



BIRDS Project Newsletter



Issue No. 8 (15 Sept. 2016)

Edited by:

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Project website: <http://birds.ele.kyutech.ac.jp/>
All back issues are archived at this website.



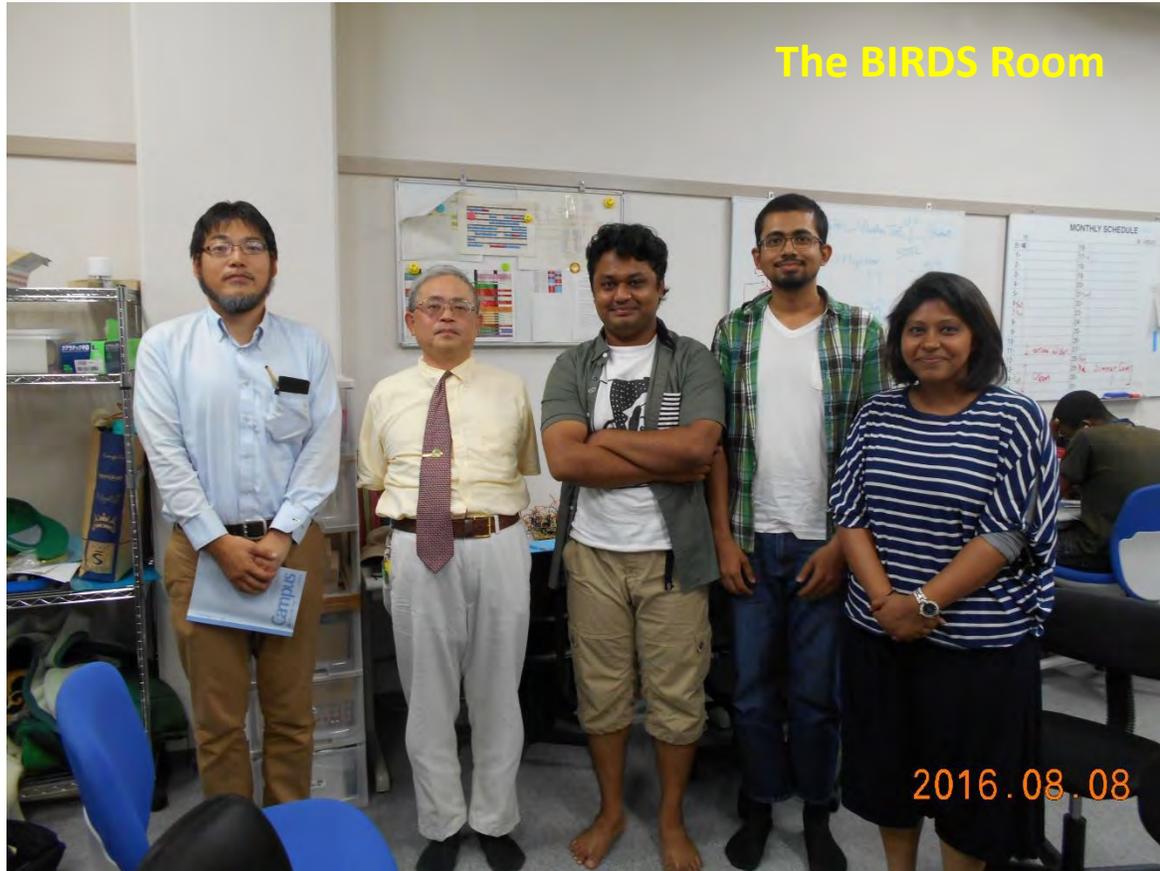
All back issues of this newsletter can be easily downloaded. Go to here: <http://birds.ele.kyutech.ac.jp/>
At the top, click on the tab called NEWSLETTER. You will get a menu for all back issues.

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1. Mainichi Newspaper interviews the Bangladesh Team



Mr. Torichigai (Mainichi), G. Maeda (通訳), Kafi, Maisun, Antara
(location of interview: BIRDS Room, 3rd floor of CeNT building)

On 8 August 2016, Mr. Torichigai of Mainichi (毎日新聞, standing at the far left in this photo) came to Kyutech to interview the members of the Bangladesh team about their role in the BIRDS Project, and about other aspects of studying in Japan.

He had participated in the Press Conference on last day of the *1st International BIRDS Workshop* (occurred at the end of June 2016). For this interview of 8 August, Assistant Professor G. Maeda served as Japanese/English interpreter.

In this interview, the students explained their past, what they are doing now, and finally explained their hopes and dreams for a space program in their home country. We can look forward to the newspaper article.

