Artist Presentation

Chico MacMurtrie

Overview

- Who is the artist and his works
- Creative Process
- “Border Crossers” How Was It Made

Chico MacMurtrie

- Chico MacMurtrie is a contemporary artist and founder of Amorphic Robot Works.
- His work explores the intersection of technology, biology, and art, often using robotics to create sculptures that move and respond to their surroundings.
- Installations have been exhibited at the MoMA New York, and the Venice Biennale.
- MacMurtrie's notable works include "Border Crossers" and "Tree Whisperers".

Creative Process

- **Conceptualization**
  - exploring a particular theme or concept and then develops ideas and sketches for potential artworks
- **Experimentation**
  - experiment with different materials and technologies to bring these ideas to life. This process involves prototyping, testing, and refining
- **Collaboration**
  - essential part of MacMurtrie's creative process. Works with scientists, engineers, and other artists to develop his projects. Incorporate diverse perspectives

Border Crossers Deep Dive

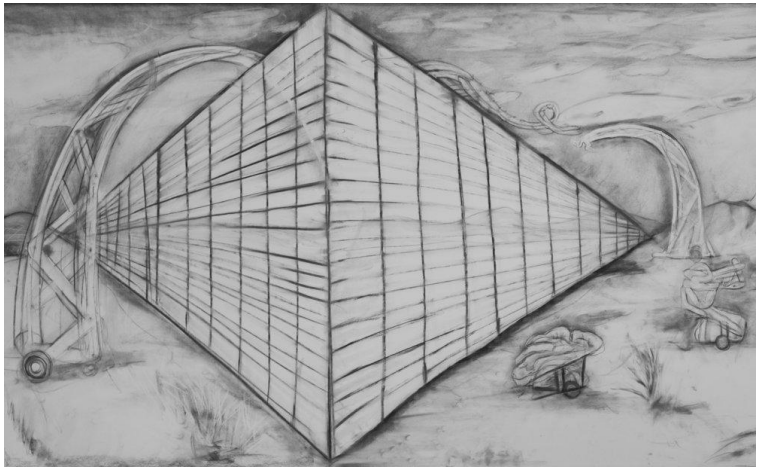
- "Border Crossers" is an art installation that features large, lifelike robots designed to simulate the experience of crossing a border.
- The installation is intended to provoke discussion and reflection on issues of immigration, border crossings, and human rights

Materials and Prototypes

- Detailed designs for the sculptures (physical form and the movements).
- Plastic for the joint mechanisms
- Stretchy breathable fabric covers the pneumatic actuators and for lifelike feel.
- Pneumatic tubing for pneumatic actuators
- Flexible plastic tubing that carries compressed air for pneumatic tubing
- Foam padding and other cushioning materials

Sensors

- **Proximity sensors**: to detect the presence of objects or people
- **Pressure sensors**: to detect changes in pressure, such as when the robots are touching the ground . The robots use pressure sensors to adjust their movements.
- **Accelerometers**: detect changes in their orientation or position and to adjust their movements
- **Gyroscopes**: detect changes in rotational motion, used to maintain their balance and to adjust movements as they rotate.



Control System

- Control system uses a complex series of microcontrollers that allow it to take inputs and respond to certain sensor data.
- Series of motor drivers and power supply components connected to different parts of the robot to appropriately respond to sensor data.
- Pneumatic control valves. a network of valves that regulate the flow of compressed air. The valves are typically controlled by solenoids which are activated by the microcontrollers.

Thank you for your attention