



BIRDS Project Newsletter

Issue No. 22 (30 November 2017)

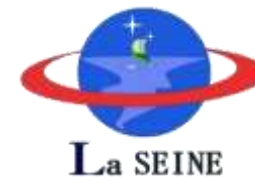


Members of BIRDS -1, -2, and -3 on 4 October 2017, at Tobata Campus

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

Edited by:
G. Maeda

Laboratory of Spacecraft Environment Interaction
Engineering (LaSEINE)
Kyushu Institute of Technology (Kyutech)
Kitakyushu, Japan



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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The Guest Box

From Sri Lanka



The **Ruwanwelisaya** is a [stupa](#) located in Anuradhapura (a UNESCO World Heritage Site-Culture) built by [King Dutugemunu](#) c. 140 B.C. This is standing at 103 m (338 ft) and with a circumference of 290 m (951 ft).

Photo credits: D.Ayesha

01. Post-graduate study on Nano-Satellite Technologies (PNST) has been renewed



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Our Work > Programme on Space Applications > BSTI > Fellowship Programme

Basic Space Technology Initiative Fellowship Programme

United Nations/Japan Long-term Fellowship Programme 2017
Post-graduate study on Nano-Satellite Technologies (PNST)
(Kitakyushu, Japan)

Our Work
Secretariat of COPUOS
Programme on Space Applications
PSA News
Fellowships

If you are from a non-space-faring nation, and you have a solid engineering background (bachelor's degree), and you are under Age 35, you are eligible to receive this scholarship (for either Phd or masters degree).

Apply at the UNOOSA website shown above – do a Google search on “PNST UNOOSA”. Currently, the website is still set for 2017. In December, it will be updated to show 2018. But the basic requirements for applying will all remain the same. Apply after the website is updated in December. The dead line for applications is set at 17:00 on 28 January 2018 Japan Standard Time.

02. JAXA recognizes “GEDC Airbus Diversity Award” going to the BIRDS Satellite Project



The screenshot shows the JAXA website header with the logo and navigation menu. The main content area features a blue banner with the title '九州工業大学の「BIRDS Satellite Project」が「GEDC Airbus Diversity Award 2017」を受賞' and a sub-header 'トピックス'. The article text describes the award received by the BIRDS Satellite Project from the Global Engineering Deans Council (GEDC) in 2017.

九州工業大学の「BIRDS Satellite Project」が「GEDC Airbus Diversity Award 2017」を受賞

最終更新日：2017年10月23日

国立大学法人九州工業大学が進めている衛星開発プロジェクトの一つである「BIRDS Satellite Project」が、この度、「GEDC Airbus Diversity Award 2017^{*}」を受賞しました。2017年は、18ヶ国45件の応募があり、Global Engineering Deans Council (GEDC) 年度総会にて、最終候補3件のプレゼンテーションが行われ、「BIRDS Satellite Project」が見事、最終選定されました。大変、名誉あることです。

See here for the rest of this JAXA web article:

http://iss.jaxa.jp/topics/2017/10/171023_birds_award.html

The capture of this award by the **BIRDS Project** is discussed in thorough detail in pages 25 through 33 of Issue No. 21 of the **BIRDS Project Newsletter**.

Please note that all BIRDS satellites are deployed into space by JAXA using JAXA's section of the International Space Station. I thank Engineer Akagi (JAXA) for bringing this web article to my attention.

03. Preparing for the 2nd BIRDS Int'l Workshop in Ghana

On 24 Oct. 2017, Prof Mengu Cho and G.Maeda visited the **Embassy of Ghana (Tokyo)** to submit visa applications. The visa is needed to enter Ghana in November 2017 for the 2nd BIRDS Int'l Workshop.



Above: Prof Cho presents a Kyutech souvenir to The Ambassador. (The Ambassador was at *JAXA's Tsukuba Space Center* this summer for the deployment of BIRDS-1.) This meeting with The Ambassador was arranged by Benjamin Bonsu, who is a member of the BIRDS-1 team.



G. Maeda visited the Embassy of Nigeria on 23 Oct 2017 to secure a visa. He and Ibukun are scheduled to participate in **FUTA's SGAC workshop** in Nigeria in November. FUTA=Federal University of Technology Akure.

04. More news on the GDEC Airbus Diversity Award given to BIRDS

Date of this item is 22 October 2017

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UNIVERSITY JOURNAL
ONLINE

トピックス | 研究成果 | 産学連携 | 地域

HOME > トピックス

2017年10月22日

九州工業大学の宇宙工学教育がGDEC Airbus Diversity Award 2017受賞

大学ジャーナルオンライン編集部

受賞 宇宙 工学 留学生 衛星 九州工業大学

8 50 B!

九州工業大学は、新興国・途上国出身の留学生を対象とした宇宙工学教育「BIRDS衛星開発プロジェクト」が、「GDEC Airbus Diversity Award 2017」を受賞したことを発表した。

<http://univ-journal.jp/16450/>

今年5回目となるこの賞は、工学教育に多様性をもたらす成功例を表彰するもので、国籍や人種、経歴の異なる人々が、より多くエンジニアリングを学ぶことに興味を持ち、エンジニアリングの世界で成功することを促進する目的がある。航空、宇宙、および関連サービスをリードするAirBus社と、エンジニアリング教育の大手国際組織GDEC (Global Engineering Deans Council) が共同出資し、今年はUNESCO (ユネスコ：国連教育科学文化機関) が後援した。

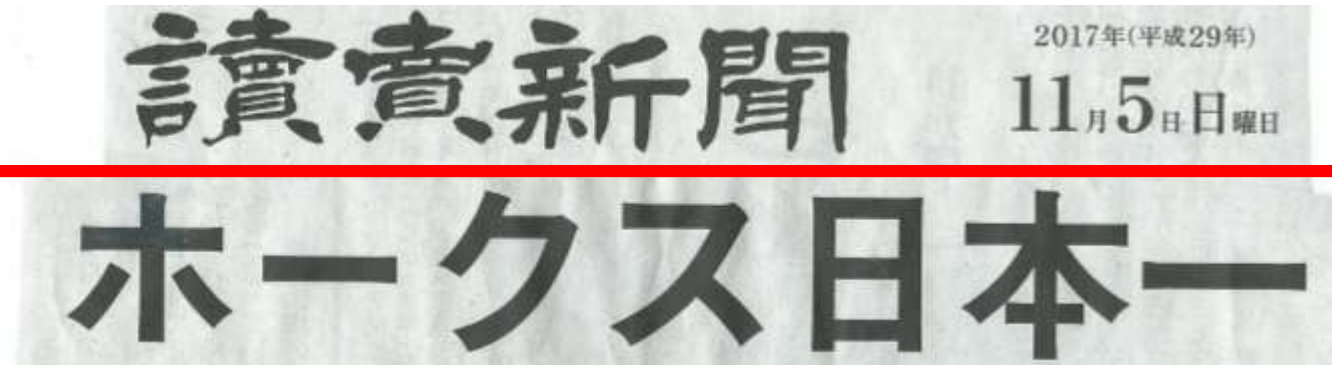
九州工業大学のBIRDS衛星開発プロジェクトは、コスト効率の良い革新的なシステムエンジニアリングを活用して途上国出身の大学院生に教育を行い、2年間の包括的衛星開発プロジェクトを実行。プロジェクトの長期的目標には、彼らがそれぞれの出身国で持続可能な宇宙開発プログラムを立ち上げることができるよう、知識や技術を獲得することを掲げている。

