ISSN: 2469-4134
Journal of Remote Sensing & GIS

OPEN ACCESS Freely available online

Perspective

Information Based on Security Enhanced in Satellite Communication

Alan Murray*

Department of Geography, University of California, Santa Barbara, USA

DESCRIPTION

NASA Research and Education Network (NREN) requirements for improvement of seamless nomadic networks in addition to our association with different space primarily based projects which includes the protocol testbed and EOS necessitates that NREN staff have an operating information of fundamental satellite technology. This paper and the presentations given in summer and fall of 2002 are designed to impart this timely information. This paper addresses the components required for a satellite based communications system, applications, technology trends, orbits, spectrum and hopefully will afford the reader an end-to-end picture of this essential technology. Satellites are objects in orbits around the Earth. An orbit is a trajectory capable to maintain gravitational equilibrium to circle the Earth without power assist.

Physical laws that were conceptualized through Newton and Kepler govern orbital mechanics. The first satellite was the Moon, however, but the concept of communications satellites came from Sir Arthur C. Clark in 1945. The Soviets launched the first artifical satellite, Sputnik 1, in 1957. The first communications satellite (a simple reflector) was the U.S. Echo 1 in 1960. The first "geosynchronous" satellite, syncom satellite launched in 1962. There are now over 5000 operational satellites in orbit, 232 of which might be large commercial (usual communications) satellites. Satellites have become important for modern life. Among the essential applications of satellite technology are video, voice, IP data, radio, Earth and space observation, global resource monitoring, military, Global Positioning System (GPS), micro-gravity science and many others. From space to our television networks to the Hubble telescope, satellites are one of the defining technology of the modern age. Video is the most successful commercial application for satellites and signal receiving is the most promising application for the technology at this time. "Spot" images of locations on Earth, GPS and Internet access both for providers and direct connection to our houses or office have been most successful, while smart phone systems primarily based on fleets of low flying satellites have been a flop.

Mobile phones like connections (such as at ISDN speeds) for marine and mobile services have been with us for some time, however. Satellite services have some big advantages, which includes being available almost everywhere on Earth with out wires, being mobile, being the proper broadcast medium and being protocol agnostic. The downside to satellite technology is that satellites have either a limited visibility over a spot on Earth or an extended round-trip time and they broadcast information that may be received by anyone under them. Satellite transmissions also are affected by both terrestrial and space weather. They are subject to a higher error rate than fiber and they are complex from each, a physical and regulatory point of view.

CONCLUSION

Satellites are launched from Earth by the shuttle, from high-flying airplanes or from ground based rockets. Once launched, payloads need to reach right elevation and escape velocity to be boosted into orbit. In order to maintain proper orbit, satellites are managed from a ground station on Earth that sends commands and receives status and telemetry from the satellite. Satellites are classified by the means of the distance of their orbits above the Earth. Low Earth Orbiting (LEO) satellites are placed at an altitude of from 100 to 1200 miles and Medium Earth Orbits (MEO) are placed at an altitude of from 4000-12000 miles.

Correspondence to: Alan Murray, Department of Geography, University of California, Santa Barbara, USA, E-mail: malan@ucsb.edu

Received: 02-Mar-2022, Manuscript No.JGRS-22-16321; **Editor assigned:** 04-Mar-2022, PreQC No. JGRS-22-16321 (PQ); **Reviewed:** 18-Mar-2022, QC No JGRS-22-16321; **Revised:** 23-Mar-2022, Manuscript No. JGRS-22-16321 (R); **Published:** 31-Mar-2022, DOI: 10.35248/2469-4134.22.11.223.

Citation: Murray A (2022) Information Based on Security Enhanced in Satellite Communication. J Remote Sens GIS. 11:223.