Introduction and Results

ARLISS 2011

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Kyushu-Univ. “team IDEA”

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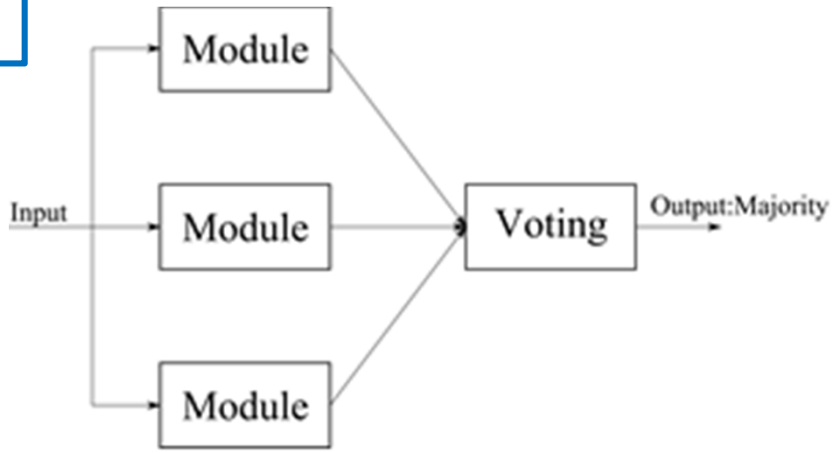
Objectives

IDEA(In-situ Debris Environmental Awareness) project

Plan to adopt three redundancy system in C&DH subsystem

Lack of developing experience

Required technical know-how

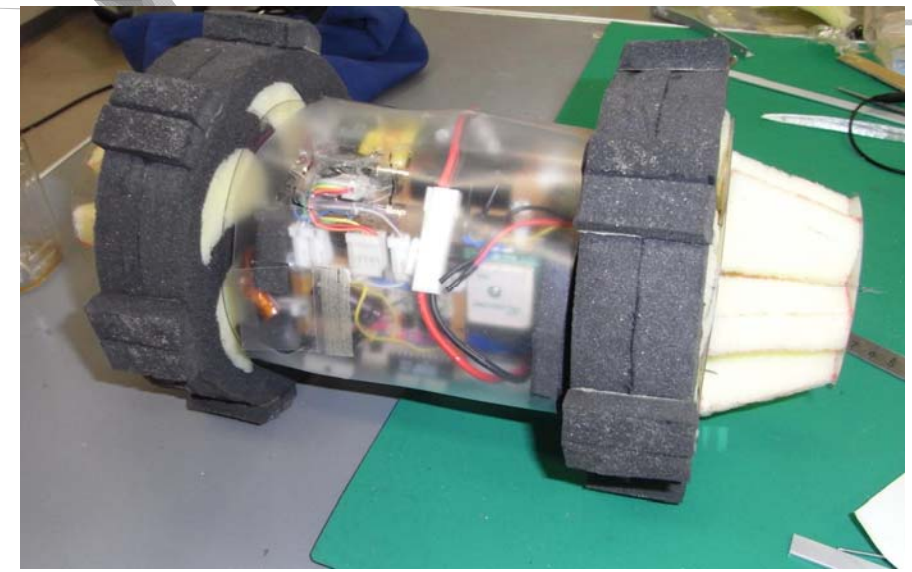


Our CanSat project2011

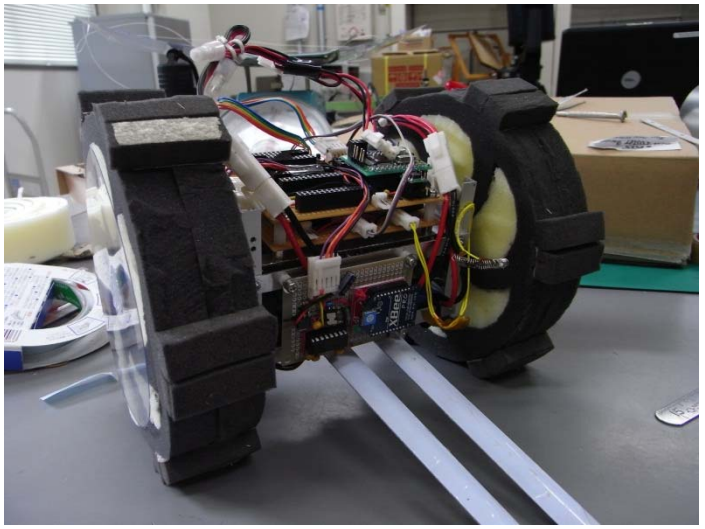
Mission definition

- **Run-back via high reliability system**
  - Equipped with three microcontrollers controlled by the predominant commands determined via logical algorithm.
  - Carries out the mission in the way of run-back
    - Long operation period is favorable to evaluate our proposed mission.

