ARLISS2005 report

Party of Sun

Member:

Senior students of ISSL (Nakasuka Lab.)

- Shinya Chikura
- Hideaki Katagishi
- Yoshitaka Suzuki
- Takashi Tanaka

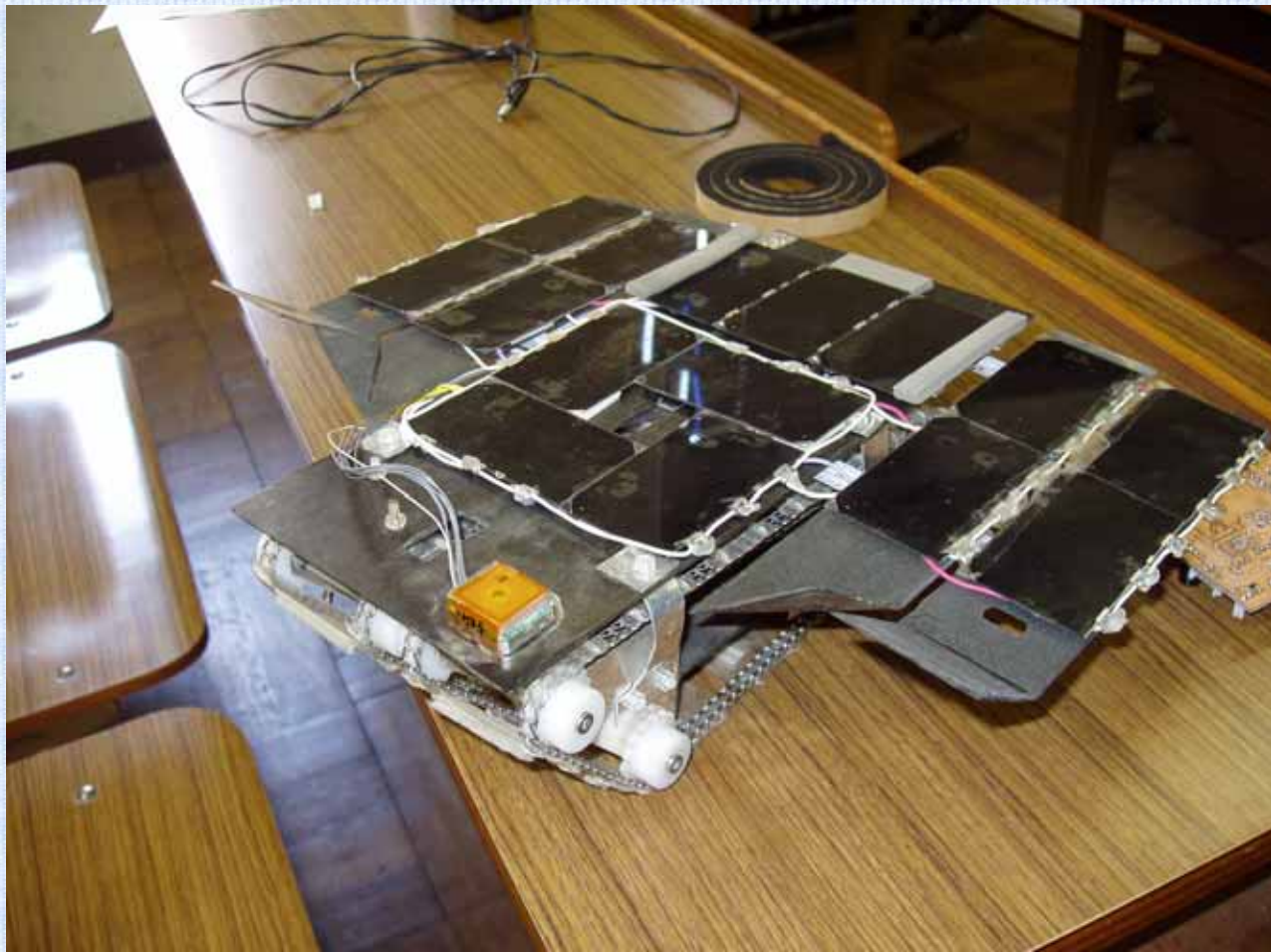
Assistance

- Teppei Morita
- Shoko Kobori

MOEROS

- Parachute Module
- Solar Panel
- Caterpillar
- OBC Board
- Sensor Board

- Made of alminum and CFRP



What we intended to do

- Cutting cords with nichrome wire
  to separate the rover from parachute
  and to open up the solar panel.
- Running with caterpiller powered by solar panel.
- Navigating with a GPS receiver and a Magnetic Sensor and comeback.

Party of SUN

Group of Students of
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MOERUS

Mission
Oriented
Experimental
Rover-system
Optimizing
Solar-power

What had really happened

- We couldn’t make the sensor work surely.
- So, the navigation software is not tested well.
- The rover landed up-side down.
  (check the video)
- The battery was empty when landed.

LESSON

- What might fail will fail.

Good points

- The power by solar panel is enough and it’s stronger in the desert than in Japan.
- The caterpiller was stronger enough to cope with steps in the desert.

(check the video)

Future works

- We will think out the way to make the parachute not to be troublesome.
- We will make the power of the solar panel to open stronger, to make him pick himself up when landing up-side down
- We will be more skilled in using a magnetic sensor and a micro controller.
- We will make more sophisticated circuits and frame.

Summary

- Our rover can run over the steps and run permanently.
- But he cannot start after the landing.
- And he cannot navigate properly.

- We will make our rover to be

“A ROVER THAT CANNOT FAIL IN COMING BACK”