# Investigating Methods of Client-Server Communications

Josh Grillo

JSON vs Plaintext

There are many ways of sending data between Clients and Servers, but I am looking into these two common choices to see what is better suited for my socket-communicating Application.

Testing Platform

To test the differences between these options, I will be using my MUD server alongside a lightweight client that will be exclusively for these tests. I will be recording some data to try and find which is the better option.
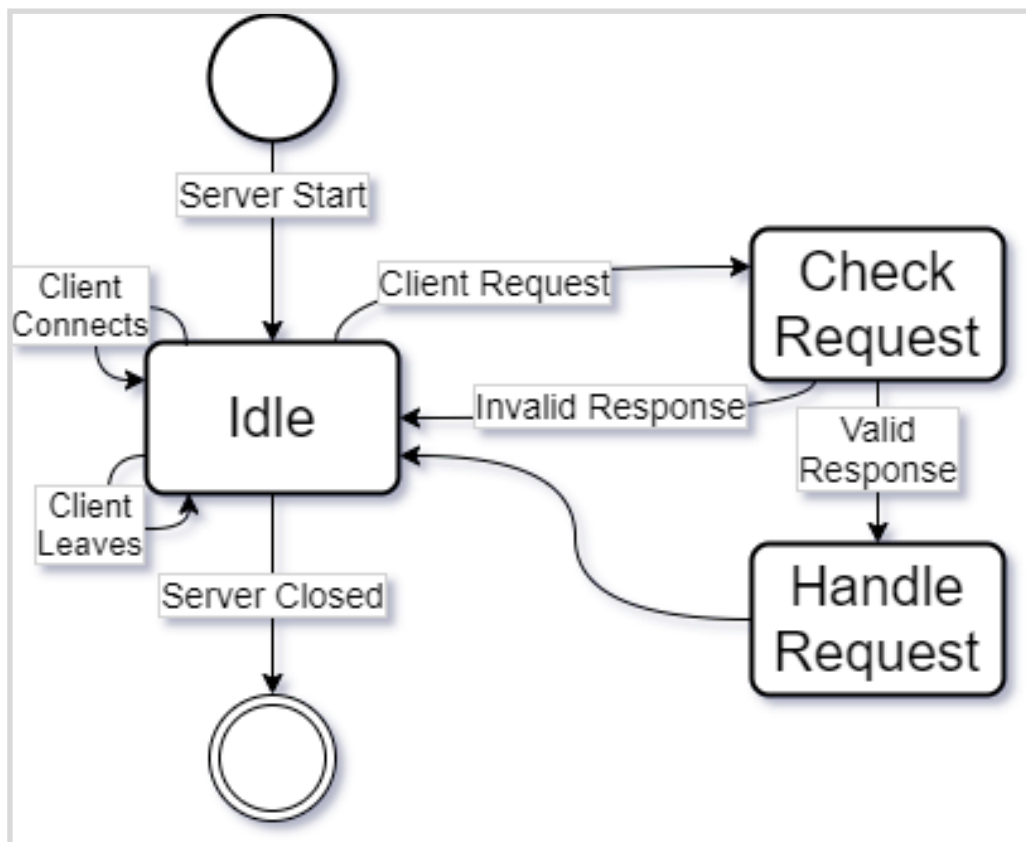
Speed of Response

I created a Test App to record how long it would take to receive and respond to a simple message. The box plot shows the data from 20 attempts, and the time is in milliseconds. The box plot shows that JSON Surprisingly has a lower mean, but a much greater range of results.
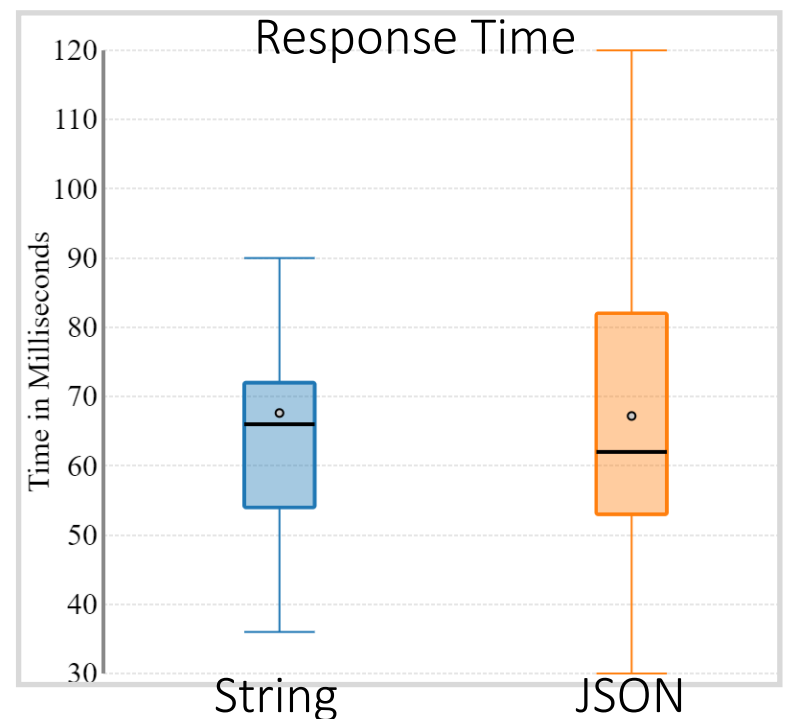
Package Size

The size of data packets when using strings is smaller (17/9 bytes) against the larger size of JSON (28 bytes). However, the tidiness of having all sent and received data in a dictionary, rather than a string, has many upsides.

In Conclusion:

Both methods of sending data have their upsides. Sending strings are simple and easy to handle, but when sending multiple pieces of information handling can become difficult. The use of JSON is slightly more work, but solves these problems.