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Artificial Satellite

Pawar Aditya Bharat, Sarvadnya Sandeep Achari, Shaikh Amir Iqbal, Sansare Karan Vilas, Shaikh Rehan Riyaz

Project Guide : Prof. Ingale Ashok Chandrabhan, Gaikwad Rakesh Vishnu

Department of Science

Santosh N Darade Polytechnic College Babhulgaon, Yeola.

Abstract - A man-made object placed in orbit round the Earth or some other celestial body. Artificial Satellite is used for transmission and communication signals between orbit of earth to navigation. It revolve in elliptical orbit around the earth. It not drop on earth due to its relative velocity. It travel around the earth in low orbit, medium orbit and high orbit. The velocity of artificial satellite is near 11.2km per sec.

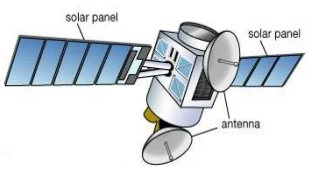
***Key Words*:** Satellite, communication signals, elliptical orbit, relative velocity.

1.INTRODUCTION

This Satellite is very useful to detect clouds, tsunami, rain, in metrology department. It communicate strong signals to the television telephone. It protect the boundary between to countries from the enemies with the help of navigational satellite. It is very useful to detect disaster management. This artificial satellite launch in different orbit of earth with the help of PSLV & GSLV Rockets. Artificial satellites come from more than 50 countries and have used the satellite launching capabilities of ten nations. A few hundred satellites are currently working, but thousands of unused satellites and satellite fragments orbit the Earth as space debris. The largest satellite is the International Space Station, which was put together by several different countries including the organizations of NASA & ISRO. Today We are challenges to make different types of artificial satellite with the help of research organization & to reduce further hardwork.

2. TYPES OF ARTIFICIAL SATELLITE

2.1Communication Satellites



A communications satellite is an artificial satellite that relays and amplifies radio telecommunication signals via a transponder; it creates a communication channel between a source transmitter and a receiver at different locations on Earth. Communications satellites are usedFor television, telephone, radio, internet,and military applications.[1] Many communications satellites are in geostationary orbit 22,300 miles (35,900 km) above the equator, so that the satellite appears stationary at the same point in the sky; therefore the satellite dish antennas of ground stations can be aimed permanently at that spot and do not have to move to track the satellite. Others form satellite constellations in low Earth orbit, where antennas on the ground have to follow the position of the satellites and switch between satellites frequently.

2.2Earth Observation Satellites

An Earth observation satellite or Earth remote sensing satellite is a satellite used or designed for Earth observation (EO) from orbit, including spy satellites and similar ones intended for non-military uses such as environmental monitoring, meteorology, cartography and others. The most common type are Earth imaging satellites, that take satellite images, analogous to aerial photographs; some EO satellites may perform remote sensing without forming pictures, such as in GNSS radio occultation.

3.3Navigation satellites

A satellite navigation or satnav system is a system that uses satellites to provide autonomous geo-spatial positioning. It allows satellite navigation devices to determine their location longitude, latitude, and altitude/elevation) to high precision (within a few centimeters to meters) using time signals transmitted along a line of sight by radio from satellites. The system can be used for providing position, navigation or for tracking the position of something fitted with a receiver (satellite tracking). The signals also allow the electronic receiver to calculate the current local time to a high precision, which allows time synchronization. These uses are collectively known as Positioning, Navigation and Timing (PNT). Satnav systems operate independently of any telephonic or internet reception, though these technologies can enhance the usefulness of the positioning information generated.

3. CONCLUSIONS

This project has been very enlightening for us, we have been able to work on reel satellite signal, and we faced issues that researchers and engineers are facing during there thesis or work nowadays. It covers several fields, such as signal processing, radio frequency, computer science and some general approach on the satellite communication environment, which is rewarding for an engineering student.

4.ACKNOWLEDGEMENT

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