

A close-up photograph of a network switch's front panel. The top half shows a row of ports with several white Ethernet cables plugged in, some with glowing green status lights. A prominent yellow Ethernet cable is plugged into one of the ports. Below this, a row of ports is labeled "10/100Base-TX Ports (1-48)". This row also has several white Ethernet cables plugged in, with glowing green lights. A blue Ethernet cable is also visible. In the foreground, there are several white labels attached to the cables, some with handwritten text like "From: N" and "To: DIS". The overall scene is dimly lit, with the primary light source being the green LEDs of the active ports.

TD 1

Telecommunication systems and networks

Research & Presentation:

- Select one of the standardization bodies mentioned in the lecture and research its history, key contributions, and current projects. You should then present their findings to the class.

Group Discussion: Transmission Media Exploration

- Students are divided into groups and assigned with transmission medium (e.g., twisted pair, optical fiber). Groups should discuss the advantages, disadvantages, and ideal use-cases for their assigned medium and share with the class.

Questions:

- What is the primary purpose of standardization bodies in telecommunications?
- How does an optical fiber transmit data?
- Explain the difference between Single-Mode and Multi-Mode fibers.
- What are the primary components of a data communication system?
- Why might a business choose twisted pair cabling over optical fiber for its local network?