

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
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STUDY AND SIMULATION ANALYSIS ON TRAFFIC MODELS OF THE UMTS BASED GEO
SATELLITE MOBILE COMMUNICATION SYSTEM

Abstract

The UMTS based GEO satellite mobile communication system has become a major satellite mobile communications development trends along with technologies' maturity and customers' growing traffic needs. As we can see, the traffic models of the system are very important for system construction and implementation. This paper proposes a kind of UMTS based GEO satellite mobile communication systems architecture, studies system end-to-end application layer services, models different types of traffic using structure method, and conducts performance simulation in according to designed parameters. The simulation results show that the traffic of UMTS based GEO satellite mobile communication systems has similar characters with the counterpart of terrestrial ones and can meet the service needs when the proposed traffic models possess proper parameters. The paper's achievement can be in great favor of the system design.