

Daily Report

Thursday, September 30th

Today we worked on getting the api specification done, which will help us to get both our server-side implementation and our client-side implementation working. We did have a first draft, but there have been made a few changes, which we figured would make it better by, for example, making it so that the client does not have to send which note it is releasing, but instead on which channel it is releasing a note, which results in the same because there can only be one note per channel. One thing that still needs some improvement in the api specification is the response to GET requests, which will need some thought as to exactly how this will be handled by the server.

Also there has been made progress on the implementation of the api on the server- and the client-side. The client can now send a couple of the requests that are used in the api, and also the client has been altered to include multiple channels per user, and also the channels will be loaded dynamically as there are channels in use on the server by either himself, or other concurrent users.

The server back-end is now capable to handle both the key-down and the key-up requests according to the specification. It can also currently call the C library used to communicate over I2C to the FPGA now, with the correct data that was requested via the rest-call and some processing from the server. At first there were some problems where it did seem to alter the state of the FPGA (change some numbers on the display), however there were still problems with system calls failing and returning an error status, and also the FPGA not receiving the correct data. However we found that this had to do with the bus speed, which we had set to 100 kHz before, but now it seemed to fail on some read bits, so now we've set it back to 10 kHz which should work just fine.

Also the waveforms have been done in VHDL, and the reading of the waveform generation calls over I2C should be understood by the FPGA, however we have not had time to test this, as we only found late on the day that we had to lower the clockspeed of the communication bus.