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

28 Nov 16

MEMORANDUM FOR RECORD

FROM: CHRISTOPHER ASKINGS
FORREST GATES
NATHAN RUPRECHT

SUBJECT: VLC Dev Kit Progress - Week 9

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 9 and what we have accomplished.

3. Over the course of the week, we went off on our own time to accomplish what we could for the projected goals, then came back together to consolidate our efforts. This utilized our free time since our schedules usually conflict. We worked based off of the Week 9 Schedule:

Week	*Date*	*Projected Goals*	*Comments*
9	11/20/16	*(Thanksgiving Break)* Reevaluate Prototype 1 Code T1: Modify T0 to send bits Code R1: Modify R1 to receive bits	Reevaluate parts being used for the circuit. Look at other options depending on findings. Make T1 send bit values with the RGB on a fixed time Make Rx launch pad blink LED to show bit value received.

4. We made the decision to do both Tx and Rx on the Raspberry Pi. Although the MSP430FR2311 had perks for using it as the Rx, it made more sense to keep the group on the

same page so we could help each other out with coding or hardware issues. With that in mind, we decided to go off of the semester goals laid out for each individual in the Week 8 Report.

5. Over the holiday, Nathan and Chris used Python to get the basic down and start developing the Tx and Rx side of our system. Chris got a GUI to operate by bringing up a window, taking in a string of characters, then outputting that string. This will act as the foundation to go into sending that message through the Tx circuit. He also found a number of useful Python techniques (including ASCII table lookup) that will make our project easier to manage in the long run. He also go the dichroic cubes in the mail and started playing with those.

6. Nathan coded with Python over the holiday to setup the Rx. He did not do GUI work but set up code that will work with the circuit built by using an ADC with the GPIO pins of the Raspberry Pi. The hardest part is dealing with the ADC. He's not sure if he got the code right and needs to wait to get parts from the department to test it out.

7. 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.

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1 Attachment:
Documentation

Documentation:

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