Paper ID: 52556
oral

30th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Space Assets and Disaster Management (4)

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LAPAN-A2 (IO-86) SATELLITE ROLES IN NATURAL DISASTER IN INDONESIA

Abstract

Indonesia is a country spread along the ring of fire with many volcanoes and surrounded by open ocean hence Indonesia prominent to a natural disaster such as earthquake, volcanoes eruption, landslide, tsunami, and another typical disaster. In 2015 Indonesia National Institute of Aeronautics Space (LAPAN) had launched LAPAN-A2 satellite in equatorial orbit with 6-degree inclination. This orbit is very useful for Indonesia since the satellite could pass over Indonesia more frequency then SSO orbit.

One of the missions of LAPAN-A2 satellite is for supporting communication during a disaster since common communication will be blackout during a typical disaster. LAPAN-A2 is also known as IO-86 satellite by amateur satellite community in the world. This paper will describe the role of LAPAN-A2 in supporting communication during several disasters that happen in Indonesia. The communication during a disaster could be done by using voice repeater payload in the satellite while in the ground; the people use only a small handy talkie with 5 watts RF and whip antenna to established communication with people in another region. Besides describing the role of this satellite, this paper also describes how this satellite asset encourages societies in Indonesia to be prepared for the natural disaster that may happen anytime by learning simple satellite communication.