18ヶ国39機関からエントリーされた45件のプロジェクトの中からファイナリストの3プロジェクトのうちの一つに選ばれ、プロジェクトマネージャのTejumola Taiwo氏 (同学大学院博士後期課程3年生、ナイジェリアからの留学生) が、カナダのナイアガラフォールズで開催されたGDEC年度総会でプレゼンテーションを行った。研究の影響力や成果、規模拡大の可能性などの基準に基づいた評価で、優勝を勝ち取った。



05. Hawks (baseball team) takes the championship in Japan

“Hawks No. 1 in Japan”



Most residents of Kitakyushu are fans of this baseball team. The team clinched the top spot in Japan.



06. BIRDS Project mentioned at UN/Russia workshop on human capacity building



This poster was displayed during the workshop; it was created by Juan Jose and Marcos – both students from Costa Rica. The poster promotes short-term training programs at LaSEINE, as well as the BIRDS Project.

This part covers BIRDS

This poster is now on display at Makerere University in Uganda, courtesy of Mr Stephen David Taabu, who represented Uganda at this United Nations workshop.



This UN workshop was hosted by Samara University during 30 October through 02 November. From Japan, Rei Kawashima (UNISEC) and G. Maeda (Kyutech) participated in this workshop.

BIRDS-3 mentioned in the presentation by Engineer Sanath of ACCIMT of Sri Lanka

Nano Satellite Project with Kyushu Institute of Technology, Japan – BIRDS 3 Programme

Two ACCIMT Research Engineers are working under the BIRDS-3 Programme developing a 1U Nano Satellite at the Kyushu Institute of Technology, Japan.



Acquisition of National Capacity in Space Technology and its Concurrent Applications in National Development: The Early Experience of a Developing Nation

Eng. Sanath Panawennage
Arthur C Clarke Institute for Modern Technologies (ACCIMT),
Sri Lanka



Day 3 (01 Nov) of the UN workshop

DAY 04 – Thursday, 2 Nov. 2017, of the UN workshop



**Establishing the Philippine
Space Program: From
Technology Development to
Policy Legislation**

Dr. Rogel Mari Sese
*Philippine Space Science Education Program, DOST-SEI
National SPACE Development Program, DOST-PCIEERD*

UN/Russian Federation Workshop on Human Capacity-Building in Space Science and
Technology for Sustainable Social and Economic Development, Samara, Russia



Dr. Rogel Mari Sese (DOST) talks about the creation of the Philippines space agency (cont'd on the next page)

Space Science Program for pre-school to high school students in selected schools in the country

Participation of the Philippines in the **BIRDS-2 Program of Kyushu Institute of Technology**

← **BIRDS-2 mentioned**

Conduct of **National Can Satellite Competition** and participation in the **Asian Try-Zero-G Experiment, World Space Week and National Astronomy Week**

Acquisition of partial share to the **NovaSAR satellite** of UK

Establishing MOUs with JAXA, UKSA and Roscosmos

Cooperation of the Department of Social Welfare and Development with InMarsat under the IPP of the UK Space Agency



Dr. Rogel Mari Sese (DOST) updates the audience on the main space activities of the Philippines.



Presentation by Rei Kawashima on Capacity Building



- **UNISEC-Global Challenge: How can we contribute to Capacity Building?**
Rei Kawashima, UNISEC Global, Japan

Presentation by G. Maeda on BIRDS



- ***The BIRDS Paradigm of Kyutech***
Joij Maeda, Kyushu Institute of Technology, Japan

The two workshop participants from Japan – UNISEC-Global and Kyutech

Presentation by Prof Belokonov



- Samara Summer Space School: outlooks of 15 years of human international capacity building and cooperation
Igor Belokonov, Samara University, Russia

He discussed the achievements of 15 years of *Samara Summer Space School*.

He encourages all young people passionate about space to attend his summer school, which is held each year.

Web link is:

http://volgaspace.ru/school_cms/



SAMARA UNIVERSITY
VOLGA CENTER OF TECHNICAL SCIENCE

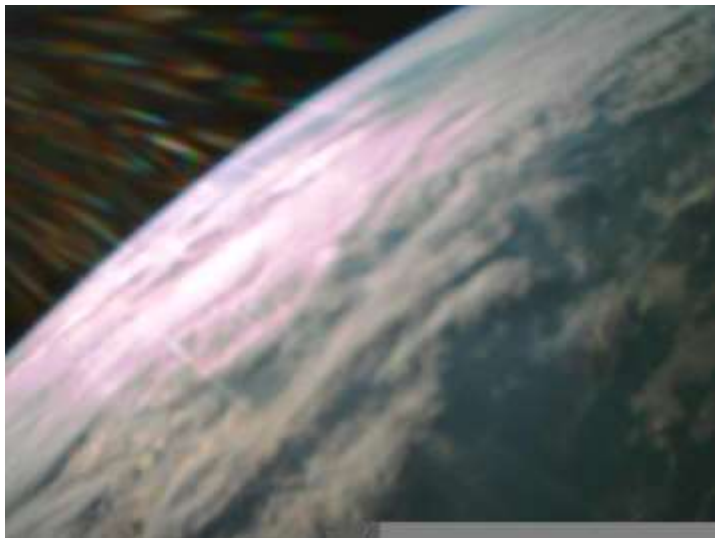


The official group photo of the UN workshop in Samara, Russia



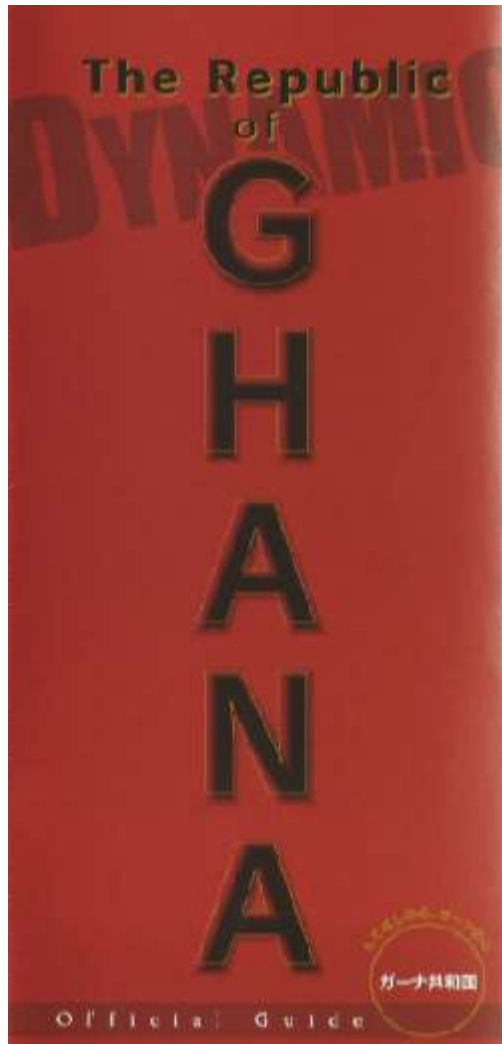
End of the article about the UN workshop in Samara, Russia.