2. The weekly BIRDS Project meeting (a sample)

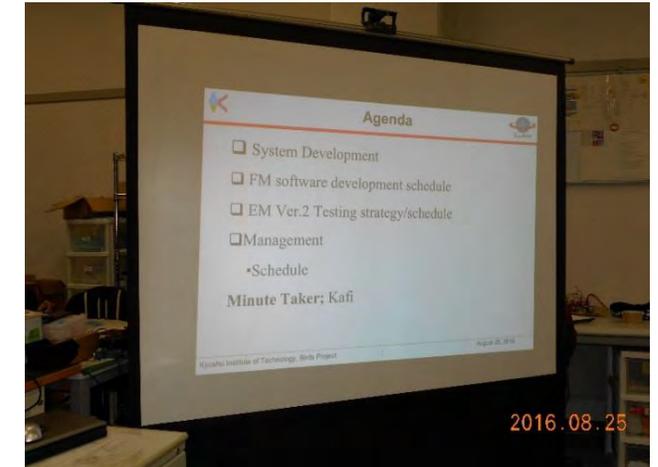


This meeting was on 25 August 2016 in the “BIRDS Room”.

As a general rule, the weekly meeting starts at 4:20 PM each Thursday. Each time, one student takes the minutes. They are distributed via email for error correction. Progress and problems are discussed at this weekly meeting.



Meeting Agenda



3. Royal Gov't of Bhutan announces its participation in BIRDS-2



Royal Civil Service Commission, Royal Government of Bhutan

Excellence in Service

ལྷོ་ཁྱེད་ English



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RGoB Scholarship for Master in Space Engineering

Satellites are increasingly important in the world today, especially for developing countries like Bhutan which is landlocked and mountainous. Satellite technology is evolving and offering higher functionality and low cost solutions. It is, therefore, important for Bhutan to harness the opportunity that satellite technology has to offer in improving the quality of life of its people. Effective use of satellite technology would also facilitate in achieving national objectives and the UN Sustainable Development Goals (SDGs).

See the full announcement:

<http://www.rcsc.gov.bt/en/rgob-scholarship-for-master-in-space-engineering/>

5. BIRDS team goes to Saga to take FCC Amateur Radio License exam

A compact report by Maisun

Summary:

Date : 03 September, 2016

Place : Miyaki City, Saga Prefecture.

Venue : Miyaki City Hall.

Participants: 9 Members of the BIRDS team who do not have a radio operator's license undertook this effort.

Flag of Saga Prefecture
佐賀県



What is HAM Operator Exam ?

BIRDS Satellite communication relies on Amateur Radio (HAM) frequencies. In order to operate at HAM frequencies, the equipment operator must have a license from the FCC, or its equivalent.



FCC is *Federal Communications Commission*, and it is the agency of the United States with the authority to issue radio licenses.





Miyaki City Hall, Saga Prefecture

License Categories:

Technician Class:

It is the entry level license. Operator is limited to some of the basic functions and privileges by HAM radio.

General Class:

Most common operator class. General Class license holder can use digital communication methods using HAM radio. This is why BIRDS member who will operate satellite *must obtain General Class license*.

Extra Class:

Extra class license holder can access all frequencies permitted by FCC.

The day of the exam (at Saga)



Last minute studying



6. Newspaper in Ghana talks about the BIRDS Project

The Daily Graphic →
(8 August 2016),
a newspaper of Ghana



The article on the right was written by **Mr. Nana Konadu Agyeman**, who is a journalist in Ghana. He is in the foreground of this photo (on the left) wearing a greenish shirt, listening to one of the presentations conducted during the **First International BIRDS Project Workshop and CDR**.

He travelled all the way from Ghana just to report on this BIRDS workshop. The BIRDS Project is grateful to him (and his sponsor) for this major news-reporting undertaking.



The BIRDS Workshop

End of June 2016

Tobata Campus of
Kyushu Institute of Technology
(Kyutech)
Kitakyushu City, Japan



7. BIRDS members will participate in “2016 World Space Week in Kitakyushu”



What is World Space Week?

World Space Week is an international celebration of science and technology, and their contribution to the betterment of the human condition. The United Nations General Assembly declared in 1999 that World Space Week will be held each year from October 4-10.

Where and how is World Space Week celebrated?

World Space Week consists of space education and outreach events held by space agencies, aerospace companies, schools, planetaria, museums, and astronomy clubs around the world in a common timeframe. These synchronized space events attract greater public and media attention. World Space Week 2014 achieved record scale: 1,600 events, nearly double that of prior year.

Events in 72 nations

Total audience since 2007: Over 2,000,000 attendees.
Nearly 500,000,000 media impressions.

