Bi-Weekly Meeting 2-7-2024

Group 40: Huyen Vy Pham, Aaron McCarville, Gunnar Hageman, Benjamin Podenjski, Noah Gaffney

Updated Version: 2/10/2024

- **Weekly Summary**

For this week, our group finished our ADC PCB schematic and layout changes. We got our Bill of Materials ready for Tayeb for ordering. Regarding the communication protocol for our FPGA, our group decided to switch from SPI to UART connection. We got the UART connection established between the PC and FPGA. We planned to get the connection to the PC through python next week.

- **Past week accomplishments**
  - Aaron McCarville:
    - Worked with Noah to finish up editing the ADC board schematic and layout.
    - Debugged triggering issues with the radar board test bench. Ended up triggering DAQ and PLL with the DAQ itself, appear to give the most stable frequency sweeps.
    - Created animated plot of the raw IF signal, and the IFFT of IF. Tested that the distance plotted reflects actual target distance.
  - Gunnar Hageman:
    - With help from Aaron got UART connection to be established between the PC and FPGA.
    - Storing commands received on FPGA and was able to return them correctly to the PC.
    - Preliminary planning for command structure from PC.
  - Huyen Vy Pham:
    - With the help of Aaron got UART connection to be established between the PC and FPGA.
    - Working on the commands to send and receive bytes through UART.
    - Working on commands to communicate with the ADC.
  - Noah Gaffney:
    - Editing the ADC board with changes feedback from the advisor.
  - Benjamin Podjenski:
    - Continue working on frontend of GUI
- **Pending issues** *(If applicable: Were there any unexpected complications? Please elaborate.)*
  - Huyen Vy Pham: There is still pending issues with using the UART to send and receive bytes to Putty.

o **Individual contributions** *(Creating this section is optional, but it is **Required to include the "Hours Worked for the Week" and their "Total Cumulative Hours" for the project for each member somewhere relevant in your report. Your individual weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that individual contributions support your claim to the weekly hours. Be honest with the reports.***)

NAME	Individual Contributions *(Quick list of contributions. This should be short.)*	Hours this week	HOURS cumulative
Aaron McCarville	Programming, board layout, debugging, testing	12	12
Gunnar Hageman	Vitis programming, debugging, planning	9	9
Huyen Vy Pham	Vitis programming, debugging, researching	9	9
Noah Gaffney	Editing the schematic and layout for the ADC board	6	6
Benjamin Podjenski	Continue working on frontend of GUI	6	6

o **Comments and extended discussion** *(Optional)*
Feel free to discuss non-technical issues related to your project.

o **Plans for the upcoming week** *(Please describe duties for the upcoming week for each member. What is(are) the task(s)?, Who will contribute to it? Be as concise as possible.)*
- Ben Podjenski: Meeting with Gunnar and nail down receiving data from alchitry board
- Aaron McCarville: Help others where needed.
- Huyen Vy Pham: Keep working on the setting up UART to send and receive bytes and command structures for ADC.

o **Summary of weekly advisor meeting** (*If applicable/optional*)
We did a final review of ADC board and talked about Alchitry host computer. We also talked about timeline going forward, and we are still on track. Gunnar showed everyone about his find out how to get UART with the Alchitry.