07. The kind of pics possible with passive attitude control (from Horyu-4)



Dr Pauline Faure presented this material in a lecture for BIRDS-3 students on 7 November 2017. These are actual photos by Horyu-4.

08. The 2nd BIRDS International Workshop was held in Ghana, 20-23 November 2017



... full details in the next issue of this newsletter ...

09. Call for papers – first conference convened by new Center for Satellite Communication

The BIRDS-2 partner of UiTM (Malaysia) has established “Center for Satellite Communication”. They announce their first international conference. *Let’s give them our full-hearted support.*



CALL FOR PAPER

INTERNATIONAL CONFERENCE ON SPACE WEATHER AND SATELLITE APPLICATION (ICeSSAT 2018)

7 – 9 August 2018
Shah Alam, Selangor, Malaysia

TRACKS

- Solar system and astronomical instrumentation
- Space weather and space climate
- Upper and lower atmosphere/ ionosphere
- Antenna for space communication
- Remote sensing and GIS application
- Satellite and communication technology
- Space data management system
- Circuit design and electronic devices for space application
- Nano satellite and payload
- Simulation and modelling for space application
- Space and Earth’s electromagnetism
- Education astronomy and public outreach
- Space policy, governance and entrepreneurship

IMPORTANT DATES

- Submission deadline: 30 March 2018
- Notification of acceptance: 30 April 2018
- Camera ready: 30 May 2018
- Conference date: 7 - 9 August 2018

Accepted papers will be published in *IOP Conference Series* indexed by CPCI-S (Web of Science and SCOPUS) :

- Earth and Environment Science (EES)
- Material Science and Engineering (MSE)

Please contact us for enquiries:

Email: icessat2018@gmail.com

Organized by:

Center for Satellite Communication
Faculty of Electrical Engineering,
Universiti Teknologi MARA



Please submit abstract and attend if possible.

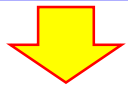
10. JAXA announces Kibo Utilization Strategy – download the pdf from Web (this slide from JAXA)

◆ What is the Kibo Utilization Strategy?

The Kibo Utilization Strategy is devised as a guideline for expanding and promoting “Kibo” utilization, covering the priority of research areas, promotion activities, requests for hardware development, and research solicitation, so as to promote “Kibo” utilization strategically toward maximized outcomes. The strategy will be reviewed as needed according to changes in its situation and progress.

◆ Prioritization toward “Kibo” maximized outcomes

Identify and prioritize prospective utilization areas as “platforms,” and make them available to various users.



One of the platforms is

[Small satellite deployment platform](#)

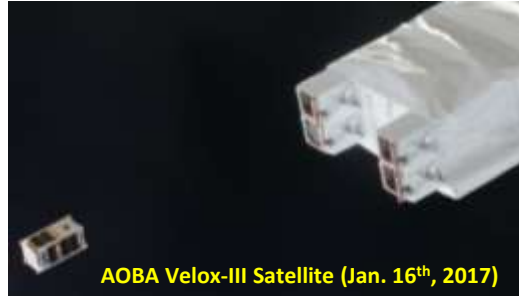
(JEM Small Satellite Orbital Deployer : J-SSOD)

- CubeSat deployment from the ISS is only feasible from “Kibo” (which has deployed more than 198 CubeSats as of Aug. 2017).
- Contribution to private company businesses and Japan’s growing presence in the world

Kyutech Satellites already deployed from J-SSOD



BIRDS-1 Satellite (Jul. 7th, 2017)



AOBA Velox-III Satellite (Jan. 16th, 2017)



<http://iss.jaxa.jp/en/kiboexp/strategy/>

Based on Kibo Utilization Strategy, Kyutech and JAXA have established a strategic partnership for promoting small satellite utilization and J-SSOD opportunities around the world. (Apr, 2017)

11. Mr Stephen David Taabu (Makerere University, Uganda) explains BIRDS Project at his university

I met Mr Taabu at the recent UN/Russia workshop on Human Capacity Building in Samara. He yearns to build a satellite for Uganda, so I told him many things about BIRDS.

Uganda might join BIRDS-4 or BIRDS-5 in the future.
- Editor.



Mr. Taabu on his campus with Kyutech training poster (the one shown in Section 6 of this issue of the newsletter).
November 2017.



12. Store and Forward Mission (S&F) Implementation in Bhutan

Written by: Cheki Dorji, Birds-II

Q1. What is GST?

A: GST is abbreviated form of Ground Station Terminal. It is a small terminal on the ground from where data (likely from remote places) is transmitted to BIRDS-II CubeSats in space. CubeSats will relay these data back to the Ground Stations. The data received at the mission centre will process and compile the data from distribution to users.

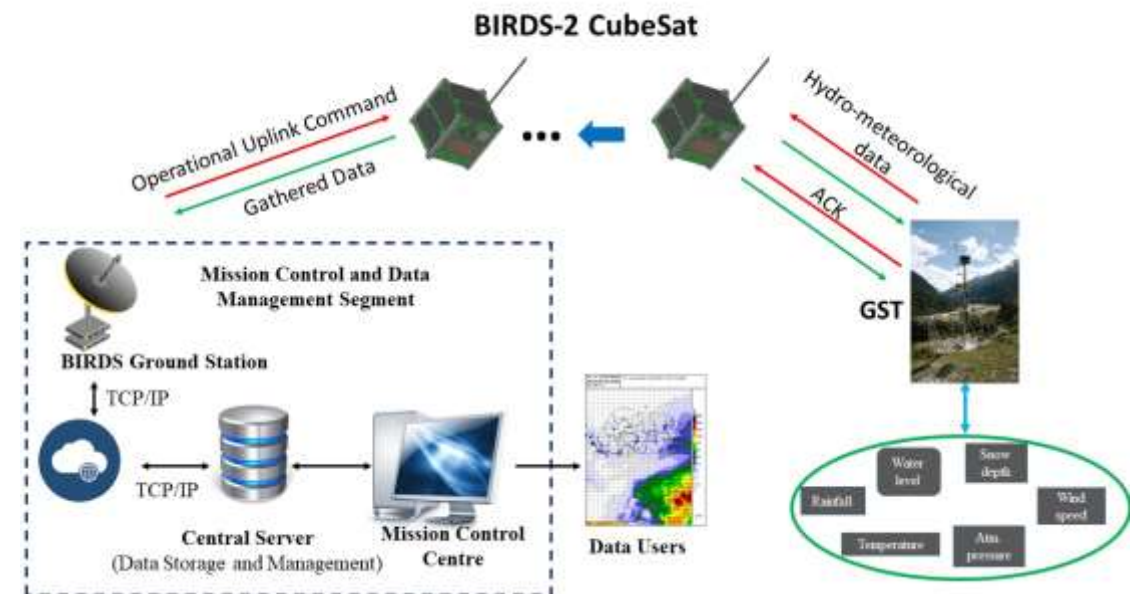


Figure 1.: Shows the broad system architecture of S&F implementation in Bhutan

Q2. How many GST will Bhutan have?