Note: all of the above text is from:
<http://www.worldspaceweek.org/about/>

Sample



2016 WORLD SPACE WEEK
CELEBRATION IN KITAKYUSHU

Remote Sensing
Enabling Our Future

October 5th and 10th
<http://www.worldspaceweek.org/>

Partners

Kyutech
Kyushu Institute of Technology

JICA

さわらびグループ

北九州市
CITY OF KITAKYUSHU

UNISEC
University Space Engineering Consortium

MITSUBISHI ELECTRIC
Changes for the Better

8. Management aspects of the BIRDS Project

The System Engineering view of BIRDS Project

Prepared by

Tejumola Taiwo

Turtogtokh Tumenjargal

Bonsu Benjamin

Raihana Antara

Tokunaga Yasuhiro

September 2016

BIRDS Project philosophy

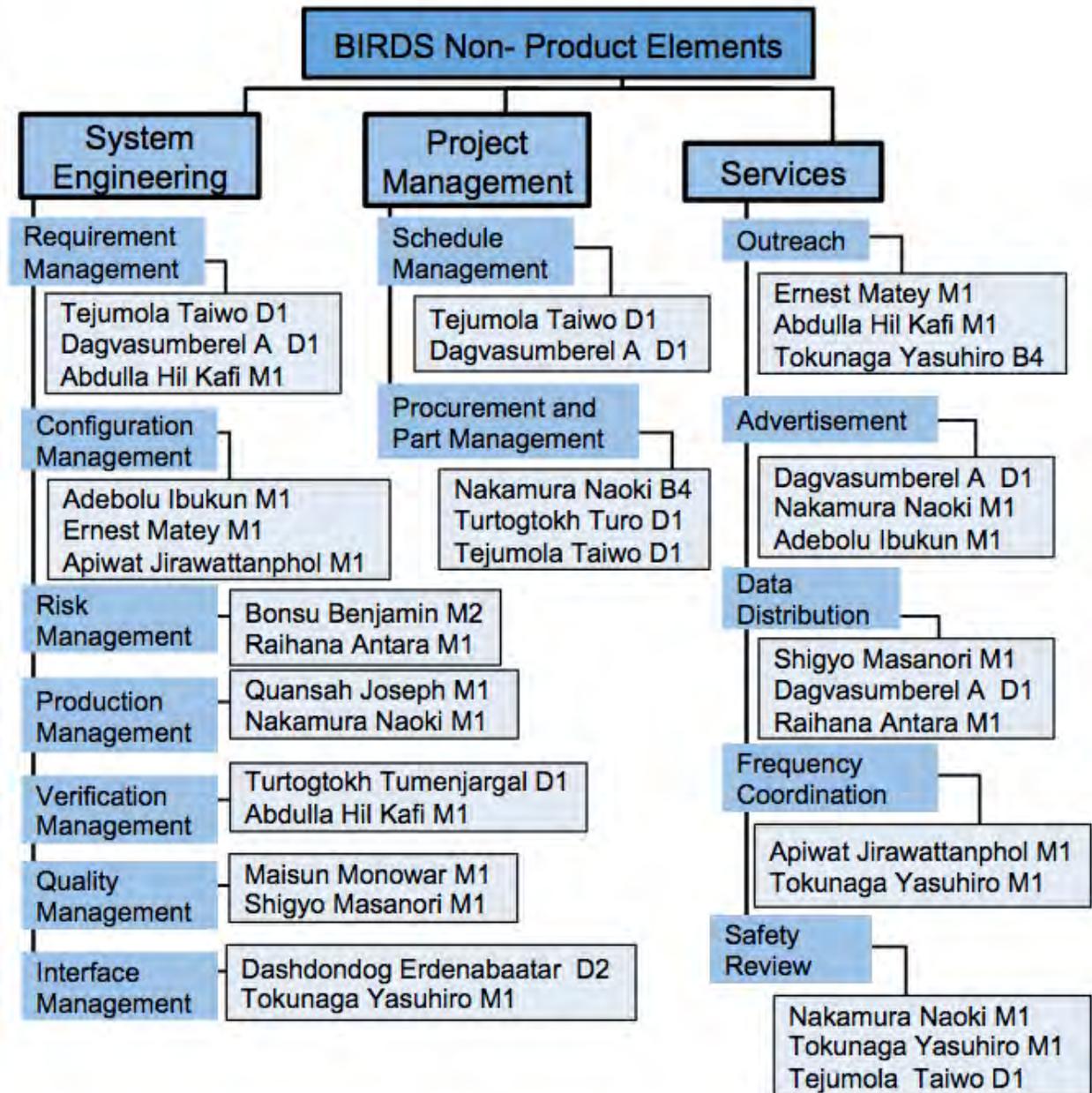
Mission statement is “By successfully building and operating the first satellite of the country make the first step toward indigenous space program”

- 2-year satellite project for developing country
- Learn all aspects of lean satellite project execution from mission conceptualization to disposal.
- Acquire skills in communication, teamwork, and *project management*.
- Lay down the foundation for sustainable space program for utilization in home countries.

