

Data Communication Option

Network Application Development using the TCP/IP Protocol Suite

**Due:** To be completed by **April 3**. Work in groups selected during your lab.

**Objective:** To use all the Windows sockets programming techniques discussed in the course in the

design and development of a "real-life" application. To design and implement a "**ComAudio**" application.

**Assignment:**

You are required to write a **Windows** application which will be able to transfer sound data using the **TCP/IP** protocol suite to transfer audio data between two Windows workstations and play it. Your program must implement the following minimum features:

- (a). The initiating workstation must be able to **connect** to a known remote Server/workstation. You may select any workstation for the test.
- (b). The program will have the capability to **transfer** and **play** sound on either of the two machines..
- (c) Provide a **Windows interface** to your application. Options to **save** and **retrieve** sound files must be provided.
- (d). The sound file format will be the **.wav** format.
- (e). Two way **microphone** support will also be provided.
- (f). You are required to provide **Multicasting capability** with your program.

For bonus marks you might want to consider features such as Fast Forward, Rewind, etc. For example, analyze the "**RealPlayer**" application and see what sort of features it provides.

**To be submitted (on April 3):**

- Detailed design work showing all the implementation details of the program.
- All documentation, Source and Executable on a disk.
- In addition you will be required to demonstrate the working of your program in the **SE 12-323 lab** on the Thursday the assignment is due.

**Other critical dates:**

- You are required to submit your design work for review on **March 18**.
- Starting **March 20** and **every Wednesday** thereafter, each team is required to submit a written progress report. The report will outline the tasks assigned to each member, the task deadlines, all tasks accomplished to date, and tasks for the upcoming week.

**EVALUATION**

**General**

(1). Design Work & Project Management:	/ 20
(2). Test and Verification Document:	/ 10
(3). Instructions & User Manual:	/ 10
(4). Functionality:	/ 60
Total:	/ 100