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Unibap brings AI to space for Precision Agriculture on NASA mission

Unibap will support a NASA 6U CubeSat satellite sensor technology demonstration of key technologies for Precision Agriculture led by SaraniaSat Inc (Pasadena, CA). Unibap's SpaceCloud computer and software platform has been selected to power SaraniaSat's algorithms for weak signal detection for on-board AI data processing under NASA's In-Space Validation of Earth Science technologies (InVEST) Program.

SaraniaSat will begin a design phase which Unibap will support. Detailed financial arrangements of the level of support, software modules, and number of SpaceCloud products needed for the demonstration which will be separately communicated to the market later. Procurement and support will be handled through Unibap's U.S. distributor Troxel Aerospace Industries, Inc.

The extremely high data volume generated by Precision Agriculture sensors, estimated at 3 Petabytes over a nominal one-year space mission life, justifies the implementation of Unibap's advanced on-board data processing technologies and products. The project is a multi-year project where SaraniaSat partners with, in addition to Unibap's US subsidiary/distributor, NASA's Jet Propulsion Laboratory, and the Hawaii Space Flight Laboratory (HSFL).

SaraniaSat's Hyperspectral Thermal Imager (HyTI) mission is a "pathfinder" that will enable the next generation of high spatial, spectral, and temporal resolution thermal infrared (TIR) imagery acquisition and processing from Low-Earth Orbit (LEO). HyTI will be designed to investigate the following global food and water security issues:

1. Mapping both irrigated and rainfed cropland areas;
2. Determining crop water use (actual evapotranspiration (ET)) of major world crops
3. Establishing crop water productivity ("crop per drop") of major world crops.

Monitoring Global Hydrological Cycles and Water Resources, and developing a detailed understanding of the movement, distribution and availability of water and its variability over time and space is a critical need for NASA's Decadal Strategy for Earth Observation from Space.

- We are very happy for SaraniaSat's breakthrough to demonstrate key technologies that can lay the foundation for future satellite constellations that can revolutionize precision agriculture. The selection of the Unibap SpaceCloud as baseline for the data processing for the huge potential market in future precision agriculture is a great endorsement that our offerings offer cutting-edge and state-of-the-art performance, says CEO Dr. Fredrik Bruhn.

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Link to NASA's press release, https://esto.nasa.gov/files/solicitations/INVEST_17/ROSES2017_InVEST_A49_awards.html



About Unibap

The company is a modern IT company at the forefront of integration of AI solutions and robotics. Unibap digitizes industry's production and manufacturing by giving blind robots vision in combination with human abilities for quality and automation. The background to Unibap is experience from many years of space exploration, of manufacturing rugged industrial computer solutions and robotics solutions.

For more information, please visit the Company's website unibap.com.

Mangold Fondkommission AB, phone. +46 8 5030 1550, is the Company's Certified Adviser.