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4O

Data Communications (Comp 4985)

Comm Audio -- testing

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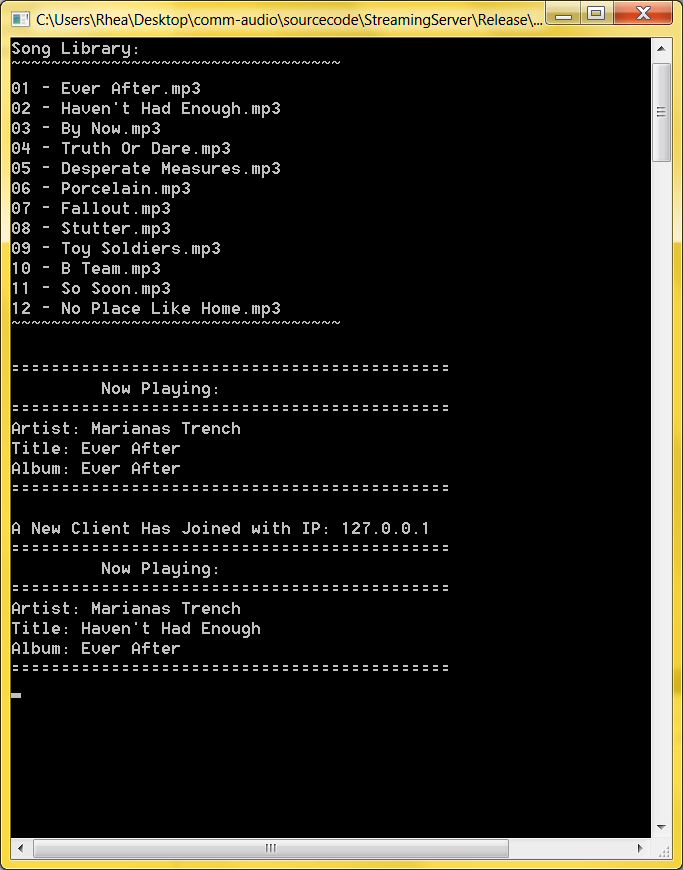
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# Test Cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Number | Test | Tool / Application | Expected Outcome | Pass / Fail |
| 1 | Server loads and accepts clients | StreamingServer.exe | Server loads and does not crash | Pass (fig. 1) |
| 2 | Server can drop sessions | StreamingServer.exe | When a client disconnects server does not crash | Pass (fig. 1) |
| 3 | Server can handle multiple clients | StreamingServer.exe | Multiple clients can stream multicast | Pass (fig. 1) |
| 4 | Server relays playlist to multiple clients | StreamingServer.exe | When the last song finishes the server goes back to the beginnings | Pass (fig. 2) |
| 5 | Server relays user list to multiple clients | StreamingServer.exe | User list appears on the clients | Pass (fig. 2) |
| 6 | Server relays currently playing song to multiple clients | StreamingServer.exe | All clients update their now playing | Pass (fig. 3) |
| 7 | Server continually streams songs on multicast to clients | StreamingServer.exe | Server plays music constantly | Pass (fig. 3) |
| 8 | Server accepts and completes TCP download requests from playlist | StreamingServer.exe | Server handles downloads | Pass (fig. 4) |
| 9 | Server accepts and completes unicast streaming requests for songs | StreamingServer.exe | Server handles unicast requests | Pass (fig. 4) |
| 10 | Client can connect to server | Qt client,  StreamingServer.exe | Client connects and plays audio | Pass (fig. 2) |
| 11 | Client receives user/playlist from server | Qt client,  StreamingServer.exe | Users are displayed and the now playing/library are populated | Pass (fig. 2) |
| 12 | Client displays error message if unable to connect | Qt client,  StreamingServer.exe | Error is displayed on inability to connect | Pass (fig. 8) |
| 13 | Client can have voice chat with another client in the list | Qt client,  StreamingServer.exe | Voice chat works and two clients hear each other | Pass (fig. 7) |
| 14 | Client can request TCP download of song from playlist | Qt client,  StreamingServer.exe | Client requests download and can play it after download | Pass (fig. 5) |
| 15 | Client can request streaming song from playlist | Qt client,  StreamingServer.exe | Client hears a unicast song play instead of multicast | Pass (fig. 6) |
| 16 | Client gracefully handles server dropping | Qt client,  StreamingServer.exe | Client displays an error and closes | Pass (Fig. 9) |

