

ABSTRACT

Mobile wireless communication technology have been developed so rapidly and vary. Communications at this time is not only limited to voice services but also for data and multimedia services. This cause on the needs of the wide bandwidth to be able to support communications services, which continues to grow in line with the increasing human needs. In line with that, since the frequency declaration of Ultra Wide Band (UWB) wireless communication, which is the frequency range of 3.1 - 10.6 GHz, the antenna design for the new communication standard have been attracting much attention from telecommunication expert. Planar monopole antenna into one of the antenna which has the potential to be able to support the UWB technology because of the simple, cost a minimum, and has a wide bandwidth

Final task entitled "Design Build Planar Monopole Antenna For Multiband Operation With Frequency Range 3.1 - 6 GHz" will discuss this planar monopole antenna design with the software Ansoft HFSS 9.2. This antenna will be designed for multiband operation with a frequency range from 3.1 to 6 GHz with a VSWR \leq 2 on the frequency (3400 - 3600) MHz, (5150 - 5350) MHz, and (5725 - 5825) MHz. The exciting method is using coplanar waveguide.

The results achieved in this final task is planar monopole antenna that works for multiband operation with a frequency range from 3.1 to 6 GHz with a VSWR \leq 2 on the frequency (3400 - 3600) MHz, (5150 - 5350) MHz, and (5725 - 5825) MHz. And then to the antenna radiation pattern is omnidireksional and polaritation shaped ellipse. Gain of the antenna is able to achieve 2.04 dBi.