
DEVELOPMENT OF ORBITAL COMPUTER NETWORK CONCEPT

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Abstract

The study considered one of the options for solving the problem of information security — creation of a global network independent on the Internet and unattainable for a number of negative impacts due to the server systems in space. We describe the development of the concept of a large-scale computer network with the location of data exchange centers in the Earth's orbit. As the basic elements of the orbital computer network, we suggest using spacecraft that serve as data storage and processing centers. Given the spacecraft's mass and the speed of data exchange between the orbital data processing centers and ground-based devices, the optimal solution is to place spacecraft in circular low Earth orbits. As an alleged means of launching server complexes into orbit, we consider Russian carrier rockets of the Angara family.

Keywords

Computer network, server, complex, data center, spacecraft, orbit, Earth

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