A: Probably one or two.

Q3. Who will develop GST for Bhutan?

A: Students from Bhutan in Kyutech will develop GST.

Q4. What kind of data will GST in Bhutan transmit?

A: Bhutan has hydro-meteorological stations spread across the country. BIRDS-II GST will integrate with one these stations, probably in remote area, and get access to data of different sensors from their system. Sensors will include temperature, humidity, rainfall, atmospheric pressure, water level measurement and so on. Hydro-meteorological station and GST can have a resource sharing like power system. GST will not substitute the already established stations rather to supplement it.

End of this section.

13. Self intro by Noraisyah – joining the UiTM team on the BIRDS-2 Project

Hi! I am Noraisyah, currently working as a lecturer in University of Malaya (UM) Malaysia. I completed my PhD dissertation in 2014 on satellite signal propagation, focusing on investigating diurnal variations in the received satellite beacon signal level during clear sky. We extracted satellite propagation data from several experiments, this include NASA's ACTs, INTELSAT beacon experiment observed by Texas A&M University, INTELSAT 705 beacon experiment observed by Pontifical Catholic University of Rio de Janeiro and the Olympus satellite beacons observed by Virginia Tech. From the investigation we concluded that a 24 hour diurnal variations seen is due to atmospheric effects, and not due to satellite payload or orbital instabilities. From our findings we recommend that the seasonal and diurnal variation of the mean clear-sky level is considered in determining link budget for low margin systems, and the sinusoidal nature of the variation augment the function of radiometers in evaluating the true rain fade level



A picture with my supervisor Prof Jeremy E. Allnutt of George Mason University during my graduation ceremony in Dec 2014

Upon returning to Malaysia, I continued to teach Undergraduate and Masters Degree students in various courses pertaining to the field of Electrical and Telecommunications Engineering. I joined a few research groups that focused on satellite communication as well as radio astronomy. Through Dr Huzaimy of UITM Malaysia, I was introduced to the BIRDS project at Kyutech. My work will be in assisting the development of a double Langmuir probe as payload to monitor the electrons in the ionosphere.

I hope to be able to continue my research in the new field of nanosatellite and assist team Malaysia in sending out our own nanosatellite!

I look forward to have the opportunity to join you in Kyutech.



With the radio astronomy research group from UM & UPSI at UITM's applied electromagnetic research lab. (L-R) Ms Ain Zakaria, Myself, Mr Danial, Dr Zamri and Mr Wan Zul.

End of this section.

Ground Sensor Terminal (GST) Development at UPD for BIRDS-2 S&F Mission

Prepared by : Izrael Bautista (UPD, Philippines)
(under PHL-MICROSAT Project 1)

Target Application : Introduction

Why farming and agricultural application?

- Philippines has **7.190 million hectares** of land being used for farming
- **29%** of total employment
- **9%** of national GDP

How?

- Temperature and soil moisture provide information for optimal irrigation and fertilizer application
- Provide controlled environment to ensure optimal growth of crops



