September 2, 2020
E+CRAFTMAN Co. Ltd.
Space BD Inc.

Space BD to provide the SmallSatellite deployment service from ISS to E+CRAFTMAN and Hokkaido University of Science

Hokkaido and Tokyo, Japan- Space BD Inc., the leading space startup in Japan that provides access to space using the International Space Station (ISS) Japanese Experiment Module “Kibo” and rideshares on Japan’s flagship launch vehicle “H3”, announced that it will provide cubesat deployment service from the ISS for HMU-SAT1. HMU-SAT1 is a nanosatellite developed by Space Development Research Club at the Hokkaido University of Science with support from E+CRAFTMAN Co. Ltd., a leading Electronic Data Interchange (EDI) company based in Sapporo, Hokkaido.

From left: Koki Ouchi, Issa Mori, and Kazuki Haga (Space Development Research Club), Kazuhiro Ohno (Space BD), Toshiki Takahashi (Head), Ryuichi Mitsuhashi (Prof.), Norito Sugawara (Space Development Research Club)

*This photo has been taken before COVID-19 emergency declaration

■ Project overview

Space Development Research Club conducts research on low power communication technology for satellites via smartphones equipped with small antenna and transceiver. This technology allows short message communication of up to about 20 characters, which is suitable during an emergency such as natural disasters. People will be able to send a safety confirmation and rescue request.

With this mission, they will demonstrate the low power communication technology in space using the antenna, nanosatellite, and the ground station that Space Development Research Club developed

internally.

■ **Organization structure for satellite development**

Prof. Mitsuhashi, who was involved in the development of the first nanosatellite in Hokkaido in 2006, is appointed as an advisor for the Space Development Research Club. Sapporo-based IT company E+CRAFTMAN will also provide support.

■ **Satellite Launch**

HMU-SAT1 is a 1U cubesat (10cm cube; 1.3kg) developed using components purchased from home electronics retailers and online stores. Space BD will manage the launch and deployment of HMU-SAT1 from ISS Kibo, which is planned for 2021. Space BD's engineering team will provide Space Development Research Club with one-stop service from technical integration at each stage of the project and support safety assessment reviews, the launch to the ISS, and the final deployment of the nanosatellite from the Kibo module.

Comment from Masatoku Niiyama, CEO, E+CRAFTMAN

"We, at E+CRAFTMAN, hope to support not only as a company in Hokkaido, but work together with the team who have high technological ability and passion towards space, and students who aim to be engineers to build the future of space. We hope that this satellite communication and transmitter/receiver trial will help the development of disaster prevention communication in the near future. Furthermore, I hope that it will be an opportunity to inspire the younger generation of Japan for technology studies. E+CRAFTMAN has a long history of developing in-house information and communication services related to distribution and logistics, and we hope that our technology, know-how, and the scheme will be utilized in future product development."

Comment from Toshiki Takahashi, Head, Space Development Research Club

"We experienced the blackout in the Eastern Iburi earthquake that occurred in Hokkaido 2018, and realized the need for next-generation communication technology that does not rely on terrestrial communication networks. We are proceeding our development with the support and cooperation of various people in Hokkaido including E+CRAFTMAN. There is no word of thanks for all the support from various people, such as Oukou Equipment Industry Co. Ltd. and Hokkaido Reishi Co. Ltd. who offered us the activity field for the case that the satellite development activities on campus will be restricted for a long period due to the impact of COVID-19. In this project, we would like to experiment with next-generation communication technology and build a wireless communication system that can be operated in disaster areas and conflict zones without relying on existing terrestrial

communication networks.”

Comment from Kazuhiro Ohno, Manager, Marketing, Satellite Launch Services, Space BD

“ We are very pleased to be able to challenge this project with E+CRAFTMAN and the members of the Hokkaido University of Science Space Development Research Club. I still remember clearly that I was excited to take up the challenge when I first heard about this project from Mr. Niiyama, the CEO of E+CRAFTMAN, members of the Hokkaido University of Science Space Development Research Club, and Prof. Mitsuhashi. I felt not only the technical skills but also the enthusiasm of all the members involved. From now on, Space BD, as a partner, will strive together to ensure a successful delivery of the project.
We believe that Space BD's service utilizing the ISS "Kibo" is the most suitable means for missions such as this for the purpose of technical demonstration. Our experienced engineers work closely with satellite developers to provide consistent support for satellite deployment.”

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Media contacts:

About satellite launch service
Space BD Inc.
Public Relations
Marin Hara
Mail： info@space-bd.com
TEL： +81-3-6264-7177

About E+CRAFTMAN’s business
E+CRAFTMAN Co. Ltd.,
Administration Office
Ito, Mohri
Mail:kanri@ecraftman.com
Tel: +81-11-640-7200

■ About E+CRAFTMAN

E+CRAFTMAN, an Electronic Data Interchange (EDI) provider in Hokkaido, was established in May 2007 by the president Masatoku Niiyama. The company mainly develops and provides IT services related to food distribution. In October 2014, E+CRAFTMAN established a local subsidiary, E+CRAFTMAN VIETANAM, in Ho Chi Minh City, Vietnam to develop and provide IT services for both Japan and Vietnam in the effort to expand its business in Japan and overseas. In January 2019, it was certified as the first electronic payment settlement agent in Hokkaido.

■ About the Space Development Research Club at Hokkaido University of Science

The Space Development Research Club is a group with love for space and manufacturing, consisting of cross-disciplinary members from 4 faculties and 13 departments of Hokkaido University of Science. In 2006, the Hokkaido Space Union, the predecessor of the group, successfully launched the HIT-SAT (HO-59). In addition to satellite development, the Space Development Research Club is also making efforts to broaden the scope of space development by conducting educational activities related to

space development to local children.

■ About Space BD

Space BD delivers the optimum plan to transport things to Space for customers aiming to launch satellites or perform experiments in the space environment. As the strategic partner of Japan Aerospace Exploration Agency (JAXA), the company provides one-stop support from technical coordination to launch execution and operations support using reliable space assets such as the ISS Kibo module and Japan's flagship launch vehicle H3.

Furthermore, Space BD has expertise in new business and project creation to explore new possibilities of space utilization and open up Space to other industry sectors. Since its foundation in 2017, Space BD has been pursuing its mission to accelerate the industrialization of Space by incubating various businesses around "Space." Their business activities include leadership training program based on the training program for astronauts, and capacity-building in developing countries. The company will continue to expand the scope of the space industry around the world.
https://space-bd.com/en/