

19th SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
Small Satellite Operations (3)

Author: Mr. Joshua Tristancho
UPC, Spain, tristancho@gmail.com

Dr. Jordi L. Gutierrez
Universitat Politecnica de Catalunya (UPC), Spain, jordi.gutierrez@upc.edu

SIMPLIFIED FEMTO-SATELLITE OPERATIONS FOR DISASTER MANAGEMENT MISSIONS

Abstract

The reduction in size of satellites is reaching at the range of femto-satellites, less than 100 grams of mass. One of the key point to achieve such a reduction is to simplify the design of the satellite but also to simplify the mission operation. In the present work, a simplified method for femto-satellite operations is presented able to cover the main types of Disaster Management (DM) tasks. Then, a mission is easy to program using a few default functionalities in the satellite and a list of interest points. Also, in adaptive missions, it is easy to update the list with a minimum set of information. This feature allow an easy control for the First Responders (FR) when they are in the field. This satellite could send pictures to the FR agents with a minimum ground station infrastructure.