

Case Project:

In the following assignments, you consult for the newsroom of the Franklin Daily Herald, a newspaper in a Midwestern U.S. city that is still thriving because of its close ties to the community and first-rate reporting. All of the news reporters have laptop computers, and now their management has funded a project to network the entire newspaper building. Having a network that links all of the departments and enables company-wide exchange of information and Internet access will help position this newspaper to stay competitive with other news sources.

Case Project 2-1: Expanding the Network Backbone

There is already a partial network backbone using Ethernet in the newspaper's building that joins some of the administrative and advertising offices. Prepare a report or slide show that explains why Ethernet is still a good choice for the network backbone.

Ethernet is still a viable and effective network backbone. Ethernet can provide a more stable and secure form of connection. It can support higher bit rates resulting in faster download speeds. If more bandwidth is needed then changing out the ethernet cables can be a quick process. Ethernet connections make the network more secure because it requires a user to have physical access to the network or wire.

Case Project 2-2: Creating a Network That Can Communicate with Other Networks

The management wants to know if there are any guarantees that the network you are proposing will communicate with other networks. What is your response?

Yes, communication can be done to other networks since the ethernet cable is connected back to the router. The router will create a public IP address in order to communicate with other networks. While ethernet is a great backbone for a company given the case project it could be best to establish a Mesh Topology. This would allow each office and different branch of the company to communicate effectivity even if something happens to the ethernet connection.

Case Project 2-3: Questions About the OSI Model

Network function	OSI Layer
Resizes frames to match the receiving network	Data link
Performs data compression	Presentation
Ensures data is received in order	Transport
Handles the data-carrying signal	Physical

Provides file transfer services	Application
Enables routing	Network
Enables the receiving node to send an acknowledgment	Session

Case Project 2-4: More Questions About the OSI Reference Model

Brett likes your table and has another question. He would like you to explain MAC addressing.

A Mac address is a hardware address that is associated with the NIC in a computer. The Network adapter has a Mac address that gives a computer its own unique Mac address. This ensures that a computer is uniquely identified allowing for proper communication across networks. Mac addresses are used in a local setting whereas IP addresses are used for global communication.