Activities of Rocket WG
UNISON–Japan

Kyohei Yashima

2016/10/21
Index

- Co-operate Launch site
- Recently launch & schedule
- Four Sub WG
Co-Operate Launch Site

- Noshiro, Akita
  August, launch about 15 Rockets
- Oshima, Tokyo
  November, March launch about 12 Rockets
- Kada, Wakayama
  March, launch about 4 Rockets
Rocket WG

- Numbers of Launch in 2016
  - 2016.03 Oshima → 12 Rockets
  - 2016.03 Kada → 3 Rockets
  - 2016.08 Noshiro → 15 Rockets

- Launch schedule
  - 12, 13th Nov Oshima 4 Rockets
  - 2017 March Oshima & Kada about 12 & 4 Rockets
Rocket WG

- Sub WG (1)
  - **Safety Management**: We consider about criteria of safety management and the way to evaluate the safety of launching rockets.
  
  - **Engine development**: In this sub WG, in addition to the increase of student groups that developing Hybrid rocket engine, we share the date and exchange opinions each others. Also, debate the method to evaluate fright model engine.
Rocket WG

- **Sub WG (2)**
  - **Public relation**: Because of the importance of understanding of stakeholders, we share the information and technique, for example how to manage the homepage of group.

  - **Launch site management**: Recently in Japan, there are a lot of groups that launch rockets. But, the window of launch is limited. Because of this problems, we consider the way to use the resource (launch window) efficiently.
Activities of SatelliteWG
Unison-Japan

Masahiro Kaku
Sharing the information (2011～)

<table>
<thead>
<tr>
<th>background</th>
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<tbody>
<tr>
<td>A lot of groups belong to WG</td>
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<tr>
<td>&gt;&gt;&gt; Connection between each groups become thin</td>
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<table>
<thead>
<tr>
<th>Basic concept</th>
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<tr>
<td>GIVE and TAKE the information</td>
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<td>&gt;&gt;&gt; Get the information unilateral is not good</td>
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<tr>
<td>&gt;&gt;&gt; Every group provide the information</td>
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<th>Goal</th>
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<td>Improve the success rate of develop &amp; operate satellite</td>
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Activities

Session

Held 10 times in the past

Discussion

Held 5 times in the past

We hold session & discussion 2,3 times in a year

Upload the information that we get at the events on the Date base (WIKI)

Participants can access anytime (need PW)
Activities in this year
Motivation or object of events participants

× Discussion & session for data base
〇 To get the information that their group need
> Importance “Provide the chance to interact”

Discussion event so far ...

+ The theme is subsystem or component
> Lack of Understanding about whole project or background

> Determine the theme that focus on whole system

ex: Extract the risk about past project
CanSatWG

- Creating CanSat
- Sharing results of experiment & knowledge
- Participating & Managing Competition
  - Noshiro Space Event
  - ARLISS
Creating CanSat

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<thead>
<tr>
<th>Flyer Type</th>
<th>Rover Type</th>
<th>Mission Type</th>
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<tr>
<td><img src="image1" alt="Flyer Image" /></td>
<td><img src="image2" alt="Rover Image" /></td>
<td><img src="image3" alt="Mission Image" /></td>
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- Go to the target point autonomously.
- Create original mission by themselves (like observation, polling, etc) and make CanSat to achieve it.
Sharing results of experiment & knowledge

CanSat_UNISEC
https://www.facebook.com/ARLISS.CanSat/
Participating & Managing Competition

Not only deciding rules or awards of competition.

But also....

- Recruit CanSat teams and staff.
- Think about schedule of preparation and the event.
- Gathering & Manage facilities or tools
- Setup & tune facilities through entire the event

Students take part in these article
Noshiro Space Event

The Largest CanSat Event in Japan (36 teams participated this year)

CanSats are dropped from balloon

0m goal rover team

https://www.youtube.com/playlist?list=PLYWl7BljyAdOOpym7FEqK7fEZ8JVovoHEB
ARLISS
(A Rocket Launch for International Student Satellites)

@Black Rock Desert, NV, U.S
Teams from Japan(13), South Korea(2), U.S(2), Egypt(1) and Peru(1)

Prepare
Launch(3-4km)
Mission or comeback

We want to make it **more international** for 20th anniversary(2018)

https://www.youtube.com/playlist?list=PLja-vqMgswHJGVQtX4lIltopfC6AWse02