Snake-alike Titanoboa robot is beyond eek (w/ video)

November 19 2011, by Nancy Owano

Photo by Michael J.P. Hall

(PhysOrg.com) -- Many 40-something surfers become six year olds when seeing spiders, snakes, and insects in machine form. They either think the machines are scary but funny or at the least entertaining. A group of artists are giving them plenty to screech and talk about this month. The Mondo Crew is part of eatART of Vancouver, British Columbia, the collective of artists, designers and builders who make large- kinetic, robotic, and mechanized sculptures.

They are working on their project for a formidable 50-foot electromechanical snake that weighs over 2,000 pounds and will slither on land and glide under water.

The fitting name for this project, and the snake, is Titanoboa. Artist Charlie Brinson thought of the idea of building Titanoboa after learning about the discovery of fossilized remains of the actual Titanoboa. This was an enormous prehistoric snake that lived 60 million years ago. He assembled a team and they began building a replica of Titanoboa this summer. The machine continues to be developed. The Titanoboa project seeks to reincarnate the beast as an amphibious, electromechanical serpent machine designed to provoke discussions of our changing climate and energy use in a historical context.

This giant reincarnation, so the project vision goes, will roam the earth terrifying and enlightening those who dare to ride the snake and fear and contemplate the future of our planet.

As a work in progress, the team mates working on the snake have numerous items on their agenda. Titanoboa's design specifications include five different modes of motion, dynamic internal lighting, a scalable Lithium polymer battery system, multiple Arduino Mega micro controllers, controllable by rider or remotely, and automated eyes and jaws.

The group will make the "snake" more lifelike by working on a more polished-looking skin. Scale design and manufacturing will get under way next year. In future builds, the Titanoboa will feature a saddle mounted on top of the machine. The machine, with its hundreds of individual parts, will require skilled rider control. Another goal is to make the mechanical snake able to glide under water.

The project goal in a broader sense, according to the site, is to create

something that ignites technical learning on relevant technologies. Brinson, project lead, has had support on the project from students as well as a diverse team of professionals spanning disciplines.

Brinson successfully launched this as a Kickstarter project in the summer and raised over $10,000 for his sculpture project. He explained at the time that the Titanoboa project seeks to reincarnate this beast as an electromechanical serpent meant to provoke discussions on our changing climate in a historical context.

With the help of a successful Kickstarter campaign, he had said, the Titanoboa team can build elaborate scales to protect the snake's electronic insides and purchase control components to help her slither more gracefully.

More information: www.titanoboa.ca/