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REUSABLE FUEL TRANSPORT.

Abstract

The construction of an average communications satellite costs around $300 million, approximately $50 million to launch, and its useful life is around 15 years. When the fuel is used completely, the satellite is not able to maintain orbit, it loses communication, until it begins to fall and, as its fragments disintegrate, they impact the Earth's surface. Refueling will extend the life cycle of the satellite, allowing companies and governments to reduce the costs of developing and launching replacements by a considered percentage. Contemplating the types of liquid and gaseous fuel. For two-component fuel, transportation will take place through two different channels. After refueling the satellites, the drain system will provide evaporation of the fuel residue to prevent an explosion after uncoupling. The number of channels for liquids or gases can be expanded to suit any need. The service station and the implementation of the plug in the satellites will allow to extend their useful life. It can also be used to interconnect space station modules or assemble on orbiting spacecraft. In addition, the transport of reusable fuel will be used in the future, for interplanetary fuel stations, to facilitate the colonization processes of our solar system and extend the life of the satellites by approximately 80%.