This research work analyzed the performance of Wireless Local Area Nework (WLAN) how the performance can be increased within the Federal University of Technology, Minna, Bosso Campus. Random sampling method was used using questionnaire to collect data from the respondents. One hundred (100) copies of questionnaire were administered. Ninety five (95) were returned, while five (5) were missing. From the analysis it shows that out of all respondents from various groups a total number of eighty (80) have computer. Only four (4) which represent 8.30% of total number of people are using FUT Minna WLAN. The result of this analysis revealed that we have we have a huge percentage of the users of this network who prefer to use other network available outside the campus, this is due to the erratic nature of the FUT Minna, WLAN Bosso Campus service. Based on this findings, we recommend a redesign in the architectural design of this network.