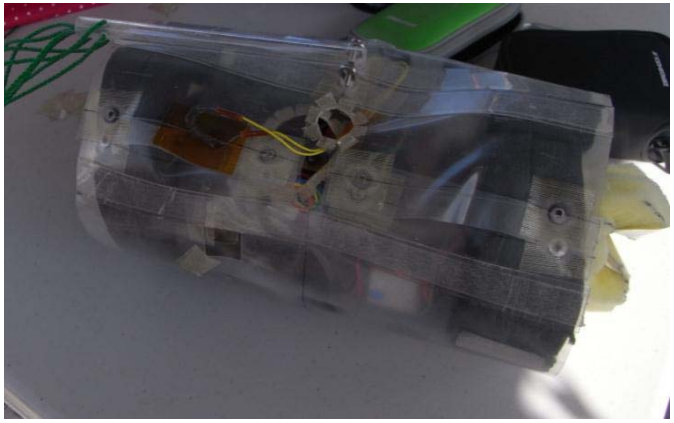
Overview of our CanSat



Front view



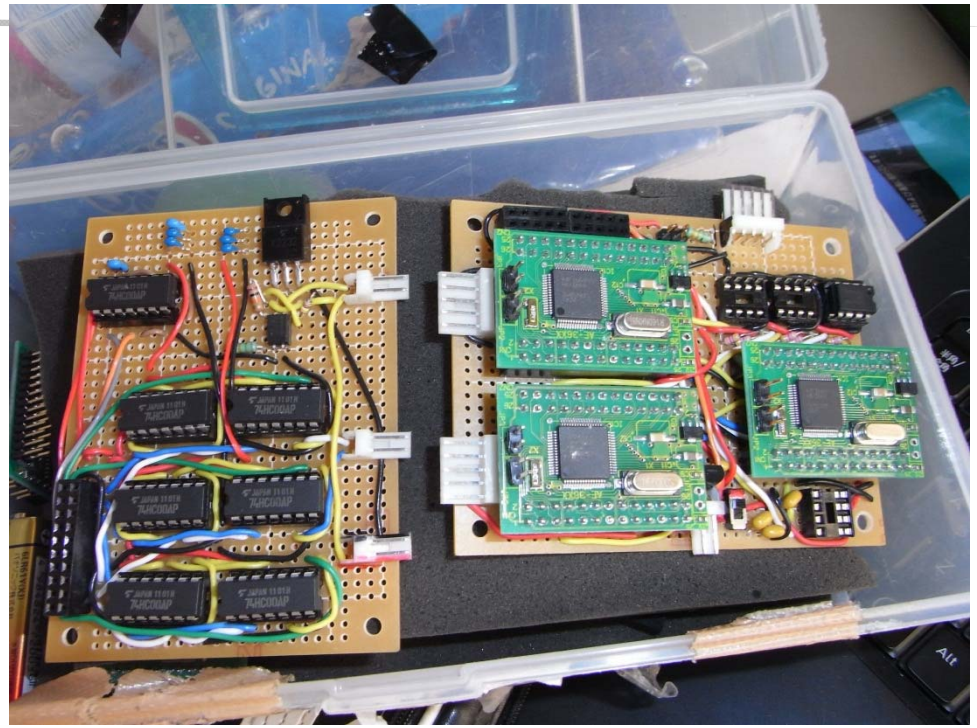
Rear view



In shortage

Three redundancy system

- Controled by majority system
- Big and heavy for CanSat
- Required Noise reduction
- Difficult to sys synchronize clock and pulse band



Result of 1st launch

- Failure
  - Not start working because of acc sensor problem
  - Little damage on body structure

Result of 2nd launch

- Failure
  - There is no parachute around CanSat
  - Serious damage on body structure and electric board
  - Maybe free fall (break chassis)
  - Not start working

Summary

- We tried adopting three redundancy system for CanSat and run-back via rover style.
- In ARLISS2011, CanSat can't start running because of trouble in dropping.
- The difficulty of three redundancy system and experience of CanSat developing are useful for our satellite's project "IDEA".

Thank you Eriv.!! , Thank you Allen!!