Source: Philippine Statistics Authority, 2015



Target Application : Introduction

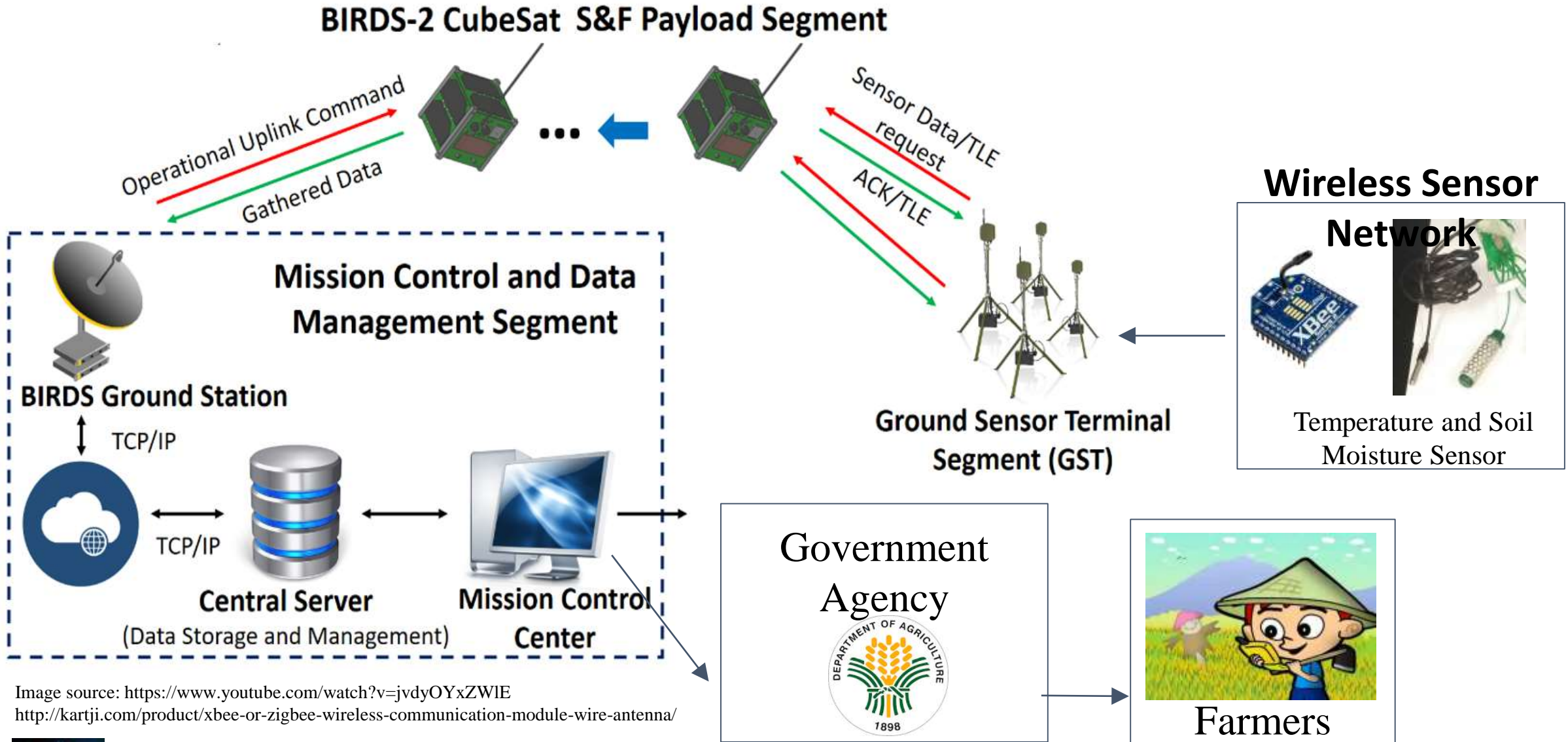


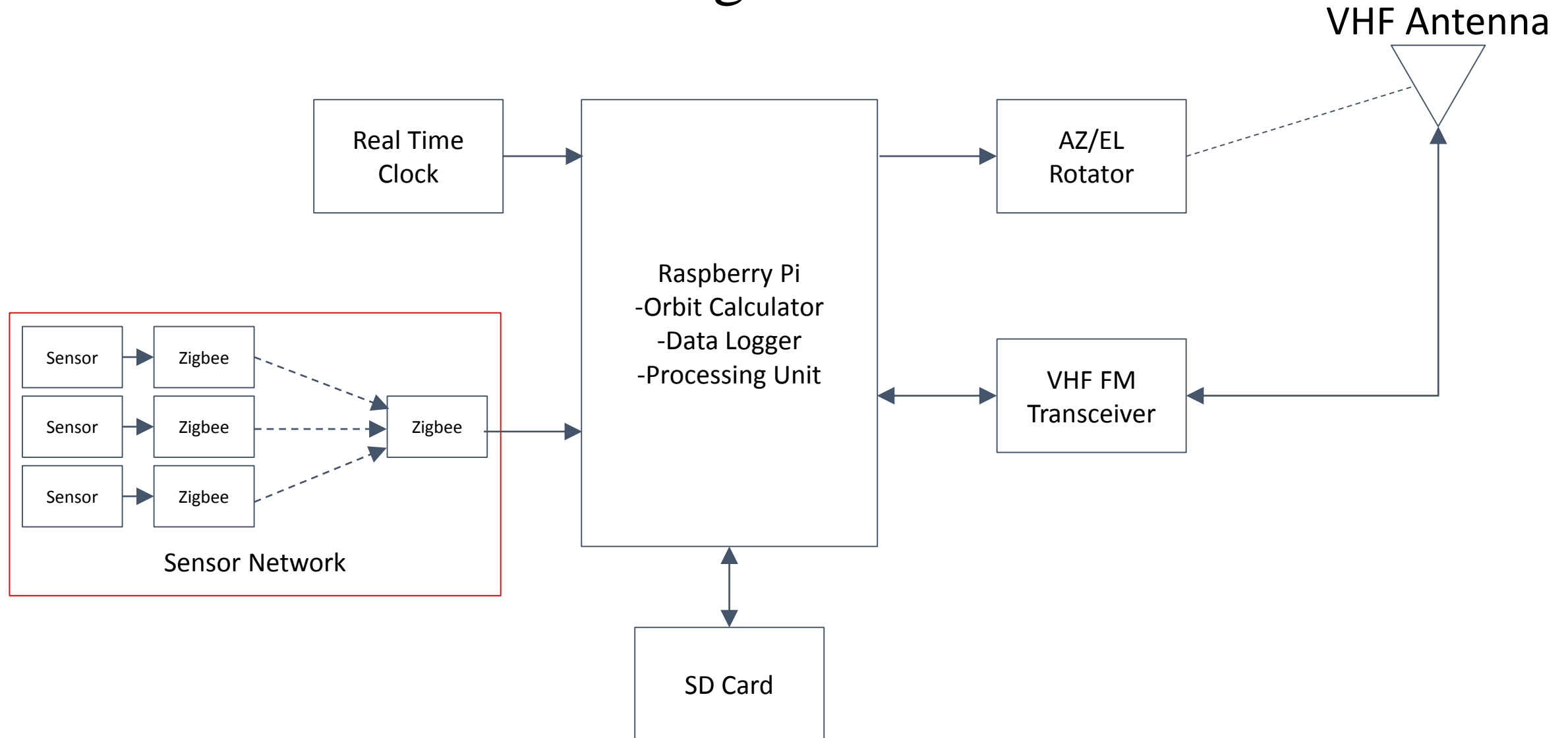
Image source: <https://www.youtube.com/watch?v=jvdyOYxZWIE>
<http://kartji.com/product/xbee-or-zigbee-wireless-communication-module-wire-antenna/>



Target Application : Introduction

- Several soil moisture and temperature sensors gather data on the field and transmit this information and their location to a single GST per field using Zigbee protocol.
- Collated data are uploaded by the GST to the CubeSat during each pass (time determined by the orbital calculator).
- Once the CubeSat passes over any BIRDS Ground Station, data are downloaded and forwarded to a central server (where data from ground stations are accumulated).
- Then, the downloaded data are processed and distributed to the government agency that performs further analysis (i.e. Department of Agriculture).
- Pertinent data and analysis are sent to the farmers using SMS/mobile data.
- The data may contain information such as location in need for more irrigation/fertilizer or optimal crops to plant. This will lead to better crop management.

The Latest GST Block Diagram



15. Review of recent BIRDS-3 activities

The next four pages were created by
Abhas (BIRDS-3, Nepal)

BIRDS-3 Learning Sessions in October, 2017

Oct 13, 2017



PCB Design Session I
Atomu (HORYU-IV)

Oct 19, 2017



Mission Mode Lecture
Prof. Mengu Cho

Oct 20, 2017



PIC Session I
Turo (BIRDS-1)

Oct 23, 2017



Amateur Radio License Seminar
Apiwat (BIRDS-1)

Oct 26, 2017



PCB Design Session II
Tharindu (BIRDS-3)

BIRDS-3 identified three key skills that all members should have in some minimum capacity. Those skills are:

- 1) Eagle CAD PCB Design
- 2) Solidworks CAD Design
- 3) PIC Programming in C

Sessions were organized to raise the skill level of all members.

BIRDS-3 Learning Sessions till Mid-November, 2017



BIRDS-3 Potluck October 2017 Session

On 28th October 2017, BIRDS-3 members gathered for the end-of-month potluck session. Everyone contributed to the table by bringing in food and drinks. The event took place at Abhas' (Nepal) home.



