Activities of UNISEC-Japan student organization, UNISON
-What is UNISON?-

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CanSat and Rocket experiment ('99~)

Cubesat Development ('03~)

UNITEC-1
What is UNISON?

- **UNISEC student organization**, UNISON
  - Students in UNISEC belongs to UNISON

Limited Resources, Limited Technologies in each university/group

Generate "Competition" and "Cooperation"

Improve technologies and Motivate students
Working Groups in UNISON

WG has own activities in each field

Satellite  GSN

PR

Exchange

CanSat  Rocket
Satellite Working Group

- Operation by representative of each satellite development university
- Discussion on satellite technologies
  - Started in 2011 (6 times held)
  - (Topic) project management, thermal design, magnetic attitude control, communication, etc.
- Database construction
- Joint Development (UNICORN)
  - We aim challenge to the big project
Rocket Working Group

◆ Management of Noshiro Space Event in Japan
  ➢ Noshiro Space Event is an amateur rocket competition which is held in mid-August every year in Noshiro city, Akita prefecture.

◆ Joint development (UNISTAR)
  ➢ UNISTAR project (2011)
    ✓ UNIsec STAndard Rocket
    ✓ Joint development among 8 organizations
CanSat Working Group

◆ Management of ARLISS
  ➢ A Rocket Launch for International Student Satellites
  ➢ International Cansat competition
    ➢ Come Back Competition
    ➢ Mission Competition
Ground Station Network Activities

◆ Ground Station Network construction
  ➢ GSN has been active to construct a network-based ground station system for satellites operation.

◆ Cooperation of ground station
  ➢ Common ground station and software

◆ Outreach
WEB and Outreach Working Group

◆ Management of UNISON website
  ➢ Started in 2010
  ➢ Share daily development activities (blog), projects’ information, etc.

◆ Outreach
Benefits of UNISON

• Several events are held in UNISON
  – Improve technologies and Motivate students

Participants + Managers = UNISON Event

Both are students in UNISON
Benefits of UNISON

- Several events are held in UNISON
- Both participants and managers can learn skills

- Learn Practical skills
  - Engineering
  - Project management
- Communicate with each other

* Learn skills to run events
* Communicate with each other

* second-order benefit
Key concept

- Participants and Managers are supporting each other
- Participants play an important role in UNISON
  - It is impossible only for managers to make an event
- This concept has been central to the history of UNISON-Japan for 10 years
UNISAS and UNISON

- **UNISEC Alumni Association, UNISAS**
  - Stimulate UNISON members
  - Hold an assembly to make a good relationship

**UNISAS**
Vertical Relationship

**UNISON**
Horizontal Relationship
Conclusion

• **UNISEC student organization, UNISON**
  – The organization where students in UNISEC-Japan can smoothly communicate with each other and work several activities together
  – Realize “Competition” and “Cooperation” in UNISON
  – Both participants and managers can learn skills, supporting each other
    • Engineering skills
    • Running an event

• **UNISEC Alumni Association, UNISAS and UNISON**
  – UNISAS supports UNISON
  – “Vertical” relationship