

The Evolution of GISTDA Satellite Operation Center

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ABSTRACT

Since the launch of THAICHOTE (THEOS) on 1st October 2008, Gistda have gained several years of invaluable experiences in remote sensing satellite operation. At the beginning of the mission, all of the operations depended mainly on the ground control systems and knowledge provided by Astrium, the satellite manufacturer. After Gistda had familiarized with the operations and maintenance procedures during the early mission, several limitations were observed.

From these reasons, Gistda initiated several projects to develop its own capabilities to bring the systems up to date, automate routine activities and ameliorate operation efficiency, more important, to be independent and self-sufficient. Until now, Gistda have developed its own state of the art tools for the whole remote sensing satellite operation chain. This article gives an overview and the history of the development of Gistda's satellite operation programs. Currently, these tools are being developed in-house by Gistda's engineers in cooperation with academics and international partners. The system includes VOSSCA satellite control terminal, EMERALD orbit determination and maneuvering planning software, GEFT mission planning tool, ATOM satellite status monitoring management and the Thaichote's Image Processing and database system.

Most important, the development of these programs is the result of Gistda's quest to be self-sufficient and to lead the country and its industry into a space technology proficient country.