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# San Jose State University WIRED Project

Presentation on Monday, Dec. 17, 2007

Via

Internet on E/pop

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[aa.stanford.epopcentral.edu](http://aa.stanford.epopcentral.edu)

These projects are:

## PolarBot

The PolarBot shown below was developed over a two year period at Stanford as part of the Spacecraft Design program. It was meant to go the Antarctica and be teleoperated over the Iridium telephone satellite network on an iceberg in the Ross sea area. It was no thoroughly tested by students so was never scheduled to go.

As a project for the SJSU students, they are completing the preparation and testing of the PolarBot and we have an opportunity to send it and a student at no cost to us to Antarctica early in 2008. This will be taken to Antarctica by Anne Kershaw from Lake Tahoe, CA. Anne formerly owned a tourist business in Antarctica, sold that business and is now starting a new tourist business. The reason for taking the PolarBot to Antarctica this year is for PR purposes for her new company - which makes it great for us to test it and a student gets a trip to Antarctica.

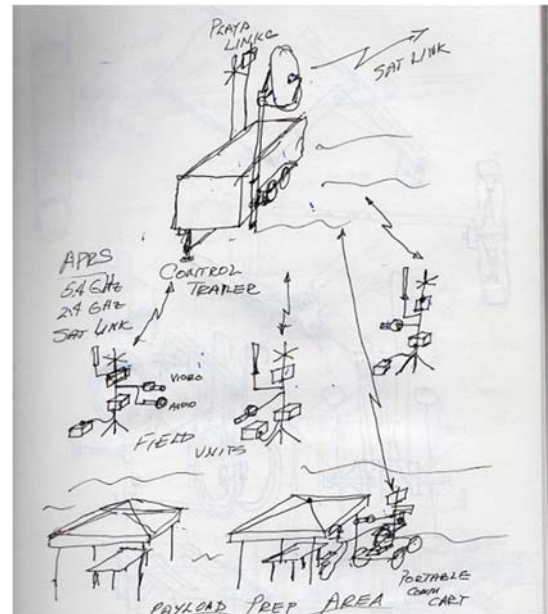
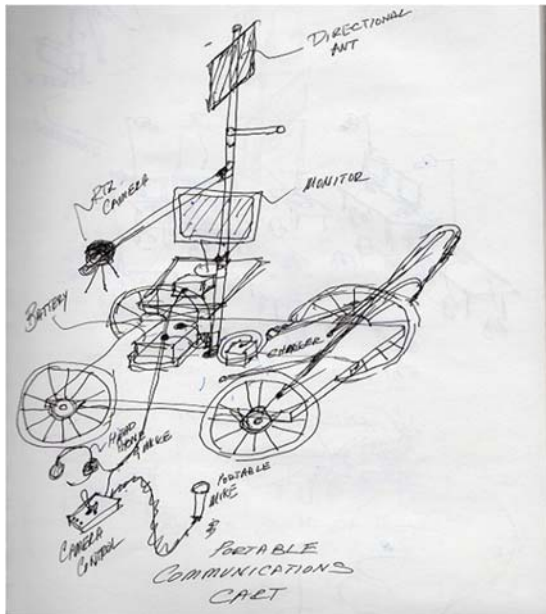


A demo will be given to Anne at SJSU on Thursday, Dec 6 at 7:30pm. Students will finish the preparation and be ready for the trip.

Before and during this trip, we would like to plan an outreach event to several schools so they can see the PolarBot and meet the students before it goes and to follow the progress during the trip. The PolarBot will be returned shortly after a few weeks stay in Antarctica while the student(s) are there.

