Module 2 Lifelong Learning

EECE 381   Section: L1B   Group:2
Xu Chen # 19502137, Peter Wang #69736080, Yuxin Xu #37909090, Michael Zheng #23410111

Module 2 was definitely challenging for us since none of us had any knowledge about android programming before we started to work on this module. Yet we think module 2 really pushed us to learn; the knowledge we gained is going to be very helpful in our future careers.

Sources Used

We had to find and use a lot of outside help to accomplish the tasks we wanted to implement. First of all, the tutorials on Connect helped us to better understand and use the Middle-Man software. We learnt how to create a user interface on the android device that allows user to enter IP address and use that specific address in connecting android devices to the DE2 board. We also learnt how to stream images from the android onto the VGA screen by revising knowledge we learnt in module 1. For the Android Application, the tutorials on Connect and the tutorials on the Android Homepage were both beneficial to us. The tutorials on Connect were more up-to-date, and they helped us get familiar with the Android APIs. It also taught us about the life cycle of a typical android program, which is crucial for any app development. The tutorials on the Android HP expanded our knowledge about android programming. They helped us learn how to implement the camera API, how to take picture once the camera was set up, how to save files on internal and external storage, how does Wi-Fi-direct works and so on.

Identification of Learning Need

One specific learning gap is the lack of knowledge about Wi-Fi routing. None of us know how the Wi-Fi really works. Wi-Fi function is important because transferring files and sending signals across platforms would not be possible without Wi-Fi. And if we were to make the App adapt to LTE or 3G, we need to first understand how Wi-Fi works. Even though, we followed the tutorial on the android Homepage. We still could not figure out what each step does. As far as we know, we need to check in the app that the Wi-Fi is connected, and then initiate a file transfer mechanism via this Wi-Di connection. We assume that the file transfer is done by socket programming, but the challenge is to determine the IP address of the devices because when they connect to Wi-Fi, they are each assigned a dynamic IP address and their IP addresses change each time they connect. We definitely need to expand our knowledge on Wi-Fi before we can continue to work on our app.

Identify and Evaluate Technical Literature

1. Kedarnath. *How to detect when WIFI Connection has been established in Android?*. Internet: http://stackoverflow.com/questions/5888502/how-to-detect-when-wifi-connection-has-been-established-in-android May. 4, 2011 [Dec. 10, 2014].
Credibility: unauthoritative, up-to-date, biased

2. *Andriod Wi-Fi Tutorial*. Internet: http://www.tutorialspoint.com/android/android_wi_fi.htm [Dec. 10, 2014].
Credibility: in between authoritative and unauthoritative, out-of-date, unbiased

3. Android 4.4 r1. *android.net.wifi*. Internet: http://developer.android.com/reference/android/net/wifi/package-summary.html Dec.10, 2014 [Dec. 10, 2014].
Credibility: authoritative, up-to-date,unbiased

4. Matt Gottsha. *How to Program an Aroind Application and Manage the Wi-Fi Capabilities of a Smartphone*. Internet: http://www.egr.msu.edu/classes/ece480/capstone/spring11/group02/documents/matt_appnote.pdf April.1, 2011 [Dec. 10, 2014]

Credibility: somewhat authoritative, up-to-date,biased

5. M. Zigurd and D.Laird, *Programming Android: Java Programming for the New Generation of Mobile Devices*, 2nd ed. USA: O'REILY, 2012.

Credibility: authoritative, up-to-date, unbiased

In-Depth Evaluation

Some sources are unauthoritative, out-of-date and biased, however, they helped us to get an overview of what the specific APIs we were expecting to use. With this knowledge in mind, we can start researching on these specific APIs and familiarize with them. The report wrote by Matt Gottsha is related to our interest. Even though it is biased, we can still refer to it because it contains information we need to solve the problem we will be facing. The last source is helpful in all aspects of android development. If we were to further improve our product, we would definitely need the knowledge in this book.