

# COMS Satellite Ground Control System

Byoung-Sun Lee, Sanguk Lee, Jeom-Hun Lee,  
Won Chan Jung and Jaehoon Kim

Satellite Control Technology Team, ETRI, Daejeon

As a multi-mission geostationary orbit satellite, COMS (Communication, Ocean, and Meteorological Satellite) is planned to be launched in the year 2008. The COMS ground system comprises Satellite Ground Control System (SGCS) with S-band link, Korea Ocean Satellite Center (KOSC) with L-band link, Korea Environmental Satellite Operation Center (KESOC) with S/L-band link, and Communications Test Earth Station (CTES) with Ka-band link.

The SGCS performs the following functions: reception and processing of telemetry data by S-band link, transmission of telecommand by S-band link, tracking and ranging, control and monitoring of SGCS equipment, analysis and simulation of COMS, processing and analysis of flight dynamics data, and mission scheduling and telecommand planning. In order to fulfil the above functions, the SGCS consists of five subsystems: TTC (Tracking, Telemetry and Command Subsystem), ROS (Real-time Operations Subsystem), MPS (Mission Planning Subsystem), FDS (Flight Dynamics Subsystem), and HSS (Hybrid Simulator Subsystem).

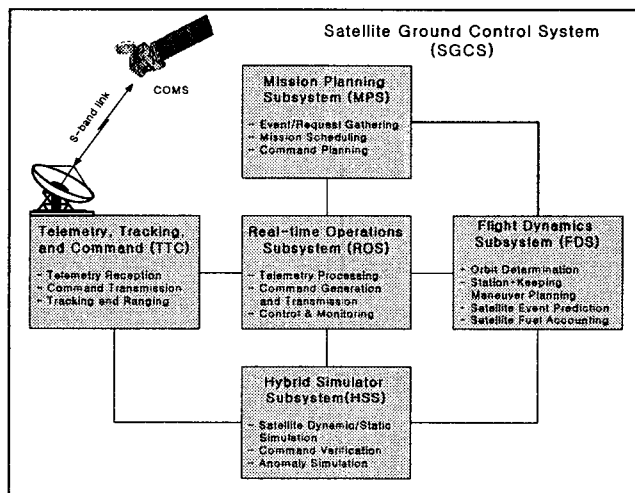


Figure. COMS Satellite Ground Control System