### Communications Cart

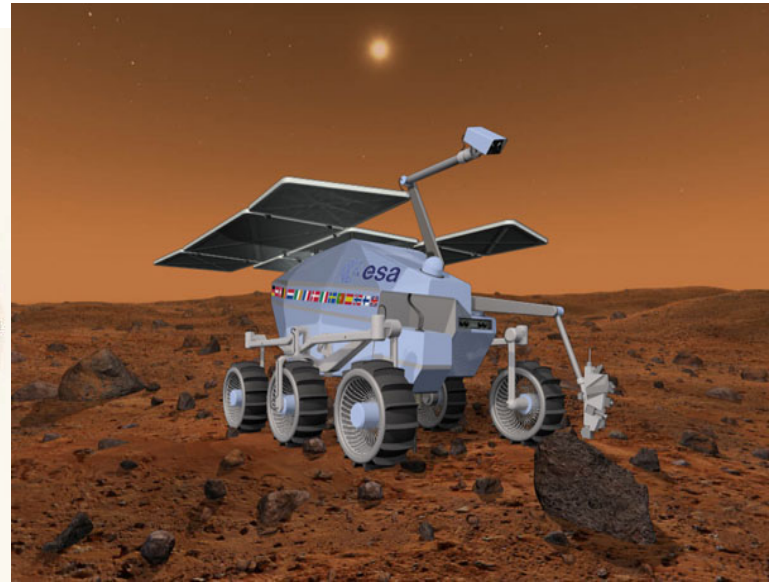
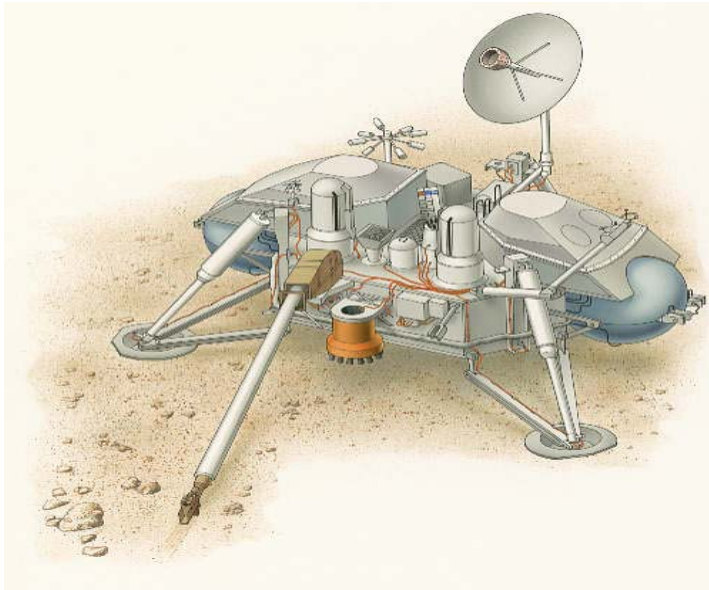
A second group of students are working on the HIC field communications cart. The concept of the communications cart is shown below. This cart is to be used in as shown below in the field to allow communications between the students in the classroom and field activities.



The students working on the prototype of this cart now have all of the basic components and are assembling them for a demonstration on December 17. We also will be doing this through an internet conferencing software called e/pop and can connect external viewers.

### Lunar Lander and Rover Models

A third group of students are working on possible models of the X-prize lunar lander and rover. They have been working on the electronics and are now ready to build models based on the illustrations shown below.



The lander and rover will have PTZ cameras that are operated remotely. The lander will be a static model that contains the rover. The rover will be contained in the model rover and can be commanded by radio to be released from the lander. The rover will then be able to be driven around from commands from a notebook computer with an operational ground station.

The major purpose of this project is for the students to get hands-on experience building these models and the electronics associated with it. It will also be used for outreach in Task 3.10. The final demo for this project will be at SJSU on December 17.

Check out students working on lander on rover on December 8-9, 2007 at:

<http://www.flickr.com/photos/jeffreyleung/sets/72157603420576462/>

### Lunar Satellite Model

A fourth group of students are working on putting motors and remote control on a three axis lunar satellite model. A larger version of this model is shown below.



The model used by the students will be about 2 feet high. It will have drive motors to rotate the satellite in all 3 axes, have index wheels to determine each axis location and command of functions within the satellite model.

The major objective of this project is like the Lunar Lander and Rover. It is to teach the students how to build model, integrate electronics and have a display for use in Task 3.10. The final demo for this project will be at SJSU on December 17.