PRESS RELEASE

June 8, 2023

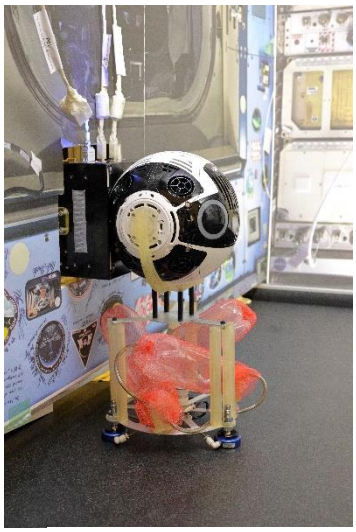
ACSL Ltd.

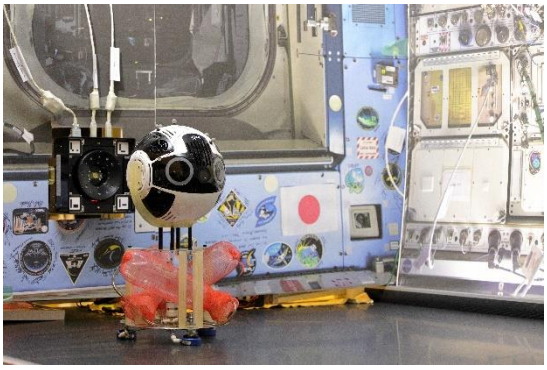
Int-Ball2 with ACSL's Visual SLAM Technology Launched into Space

- Int-Ball2, equipped with ACSL's Visual SLAM technology, was launched into space onboard a rocket.
- Visual SLAM technology is used for Int-Ball2's self-positioning as it moves around the International Space Station (ISS).

ACSL Ltd. (Edogawa Ward, Tokyo; Satoshi Washiya, CEO, hereafter ACSL) has been developing Visual SLAM technology for Int-Ball2 in the production of the JEM Inboard Portable Video Camera System Demonstration 2 (hereafter Int-Ball2) Navigation Function Software, which was commissioned by the Japan Aerospace Exploration Agency (JAXA) in June 2019.

ACSL are pleased to announce that the Int-Ball2 was launched into space at 00:47 (JST) on June 6, 2023, aboard the rocket "SpX-28" developed by Space Exploration Technologies Corp (Space X).



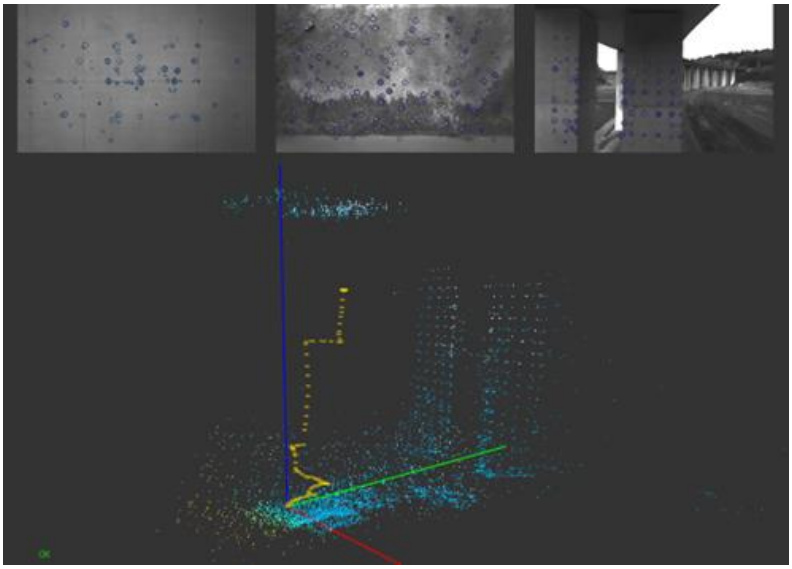


Ground test of Int-Ball2（C)JAXA

■What is Visual SLAM technology?

Visual SLAM, the core technology of ACSL, is a technology that estimates the drone's self-position while modeling the environment by processing camera images.

The figure below shows a drone flying along a yellow trajectory, recognizing feature points in the video from cameras above, below, and in front of the drone, and generating a 3D environmental model.



The image of generating a 3D environmental model by Visual SLAM technology

The JEM Autonomous Mobile In-vehicle Camera (Int-Ball), an in-vehicle drone developed by JAXA, can move around the ISS while controlling its own posture to take still images and videos, which are then sent to ground control personnel and researchers in real time.

Int-Ball2's Visual SLAM technology is responsible for determining Int-Ball2's self-position as it moves within the ISS.

<Reference>
https://humans-in-space.jaxa.jp/news/detail/003155.html

ACSL Ltd.

ACSL develops, manufactures, and commercializes industrial drones in order to realize labor-saving unmanned operations in industrial applications. ACSL's core technology is in its proprietary autonomous control technology and industrial drones equipped with image processing and AI edge computing technology. ACSL drones are already used in a variety of applications such as infrastructure inspection, postal delivery and logistics, and disaster prevention.

For more information visit https://www.acsl.co.jp/en/