

COMPANY SPECS

Company: Tigershark Limited (Taipei American School ROV Program)

Home state: Headquarters at 800 Zhong Xien Bei Rd. Sec. 6 Taipei, Taiwan

Distance required to travel to the international competition: The approximate traveling distance is at 12,799 kilometers

History: The company history began with a meeting on one April day in 2009. Expanding from an original crew of eight to a final crew of nine, the company went to the MATE International ROV Competition in June of the following year. However, two members of our team left permanently while we welcome the joining of six additional members, the juniors of our team: Arthur Chang, Sarah Lu Chang, Mandy Chow, Kevin Ku, Kateline Lin, and Loren Weng.

Company: Starting with the top row from left to right – Arthur Chang, Hanpin Tai, Alex Chen, Justin Lin, Derek Meng, Kateline Lin, Mandy Chow, Lawrence Chang, Kevin Lin, Loren Weng, Sarah Chang, Gaga Kim and Kevin Ku. See organization for roles.



Company Organization:

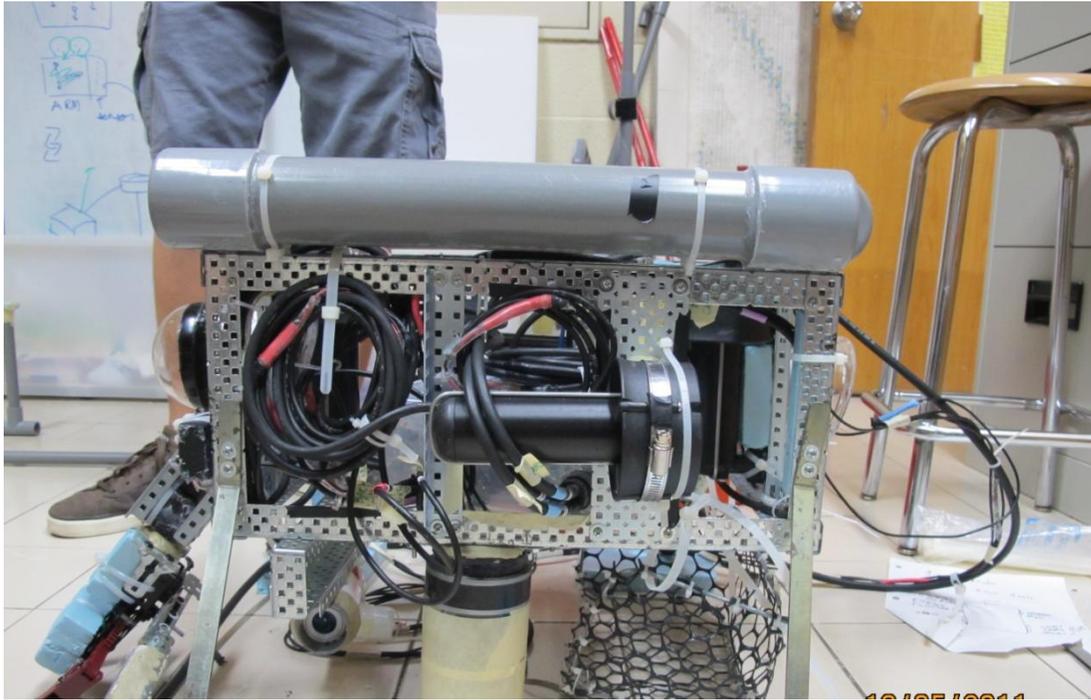
- CEO: Lawrence Chang
- Engineering Chiefs: Alex Chen, Kevin Lin, and Justin Lin
- CFO and Chief Secretary: Derek Meng
- All others are various assistant engineers and secretaries.

Products and Services: Tigershark Co., Ltd. provides underwater robotics products and operation services. The group manufactures remotely operated vehicles capable of completing a variety of tasks, ranging from repair to data collection, from shallow to deep water areas. In addition, Tigershark Co. also provides a strong ROV consumer services sector, such as piloting the ROV to complete certain tasks that requires specialized skills that Tigershark employees possess.

Potential Clients: Tigershark targets clients with marine assets — underwater or on the surface, large or small constructions — that require maintenance and management in hostile climates or other conditions that may render manual operations impossible. One such example is the underwater pipelines that form the backbone of the modern global petroleum economy. Such a delicate and vital system is vulnerable to the volatile and mostly unpredictable sea floor movements that could potentially cause blockage or leakage.

Academic Backgrounds of the individuals of Tigershark: all Tigershark personnel are upper classmen in high school, either a junior or a senior

ROV SPECS



ROV name: TS-02

Total cost of ROV: 81425.6 NTD or approximately 2714.19 USD

Primary materials: The primary materials used for constructing the ROV include VEX metal parts (of various metal alloys), PVC pipes, epoxy, and acrylic.

Dimensions in metric units (length x height x width): 50 cm x 43 cm x 33 cm; or 0.5 m x 0.43 m x 0.33 m.

Total weight in kilograms: 12.4 kg

Safety features: There are five main safety features of the ROV, all placed in the waterproofed box fixed to auxiliary attachments. First, waterproofed, detachable cables lower the possibility of having a single leakage that would undermine the waterproof integrity of the entire box. Second, the thermometer is placed in the ROV's Lock and Lock box to prevent overheating, so that we can directly monitor the temperature inside at all times. Third, we used a double layered Lock and Lock box to decrease the likelihood of a leakage, thanks to the dual compartments. Fourth, we used VEX-certified metals that have already been tested for durability, and have the sharp edges already blunted. Last but not least, we used non-pressurized water in the syringe to eliminate the possibility of a blowout given the normal pressure and the incompressible quality of water.

Special features: Our ROV has two special features: the Seacon detachable cables and the bottom servo camera capable of performing 180-degree rotation as well as left-right pan. As briefly mentioned before, the Seacon detachable cables decrease the possibility of a leakage (and subsequent destruction of the "brain"). Furthermore, the 180-degree, left-right pan camera allows a 180 degree view from the bottom of the ROV, filling in the blind spots of other cameras.