



Principles of Communications (NEC-502)

Title of the Activity:

Importance of Modulation in Communication Systems.

Methodology:

A Plane Paper as a message signal and an envelope, a heavy stone is considered as a carrier wave to understand the importance of modulation in communication systems.

Procedure of conducting the activity

A plane paper as message signal, an envelope and a duster as carrier wave is taken for this activity by a group of ECE 3rd year students in communication system lab. The motive of this activity is to understand that, how a carrier wave is used (i.e. modulation process is adopted) to carry a message signal for long distance communication from source to destination.

Procedures:

1. Setup of a Table (one end is considered as source and other as destination), a paper, a duster and an envelope is taken.
2. Paper is thrown toward one end of the table from other end. We see that the paper will not be able to reach the destination (end of the table).
3. Same paper is attached with a duster and then it is thrown towards the destination from source and we see that this paper reached the end easily due to duster.
4. One another way is to place this paper in an envelope to send this message to the destination safely.

The Result and Analysis:

After this activity, students are able to understand the concept of modulation. They are able to understand that as low weight paper reached the destination with the help of a heavy weight duster and with the help of an envelope through table. In similar way the low frequency signal can be transmitted through a medium/channel to a long distance with the help of a high frequency carrier wave.