

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Fixed and Broadcast Communications (3)

Author: Mr. Toshio Asai

National Institute of Information and Communications Technology (NICT), Japan, asai.toshio@nict.go.jp

AN ADAPTIVE SATELLITE COMMUNICATIONS SYSTEM

Abstract

For the broadband satellite communications system, especially using higher frequency such as Ka-band, an adaptive communications link controls will be required to provide uninterrupted communication service under the heavy rain condition. The proposed satellite communications system provides highly reliable link under the heavy rain conditions by controlling transmission power, bandwidth, data rate, forward error correction method, modulation scheme, satellite spot beam width, etc. adaptively in accordance with the rain attenuation. The design target of the system is to provide better than 99.99