Current student space projects and future plans in Korea

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Agenda

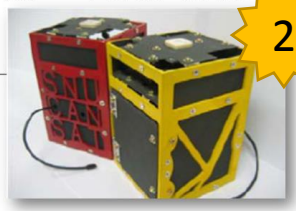
- CanSat Activity of Korea: A Glance
- CubeSat Activity of Korea: A Glance
- So, Why CanSat/CubeSat?
- SNU Space Program Roadmap
- UNISEC-Global Activities

CanSat Activity of Korea: A Glance

ARLISS

2006 SNU

2007 SNU



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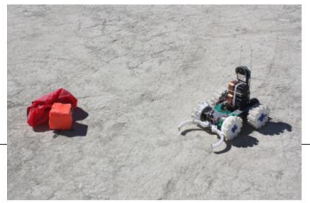
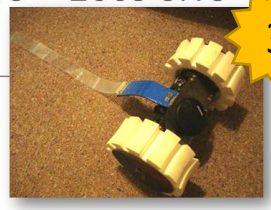
2008 SNU



2009 SNU



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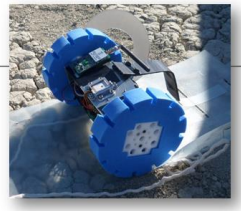
2010 SNU



2012 SNU

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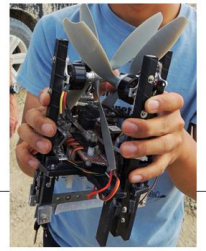
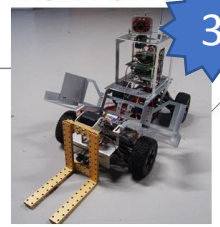


2013 KIT



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2014 SNU

KIT *

: Come back competition

: Mission competition

* Image Credits:
Wolfram Burner

CanSat Activity of Korea: CanSat Competition

- CanSat Competition: Annual Event
  - Organization: SaTReC
  - Funding: Ministry of Science, ICT and Future Planning

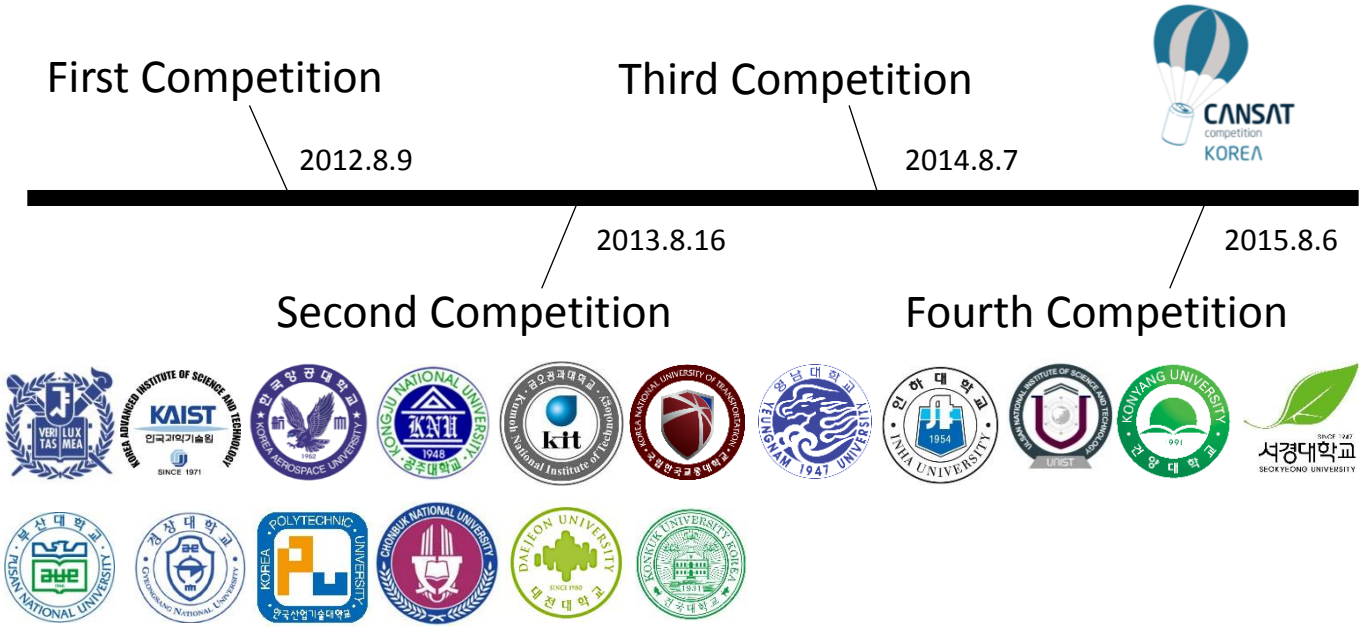
	Seulgi	Changjak
Application submission	2015.05.08	
First Evaluation (Results)	2014.05.11~15 (5.18)	2015.05.11~15 (5.18)
	Maximum 20 teams	Maximum 20 teams
Online Education	2015.05.18~	
Second Evaluation	2014.06.15~20	2014.06.15~20
	Maximum 10 teams	Maximum 10 teams
Prior Education	2015.06.20	
Competition	2014.8.6	2014.8.6
Final Evaluation	2014.8.13	2014.8.13