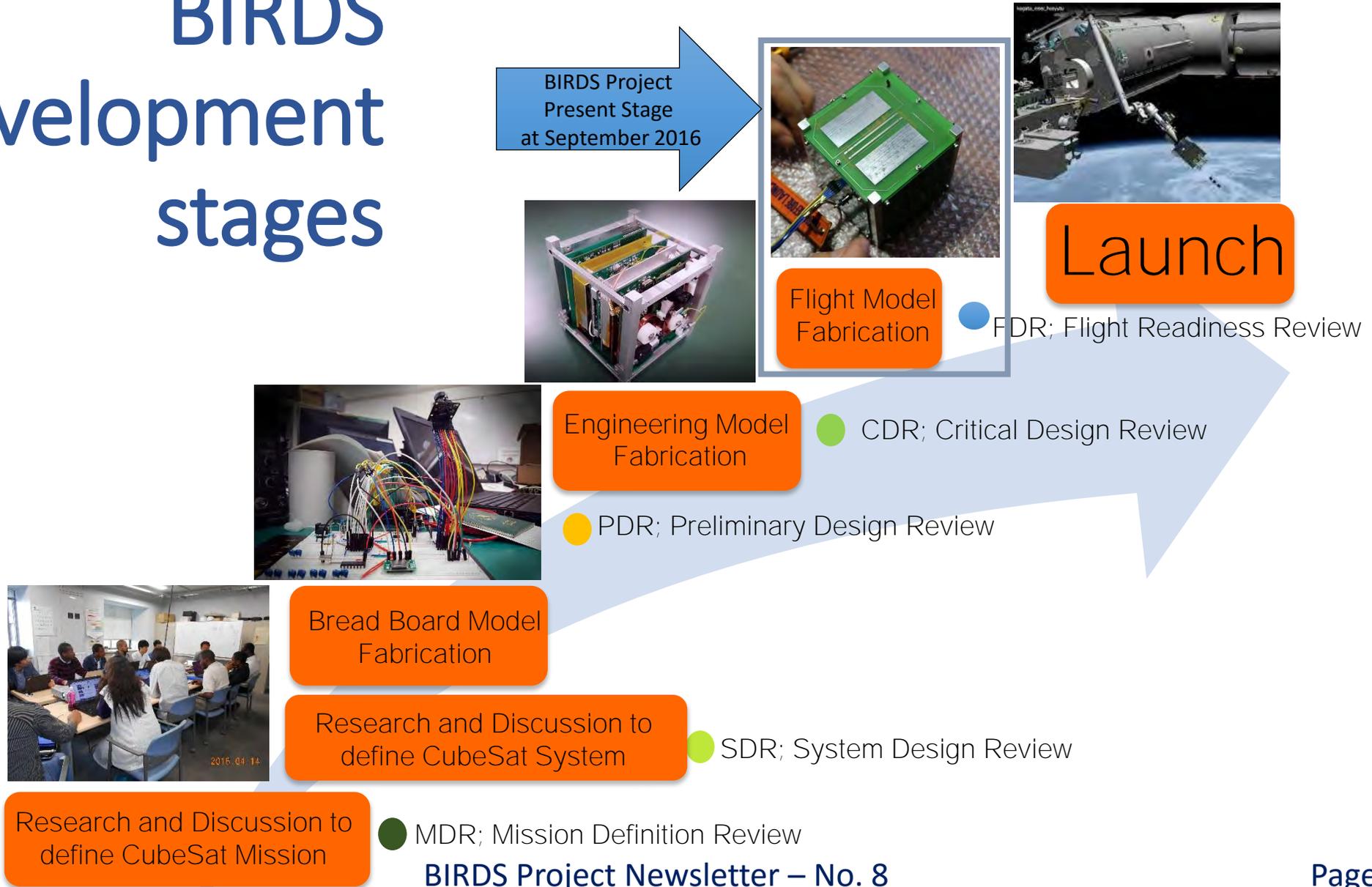
BIRDS Project management organogram

The Lean satellite concept of the BIRDS project.

