Kyutech and Capacity Building

Assistant Professor George Maeda
Laboratory of Spacecraft Environment Interaction Engineering ("LaSEINE"), Kyushu Institute of Technology ("Kyutech"), Kitakyushu, Japan.
宇宙環境技術ラボラトリー、九州工業大学、北九州。

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The BIRDS Project delivers the technical competence to build satellites inside of your own country
This is our track record with BIRDS satellites

JAPAN  GHANA  MONGOLIA  NIGERIA  BANGLADESH  THAILAND  TAIWAN

BIRDS-II (2016-2018)
BHUTAN  MALAYSIA  PHILIPPINES

BIRDS-III (2017-2019)
JAPAN  SRI LANKA  NEPAL
BIRDS-3 Image Gallery

It is the first photo taken by BIRDS-3 satellite.

PACIFIC OCEAN

Island of Sri Lanka

Each image takes about 2-3 days to downlink completely
BIRDS-4 is currently underway

Countries:
◆ Japan
◆ Philippines
◆ Paraguay

Flight models shall be delivered to JAXA in Dec. 2019.
Kyutech is now recruiting for BIRDS-5 Project, which starts April of 2020
This is the essence: Learn the *entire* satellite development process from start to finish.

**Start**
- Design
- Breadboard

**Engineering Model**

**Flight Model**

**Deploy in space**

**Extensive environmental testing**

**End**

Maeda – Nov 2019 – UNIGLO7
One BIRDS Project from start to finish is exactly 24 months.
BIRDS-1 (duration of 2 years) - Finished

BIRDS-2 (duration of 2 years) - Still in orbit

Deployed on 17 June 2019

BIRDS-3 (duration of 2 years)

Now being developed

Projects overlap by one year

BIRDS-4 (duration of 2 years)
Kyutech is the No. 1 university in the world in one amazing respect.
Smallsats by the Numbers 2019

This shows 13 satellites but since this was published we have launched 5 more …

… our grand total now stands at 18 satellites.
### Kyutech Satellite History

G. Maeda, 13 June 2019

<table>
<thead>
<tr>
<th>No.</th>
<th>Satellite name</th>
<th>(a) Date of Launch (b) ISS deployment</th>
<th>Nations involved</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HORYU-II</td>
<td>(a) 2012/5/18</td>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Shinen-2</td>
<td>(a) 2014/12/03</td>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>HORYU-IV</td>
<td>(a) 2016/02/17</td>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>AOBA VELOX-III</td>
<td>(a) 2017/01/19</td>
<td>Japan and Singapore</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BIRDS-I: Ghana</td>
<td>(b) 2017/07/07</td>
<td>Japan and Ghana</td>
<td>Ghana’s first satellite</td>
</tr>
<tr>
<td>6</td>
<td>BIRDS-I: Mongolia</td>
<td>(b) 2017/07/07</td>
<td>Japan and Mongolia</td>
<td>Mongolia’s first satellite</td>
</tr>
<tr>
<td>7</td>
<td>BIRDS-I: Nigeria</td>
<td>(b) 2017/07/07</td>
<td>Japan and Nigeria</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>BIRDS-I: Bangladesh</td>
<td>(b) 2017/07/07</td>
<td>Japan and Bangladesh</td>
<td>Bangladesh’s first satellite</td>
</tr>
<tr>
<td>9</td>
<td>BIRDS-I: Japan</td>
<td>(b) 2017/07/07</td>
<td>Japan</td>
<td></td>
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<tr>
<td>10</td>
<td>BIRDS-II: Philippines</td>
<td>(b) 2018/08/10</td>
<td>Japan and Philippines</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>BIRDS-II: Malaysia</td>
<td>(b) 2018/08/10</td>
<td>Japan and Malaysia</td>
<td></td>
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<tr>
<td>12</td>
<td>BIRDS-II: Bhutan</td>
<td>(b) 2018/08/10</td>
<td>Japan and Bhutan</td>
<td>Bhutan’s first satellite</td>
</tr>
<tr>
<td>13</td>
<td>SPATIUM-I</td>
<td>(b) 2018/10/06</td>
<td>Japan and Singapore</td>
<td></td>
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<tr>
<td>14</td>
<td>Ten-koh</td>
<td>(a) 2018/10/29</td>
<td>Japan</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>AOBA VELOX-IV</td>
<td>(a) 2019/01/18</td>
<td>Japan and Singapore</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>BIRDS-III: Nepal</td>
<td>(b) 2019/06/17</td>
<td>Japan and Nepal</td>
<td>Nepal’s first satellite</td>
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<tr>
<td>17</td>
<td>BIRDS-III: Japan</td>
<td>(b) 2019/06/17</td>
<td>Japan</td>
<td></td>
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<tr>
<td>18</td>
<td>BIRDS-III: Sri Lanka</td>
<td>(b) 2019/06/17</td>
<td>Japan and Sri Lanka</td>
<td>Sri Lanka’s first satellite</td>
</tr>
</tbody>
</table>

The 18 satellites that we have launched so far
Finally, a word about pursuing a Masters Degree or PhD at Kyutech
Space Engineering International Course

- Taught in English
- You must have a bachelor’s degree in some field of engineering
- Masters degree in two years
- Phd in three years
- SEIC has between 45 and 60 students at any given time, mostly foreigners
- You will learn a lot about space engineering through *hands-on training*

After this talk, see me for a SEIC brochure
Post-graduate study on Nano-Satellite Technologies

- PNST, since 2013, a full scholarship
- Jointly administered by the UN and Kyutech
- Six persons selected each year, 3 Masters and 3 PhD
- Applications accepted during September thru January
- Apply through the website given below
- You must be from a non-space-faring nation


After this talk, see me for a PNST brochure

If accepted, you are placed into SEIC
Thank you for your attention from the BIRDS Family

BIRDS -1 -2 -3 and -4

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