

Assignment

WAN Technologies



3.4 – WAN Technologies

T1/E1 and T3/E3/DS3 (3:46) |

Satellite, ISDN, Cable, DSL, and Dialup (10:25)

Circuit Switching and Packet Switching (3:30)

Transmission Media, Speed, and Distance (4:34)

Figure 1-1 *WAN Technologies Tutorials*

Note that you may have to scroll down the Tutorial Page to find the relevant WAN Technologies Tutorials.

Tutorial	Description
T1/E1 and T3/E3/DS3	T1 and E1 lines are the most widely enterprise WAN connections used in the world.
Satellite, ISDN, Cable, DSL, and Dialup	Satellite, cable, and DSL are among the most widely used WAN homes and small office connections.
Circuit Switching and Packet Switching	Circuit and packet switching: two major WAN technologies.
Transmission Media, Speed, and Distance	Introduction to the three major WAN cable types used today.

Table 1 *Professor Messer's WAN Technologies Tutorials*

Instructions

For this Assignment, you will view several online WAN Technologies video tutorials. After viewing each tutorial, answer the related questions. When you have completed your answers post them to your online portfolio. After you have placed your work into your portfolio, then, post your portfolio's URL to our class discussion group. (Note, portfolios will not be evaluated until midterm.)

Note that these tutorials can be found at:

<http://www.professormesser.com/n10-005/free-network-plus/>

T1/E1 and T3/E3/DS3

<http://www.professormesser.com/n10-005/t1-e1-and-t3-e3-ds3/>

Questions

1. A T1 line employs what type of multiplexing?
2. When entering a building, what type of media does a T1 line most likely use?
3. With what type of media would a T3 likely use when it enters a building??

Satellite, ISDN, Cable, DSL, and Dialup

<http://www.professormesser.com/n10-005/satellite-isdn-cable-dsl-and-dialup/>

Questions

1. How does the cost of non-terrestrial communications compare with conventional terrestrial networking?
2. Other than cost, what is the significant disadvantage of satellite communications?
3. What does the A in "ADSL" represent?
4. What type of media would an ADSL use when it enters a building?
5. What type of DSL is capable of speeds of up to 100Mbit/s?

Circuit Switching and Packet Switching

<http://www.professormesser.com/n10-005/circuit-switching-and-packet-switching/>

Questions

1. Which technology, circuit or packet switching, is most like the technology utilized by POTS?
2. What is the major criticism of circuit switching?
3. Why is packet switching considered more efficient than circuit switching?

Transmission Media, Speed, and Distance

<http://www.professormesser.com/n10-005/transmission-media-speed-and-distance/>

Questions

1. What are the three major WAN cable types?
2. When was coax cable patented?
3. What type of cable is typically used in a local area network?
4. What purpose does the twist in TWP copper cable serve?
5. What type of cabling would you use for very long distance and very high speed runs?
6. When you use fiber optic cables, what are two conventional cabling operations that require extra care?