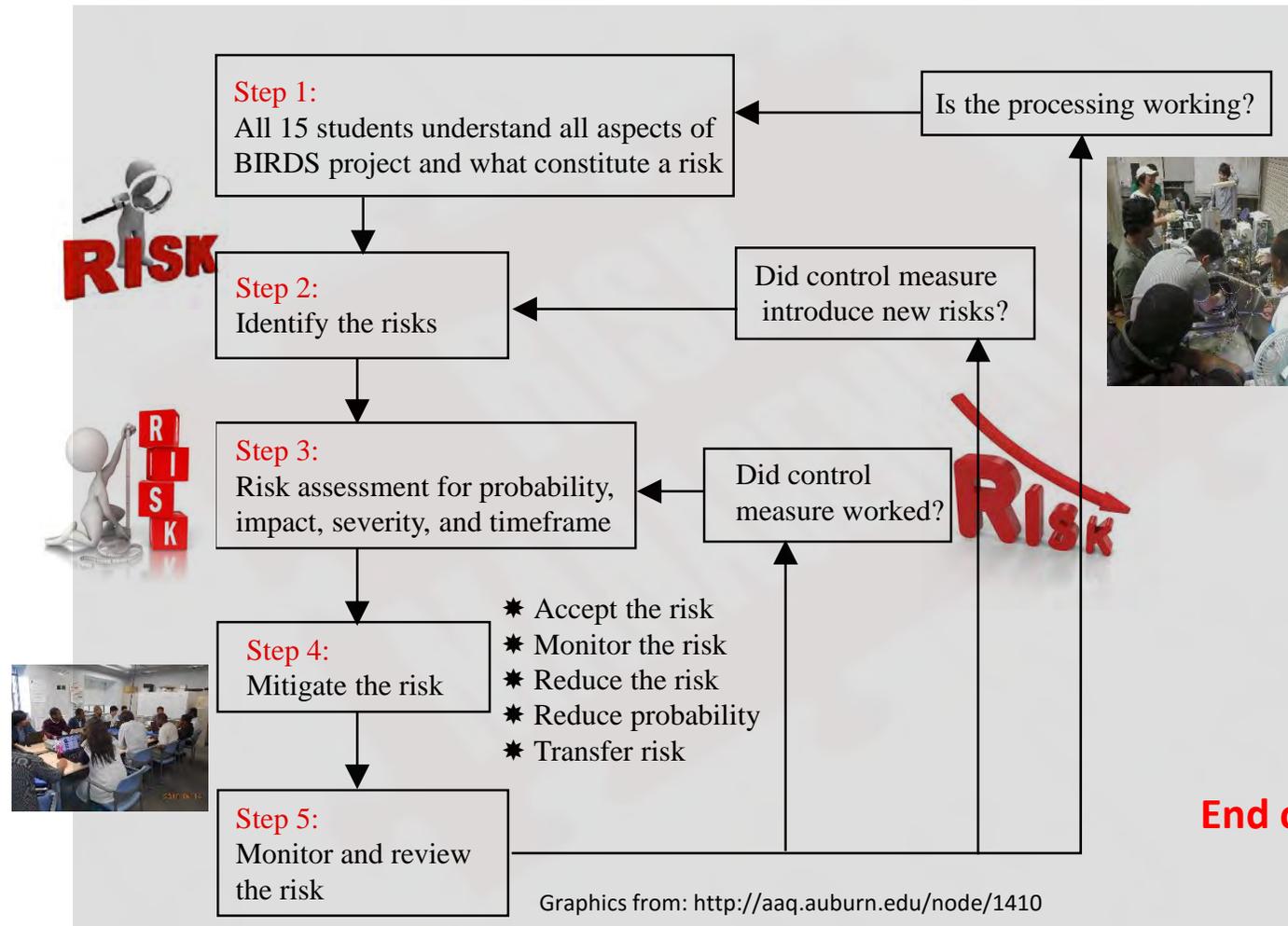
- 15 students in one room.
- Risk management based on collective experience
- We adopt the principle of “testing through use “ for component selection.
- Reduction of all forms of waste and instead add value
 - >Transportation waste
 - >Inventory waste
 - >Unnecessary movement
 - >Unnecessary communication
 - >Waiting
 - >Over production
 - >Over processing
 - >Over testing
 - >Defects



BIRDS development stages



How do we manage risk?



OUR Strengthes

- * Understand all development processes.
- * Apply project management tools.
- * Consider the risks.
- * Communicate constantly.
- * Review, reflect and report every time.

End of management overview report.

9. Two BIRDS students participate in the “60th Space Science and Technology Conference” at Hakodate

BIRDS Project at 60th Space Science and Technology Conference



At Hakodate Arena, Hakodate, Hokkaido, Japan.

