEEE 802.11 standard specifications for WLAN
- A WLAN interface, device, or system is also termed Wi-Fi enabled

WI-FI DIRECT

- Wi-Fi direct is new way to connect at existing Wi-Fi speeds—up to 250 Mbps.
- Wi-Fi direct devices will also be able to advertise their presence and discover another Wi-Fi direct device

WI-FI DEVICE

- Connects WLAN using Ad hoc network
- WLAN connects to the Internet and remote enterprise server
- Wi-Fi network is a communication network using the wireless frequency between 2.412 GHz and 2.472 GHz

WI-FI DEVICE

- Popular standards for WLAN IEEE 802.11a, 802.11b, and 802.11g/i/n (Table 2.1)
- Security protocol IPSec
- Quality of service limits by bandwidth provided by Internet Service Provider

WI-FI FEATURED MOBILE

 Most smartphones have Wi-Fi network specifications—WLAN standards IEEE 80211b and IEEE 802.11g

WI-FI FEATURED MOBILE

 A smartphone enables, in addition to making phone calls through cellular CDMA/GSM networks, connection to the users for staying connected via the Internet (using VoIP) through Wi-Fi networks, instead of using more expensive cellular services

WI-FI FEATURED MOBILE

- Smartphones offer the following improved services: (a) secure phone calls through VoIP service, (b) access to the local files of an enterprise, and (c) connection to the Internet through cellular services or Wi-Fi
- WhatsApp, Messages, Videos, Images, Files, Voice Calls and Video Calls

COMPARISON WITH 3G

• Refer Table 10.1 P.369

© Oxford University Press 2018. All rights reserved.



- Wi-Fi an implementation and a trademark of Wi-Fi Alliance
- Wi-Fi Alliance certifies the products based on IEEE 802.11 standard specifications for WLAN

SUMMARY

- Secure phone calls through VoIP service, access to the local files of an enterprise,
- WhatsApp, Messages, Videos, Images, Files, Voice Calls and Video Calls

End of Lesson 02 Wi-Fi

© Oxford University Press 2018. All rights reserved.