Makiko (Japan) smiles as she cooks her signature miso soup

BIRDS-3 visit to Mojiko/Shimonoseki, November 2017



Train Museum



Fugu dinner



Makiko (Japan), Pooja (Bhutan) and Dulani (Sri-Lanka) pose for a photo

On 3rd November 2017, BIRDS-3 members went on a short trip to Mojiko Station where they crossed over to Shimonoseki city through Kanmon Pedestrian Tunnel.



*Abhas: Thanks for your pics and notes – BIRDS-3 has great team spirit !!!
– The Editor.*

BIRDS members presented their work at the 61st Space Sciences and Technology Conference (SSTC)

SSTC is the largest annual gathering of aerospace players in Japan which brings together participants from the academe, government and industry to showcase their work through presentations and exhibits. This year, the event was held at the Tokki Messe, Niigata Convention Center, Niigata City, Japan.

Prepared by: *Adrian Salces (BIRDS-2, Philippines)*

Mr. Tokunaga's Presentation



Title: “Development of an experimental prototype of a standard bus equipment for 1U CubeSat”

Session: Small Satellites

Date and Time: October 25, 2017, 9:50 am



Mr. Joven Javier's Presentation



Title: “Overview of BIRDS-II CubeSat Constellation Project”

Session: Small Satellites

Date and Time: October 26, 2017, 8:50 am

Mr. Adrian Salces' Presentation



Title: “Proposed Store-and-Forward Lean Satellite-based Remote Data Collection System of the BIRDS-2 Project”

Session: Small Satellites

Date and Time: October 26, 2017, 9:10 am

Mr. Turo's Presentation

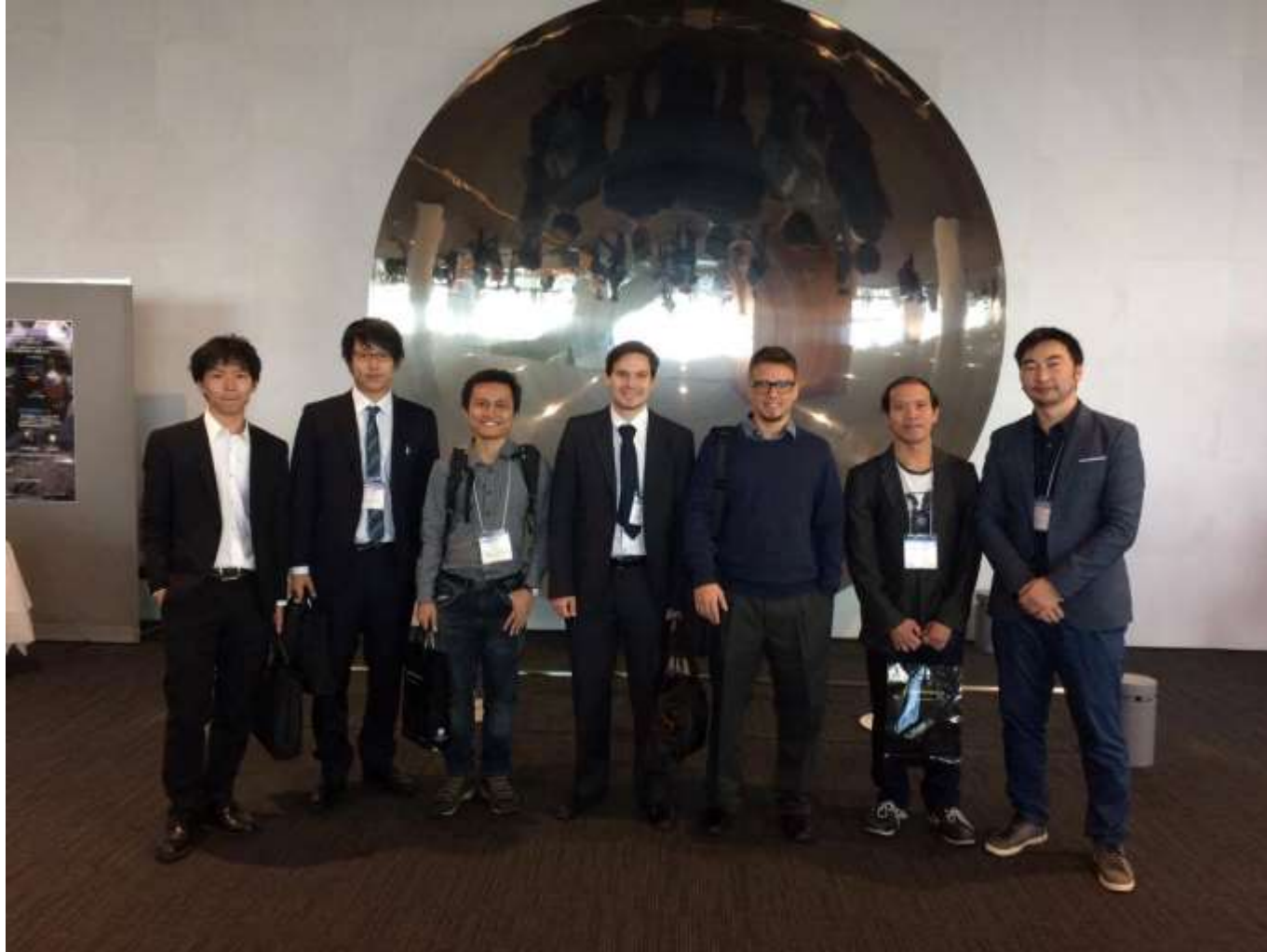


Title: “Software configurable backplane interface design for a CubeSat bus system”