This photo report created by

Apiwat Jirawattanaphol (Thailand) and Turtogtokh Tumenjargal (Mongolia)

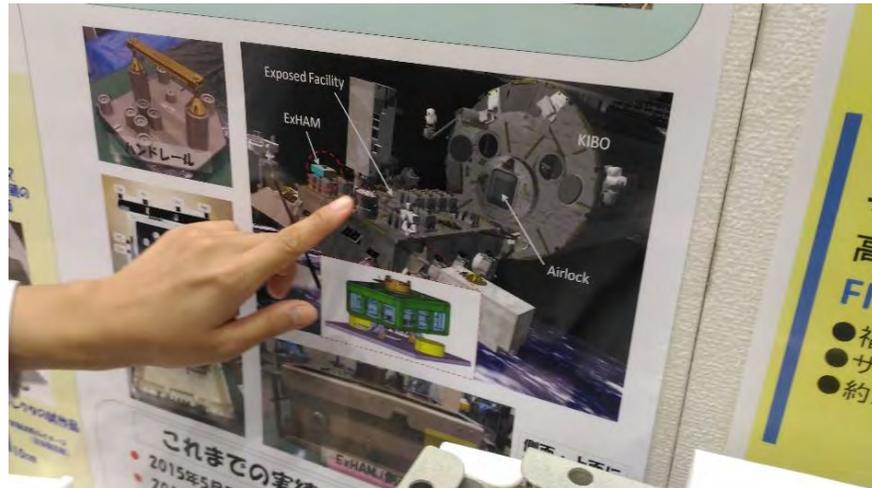
6-9 September 2016



JAXA Booth



Actual size 3D print model of ExHAM (Exposed Experiment Handrail Attachment Mechanism) module on ISS

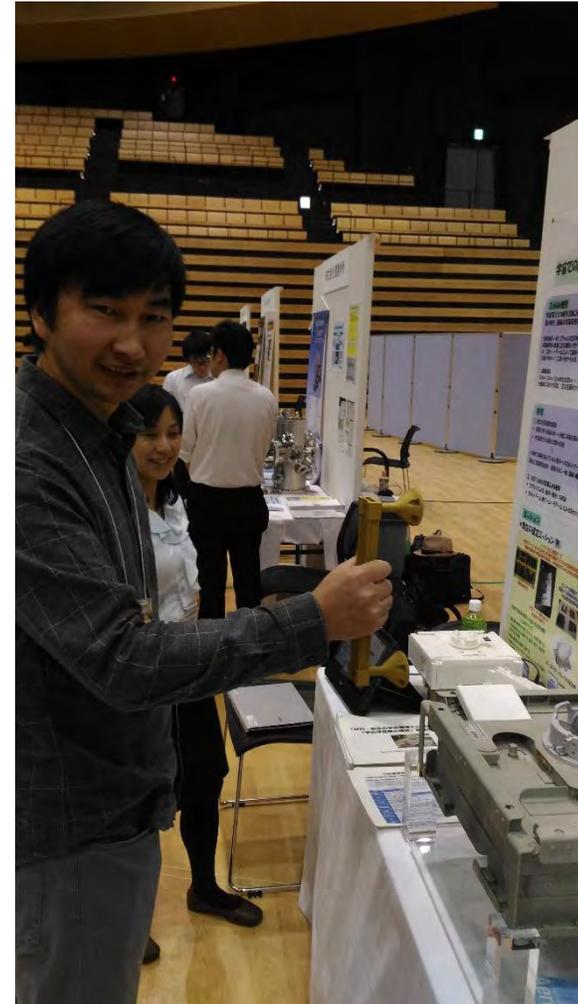
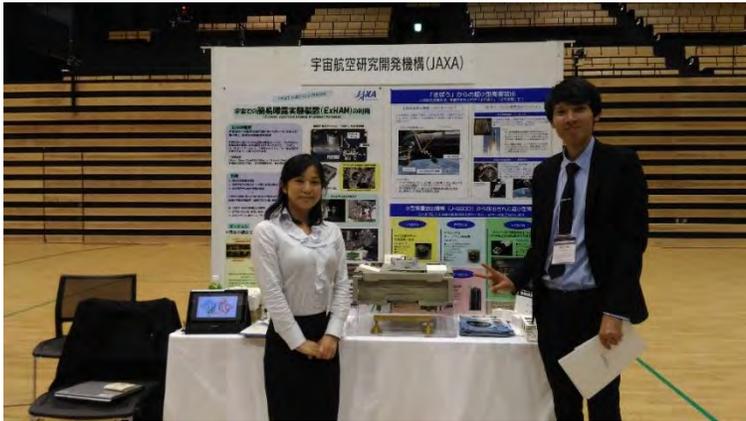


Half-size 3D print model of JEM Small Satellite Orbital Deployer (J-SSOD); BIRDS CubeSat will use the J-SSOD for its deployment from ISS

