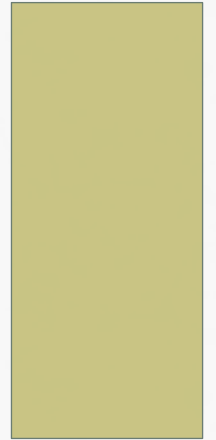# IEEE 802.X STANDARD, ETHERNET & FDDI

PREPARED BY
AFIFA HOQUE

802 PROJECT MODEL

- Project 802 is an ongoing project of the Institute of Electrical and Electronics Engineers (IEEE) for defining local area network (LAN) and wide area network (WAN) standards and technologies. The 802 specifications define the operation of the physical network components – cabling, network adapters, and connectivity devices such as hubs and switches.

BACKGROUND OF ETHERNET TECHNOLOGY
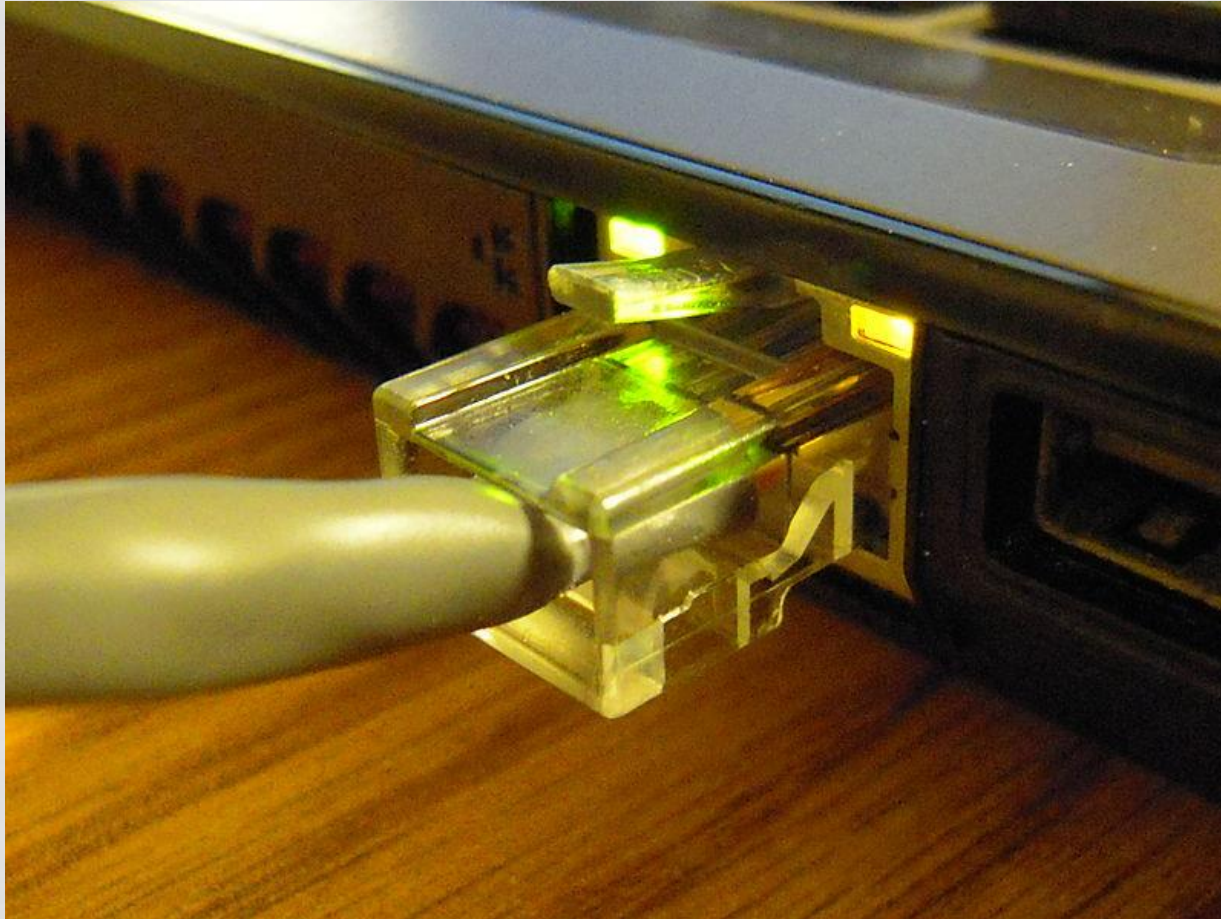
(CONT.)

- Ethernet was **developed at Xerox PARC between 1973 and 1974**. It was inspired by ALOHAnet, which Robert Metcalfe had studied as part of his PhD dissertation. ... He convinced Digital Equipment Corporation (DEC), Intel, and Xerox to work together to promote Ethernet as a standard.

IMPORTANT FEATURES OF THE IEEE 802 CATEGORY

- The most widely used IEEE 802 standards are for **Ethernet, Bridging and Virtual Bridged LANs Wireless LAN**, **Wireless PAN**, **Wireless MAN**, **Wireless Coexistence**, Media Independent Handover Services, and Wireless RAN with a dedicated Working Group providing focus for each area.

- IEEE 802 wireless standards. IEEE 802 is a collection of networking standards that cover **the physical and data-link layer specifications for technologies such as Ethernet and wireless**. These specifications apply to local area networks (LAN) and metropolitan area networks (MAN).

ETHERNET CABLING SYSTEM

- There are three cable types commonly used for Ethernet cabling: coaxial, twisted pair, and fiber-optic cabling. In today's LANs, the twisted pair cabling is the most popular type of cabling, but the fiber-optic cabling usage is increasing, especially in high performance networks. Coaxial cabling is generally used for cable Internet access. Let's expain all three cable types in more detail.

ETHERNET (IEEE 802.3) FRAME FORMAT
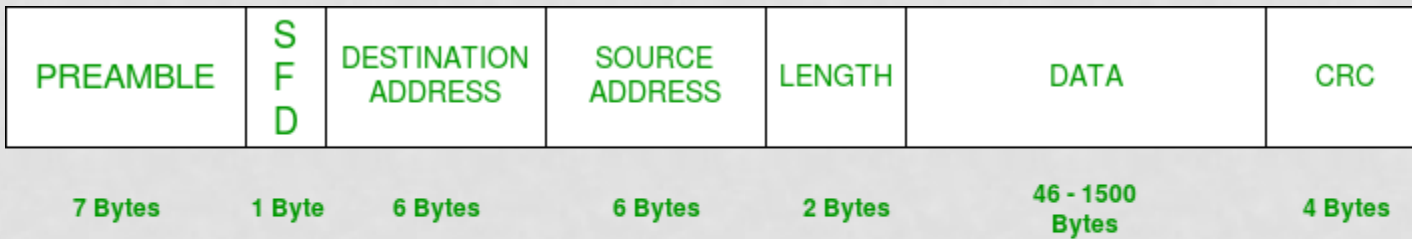
IEEE 802.3 ETHERNET Frame Format