23rd IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4) Small Earth Observation Missions (4)

Author: Dr. Eugene D Kim Satrec Initiative, Korea, Republic of, edk@satreci.com

Dr. Hungu Lee Satrec Initiative, Korea, Republic of, budgie@satreci.com Dr. Ee-Eul Kim Satrec Initiative, Korea, Republic of, eek@satreci.com Dr. Byungjin Kim Satrec Initiative, Korea, Republic of, bjkim@satreci.com Mr. Sungdong Park Satrec Initiative, Korea, Republic of, sdpark@satreci.com

SATREC INITIATIVE'S NEXT GENERATION HIGH PERFORMANCE SMALL SAT FOR EARTH OBSERVATION

Abstract

The advancement of small satellite and launcher technologies attracted unprecedented interest (and investment) in the so-called NewSpace industry recently. Ignited by Google's Terra Bella (former Skybox Imaging), there have been numerous Earth observation constellation projects announced in the past few years. As opposed to traditional spatial resolution-centric Earth observation missions, these small satellite constellation missions focus on better temporal resolution applications.

SpaceEye-X was developed as Satrec Initiative's (SI) next generation high performance Earth observation satellite. With 0.5 m or better GSD and higher imaging capacity, it was designed to give WorldView-class spatial resolution and wide swath for a small satellite. It was also designed to be compact enough to be launched simultaneously to form a constellation. With the improved agility, more advanced imaging modes are doable, and the constellation can monitor various shaped borderlines or coastline with higher temporal resolution.