NETWORK SYSTEMS AND ADMINISTRATION ASSIGNMENT

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The OSI model and the TCP/IP model are two known frameworks used to understand and implement network communication protocols. While both models serve as guides, for comprehending networking systems they have some differences.

The OSI model consists of seven layers that act as a framework. Its purpose is to facilitate interoperability between network technologies and vendors. These layers include Application, Presentation, Session, Transport, Network, Data Link and Physical. Each layer has functions. Operates independently. This separation allows for standardization. Can sometimes lead to inefficiency.

On the hand the TCP/IP model is the foundation of the internet and comprises four layers; Application, Transport, Internet and Link. This model is more practical and closely aligned with how the internet works. In the TCP/IP model the Application layer roughly corresponds to the combined Application, Presentation and Session layers in the OSI model. This simplifies communication processes.

While many networks and systems use the TCP/IP model due to its practicality in reflecting the internet’s structure we should note that the OSI model remains essential for understanding networking concepts from an academic standpoint as a reference point, in network design.

The widespread adoption of the TCP/IP model can be attributed to its flexibility and simplicity making it the primary reference model, for networking. However, depending on the task and context both models – TCP/IP and OSI – serve as tools, for understanding and working with network protocols.

In conclusion, The OSI model has seven layers and is like a theoretical blueprint for networks to work together. On the other hand, the TCP/IP model has just four layers and is more like the practical framework that the internet uses. OSI is like the theory class, while TCP/IP is like the real-world application class. Most people prefer the TCP/IP model because it's straightforward and flexible, making it the go-to choose for building networks.