507IoT Feedback – Oct 15, 2023

regarding: initial proposal

Group Name: Bulletstorm

Comments:

Project Scope:	depends on you previous experience. Have you used PyGame before? If not, keep it simple and focus on the main components of this project (Sensor, Actuator, Processor with Storage, Connector). If yes, awesome, go ahead. The scope of the “weapon” with sensors and actuators is very appropriate. I am a bit worried about the complexity of the actual game.
Initial Architecture:	Good!
Gameplay:	Great idea, BUT: the game will be displayed to a wide audience at the final presentation, possibly to children. Please keep it free of graphic violence, ideally “family friendly”.
Timetable:	ok, but not very precise yet
Hardware Requirements:	needs to be way more precise, provide component specificiations and vendors/links

Questions:

1. Wie Kommunikation zw. 2 IoT System durch UDP?
Do you really want this? UDP is fast but not reliable. It is perfect to send a lot of data with low latencies. If latency is important to you and you don’t care about a potential data loss, you can use UDP. However, you actuators don’t have the same requirements. They are probably better controlled with a slower but more reliable protocol such as MQTT or HTTP or even via WebSocketa. Not sure if bi-directional communication via UDP would make sense in your use case.

2. **Sprache/Format für Preprocessing von sensorisch erfassten Daten?**
The sensors need to be connected to a microcontroller (i.e. ESP8266/32/Arduino), which are quite capable. You can program them in various languages (C, micropython, lua etc) – so the coding of the actual preprocessing is straight forward.

3. **Sprache/Format für Aktuator?**
Same as 2. They need to be connected to a microcontroller. Small LEDs can be powered directly from the GPIOs of the microcontroller. If you need more power, you need an external power source and create your own IC. You will definitely have to do this to power the rumble motors – so a bit of electrical engineering is required, but straight forward. Tons of tutorials for that can be found online.