Project Plan for Group Activity (max. 1 page)

Group 10: (Noor Maham, Chen Xingji, Okoroego Ihechukwudere, Al-Humairi Mohammed)

Overview (Motivation)

Regardless of whether you want an internet connection for personal use, a small business, or a major organization, it is essential to make an informed choice about which network provider to use. There are often a number of different network providers from which to choose in countries. It might be a pain at times to be able to quickly and simply choose a network provider or Wi-Fi network that provides network coverage that is well suited to one's individual or organizational needs. For this purpose, we would want to perform and give a visual comparison of the 4G network coverages provided by three of Finland's most popular mobile network providers and the Wi-Fi network coverages available in a few selected locations around the campus. This will assist you in selecting the most appropriate network provider or Wi-Fi network for your needs.

Objectives (What?)

Measurements of various characteristics that contribute to optimal network coverage:

- Transmitting and Receiving frequencies
- Data Rates (both upload and download)
- Latency
- Received signal strength.

Methodology and expected outcomes (How?)

The first step in our plan is using an Excel spreadsheet to compile the results of various measures that will be taken in certain locations around the campus of the school. The measurements will be carried out with the assistance of a few different mobile applications, namely Opensingnal, Cellmapper, and SpeedTest. This will allow us to get the characteristics (download and upload speed, Latency, transmitting and receiving frequencies, and received power signals) of each network coverage in the particular locations that have been chosen. Most of our team members have 4G mobile devices, thus the measurements will concentrate more on the 4G network and the Wi-Fi network. After that, using Python and its associated libraries, we will do an analysis and visualization to evaluate and contrast the quality of the service provided by each network coverage in the locations that have been chosen.

Timeline and contingency plan (When?)

Measurements will be taken at a wide variety of places, and each member of the team will be responsible for putting the information into an Excel sheet. Ihechukwudere Okoroego will be responsible for the data analysis and

visualisations, and he will use Python and its associated libraries. The measurements will be more arbitrary so that we can have enough data to help establish a better interest and concentrate on the data analysis and comparison instead of the lack of data.