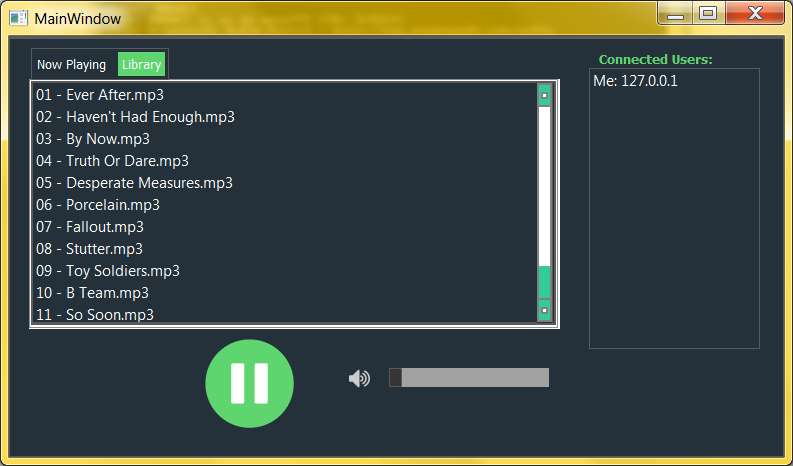
# Figures

## Figure 1



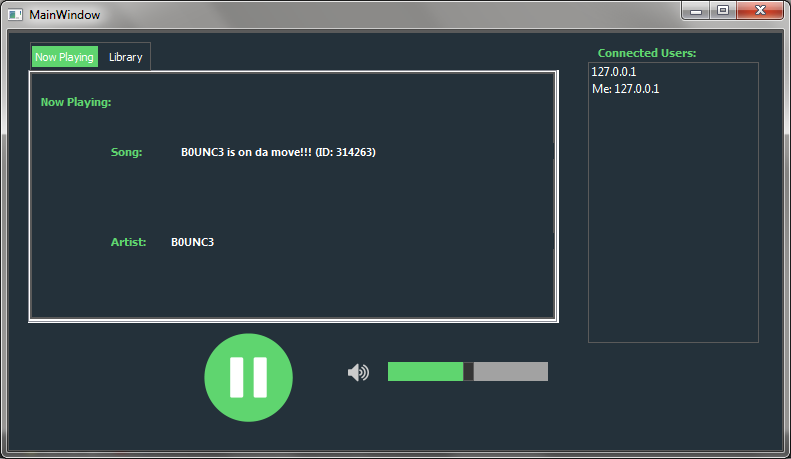
Server playing multiple songs, accepting multiple clients

## Figure 2



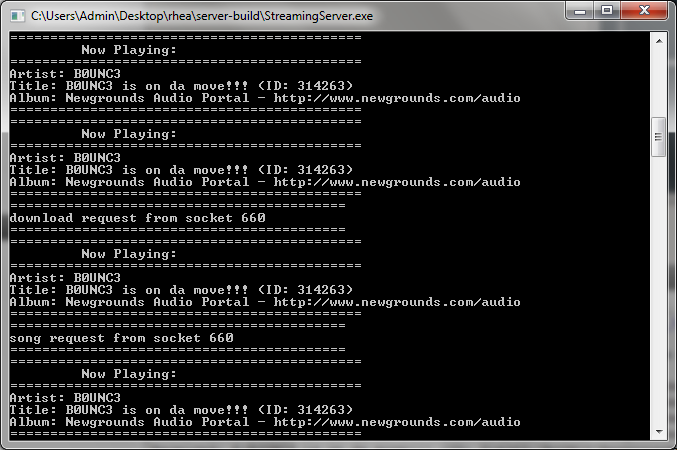
Client displaying server playlist and user list

