# IEEE 802

**IEEE 802** is a family of Institute of Electrical and Electronics Engineers (IEEE) standards for local area networks (LAN), personal area network (PAN), and metropolitan area networks (MAN). The IEEE 802 LAN/MAN Standards Committee (LMSC) maintains these standards. The IEEE 802 family of standards has had twenty-four members, numbered 802.1 through 802.24, with a working group of the LMSC devoted to each. However, not all of these working groups are currently active.

The IEEE 802 standards are restricted to computer networks carrying variable-size packets, unlike cell relay networks, for example, in which data is transmitted in short, uniformly sized units called cells. Isochronous signal networks, in which data is transmitted as a steady stream of octets, or groups of octets, at regular time intervals, are also outside the scope of the IEEE 802 standards.

The number 802 has no significance: it was simply the next number in the sequence that the IEEE used for standards projects.[1]

The services and protocols specified in IEEE 802 map to the lower two layers (data link and physical) of the seven-layer Open Systems Interconnection (OSI) networking reference model. IEEE 802 divides the OSI data link layer into two sub-layers: logical link control (LLC) and medium access control (MAC), as follows:

- Data link layer
    - LLC sublayer
    - MAC sublayer
- Physical layer

The most widely used standards are for Ethernet, Bridging and Virtual Bridged LANs, Wireless LAN, Wireless PAN, Wireless MAN, Wireless Coexistence, Media Independent Handover Services, and Wireless RAN. [2]

## Working groups

| Name | Description | Status |
|---|---|---|
| IEEE 802.1 | Higher Layer LAN Protocols Working Group | Active |
| IEEE 802.2 | LLC | Disbanded |
| IEEE 802.3 | Ethernet | Active[3] |
| IEEE 802.4 | Token bus | Disbanded |
| IEEE 802.5 | Token Ring MAC layer | Disbanded |
| IEEE 802.6 | MANs (DQDB) | Disbanded |
| IEEE 802.7 | Broadband LAN using Coaxial Cable | Disbanded |
| IEEE 802.8 | Fiber Optic TAG | Disbanded |
| IEEE 802.9 | Integrated Services LAN (ISLAN or isoEthernet) | Disbanded |
| IEEE 802.10 | Interoperable LAN Security | Disbanded |
| IEEE 802.11 | Wireless LAN (WLAN) & Mesh (Wi-Fi certification) | Active |
| IEEE 802.12 | 100BaseVG | Disbanded |
| IEEE 802.13 | Unused[4] | Reserved for Fast Ethernet development[5] |
| IEEE 802.14 | Cable modems | Disbanded |
| IEEE 802.15 | Wireless PAN | Active |
| IEEE 802.15.1 | Bluetooth certification | Disbanded |
| IEEE 802.15.2 | IEEE 802.15 and IEEE 802.11 coexistence | Hibernating[6] |
| IEEE 802.15.3 | High-Rate wireless PAN (e.g., UWB, etc.) | ? |
| IEEE 802.15.4 | Low-Rate wireless PAN (e.g., Zigbee, WirelessHART, MiWi, etc.) | Active |
| IEEE 802.15.5 | Mesh networking for WPAN | ? |
| IEEE 802.15.6 | Body area network | Active |
| IEEE 802.15.7 | Visible light communications | ? |
| IEEE 802.16 | Broadband Wireless Access (WiMAX certification) | Hibernating |
| IEEE 802.16.1 | Local Multipoint Distribution Service | Hibernating |
| IEEE 802.16.2 | Coexistence wireless access | Hibernating |
| IEEE 802.17 | Resilient packet ring | Disbanded |

| IEEE 802.18 | Radio Regulatory TAG | Active |
|---|---|---|
| IEEE 802.19 | Wireless Coexistence Working Group | ? |
| IEEE 802.20 | Mobile Broadband Wireless Access | Disbanded |
| IEEE 802.21 | Media Independent Handoff | Hibernating |
| IEEE 802.22 | Wireless Regional Area Network | Hibernating |
| IEEE 802.23 | Emergency Services Working Group | Disbanded |
| IEEE 802.24 | Vertical Applications TAG | ? |

# References

1. Institute of Electrical and Electronics Engineers (September 2004). "Overview and Guide to the IEEE 802 LMSC" (http://grouper.ieee.org/groups/802/802%20overview.pdf) (PDF). Retrieved October 13, 2020.
2. "IEEE802" (https://www.ieee802.org/). *www.ieee802.org*. Retrieved 2022-11-27.
3. "IEEE 802.3-2022 Standard for Ethernet" (https://standards.sale/IEEE_802.3-2022). *IEEE Standards Sale*. IEEE. Retrieved 16 November 2022.
4. "802.3" (http://www.eeherald.com/section/design-guide/ieee802_3.html). *Data Communincation Standards and Protocols*. EE Herald. Retrieved 2012-01-25.
5. "The fate of 100 Mbps Ethernet now definitely two-fold" (https://books.google.com/books?id=0BuAOywpBAwC&q=%22802.13%22%20100base&pg=PA1). *FDDI News*. Boston: Information Gatekeepers, Inc. **4** (7): 1–2. July 1993. ISSN 1051-1903 (https://www.worldcat.org/issn/1051-1903). Retrieved 2013-11-21.
6. "IEEE 802.15 WPAN Task Group 2 (TG2)" (http://www.ieee802.org/15/pub/TG2.html). *official web site*. IEEE Standards Association. May 12, 2004. Retrieved June 30, 2011.

- IEEE Std 802-1990: IEEE **standards** for Local and Metropolitan Networks: Overview and Architecture New York:1990

# External links

- 802 Committee website (http://www.ieee802.org/)
- IEEE 802 Standards (http://ieeexplore.ieee.org/browse/standards/get-program/page/series?id=68) available via IEEE Get Program
- Entrepreneurial Capitalism and Innovation: A History of Computer Communications 1968-1988 (http://www.historyofcomputercommunications.info/Book/9/9.2-IEEE%20Committee_802_1979-1980.html) Archived (https://web.archive.org/web/20190719022805/http://www.historyofcomputercommunications.info/Book/9/9.2-IEEE%20Committee_802_1979-1980.html) 2019-07-19 at the Wayback Machine

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