SKY Perfect JSAT Corporation
News Release

> ### SKY Perfect JSAT and a Startup by the University of Tsukuba
> ### Successfully Conducted Remote Oceanographic Survey with a "Suichu-Drone"!
> ### Service for the Marine Industry Will be Launched in FY2017

SKY Perfect JSAT Corporation (Head Office: Minato-ku, Tokyo; Representative Director, President & Chief Executive Officer: Shinji Takada; hereinafter referred to as "SKY Perfect JSAT") and Ambient Intelligence Technologies Lab., Co. Ltd. (Head Office: Tsukuba-shi, Ibaraki Prefecture; Representative Director, President: Shohei Ito; hereinafter referred to as "Ambient Intelligence Technologies") announce they have successfully conducted demonstration tests for a service utilizing a"Suichu-Drone" namely, underwater drone (Remotely Operated Vehicle [ROV]) and satellite IP network on October 17 and 18 off the coast of Suzaki on the Izu Peninsula, Shizuoka-Prefecture, Japan.

The demonstration tests utilized an ROV that is under development for safe, low-cost deep-sea surveying. ROVs are remotely operated underwater robots that can freely move about in the water. They can also shoot full high-definition videos including marine life and offshore structures from shallow to deep seas.

The videos are sent via optical fiber to a research vessel on the sea, and then sent to a data center on land via SKY Perfect JSAT's satellite IP communications lines. These demonstration tests off the coast of Suzaki verified that images of marine life and the ocean bottom at a depth of roughly 145 meters could be viewed in real time via the research vessel and data center, and also that the transmitted images could be archived in a cloud.

SKY Perfect JSAT and Ambient Intelligence Technologies began joint investigations in April 2016 with the aim of collaboration in the field of marine services combining robotic technologies and satellite IP communications services. SKY Perfect JSAT and Ambient Intelligence Technologies conducted their first underwater test at Lake Motosu in Yamanashi Prefecture in July 2016 and have conducted four successful demonstration tests. After repeated discussions with people involved in the marine, aquaculture, and other industries, the two companies are considering what services to offer. The recent demonstration tests were conducted under the influence of ocean wave height as well as tidal currents and speed.

These successful demonstration tests were major progress toward the development of low-cost satellite IP network services, including surveying and monitoring, for the marine, aquaculture, and other industries. Aiming for a service launch by the end of FY2017, the two companies will conduct multiple underwater experiments with cooperation from the University of Tsukuba (Nakauchi Laboratory) and its Shimoda Marine Research Center with the goal of improving remote operability and durability, movement stability, and other features, and also of optimizing video image quality. They will also implement proactive initiatives for new business fields—including more efficient oceanographic surveying and marine spatial data origination—and make efforts for new industrial creation including the marine and marine products industries.
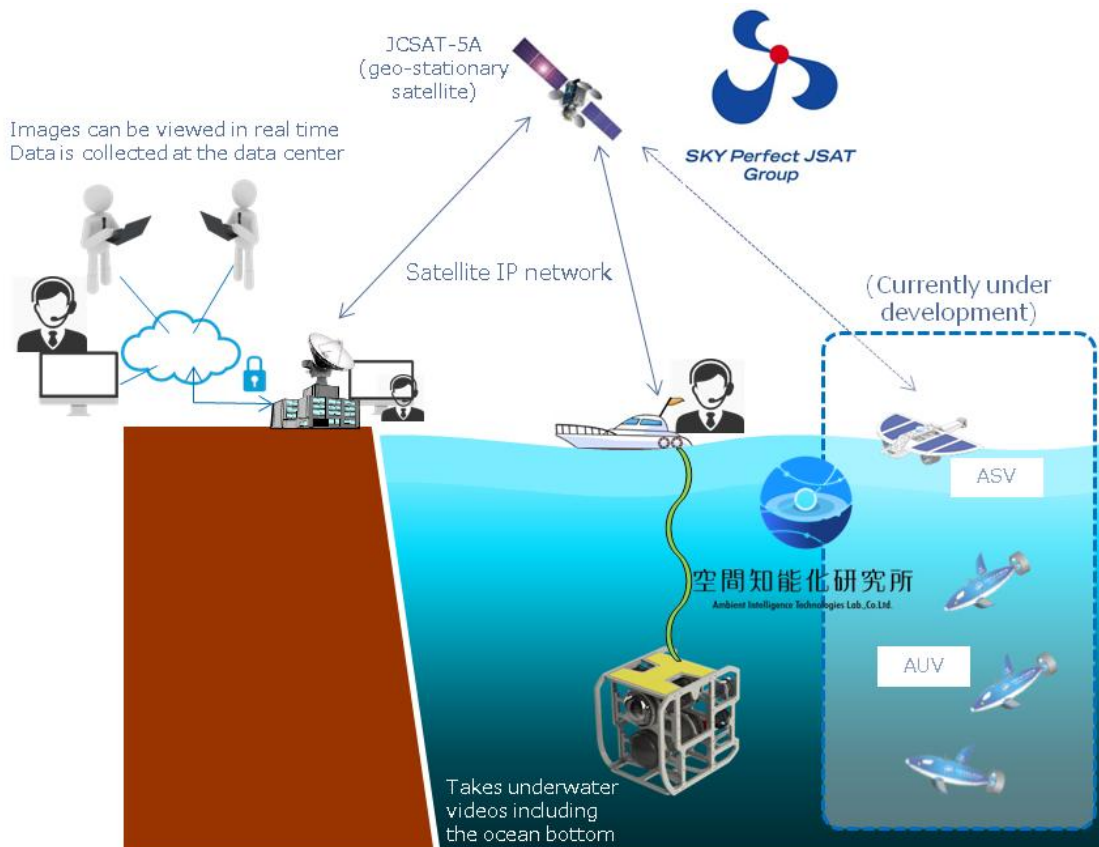
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Attachment

<The "Suichu-Drone" (ROV) used in the demonstration tests>
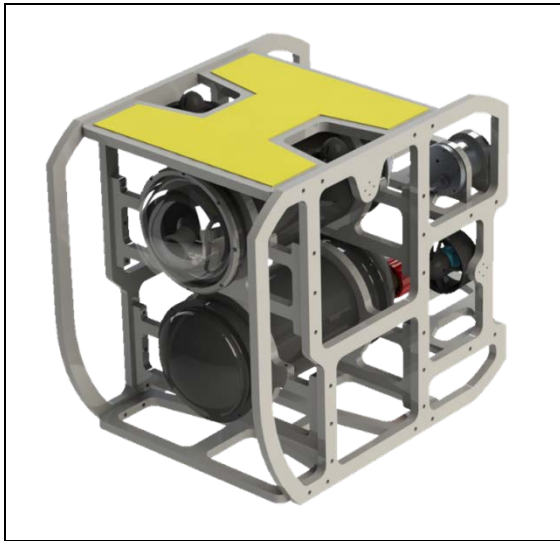
External dimensions 420 mm wide x 480 mm high x 650 mm long
Weight Approximately 18kg

<Image of planned service to be launched in FY2017>

ASV: Autonomous Surface Vehicle (autonomous, remotely controlled robot that is shaped like a ship)

This is the base station (mother ship) for the ROV and AUVs. It collects various types of data and performs charging. Automatic navigation is possible with a pre-set navigation program, as is remote navigation utilizing a satellite network.

AUV: Autonomous Underwater Vehicle (autonomous, remotely controlled deep-sea robot)

These autonomous robots are equipped with cameras, sensors, etc. They can be linked to the ASV.