

Engine System Proposal

Project - GAMES6320

During the rest of the semester, I am planning to make a networking system for my game engine. I've always wanted to dive into game networking, and I'm planning to implement a client-server model to possibly have a multiplayer game going forward.

From the perspective of someone using the game engine, the goal is to have the networking system allow the user to support multiplayer interactions by handling data exchange between players through a client-server model. This setup would allow multiple players to connect to a central server (host) and communicate their in-game actions.

Features and Usage

- Easy setup for server creation, client connection, and session management. My plan is to include connection handling and connection status checks.
- Sending and receiving data, such as player actions and positions. Someone using the system can call functions like `sendData(playerId, data)` and `onDataReceived()` to handle data transmission.
- Ensuring that each client has the correct game state. This would include syncing player locations, inventory states, or health statuses.

During the next three weeks, I expect to implement a basic server-client model for connectivity, an API for sending and receiving messages, and a simple mechanism to synchronize game states like player positions or scores.

One of the main challenges, I think, would be managing network delays and syncing states across clients without significant lag. One of my stretch goals, if there is enough time, is to implement simple lobby or matchmaking functionality.