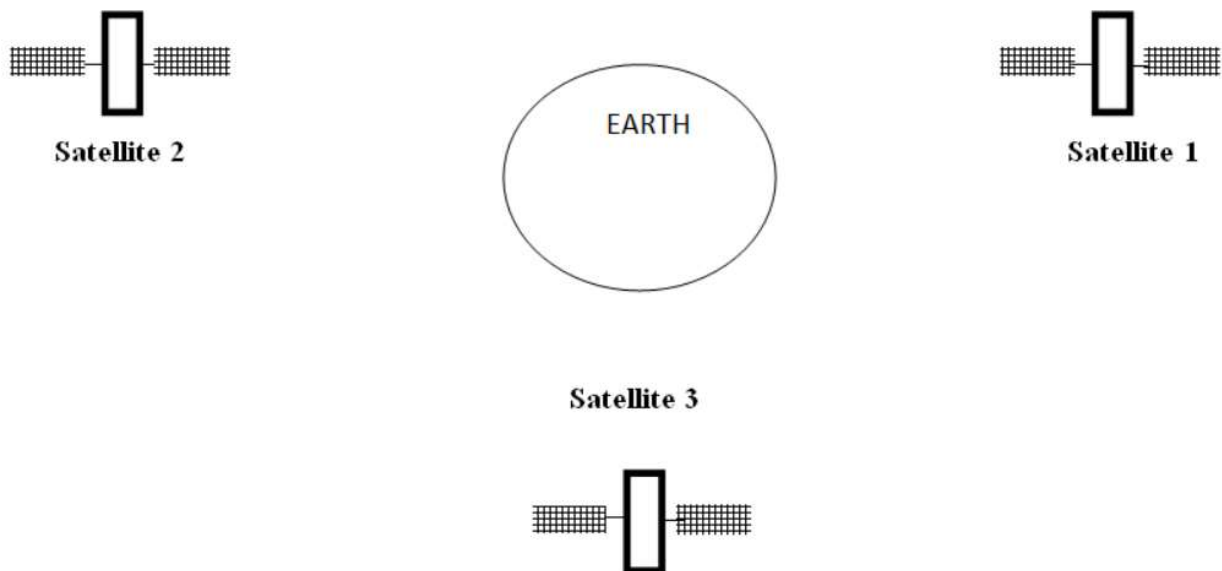


Chapter 3rd [Networking Concepts]

Satellite Microwave Communication:-

This is a microwave relay station which is placed in outer space. The satellites are launched either by rockets or space shuttles carry them. These are positioned 36000 Km above the equator with an orbit speed that exactly matches the rotation speed of the earth. As the satellite is positioned in a geo-synchronous orbit, it is stationary relative to earth and always stays over the same point on the ground. This is usually done to allow ground stations to aim antenna at a fixed point in the sky.



Features of Satellite Microwave

- It provides transmission capability to and from any location on earth.
- Deployment of Satellite microwaves for orbiting satellites is difficult.

Advantages of Satellite Microwave

- High-quality communication available to undeveloped parts of the world without requiring a huge investment in the ground-based infrastructure.
- It is used in a variety of applications such as radio/TV signal broadcasting, weather forecasting, radio/TV signal broadcasting, mobile communication and mobile, and wireless communication applications.
- The coverage area of a terrestrial microwave is less than the terrestrial microwave.

Infrared Waves

Infrared waves, with frequencies from 300 GHz to 400 THz, can be used for short-range communication. Infrared waves, having high frequencies, cannot penetrate walls. This advantageous characteristic prevents interference between one system and another, a short-range communication system in one room cannot be affected by another system in the next room.

When we use infrared remote control, we do not interfere with the use of the remote by our neighbors. However, this same characteristic makes infrared signals useless for long-range communication. In addition, we cannot use infrared waves outside a building because the sun's rays contain infrared waves that can interfere with the communication.

Assignments:-

- 1-Explain satellite microwave communication.
- 2-What is Infrared Waves communication?