WiFi and 802.11 Regulations, Standards, Organizations

Zhongwei Zhang

University of Southern Queensland

2022

The Role of Standards

- Some standards start as a commercial product
 - ► Ethernet (Xerox)
 - CSMA (Qualcom)
 - Might still become "official" standards (e.g. ethernet)
- Others are guided by a standards organisation
 - ► E.g. GSM (European standard for mobile phones)
 - Also adopted in Australia
 - ▶ 802.11 always regulated by IEEE

WiFi and 802.11 Regulations, Standards, Organizations

- International Standards Organisations (with an interest in wifi)
 - ► IEEE
 - IETF (the Internet)
 - ► ITU
 - ► ISO
 - ► 3GPP
 - ► ETSI

IEEE Standards

- ► IEEE 802.1 Interworking
- ► IEEE 802.2 Logical Link
- ► IEEE 802.3 Ethernet I AN
- ► IEEE 802.4 Token BUS
- ▶ IEEE 802.5 Token Ring
- ► IEEE 802.6 Metropolitan Area Network
- ► IEEE 802.7 Broadband Advisory
- ► IEEE 802.8 Fiber Optic Advisory

- ► IEEE 802.9 Voice/Data
- ► IEEE 802.10 Security
- ► IEEE 802.11 Wireless Networks
- ► IEEE 802.12 High-Speed Networking
- ► IEEE 802.14 Cable Broadband
- ► IEEE 802.15 Wireless Personal Area
- ► IEEE 802.16 Broadband Wireless Access

Internet Engineering Task Force (Internet Standards)

The IETF is the leading body responsible for development and publishing of Internet standards (RFCs).

Committees targetted on particular area are formed from time to time.

Members are usually employed by other organisations.

The ITU

The ITU has developed and managed standards for communications in general for many decades. They have developed hundreds of standards in this area, many of which are still in use.

ITU-T International Mobile Telecommunications (IMT) is responsible for all 5G non-radio segments including overall 5G architecture, softwarization, network management, and fixed-mobile convergence.

The International Standards Organization (ISO)

The 3rd-generation Partnership Project (3GPP)

ETSI