

EE 193 Sensor node protocol draft

Since all of our sensor nodes will be talking to a single server, we'll need to agree on a standard format for sending node updates over MQTT.

MQTT payloads are sequences of bytes, so you can pack the data however you'd like. One approach would be to pack everything into a C struct, or you could write everything into a text-based format like JSON.

To prepare for our class discussion, your team should write a 1-2 page proposal describing what you'd like the data format to look like. It should answer the following questions:

- What data fields do you want to transmit?
- How will each piece of data be represented with bytes?
- What units will each field have?
- Which fields are required, and which are optional?
- What happens if you don't have valid data for a required field? (e.g., if temperature is a required field, but your sensor isn't responding?)
- How will you indicate if a data field is (or is not) included?