ACSL to invest in AutoModality, a leading developer of "Perceptive Navigation" technology

Autonomous Control Systems Laboratory Ltd.(ACSL) hereby announces that it will invest in AutoModality Inc. (CEO Dan Hennege, New York, USA; hereinafter "AutoModality").

1. Background of investment

ACSL provides an integrated, autonomous, unmanned IoT drone systems to supplement human labor in inspection, delivery, disaster reconnaissance and aerial surveys. ACSL's core technology is in the integrated drone controls, especially in its capability to fly autonomously in GPS-denied environments using image processing – specifically, a technology often referred to as Visual SLAM*1.

AutoModality, on the other hand, has taken a different proprietary approach to develop autonomous flight control software called "Perceptive Navigation *2". This technology has gained global recognition, through its achievements in international software development contents.

Integration of AutoModality's "Perceptive Navigation" technology into ACSL's integrated drone controls will enable autonomous flight in more complex and technically difficult GPS-denied environments. This integration will empower ACSL to capture further projects in such environments.

ACSL and AutoModality will also collaborate to strengthen marketing and sales in both Japan and the United States.

*1 Visual SLAM:

A method to estimate the relative location of the drone to its flight environment using ACSL's proprietary image processing technology.

The drone captures images of the surroundings from its onboard camera, develops a map of unique features that it discovers in the environment, and estimates the drone's relative location in real-time. This computation is done on an onboard computer, which enables the drone to fly autonomously without the need for external signals such as GPS or other radio transmissions.

*2 Perceptive Navigation:

In AutoModality's definition, a technology to estimate self-position for non-GPS environments through recognition of closed objects using Lidar technology (laser-light-based remote sensing technology). Perceptive Navigation enables drones to operate in open spaces such as bridges and improves location estimation of drones by providing absolute position information of the nearby objects.

2. Outline of investment
   Amount of investment: 2.8 million US dollars
   Expected date of investment: August 20, 2019

3. About AutoModality Inc.

Company name	AutoModality Inc.
Office	United States
	Headquarters: 235 Harrison St, md 8 Syracuse, NY 13202
	Development base: 208 Devon Drive San Rafael, CA 94903
Representative	CEO: Dan Hennege
Business	Research, development and sales of UAV (Unmanned Aerial Vehicle) flight software
Established	June, 2015

4. Influence on the consolidated results of the future
   Influence on the consolidated results for the current fiscal year is negligible at this stage. Details will be disclosed immediately if a need for disclosure arises in the future.

Attention
This document is an unofficial translation of the press release announced on August 19, 2019 by ACSL (Autonomous Control Systems Laboratory Ltd.). The original press release is written in Japanese.