

DEVELOP A MOBILE APPLICATION TO MONITER TRANSMIT POWER AND RECEIVING LEVEL OF IN DOOR UNIT (IDU)

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Mobile communication is the most commonly and easiest way of communication present world. In the process of mobile communication signal transmission and receiving is the basic and most important process. During mobile communication processes there are so many equipments use but In Door Unit (IDU) is very important one among all other. Microwave links between two sites are depends on the transmitting and receiving of signals. Therefore it is mandatory to maintain all these equipments and fixed transmit power and receiving level of site. Presently they use three versions of IDU's (NEC V4, NEC Neo and Huawei RTN) in sites and there are three methods to measure parameters. Therefore measuring and monitoring these two parameters are very important.

This study aimed to develop easy method to measure these parameters in NEC products and reduce the consuming of maintaining time. Arduino was used to handle the communication method between IDU and mobile phone and Bluetooth technology used to transmit readings to the mobile application.

This research device package tested with NEC V4 and NEC Neo IDU's and NEC Neo has high level communication protocol which cannot understand and high security. Therefore Arduino cannot send messages to NEC Neo. NEC V4 has simple communication protocol and tested in sites with good results. This improvement and the concept studies will open new window to the various future researches in mobile communication area to improve efficiency of the development.

Keywords: In-door unit, Arduino, Android, NEC, Huawei, Bluetooth technology.