SPACE INTERNET TECHNOLOGY

Мініцький В. В.
National aviation university, Kyiv
Науковий керівник – В.І. Мазур, доцент НАУ

Today, humanity is once again looking into space and wants to establish extraterrestrial colonies. Astronauts will benefit from a single global network of interplanetary Internet.

Automatic spacecraft and manned missions often use specially designed systems for communication. They work efficiently and fully perform the tasks assigned to them.

However, to get the Internet into space, it is not enough to equip each spacecraft with a Wi-Fi router. Significant technical difficulties of outer space need to be overcome. The mutual movement of the planets sometimes blocks the passage of the signal. The distance between the spacecraft is such that it takes a long time to wait for an answer. And TCP / IP protocols do not work at interplanetary distances[1].

Employees of the InterPlanetary Networking Special Interest Group have developed special protocols for space Internet, which are already undergoing practical tests[2].

Space Internet technology is used by NASA and is currently used by the International Space Station in experiments on remote control of robotic robots.

Space Internet technology based on the DTN (Delay-Tolerant Networking) protocol can be useful on Earth. There is no stable connection in remote parts of the world - this is the case with the DTN standard. Geologists, polar explorers, conservationists, ocean explorers, aviators and others will be able to access the Internet as soon as the technical opportunity arises..

References:

1. Міжпланетний Інтернет. [Електронний ресурс]. − Режим доступу: https://sundries.com.ua/mizhplanetnyi-internet-iak-ioho-bachyt-odyn-izrozrobnykiv-zemnoi-pavutyny/
2. Офіційний сайт групиIPNSIG . [Електронний ресурс]. − Режим доступу: http://ipnsig.org/