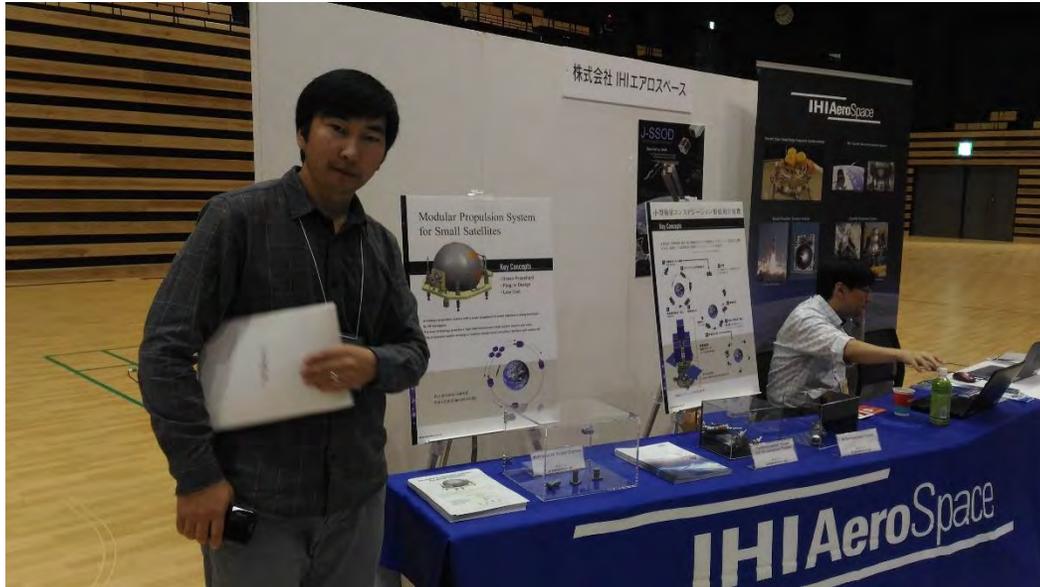
JAXA Booth, cont'd.



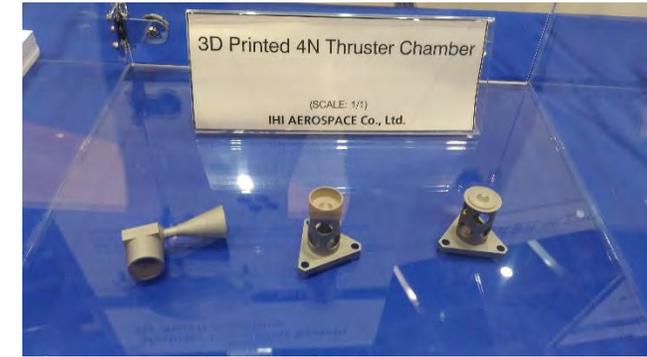
Ueyama san (JAXA) explains the ExHam and J-SSOD to Turo and Apiwat



Turo holds the 3D print model of ISS handle



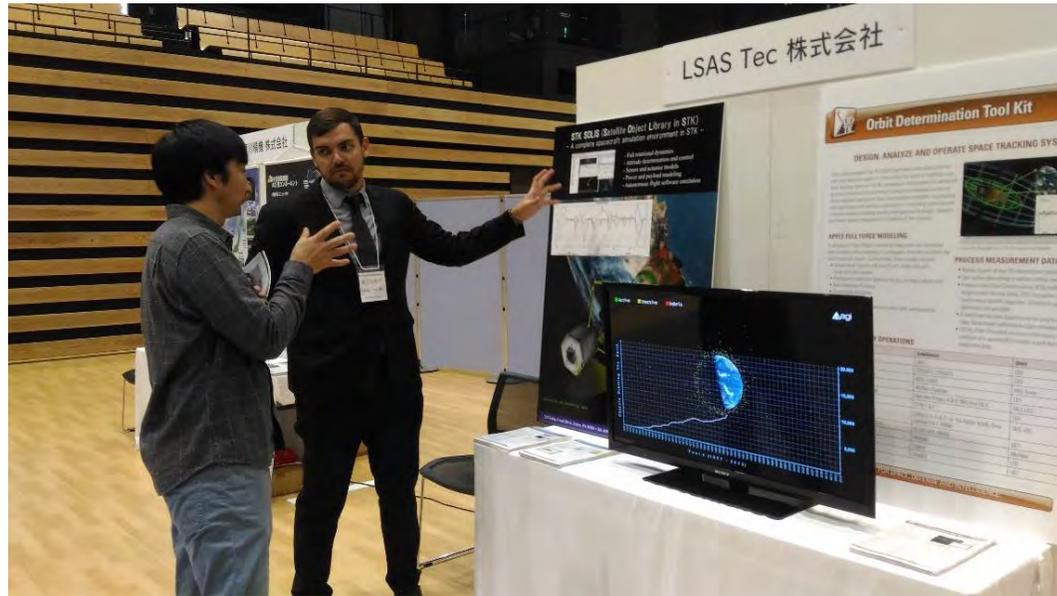
The **IHI Aerospace** company displays their mono-propellant at this booth



