



KOLEJ UNIVERSITI POLY-TECH MARA KUALA LUMPUR

DIPLOMA IN COMPUTER SCIENCE (CC101)

TNW2033: Data Communications Concept

TUTORIAL 7

CHAPTER 7: MULTIPLEXING

1. Identify the three types of multiplexing techniques.
2. Given the following information, find the minimum bandwidth for the path:
FDM multiplexing
4 devices, each requiring 1000 Hz
100 Hz guard band for each device.
3. Given the following information, find the maximum bandwidth for each signal source:
FDM multiplexing
Total available bandwidth = 5500 Hz
3 signal sources
A 200 Hz guard band for each device.
4. What are the two types of implementation of TDM? Explain.
5. Draw the **synchronous** TDM frames showing the character data, given the following information:
Four signal sources:
Source 1 message : W E
Source 2 message : L O V E
Source 3 message : D A T A
Source 4 message : C O M M
6. Draw the complete **asynchronous** TDM frames showing the character data, given the following information: (**Frame size = 3**)
Four signal sources:
Source 1 message : D S V _
Source 2 message : _ _ I S
Source 3 message : _ T H E
Source 4 message : B E S T



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