Abstract

Satellite has been identified as a potential candidate to meet the explosive Internet demand and to evolve the global Internet services. With a view to combat channel errors predominant in satellite based networks, TCP with Adaptive Flow Control and Delayed Fast Recovery (TCP-AFC) has been designed to identify a random loss with the help of selective acknowledgments. TCP-AFC has demonstrated significant performance enhancement in error prone environments through simulations and experiments on an active emulated network. In order to substantiate the improvement, we investigate the performance of TCP-AFC in a real environment consisting of a Ku band satellite link, which is more susceptible to atmospheric conditions. This paper focuses on evaluation of TCP-AFC in real life situations having appreciable channel noise and delay. Results of the extensive experiments conducted on a test bed consisting of a symmetric GEO satellite link for different channel conditions, data volume, data type and data traffic are presented in this paper. Analysis of the results reconfirms the compatibility of TCP-AFC in a heterogeneous network besides the performance
improvement over a dedicated satellite link.

Reference

Index Terms

Computer Science  Satellite

Key words

TCP-AFC

SACK_OK
cwnd
Cd
BER