

IEEE 802 LAN/MAN Standards Committee (LMSC) Overview

IEEE Committee 802 was formed in February 1980 with a mission to create standards for Local Area Networks operating at data rates up to 100 Mbit/s. Its brief was later expanded to include Metropolitan Area Networks (MANs) and data rates well beyond the original 100 Mbit/s limit.

The structure of IEEE 802 LMSC is outlined, together with the scope of individual working groups.

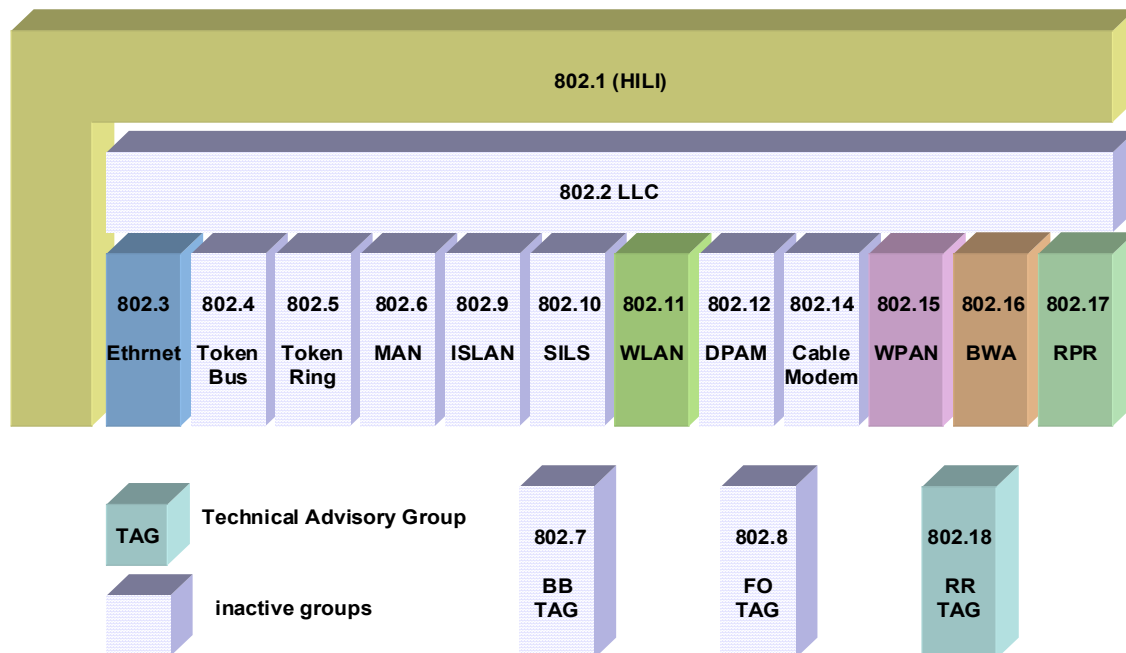
Anyone may participate in IEEE 802 working groups however voting privileges are awarded and maintained through attendance. Voting is conducted strictly on an *individual*, rather than company basis, in order to prevent dominance from larger organisations. Consensus is achieved via high-level voting thresholds in the technical approval process (typically 75%).

Anyone may initiate a new standards project, although the acceptance process is quite rigorous. A new project is generally seeded with a detailed tutorial to all attendees at an IEEE 802 meeting which, today, may be up to 1000 people. A study group is then established, depending on the nature of the group's response. The study group will be granted a fixed life (typically 6-8 months) and will create a formal Project Approval Request (PAR). The PAR will outline its case for a new standards project by addressing 5 criteria:

1. Broad market potential
2. Compatibility with established IEEE 802 architecture
3. Distinct identity
4. Technical feasibility
5. Economic feasibility

If all criteria are fulfilled, then IEEE will grant permission to start standards development, and a new task force will be established. Drafts will then be balloted by the task force/working group, then by a sponsor ballot group comprising a different set of experts. Finally, the standard will be approved by the IEEE standards board and published as an IEEE 802 standard. The majority of standards are now issued as joint IEEE/ISO/IEC standards to eliminate the additional processing delay by ISO/IEC.

A typical project spans 4 years, from a new proposal to publication. Some take longer.



- 802.1 High-Level Interfaces (HLLI): responsible for architecture, internetworking, network management, VLANs, prioritisation.
- 802.2 Logical Link Control (LLC): responsible for LLC standards.
- 802.3 CSMA/CD: responsible for Ethernet standards, including Gigabit & 10 Gigabit projects.
- 802.4 Token Bus: responsible for Token Bus standards.
- 802.5 Token Ring: responsible for Token Ring standards.
- 802.6 MANs: responsible for Metropolitan Area Network standards.
- 802.7 Broadband TAG: Technical Advisory Group for CATV cabling.
- 802.8 Fibre Optic TAG: Technical Advisory Group for Fibre Optics.
- 802.9 Integrated Services LAN: responsible for MAN standards.
- 802.10 Standard for Interoperable Security (SILS).
- 802.11 Wireless LAN (WLAN): responsible for Wireless LAN standards, including 2/11 Mbit/s.
- 802.12 Demand Priority Access Method (DPAM).
- 802.14 Cable Modem: responsible for data over TV cable standards.
- 802.15 Wireless Personal Area Networks (WPANs): responsible for WPAN standards.
- 802.16 Broadband Wireless Access (BWA): responsible for BWA standards up to 2 Mbit/s.
- 802.17 Resilient Packet Ring (RPR): responsible for RPR standards operating at Gbit/s.
- 802.18 Radio Regulation TAG: responsible for co-ordinating radio spectrum allocation.

IEEE 802 standards may be obtained free of charge as part of the *Get IEEE802* programme as long as they are at least 6 months old. Visit www.ieee802.org for details.