

LESSON PLAN
Telecommunications

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| Name of school | Mircea Cristea Technical College, Brasov |
| Level | Advanced |
| Area | Telecommunications |
| Time | 50 min |
| Authors | Adelina Sitaru, Dorica Ivascu (teachers); Andronic Lucian, Burciu Bogdan, Buzei Radu, Damian Andrei, Honcu Mihai, Nicolaie Iulia, Palasan Vlad, Toma Ladina, Velescu Daniela, Tesileanu Lucian, Grosu Radu, Sirbu Alexandru, Stefan Ionut, Sandru Remus, Rosca Teodora |

Public Data Networks

.1 Access to text:

What is a network?

What do you know about data networks?

2. Focus on content

A. Read the text below and decide whether the following statements are true or false according to it:

1. Public Data Networks are designed for data transmission only
2. The Nordic Public Data Networks is a circuit-switched type of digital network
3. The Data Switching Exchange does not control the set-up and clear down of data networks
4. The DTE consists of a printing or alphanumeric visual display terminal or a computer

Public Data Networks

Public Data Networks are designed for data transmission only. Therefore they avoid the limitations of speed etc. of transmission over the switched public telephone or telex network. The Nordic Public Data Network is a circuit-switched type of digital network and its basic purpose is to provide a means of synchronous data transmission.

The data switching exchange (DSE) controls the set-up and clear-down of data calls, and monitors the connections and functions of the network. This exchange, which is capable of handling 100 calls per second, may be supplemented at a later date with a special service centre (SSC) for the introduction of certain new facilities. The DSE is connected to a data circuit concentrator (DCC). The purpose of the concentrator is to collect traffic from a number of individual subscriber links (TDM) to the exchange.

These TDMs, which consist of time division multiplexed streams (64 Kbps), also transfer traffic between the DCC and one of the multiplexors (RMX). The multiplexors (RMX and DMX) connect several subscriber lines either directly to the DSE or to the DCC which passes traffic to the DSE. Between the RMX and the DMX the data terminal equipment (DTE) is located in the subscriber's premises. It primarily provides the standardized interface between the DTE and the network. Lastly, the DTE, which consists of a printing or alphanumeric visual display terminal or a computer, provides the subscriber with the data reception facilities.

B. Now answer the following questions:

- a) What is the Nordic Public Data?
- b) What is its purpose?
- c) How many calls per second is DSE capable of handling?
- d) What is the purpose of the concentrator (DCC)?
- e) Where is the Data Terminal Equipment (DTE) located?

3. Focus on language**A. Unjumble the following words that are all related to public data networks:**

TWKNOER
NOENTCSNCIO
TDAA
CSREVEI
WECDSIH
RHUSYSONONC
TELDUEPMXIL

B. Match the numbers with the correct letters so as to obtain correct statements according to the text:

- | | |
|-----------------------------------|---|
| 1. The data switching exchange | a. provides a means of synchronous data transmission |
| 2. The Nordic Public Data network | b. monitors the operation and the way in which the network is connected |
| 3. The data circuit concentrator | c. provides the subscriber with the facilities for receiving data. |
| 4. The data terminal equipment | d. collects traffic from several individual subscriber links to the exchange. |

C. Fill the gaps with the correct words given below:

- | | | | |
|-----------------|---------------------------|-------------|------------|
| a) concentrator | b) special service center | c) designed | d) traffic |
| e) capable | f) supplemented | | |

1. Public Data Networks are.....for data transmission only.
2. This Exchange, which is.....of handling 100 calls per second, may be.....at a later date with a.....
3. The purpose of the.....is to collect.....from a number of individual subscriber circuits.

4. Interpretation

- A. Make an oral presentation of public data networks using the information and the terms provided in the text.
- B. Summarise in a sentence what the text is about.

5. Response

- A. What do you think a business like this involves?
- B. What skills do you think are needed to apply for a job in this domain?
- C. Give your opinion on this text either by making an oral presentation or writing a paragraph about it.

KEY

- 2.A. 1 - T; 2 - T; 3 - F; 4-T.
- 2.B. a - a circuit-switched type of digital network;
b - to provide a means of synchronous data transmission
c - 100 calls per second
d - to collect traffic from a number of individual subscriber links to the exchange
e - in the subscriber's premises
- 3.A. network; connections; data; receivers; switched; synchronous; multiplexed
- 3.B. 1 - b; 2 - a; 3- d; 4-c
3. C. 1 - c; 2 - e, f, c; 3 - a, d.