



ACADEMICA
**An International
 Multidisciplinary
 Research Journal**
 (Double Blind Refereed & Peer Reviewed Journal)



DOI: 10.5958/2249-7137.2021.02215.1

AN OVER VIEW OF SATELLITE COMMUNICATION

Mr. Rishi Sikka*

*SOEIT, Sanskriti University,
 Mathura, Uttar Pradesh, INDIA
 Email id: rishisikka.ec@sanskriti.edu.in

ABSTRACT

With the introduction of satellites, communication throughout the whole world has been revolutionized. Satellite communication has benefited humanity in a variety of ways, including predicting weather, providing storm warnings, and providing a wide range of communication services in the fields of relaying television programs, digital data for a variety of business services, and, most recently, telephony and mobile communication. If satellite communication connections are utilized for voice and fax transmission to aircraft on international routes in the near future, it will not surprise the global community. Other uses of satellite communication include GPS navigation, global telephone, multimedia video and internet connection, Earth imaging through remote sensing satellites for resource monitoring, telemedicine, and tele-education services, among others. The satellite communication system is transitioning from high-cost, high-capacity trunk connectivity to low-cost multipoint-to-multipoint transmission. Satellite communication has progressed in various ways, including frequency reuse, linking numerous ground terminals across the globe, multiple spot beam communications, laser beam-based satellite communication, and the utilization of networks of tiny satellites in low earth orbit. Different application aspects, both current and future, are addressed in this article on satellite communication development. If we pool our efforts and come up with creative and low-cost solutions for the global community, satellite communication offers numerous applications and markets.

KEYWORDS: *Satellites, GPS Navigation, Remote Sensing, Telemedicine, Frequency Reuse.*

REFERENCES

1. A. H. Lokman *et al.*, “A Review of Antennas for Picosatellite Applications,” *International Journal of Antennas and Propagation*. 2017, doi: 10.1155/2017/4940656.
2. Y. Konishi, “Phased array antennas,” *IEICE Trans. Commun.*, 2003, doi: 10.1201/b14904-23.
3. W. W. Wu, E. F. Miller, W. L. Pritchard, and R. L. Pickholtz, “Mobile Satellite Communications,” *Proc. IEEE*, 1994, doi: 10.1109/5.317086.
4. S. S. Kamal and S. Saadat, “New advances in VSAT satellite systems networking technology support the multimedia requirements of tomorrow’s business services,” 1996, doi: 10.2514/6.1996-1085.
5. L. Wang, F. Li, X. Liu, K. Y. Lam, Z. Na, and H. Peng, “Spectrum Optimization for Cognitive Satellite Communications with Cournot Game Model,” *IEEE Access*, 2017, doi: 10.1109/ACCESS.2017.2779804.
6. R. Radhakrishnan, W. W. Edmonson, F. Afghah, R. M. Rodriguez-Osorio, F. Pinto, and S. C. Burleigh, “Survey of Inter-Satellite Communication for Small Satellite Systems: Physical Layer to Network Layer View,” *IEEE Communications Surveys and Tutorials*. 2016, doi: 10.1109/COMST.2016.2564990.
7. K. C. Yi, Y. Li, C. H. Sun, and C. G. Nan, “Recent development and its prospect of satellite communications,” *Tongxin Xuebao/Journal on Communications*. 2015, doi: 10.11959/j.issn.1000-436x.2015223.
8. Y. Rahmat-Samii and A. C. Densmore, “Technology trends and challenges of antennas for satellite communication systems,” *IEEE Trans. Antennas Propag.*, 2015, doi: 10.1109/TAP.2014.2366784.
9. B. I. Edelson and L. Pollack, “Satellite communications,” *Science (80-.)*, 1977, doi: 10.1126/science.195.4283.1125.
10. A. Kalantari, G. Zheng, Z. Gao, Z. Han, and B. Ottersten, “Secrecy analysis on network coding in bidirectional multibeam satellite communications,” *IEEE Trans. Inf. Forensics Secur.*, 2015, doi: 10.1109/TIFS.2015.2432732.