عنوان مقاله:

Analysis of Imperfect Space Channel for the Next Generation Satellite Networks

محل انتشار:

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خلاصه مقاله:

An efficient space data management is imperative in guaranteeing the best performance with a fair distribution of next generation satellite networks. Therefore, one of the major challenges to implement this kind of future satellite networks is evaluation any untrusted error for the best quality of service (QoS). In this regard, bit error rate (BER) criteria based on the type of space channel which it can be defined prefect or imperfect state between one or more satellites and terrestrial infrastructures seems to be an important subject for space communication. In this paper, the authors provide a bandwidth sharing algorithm for a proposed future heterogeneous satellite networks. This structure can have many satellites in different orbits beside terrestrial equipment having many antennas. In this paper to evaluate this system model, the coverage probability and space capacity based on input parameters such as path loss and signal to noise ratio (SNR) has been analyzed. Also, the bit error rate for a Multi-Input-Multi-Output (MIMO) satellite network based on imperfect channel estimation is simulated based on quadrature amplitude modulation (QAM) and quadrature phase shift keying (QPSK) digital modulations which input parameters are error rate due to imperfect channel estimation and the number of antennas. Finally, two digital modulation compared together based on error rate changes.

کلمات کلیدی:

Satellite Communication; Small Cell; Frequency Reuse; Bandwidth Sharing; Imperfect Channel