COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL ENGINEERING
UNIVERSITY OF NORTH TEXAS, DENTON TX 76203

30 Jan 16

MEMORANDUM FOR RECORD

FROM: CHRISTOPHER ASKINGS
FORREST GATES
NATHAN RUPRECHT

SUBJECT: VLC Dev Kit Progress - Week 18

1. The purpose of this memorandum is to report our progress in accordance with our predetermined schedule.

2. The specific purpose of this memorandum is to review the objectives of week 18 (also from Winter Break) and what we have accomplished.

3. Over the course of the winter break and the beginning of the school spring semester, we reviewed user contributions, past work completed, and progress needed to be made. We utilized our free time since our schedules were open until the start of school. We met Sunday Jan 8th, 2017 for review, and worked based off Week 17 & 18 of the Schedule:

Week	*Date*	*Projected Goals*	*Comments*
17	1//15/17	Re-familiarize with past research and code	Potentially retest system and verify points as to how to improve the system.
18	1/22/17	Order Parts for Prototype 2 Code T2: T1 with UART Code R2: T2 with UART	Implement UART to choose the bit being sent (hit the 0 or 1 key on Tx) and showing the received bit on the Rx side.

4. We have begun to implement with UART and have found a lot of success utilizing it for the transmitter side. We started implementation of the UART in the receiver side. We mostly completed the transmitter side of the GUI in Python. We have begun coding for the receiver side of the GUI in Python as well.

5. At the end of last semester, our demo presentation of our project to Dr. Namuduri was successful. We took a few weeks off for the winter break, and contacted each other for meeting a week before school starts on Sunday. Due to Forrest being behind in the project from multiple absent incidents from the fall semester, we felt starting small was a good idea for him. Forrest is to create a small section of code inside the parent GUI of the transmitter in python to use the constant current driver. Instead of using a potentiometer and user control, the GUI would give button options to vary the voltage and brightness of the Tx LED. Nathan continued to work on his UART code for the receiver. Chris ordered his MSP430 online in preparation of coding for CCS in the transmitter side, and also tidied up his current GUI code for future testing.

6. In the next Week of 17 we met on Sunday for further analysis and game plan for when school started. Forrest's test code did not fit well into the parent code as it did not work, and was reviewed by Chris and Nathan. Even though the code was not complimentary to Chris' previous work, we discussed what exactly went wrong. Chris helped Forrest by revamping the code into something that worked, and assigned Forrest with the new task of starting the GUI side of receiver. The program will input binary code that will separate into bytes, print out ASCII of file type and message, and eventually read file types to be printed or saved as specific file types. As a note, Forrest also met with Dr. Namuduri later this week to discuss current project progress.

7. Chris and Nathan are both working on the UART for both the receiver and the transmitter. Nathan is getting the receiver UART to mostly work but is having syntax errors slow the process of completion. The error showed in main.c but the problem was incorrect declaration syntax in the header file. Since Chris' new board came in, we met on Friday to swap work between the UART/Python to familiarize and go over on the weekend each other's code as a main reference for the next. Chris was able to test some small code for UART for the transmitter, and Nathan was able to set up his Raspberry Pi for future testing.

8. If you have any questions, comments, or concerns, please feel free to contact us at:

- Chris Askings: (817) 367 – 8273 or via email at chrisaskings@gmail.com
- Forrest Gates: (979) 733 – 2454 or via email at forrestgates2016@gmail.com
- Nathan Ruprecht: (903) 268– 9600 or via email at nathan.ruprecht@outlook.com.

//SIGNED//
CHRISTOPHER ASKINGS
UNT – BSEENG Student

//SIGNED//
FORREST GATES
UNT – BSEENG Student

//SIGNED//
NATHAN RUPRECHT
UNT – BSEENG Student

1 Attachment:
Documentation

Documentation:

All material pertaining to our project can be found on GitHub:
https://github.com/NathanRuprecht/EENG4910-4990_SeniorDesign