*CanSat Competition 2015 Schedule

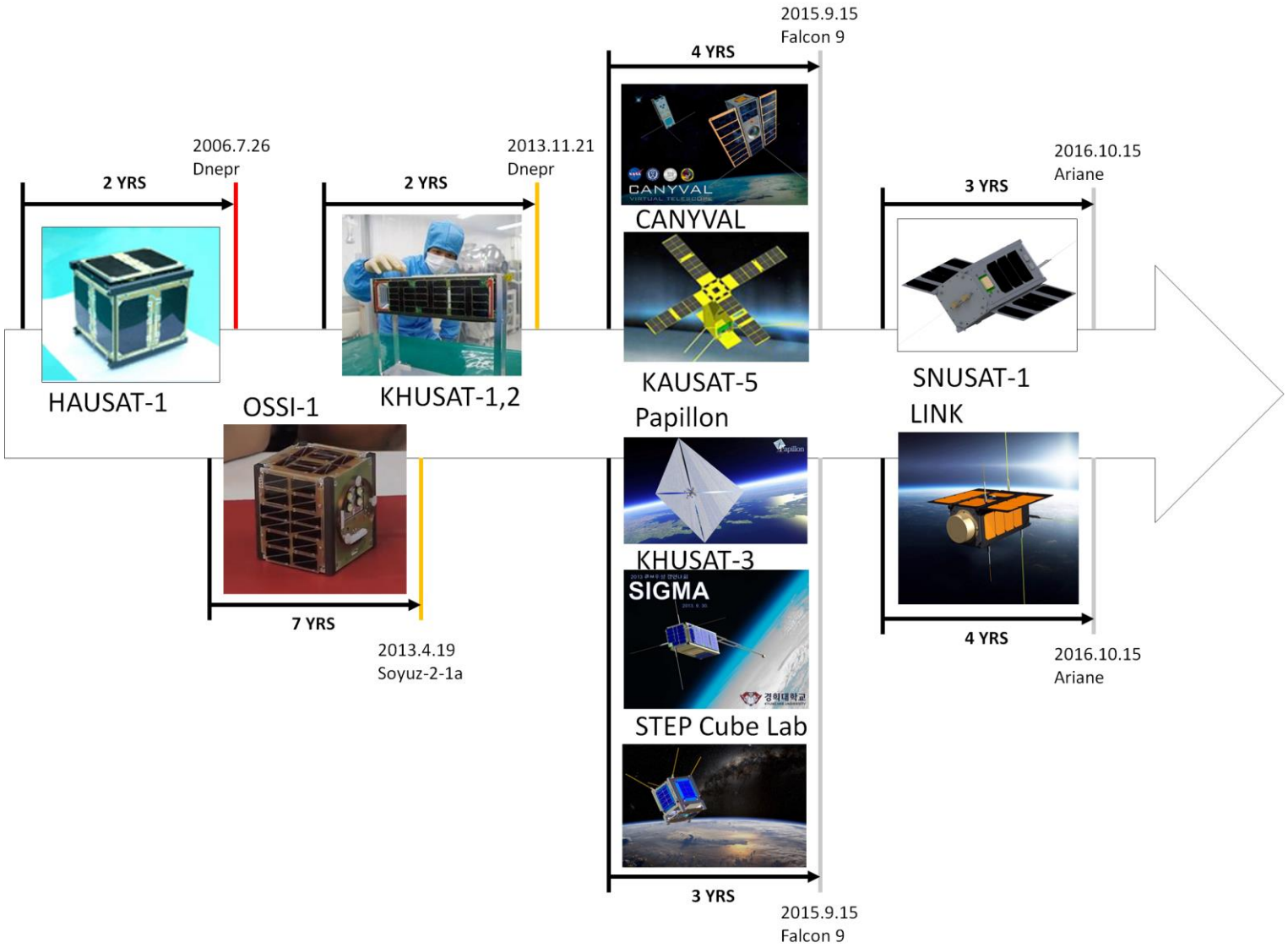
CanSat Activity of Korea: CanSat Competition

Seulgi (Wisdom) : High School Students
Changjak (Creation) : Undergraduate Students

