World Academy of Science, Engineering and Technology
International Journal of Electronics and Communication Engineering
Vol:10, No:06, 2016

Study and Analysis of Optical Intersatellite Links

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Abstract : Optical Intersatellite Links (OISLs) are wireless communications using optical signals to interconnect satellites. It is expected to be the next generation wireless communication technology according to its inherent characteristics like: an increased bandwidth, a high data rate, a data transmission security, an immunity to interference, and an unregulated spectrum etc. Optical space links are the best choice for the classical communication schemes due to its distinctive properties; high frequency, small antenna diameter and lowest transmitted power, which are critical factors to define a space communication. This paper discusses the development of free space technology and analyses the parameters and factors to establish a reliable intersatellite links using an optical signal to exchange data between satellites.

Keywords : optical intersatellite links, optical wireless communications, free space optical communications, next generation wireless communication
Conference Title : ICOCN 2016 : International Conference on Optical Communications and Networks
Conference Location : New York, United States
Conference Dates : June 06-07, 2016