

SPACE ACTIVITY AND SOCIETY (E5)
Technology Transfer Trends (1)

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SUCCESSFUL SPIN-OFF IN BRINGING SPACE DOWN TO EARTH: CASE OF KOREA'S EARLY
WARNING ENVIRONMENTAL RADIATION MONITORING NETWORK

Abstract

In developed countries with advanced space technologies, many applications developed directly or indirectly from the space technology have produced thousands of 'spinoffs' that contribute to improving national and individual life and it influences everyone's lifestyle. History of industrialization of space technology in Korea has been only a few decades so far. Starting from the Wooribyo (KITSAT)-1, which was the 1st Korean satellite launched in 1992, Korean industry experienced technological awakening toward the space.

Keystone program to develop spinoff product from the proven space technology began with increasing demand for national security in early 2000. Major concern of Korean national security comes from North Korea, Nuclear Facilities and sometimes from the neighboring countries.

The paper describes successful spinoff experience of joint development between Korea Institute of Nuclear Safety (KINS), which is Korean regulatory body for safety of nuclear related activities, and Satrec Initiative, which is Korean SME in the space industry, from the private sector.

There has been a need of spectrum acquisition from the radiation monitoring instrument for KINS, as a national nuclear regulatory body, to analyze acquired data and finally achieved successful development of EFRD based on NaI(Tl) scintillation sensor.

It is noted that the use of this spinoff product, EFRD, is not limited only to Korea, but becomes increasingly a popular solution thanks to its capability of spectrum acquisition, which has been adopted from the space proven technology having been employed to spacecrafts development.