Explain how data is represented with different types of network cable.

Data can be represented with various ways and types of cables with different inner materials such as coaxial, twisted pair, and fiber optic cables. In coaxial cables, data or signals sent are represented through variable voltages or modulated signals. With its robust insulation compared to UTP, coaxial has a strong signal-to-noise ratio that allows for a high data throughput. Twisted Pair cables, by its own name, contains twisted pairs of wires inside the cable ending with an RJ-45 connector It has two types: UTP and STP. STP reduces EMI, RFI, and other forms of signal noise. These are commonly used in Ethernet and Telephone networks because of its configurable plugs, allowing for easier maintenance compared to others. Data are represented through binary signals using modulated voltage sequences in various speeds such as Cat 5, 5e, and 6. And, fiber optic cables, these cables contain glass cores to transmit signals through light. Its data are represented through pulses of light containing binary on and off states. Because of its zero noise, it can send multiple types of signals or wavelengths to send large amounts of data in just one cable.