- CanSat Requirements
  - Seulgi: CanSat Kit provided (< 800 g)
  - Changjak: CanSat must be developed (< 1000 g)



CubeSat Activity of Korea: A Glance



CubeSat Activity of Korea: CubeSat Contest

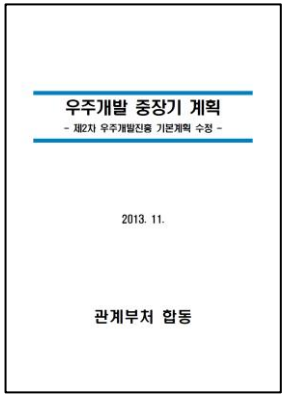
- Third CubeSat Contest (2015)
  - 11 teams competing, three will be chosen
  - Two phase competition

Phase 1 (40%)		Phase 2 (60%)
Mission and system design		Feasibility
Originality and creativity, technical aspects of system design, team configuration (6 Teams)	⇨	Assessment of system feasibility (3 Teams)
2015.7.16		2015.8.27

So, Why CanSat/CubeSat?

- Excellent engineering hands-on practice
- A perfect platform for technology break through
- However, for a sustainable space program a roadmap is required

Mid and Long Term Space Development Plan



○ 차세대소형위성 개발 기술 및 초집적, 고성능 ICT 기술 접목을 통해 **개인용 위성서비스 추진**

- 고성능, 초경량 큐브위성 등 초소형위성 개발 및 양산, 기존 위성 운용 시스템과의 연계를 통해 신개념의 서비스 창출과 수요 견인

○ 우주기술 **경연대회**를 통한 **차세대 인력기반** 육성

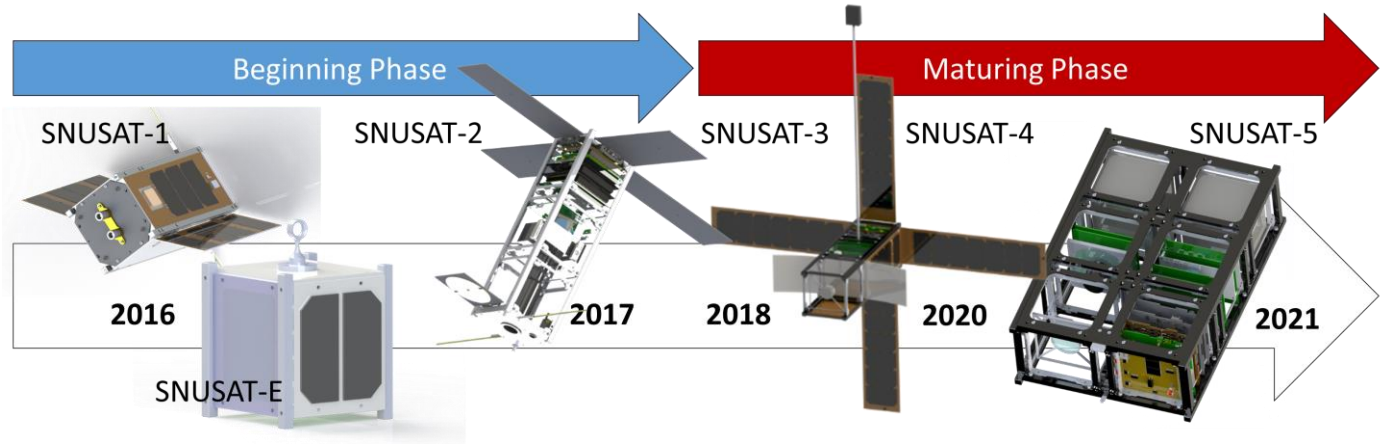
- **대학(원)생 대상** 교육 목적의 우주시스템 설계·제작·운영을 통해 **우주기술 기초지식 습득 기회 제공**

※ 큐브위성 경연대회를 통해 시스템설계, 임무설계, 통신, 위성 탑재 컴퓨터, 열제어, 전력계, 소프트 웨어 등 위성제작을 위한 대학생 대상 위성실무 교육 실시('20년까지 1,400명 교육)

- Create new conceptual service through CubeSats
- Educate undergraduate and graduate students in space system design, development and operation
  * Through CubeSat competition

SNU Space Program Roadmap

- Primary aim is on space education
- Secondary aim is to develop infrastructure up to application level space programs in future
- Education and technology advancement as its goal,
- space grant opportunities to make the program practical and realistic



UNISEC-Global Activities

- SNU is putting effort to establish a foundations for undergraduate students to follow up the CanSat/CubeSat educational steps
  - Utilization of CanSat Kit aiming mid 2015
  - CanSat-CubeSat-Extended Research step
  - First try in SNU, then share and extend to other universities
- Last year's UNISON-Global team connected through Skype, continuing our discussions