Session: Small Satellites

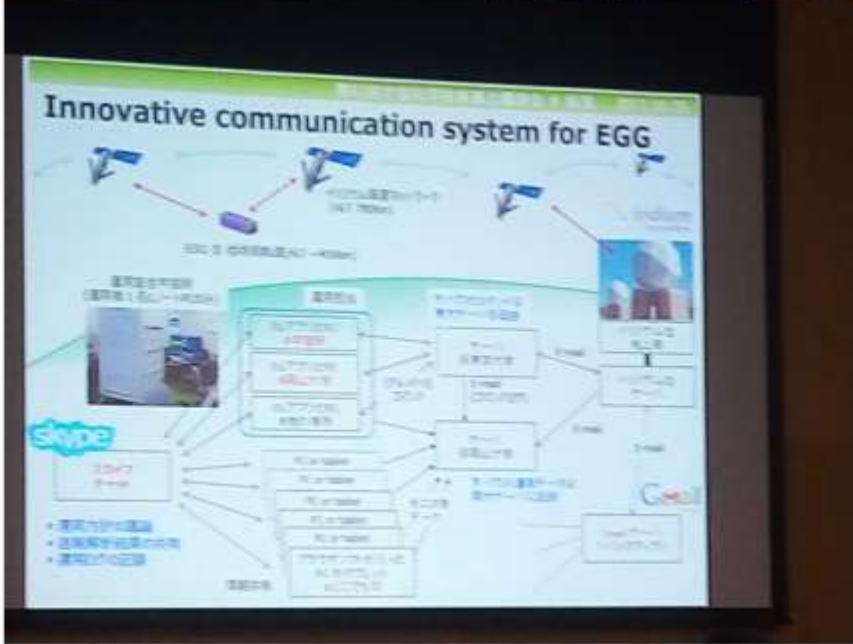
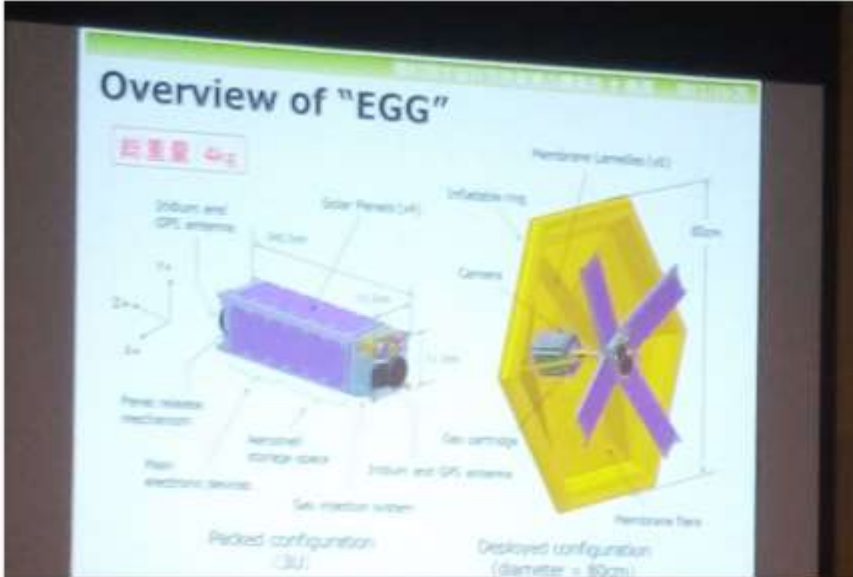
Date and Time: October 26, 2017, 9:50 am

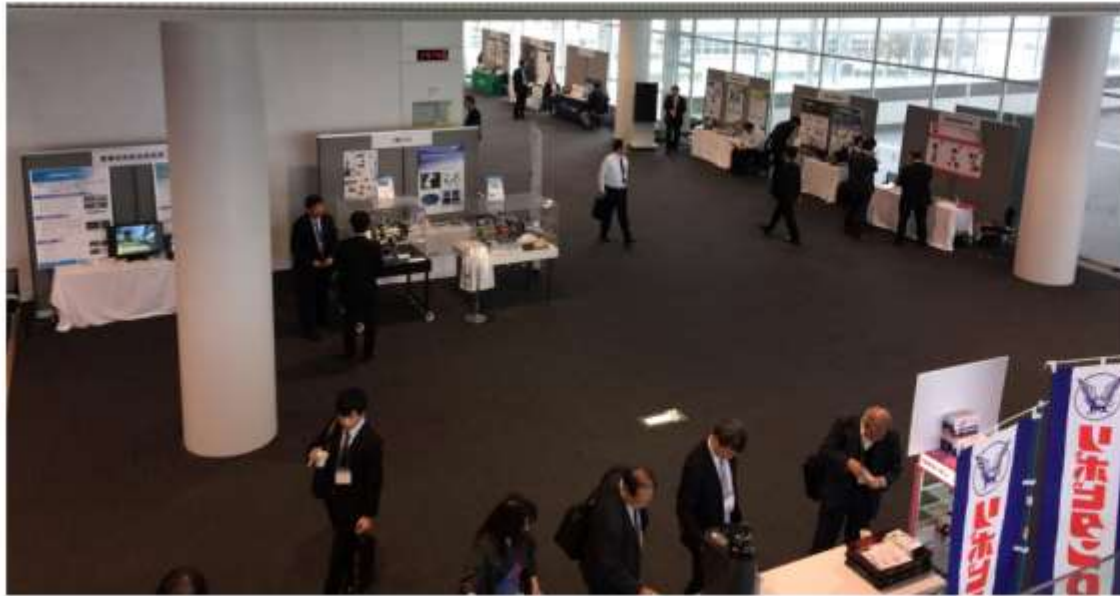
Group Photo with other members of Kyutech



From left to right: Mr. Yasuhiro Tokunaga, Mr. Syunsuke Inoue, Mr. Adrian Salces, Mr. Marcos Hernandez Herrera, Mr. Juan Jose Rojas Hernandez, Mr. Joven Javier, Mr. Turtogtokh Tumenjargal (Turo)

Photos of Exhibits, Presentations and Lectures During the Event





End of this section.

BIRDS-2 members Adrian, Hasif and Syazana participated in the APSCC 2017 Youth Development Workshop

BIRDS-2 members Adrian, Hasif and Syazana participated in the Youth Development Workshop during the *2017 Satellite Conference and Exhibition* (APSCC 2017 #SATECHexplorer) organized by the Asia-Pacific Satellite Communications Council. The workshop was held in Tokyo on October 12, 2017, which was followed by a facility tour to VSAT on the following day.

Prepared by: *Adrian Salces*

Communications satellite industry experts and keynote speaker shared basic knowledge and experiences with the young participants



Credit for the above photos belongs to the APSCC 2017 organizers.

Satellite Communications: Fundamentals, Systems and Applications

By Ali E. Ebadi, Advisor, MEASAT

Communications satellite industry experts and keynote speaker shared basic knowledge and experiences to the young participants



Satellite Communications: Regulations
By Daniel Mah, Senior Legal & Regulatory Counsel, SES



Satellite Communications: Industry Overview
By Jose Del Rosario, Research Director, NSR



Keynote: Careers in Space
Former NASA Astronaut Daniel Tani reviewed his career in the aerospace industry - from spacecraft designer to launch manager to astronaut and currently as educator. His talk was very interesting and inspiring.

Credit for the above photos belongs to the APSCC 2017 organizers.

Credit for the photos below belongs to the APSCC 2017 organizers.

Case Study Exercise: Satellites and the IoT Revolution



BIRDS-2
member Hasif
from Malaysia

Prof. Cho

From the program: “This hands-on workshop involves a case study on the planning of a satellite system for an imaginary country in the Asia Pacific region to provide low cost connections for the rapidly growing number of internet capable devices (commonly known as the IoT revolution).” The participants would act as tenders who were called to prepare and present proposals for a terrestrial and/or satellite system to provide this service. Prof. Cho was one of the panel of experts who guided three teams of participants as they come up and present their proposals.



(1) BIRDS-2 member Syazana (right) from Malaysia



(2)

Credit for photos 1-3 belongs to the APSCC 2017 organizers.



(3) Presentation of proposals



BIRDS-2 member Adrian (Philippines)

Picture-taking opportunity with former NASA astronaut Daniel Tani



(4) Awarding of prize for the winning proposal. Adrian's and Syazana's team won.

