



Maki Lab.

[Light for the sea, adventures for the robots]

Underwater Technology Research Center

<http://makilab.iis.u-tokyo.ac.jp/>

Underwater Platform Systems

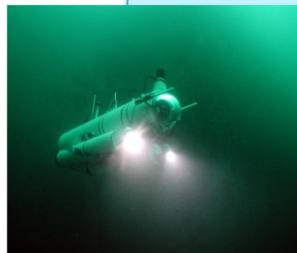
Graduate School of Frontier Sciences
Department of Ocean Technology, Policy and Environment

Future platform systems for underwater observation

We tackle the development of new systems for underwater observation, by means of latest technologies of robotics and informatics. These systems will realize wide-area, high-accuracy, and long-term observation through collaboration of multiple autonomous agents like autonomous underwater vehicles (AUVs).

PLATFORM

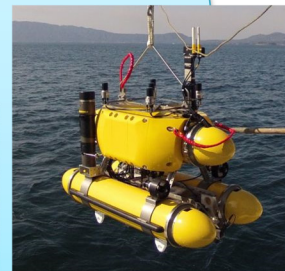
- Development of autonomous underwater platforms
- Non-contact charging
- Power generation from hydrothermal chimneys



AUV Tri-Dog 1



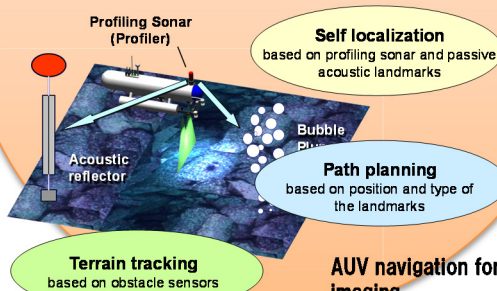
Seafloor Station (type A)



AUV Tri-TON

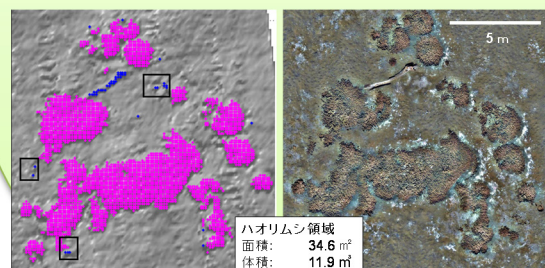
NAVIGATION

- Mutual acoustic positioning
- Probabilistic state estimation
- Terrain tracking, Obstacle avoidance
- Path planning



DATA PROCESSING

- Seafloor imaging (2D, 3D)
- Automated detection of a specific benthos
- Database



Tube-worm colonies at Kagoshima bay

ハオリムシ 領域
面積: 34.6 m²
体積: 11.9 m³
平均高さ: 0.3 m