

# Weekly Report

Date:10/23/13

Group name : Portable FPGA Based Serial Bus Multiplexer (Group 13)
Client/Advisor: Dr. Somani, Dr. Celik
Attendees/Role: Steven LeBlanc - Leader/Firmware Design Adriana Ceylan - Communications/Hardware Design Darin Cleveland - Webmaster/Hardware Design Justin Wheeler - Software Design

## Accomplishments For Past Week

What	Who	Date
Finally got system that can send signals to USB controller without crashing. No reply from USB controller, non-functional initiation sequence suspect.	Darin	10/20
Found some errors/odd behaviors in UART, determined necessary timing of data sends.	Justin	10/23
Decided to use SRAM instead of SDRAM due to implementation issues/errors. Memory problem is solved.	Adriana	10/20
Tried to implement a simple "Hello world" using SRAM, Nios processor, UART RS232 port, Darin's module (TX and RX connected as a wire). I get no compile/build errors, but no text was echoed.	Adriana	10/23
Found errors in firmware for USB controller communication.	Steve and Adriana	10/23
Attempted to get my hardware solution working to be able to run the "golden code" premade software solutions	Steve	10/23

Plan for Coming Week/Individual Tasks

What	Who	When
Divide time between: getting USB controller initialized, researching the alternative solution of using another board to act as a usb controller, researching the alternative solution of using a breadboard system to facilitate usb communication.	Darin	10/30
Test USB API with wireless mouse to find any errors.	Justin	10/30
Now that memory is not a problem, I am trying to use the UART system (Altera's module, then Darin's) to print "Hello world" to Minicom/Putty.	Adriana	10/30
Apply new Firmware to Darin's working Hardware system	Steve	10/30
Continue to get a working hardware system to initiate my own testing with USB Firmware	Steve	10/29

Pending Issues

Issue	Responsibility
JTAG connections for programming the Nios Have become spotty. Connection will randomly die leaving us with inability to load new firmware.	Adriana, Darin, Steve
Quartus has become very touchy with removing hardware modules from the hardware solution. We need to find a solution that works, and slowly build off of it, saving copies of our system as we go along.	Adriana, Darin, Steve

Individual Hourly Contribution

Darin Cleveland	6
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Adriana Ceylan	6
Steve LeBlanc	9
Justin Wheeler	6

Minutes:

8:11 - WAY behind.

- Steven's hardware ran, added more to it, failed, tried to regress but that didn't fix it.
- Can't regress because it leaves fragments behind no matter what you do.

8:17 - using SRAM now, more memory.

- Trying to talk to USB controller, failing.

8:22 - alternative solution: add external usb controller controlled by output GPIO. PIC18F455?

- Will have to pay attention to cable properties.

8:34 - second alternative solution: use second fpga board as usb controller, using usb controller software from online. Someone must have made such a thing.

8:51 - Visual studio example we're using isn't functional, likely is a different version than the Visual Studio installed on Darin's computer.

8:55 - Learning in 492 is more important than getting the system working. We do not flunk the course if the project fails, so long as we have legitimately given it our all and learned from our failures. Good to know.