Chhota Chhatri

Aim :

We plan to make an umbrella which will follow its user, i.e. the user won't have the carry the umbrella with him wherever he goes.

Implementation :

1. The main step of the implementation is to make the umbrella track the user. We intend to do that by using a beacon circuit and a corresponding receiver. The beacon circuit will be carried by the user, whereas the receiver(s) will be mounted on the umbrella. The beacon will constantly emit periodic signals. The receiver will detect the signal and depending on the strength of the signal, it will get an idea of its distance from the user. If the receiver cannot detect the direction of the signal, we will use multiple receivers and depending on the value recorded by each receiver, we will determine the direction of the user relative to the umbrella. This step is expectec to take two weeks.

2. To make the umbrella fly, we will use symmetrically placed rotors on the circumference of the umbrella. This is remniscent of the flying bot from 3 idiots. We expect this step to take around 3 weeks.

3. The debugging part is expected to take one week.

Components Required:

1.Black umbrella cloth

2.Rods for making skeleton of umbrella

3.Rotor

4. Beacon receiver.

5. Resistors, capacitors, ICs etc. for making beacon circuit.

Cost :

To be estimated. (Not more than 5000)

Applications Of This Bot:

1. For protection from rains

2. For surveillance.

Learning Outcome:

Get familiar with electronic circuits and aeromodelling concepts.