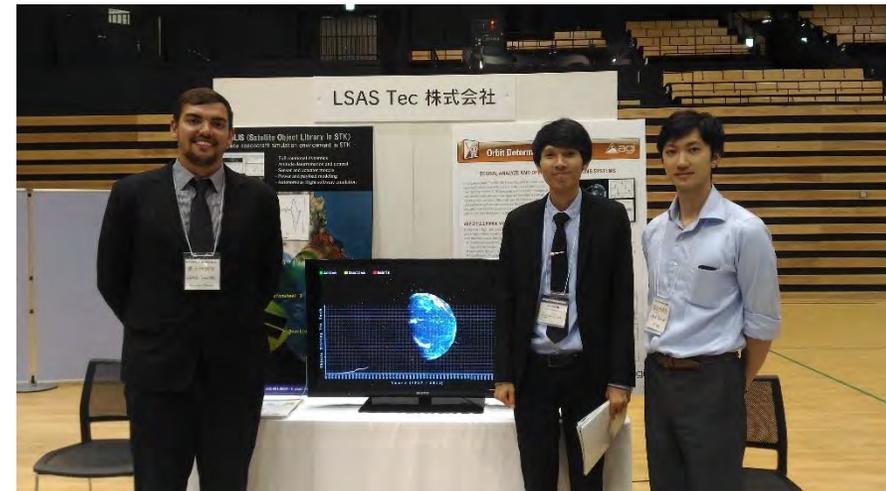
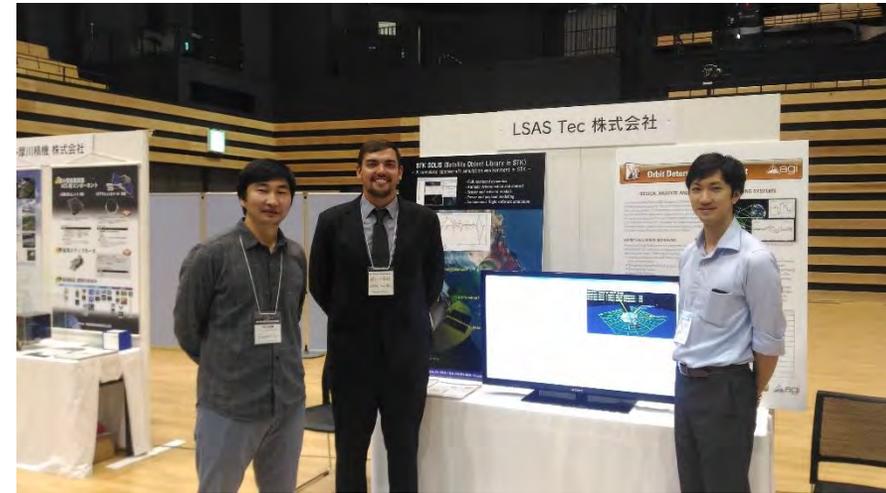


offers
STK – system tools kit

<http://lsas-tec.co.jp/en/>



Discussion about BIRDS and STK software functions with Mr. Alexander at LSAS Tec booth.



10. BIRDS Research Coordinator G. Maeda travels to Sudan and Ethiopia

From 13th to 20th of August (2016), G.Maeda (newsletter editor) was in Sudan and Ethiopia to encourage students to study at Kyutech, and to discuss BIRDS-type projects with counterparts.



The Director's Office
Institute of Space Research and Aerospace
Khartoum, Sudan.



From the left:
Hala (2015 PNST graduate), G. Maeda,
and Dr. Moutaman (ISRA Director)



On the campus of
Bahir Dar University ([Amharic: ባህር ዳር ዩኒቨርሲቲ](#))
Bahir Dar City, Ethiopia.



Lecturer Sewnet (lady in the center) with
newly hired lecturers

11. Kyutech International Coordinator S. Kikuchi travels to Mongolia

Recently, Prof. Kikuchi (Kyutech *Organization for Promotion of Research and Innovation*) visited NUM (National University of Mongolia).



Part of his discussions included BIRDS-related matters.

END OF ISSUE NO. 8



Date: 29 August 2016

Location: NUM, Ulaanbaatar, Mongolia

From the left:

- ① **Mrs. Sh. MENDBAYAR**
Head of Dept. of International Relations and Cooperation, NUM
- ② **Mrs. D. SARANTSETSEG**
Dept. of International Relations and Cooperation, NUM
- ③ **Prof. Shinichi KIKUCHI**
Kyushu Institute of Technology
- ④ **Dr. Tsolmon Renchin**
Professor, NUM
- ⑤ **Mr. Erdenebaatar Dashdondog**
("Erka"), Ph.D. Candidate, Kyutech