Paper ID: 34277
oral

SPACE SYSTEMS SYMPOSIUM (D1)
Interactive Presentations (IP)

Author: Dr. Linghua Guo
China Academy of Space Technology (CAST), China

A HIGH SPEED RELAY SATELLITE SYSTEM FOR THE NEW SPATIAL INFORMATION NETWORK

Abstract

With the rapid development of the space science and technology of earth observation and deep space exploration, the applications requirements of real-time (¡1s) and efficient relay (¿5 Gbps) for big data produced from spacecrafts have been proposed. The establishment of a unified, standard of spatial information system network and backbone relay grid structure will be imperative under the situation. The research has proposed a system composed of 4-5 GEO satellites which work as the backbone nodes of space dynamic reconfiguration information network. Such system provides relay support services of application and control data for near Earth, deep space, and other platform. Therefore, the key problems such as the reliable separation for data-control plane, the real-time awareness for dynamic reconfiguration network, the efficient distribution for network resource virtualization, etc. will be concerned about and should be resolved. The new space information networks backbone relay satellite system can achieve full space, all-weather, full-time, multi-task, high rate, high flexible information access and relay.