Project #3 (10%)

CS5263 Wireless Multimedia Networking Technologies and Applications

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Due at 03:30 p.m. on December 30th, 2013. Please send your materials via email to the instructor. See course website for grading policies, especially about late submissions.

This is a group project to familiar yourselves with the Android platform and WiFi Direct standard. Each group has 2–3 students. The ultimate goal of the project is to develop a real-time video conferencing APP that runs on two close-by Android phones. The video streams are transmitted over the WiFi Direct connections.

The project consists of two parts. The first part is to download, compile, and set up a file sharing APP written by a group of USC student. A PDF snapshot can be found here: http://tinyurl.com/cbedu67. It is your job to download and test their source code. If there are bugs in the source code, you *need to* fix them to get credits. This part is worth 5%.

The second part of this project is to extend the above android project to support life video conferencing. You are free to use any protocols as well as any publicly available libraries, but remember to give the credits to the open-source projects. We will only transfer videos in this project, and you do not need to control the frame rate. This part is worth 5%.

You may create two separate APPs or have a single APP performing the two functionalities. On the due date, at 3:30 p.m., you will: (i) demonstrate your system using two Android devices, (ii) present your design and lesson learned to the class, and (iii) turn in your source code. You will only get partial credits if you did not finish all the tasks on time. No extension will be granted since it's very close to the end of the semester.

There are some tips for your reference. For the first part, you need to create FileList file manually. It is used to indicate which files will be requested from server. For the second part, you can try to use the following comments or think one by yourself. You can store the captured pictures as files from Android camera and send files to client side using USC project to ensure

pictures are received and then render the received pictures on client side screen. Last one, remember to enable necessary user permissions for your Android APPs.

It is important to notice that this is a graduate level programming assignment, and you are responsible to think, design, implement, and test your APPs. Have fun.