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Author: Mr. Swaraj Sagar Pradhan
Space Generation Advisory Council (SGAC), Nepal

USE OF MICRO SATELLITES FOR GLOBAL CONNECTIVITY, HIGH SPEED TRANSMISSION, FLEXIBILITY AND DATA ANALYSIS

Abstract

This is a phase by phase developmental project of the project "Use of micro satellites for rural connectivity and data analysis". The main theme of this project revolves around the use of cube based satellites in Very Low Earth Orbit in order to provide global connectivity, high rates of connectivity speed using quantum qubit data packets for compressed and fast connectivity as well as data analysis such as weather, disaster alarming and scientific data analysis. This project depends a on relative planned swarming system of inter-connected cube satellites, these satellites will be connected and will drift relative to each other which means that the level of coverage and service will change with time. The governing parameter of the drift is the relative velocity difference received at the time of deployment. These inter-connected satellites will be equipped with HET (High efficiency thrusters) for higher orbital stability, collectively these satellites can give very low latency data rates at data latencies down to about 20-30 milliseconds, which is done End to End Quantum Data transmission with an additional feature that helps on data analysis also. the relative drift is solved using constantly changing satellite connections which has a very stable and planned orbit using the Teran celestial coordinate system in order to provide uninterrupted high-speed data connectivity as well as other facilities. These satellites being very small at the size of 1U cube satellites, are relatively very cheap to conventional approaches to satellites and are much easier to mass produce and mass launch as they are light and easy to deploy. The results expected from this project is that, the people of the rural areas can get connected to the internet so that they can have a better education and can know about the various technologies of the outer world that can enhance their development as well. Many parts of world are disconnected to road systems or even sufficiently advanced technologies, these mobile and portable satellites will be able to connect practically each and every part of the making global connectivity possible. Not just that but already connected urban areas too can enjoy very fast and easy to afford high speed connections and accurate weather data. Using quantum data transmission means we can use these later on as a way to do deep space communication as well! Having this in constellation also provides us a new opportunity of data analysis through constant earth observation. Technologies like these can signal wildfires and flood etc. and can help reduce loss of property and life in a natural accident etc. Realizing the need of this, this is what I would like to present and research on would like to work on this project.