

Homework #9

(Due on 13 January 2011)

Name and characterize three classes of multimedia applications. Give one application example for each class.

Discuss the usage of UDP vs. TCP to stream multimedia.

**What is jitter and how does it impact the playback of multimedia content?
Which client-side mechanism can be used to compensate for jitter?**

Assume a multimedia application streams data with a constant bit rate of 2Mbps. The network delay is between 0 and 2 seconds. How long does a client have to wait before it can begin to playback the stream and how much data does it have to buffer.

What is the goal of adaptive playout delay? Give a brief overview of the steps involved.

What is the role of RTCP? How can it be used to synchronize RTP streams?

Illustrate how a voice call is established using the Session Initiation Protocol.