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THE PERFORMACE ANALYSIS OF DTN COMMUNICATION SYSTEMS IN MOON EXPLORATION PROGRAM.

Abstract

An Interplanetary communication suffers from a high latency and transmission errors due to the intermittent connectivity and requires a high transmission power for message delievery. Delay/Disruption toelent network (DTN) has been developed to ensure the message deliever in the challenging interplanetrary network and lunar orbit. Contact duration and period betweeen nodes in DTN is critical to reduce an end-to-end latency and to optimal utilize reaource at each node. In this paper, we consider a DTN communication system which transmits message from Earth and Moon through network. We demonstate that realy system with orbiter reduces the end-to-end latency for message deievery. In addtion, we dervie proper routing scheme and minimum buffer size at Earth and lunar to ensure the message deliever.