

PPG Aquarium - Reefbot

ReefBot is a unique children's aquarium exhibit at Pittsburgh's PPG Aquarium featuring a custom-built VideoRay Pro 4 ROV named "CLEO". Outfitted with an HD camera and fish-recognition software, CLEO and the Reefbot exhibit debuted at PPG Aquarium in December 2010. Visitors of all ages can fly CLEO in the aquarium's Big Ocean Exhibit tank to explore and identify 30 different species of fish.

Developed by a Pittsburgh-based team of robotics engineers, aquarists and professionals from the Carnegie Mellon University's Robotics Institute, the Pittsburgh Zoo, and PPG Aquarium, the Reefbot exhibit serves a dual role as an educational tool and a robotics research program. As an educational tool, Reefbot provides an interactive platform for educating the public about coral reef biodiversity and ocean conservation. At the same time, the PPG team is using the exhibit to develop underwater robotic technology for field research and exploration.

Because the Reefbot exhibit was anticipated to reach a large audience with varied levels of experience with robotics, the aquarium needed to find an ROV that was easy-to-use and able to withstand several hours, if not days of continuous use. In order to maintain the integrity of the Big Ocean Exhibit tank, the ROV also needed to be non-disruptive to the marine life already present. These requirements were suited perfectly to the VideoRay Pro 4. Even first-time ROV pilots can successfully fly CLEO around the tank, thanks to the ROV's user-friendly design and compatibility with familiar technology like video game controllers.

Public display exhibits like Reefbot introduce marine research, underwater exploration, and robotics to the masses, not just professionals. It is for this reason that the future of marine life conservation, robotics technology may very well rely on CLEO and her peers in museums and aquaria around the world.

