

HOMEWORK 4

Homework 4

Yuji Shimojo

CMIS 435

Instructor: Michael Tarquinio

November 16, 2015

HOMEWORK 4

1) How did the Ethernet standard evolve to be able to support latency sensitive applications like streaming media?

The first Ethernet standard was defined as IEEE802.3 which uses 10BASE-T, coax cables, and half duplex with CSMA/CD as technology components. At that time, network topologies defined by it are bus and star. After that IEEE802.3u was set, which uses 100BASE-TX or 100BASE-FX with full duplex followed by 1Gbps cables such as IEEE802.3ab for twisted pair cables and IEEE802.3z for optical fiber cables.

2) What aspect of Ethernet can be a problem for security? What mechanism(s) were added to fix the problem?

Ethernet is a broadcast system which any information sent from one computer to another through Ethernet LAN. To fix the problem, you need to send unicast or multicast messages via network switches as possible.

3) Compare and contrast CSMA/CD and CSMA/CA.

A wireless network doesn't detect a collision as like a wired network because it is in the air. It doesn't send a JAM signal or discard an unnecessary frame.