

HOMEWORK 3

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CMIS 435

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November 8, 2015

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1) Using the F_i and RR_i notation illustrate the transfer of 15 data packets with a window size of 3.

----F0---->

----F1---->

----F2---->

<---RR3-----

----F3---->

----F4---->

----F5---->

<---RR3-----

----F6---->

----F7---->

----F8---->

<---RR3-----

----F9---->

----F10---->

----F11---->

<---RR3-----

----F12---->

----F13---->

----F14---->

<---RR3-----

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2) Is it possible for a PC to run multiple network layer protocols over the same network port? Describe what mechanism is used to do it.

It is not possible for a PC to run multiple network layer protocols over the same network port. Because each network layer protocol would have its own unique service access ports, the same network protocol at the source talks to the same network layer protocol at the destination.

3) Why do we use parity bits and CRC checks? What purpose do they serve?

When signals at the physical layer are transmitted for a long distance, they are attenuated and distorted by noise. Parity checking and CRC checks are mechanism to detect such data which can be changed in the process of transmission.