

Creating an Extensible, Automated, Multi-Mission Ground System for Earth Observation Satellites

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Abstract: With a large, and rapidly growing, constellation of earth observation satellites, architecting a ground system solution for direct reception of imagery is problematic. Ground station operators are often faced with proprietary single-mission black-box solutions for each sensor they wish to receive. This in turn causes unnecessary redundancy and expense in station operations including mission planning, antenna scheduling, telemetry processing, cataloging, and archiving. This presentation describes an open ground system architecture which supports multiple missions, is highly automated, and is extensible to easily add new missions coupled with down-stream processing to support near-real time reception, processing, and analysis of imagery from a wide variety of sensors.

