

Drawbacks of OSI Model

1. Many LANs are powerful (high speed) and has low error rates, many applications do not need the data integrity provided by OSI.
2. Many LAN applications need very fast setup with each other but the connection mode transfer in OSI requires an agreement between 3 parties, users and the service provider, hence it is slow.
3. The OSI model is too complex. The gap between the concrete use (implementation) and the model is sometimes significant. Indeed, few programs can use or wrongly use the 7 layers of the model: the session and presentation layers are hardly used and on contrary the data link and network layers are often split into several sub-layers, since they are pretty complex. The OSI model is in fact too complex to be effectively and properly implemented. The committee that wrote the standard even had to leave aside some technical points, like security and coding, so much it was delicate to preserve a well defined role to each layer completed with these extra technical points. This model is also redundant (the flow control and the error control appear in most layers). At the implementation level, TCP/IP is much more optimized and effective.
4. OSI model is not adapted at all to telecommunication applications on computer. Some choices are in disagreement with the way computers and software communicate. The standard actually uses "system interruptions" to report events, and with high level programming languages, that is not very realizable.
5. Due to the complexity of the model, the first implementations were pretty heavy and slow. Conversely, the first implementation of TCP/IP in the Unix system of the Berkeley University (BSD) was free and relatively effective. Historically, people thus had a natural tendency to use TCP/IP.