Facility Tour of the VSAT (October 13, 2017)



18. Update on StoFow at UiTM

My UiTM Store & Forward (StoFow) for Ground Station Integrated Mission (G-SIM) *An update*

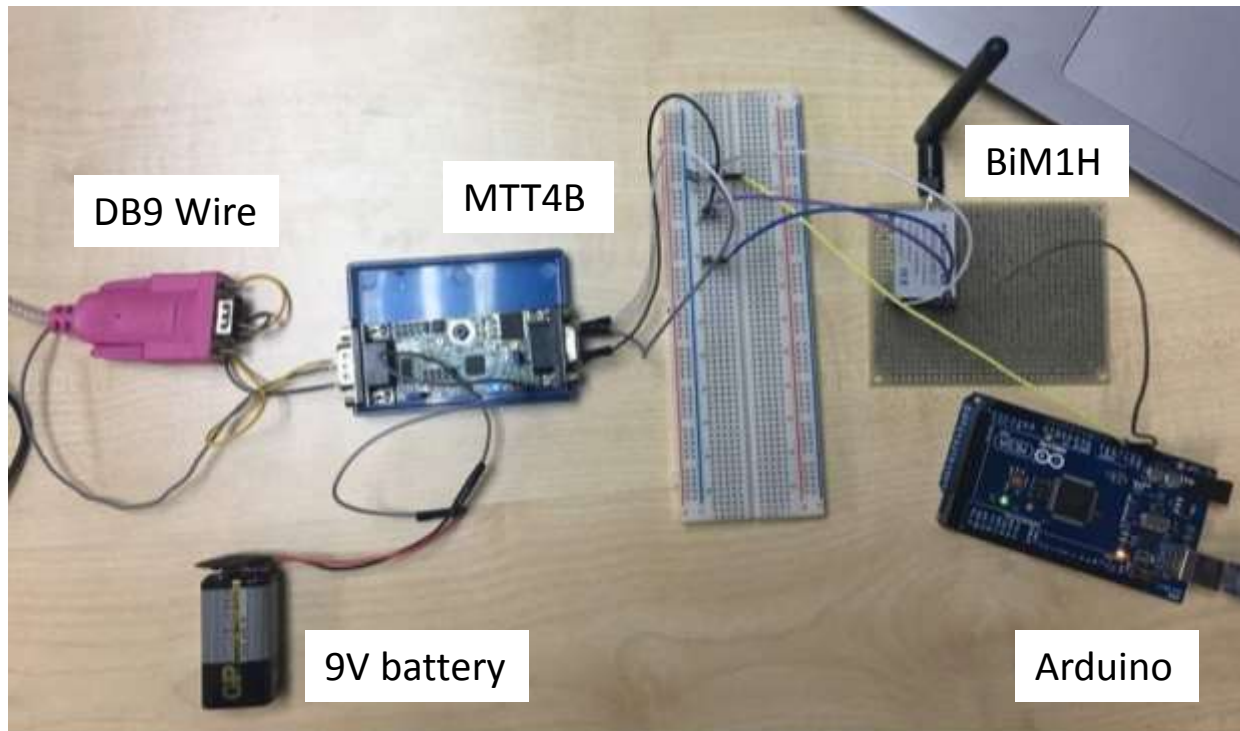


Figure 1: Configuration setup for TNC (MTT4B) and radio (BiM1H) to PC

The purpose of the testing

To configure MTT4B and to check whether the data is able to receive by radio transceiver (BiM1H) or not

Article (this page and the next) prepared by:

Nur Amirah Bt Azahari (UiTM)

16th November 2017

Procedure & Results

- I. DB9 cable is used to connect MTT4B to PC
- II. MTT4B is power up using 9V battery which connected to port J3
- III. BiM1H is power up using 5V pin from Arduino
- IV. Observe the process of data transmit using serial monitor from PC

The result was positive. The data was able to receive by the radio transceiver.

➡ Future task is to integrate the GST system with S&F payload.

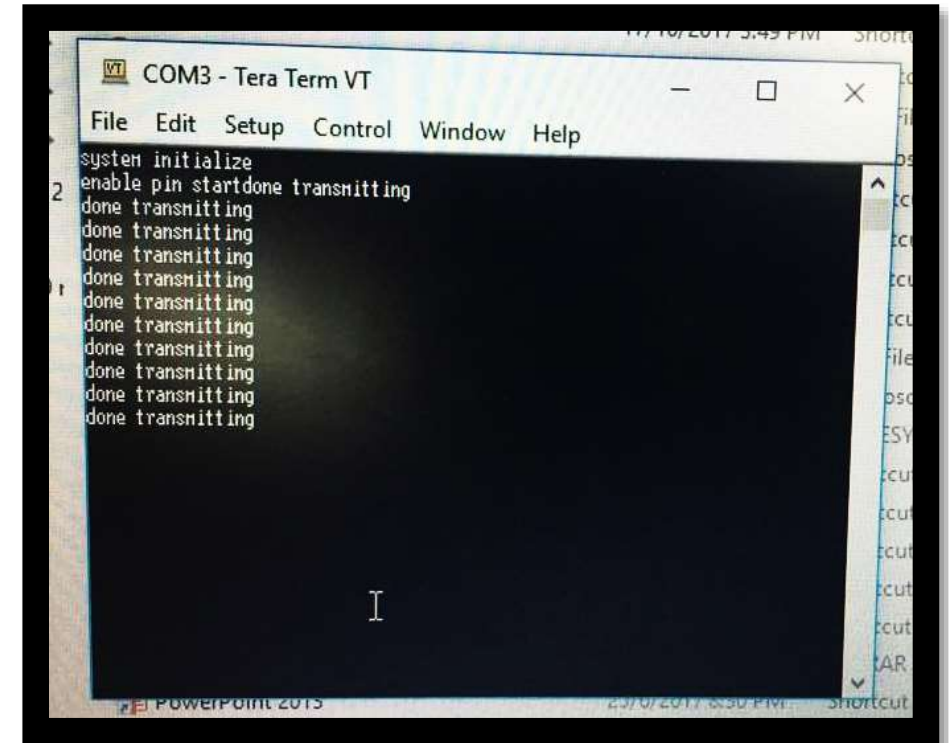


Figure 2: Tera Term software is used to configure MTT4B

End of **BIRDS Project Newsletter** – Issue Number Twenty-Two

This newsletter is archived at the BIRDS Project website:

Project website: <http://birds.ele.kyutech.ac.jp/>

When a new issue is entered in to the archive, an email message is sent out over a mailing list maintained by the Editor (G. Maeda, Kyutech). If you wish to be on this mailing list, or know persons who might be interested in getting notification of issue releases, please let me know.

This newsletter is issued once per month. The main purpose of it is to keep BIRDS stakeholders (the owners of the satellites) informed of project developments.

