

SMALL SATELLITE MISSIONS SYMPOSIUM (B4)

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LESSONS LEARNED FROM 20 YEARS SMALL SATELLITE DEVELOPMENT

Abstract

A small satellite is one of the feasible tools to access space for emerging countries. Korea also started space development with a small Earth observation satellite 20 years ago. The satellite project was initiated by the university, KAIST, and a great deal of effort was placed to acquire self-standing capability through a series of satellite projects for 10 years. In 1999, some of the core engineers of the KAIST satellite projects established an independent private company, Satrec Initiative, and started commercial business specialized in small satellite development, while KAIST continued new technology demonstration and space science satellite missions.

The small satellite systems of Satrec Initiative have evolved to the commercially and technically competitive systems through continuous innovation of technology and collaborations with both international and national entities in various satellite programs.

This paper reviews the small satellite development experiences in Korea focusing on how to achieve competitiveness in the satellite market along with the benefits and the future of the small satellites. Also, most common considerations of emerging countries about to start space development are addressed, and the ideas for sustainable and successful satellite development are shared.