## Figure 3



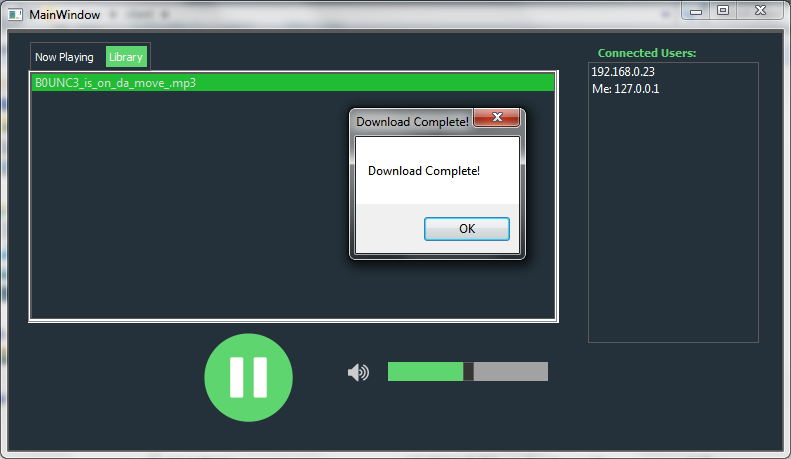
Client displaying now playing song

## Figure 4



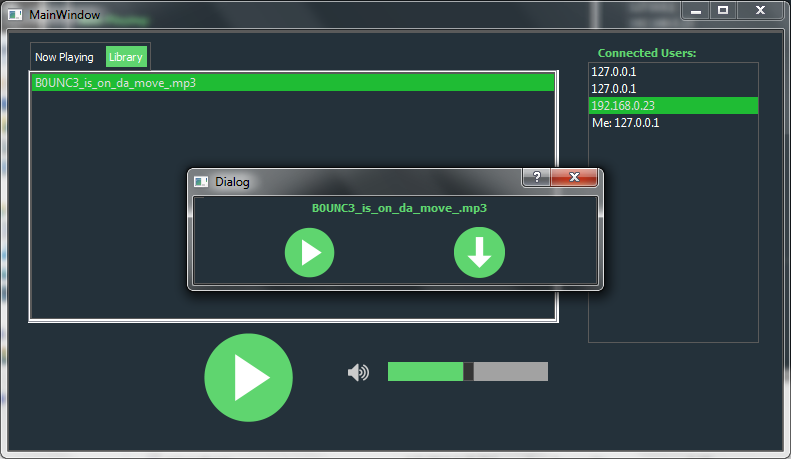
Server accepting download and unicast requests

## Figure 5



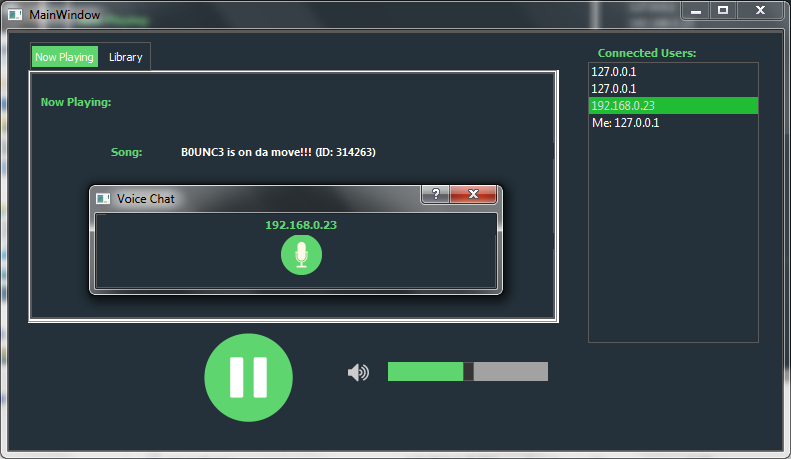
Client downloading a song from the server

## Figure 6



Client making a unicast request

## Figure 7



Client starting a voice chat

## Figure 8



## Figure 9

