

PROJECT MORPHEUS

The CARPA Authority has commissioned Delta Technologies to design, build, and test a fully autonomous polymorphic robotic system in "Project Morpheus." Required Morpheus Capabilities:

Autonomous reconfiguration through three morphs and four states

Autonomous performance of a valued task in each state

Capability to perform the series of morphs and tasks at least twice

Transportable within a protective case, of which Morpheus will be removed from and returned to the case by an operator

OUR MISSION

Our mission is to keep the world safe. Mercury is specifically designed for military use to reduce soldier casualties in life threatening missions. Before a soldier enters the field, he or she is prepped with information about the job and surroundings; however, because battlefields are not static, the data is liable to be inaccurate by the time the troops arrive. Real-time information allows personnel to adapt to changes in a dynamic situation. Since Mercury will not hinder a soldier's performance on the field, it will be the paragon of non-combat support equipment.

Partners and Sponsors



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DELTA TECHNOLOGIES

Project Morpheus

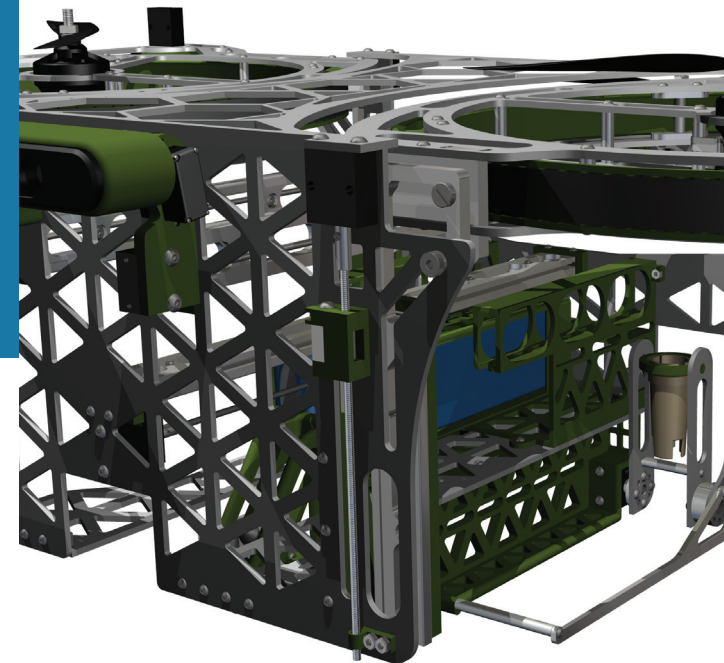
California Academy of Math & Science
1000 East Victoria Street
Carson, California 90747

Witness change,
support advancement.
Welcome the future.
Welcome to Mercury.

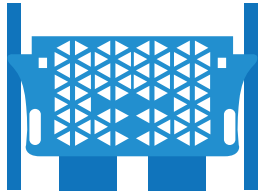
METHODOLOGY

Here at Delta Technologies, we believe that form is essential to function. We are on the cutting edge of technology as we create mechanisms that transform to function more efficiently. In light of this new technology, we have released our newest product, Mercury. Mercury is a self-morphing robot that can achieve both terrain and air travel.

Changes today, shape tomorrow.

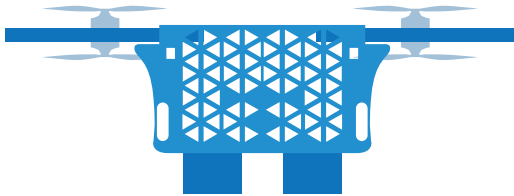


States of Mercury



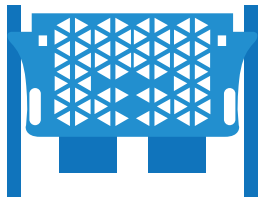
Dormant State

In this robust, compact configuration, Mercury is secured in a durable, impact-resistant housing and protected from extreme external damaging forces.



Flight State

Mercury's Aerial Reconnaissance Unit (ARU) performs revolutionary 3D room mapping and surveillance, providing users with precious real-time intelligence.



Drive State

Mercury dominates not only the skies, but also land. The Hydrological and Geological Analysis Systems (HAS & GAS) are equipped with cutting-edge technology capable of detecting land mines and determining water potability.

Technological Applications



Education

Educators can utilize our unique morphing technology to show complex biological processes. Metamorphosis can be demonstrated with an animatronic device that can morph to show how new traits are developed - for example, the change from caterpillar to butterfly. Furthermore, cardiac processes can also be demonstrated through a morphing apparatus, showcasing living systems.



Terrestrial Applications

Hazardous waste sites can be quickly accessed through flight, and accurately neutralized whilst limiting the need for human intervention. Similarly, robots can access physically restrictive locations to conduct scientific research. Commercially, robots can act as courier bots to transport goods - either medication from a hospital pharmacy to bedridden patients or freeing up nurses for more urgent matters.

Technological Applications



Space Exploration

Our morphing technology will revolutionizes space exploration: Now robotic explorers can traverse over any variety of terrain. For instance, if the robot can now easily overcome difficult-to-traverse terrain by morphing and flying over the problem. Additionally, our radar drops can be transformed into scientific experimental suites, allowing deployment and remote testing without sacrificing functionality.



Aquatics

With our expertise, organizations can confidently enjoy the benefits of vehicles that have a wide spectrum of abilities. From standard expedition duties such as mapping the ocean floor to delicate salvage operations, the possibilities of aquatic vessels with variable configuration are limitless.