SMALL SATELLITE MISSIONS SYMPOSIUM (B4)
Small Satellites Potential for Future Integrated Applications and Services (4)

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SMALL SATELLITE CONSTELLATION PLANNING FOR DISASTER MANAGEMENT

Abstract

Disaster monitoring and mitigation is one of the major concerns of all the countries. Such a monitoring calls for space based sensors and constellations for multiple and repetitive observations to provide vital inputs. The study of the types of disasters, methods of detection and monitoring has lead to the selection of the appropriate sensors, the satellites and constellations. The study brings out that a two tier capability in the sensors is required to meet the requirement of detection of the disaster at first place followed by more sensitive observations by finer sensors. The finer sensing at anticipated locations need to be triggered by global course sensing satellites. The current paper is a preliminary study to identify the sensor combinations, number of satellites required and configuration of constellation. The paper also addresses the communications and information transfer across the satellites through inter satellite links for an effective functioning of the constellation