

Space BD provides ISS external platform utilization service to Sony

Succeeded in demonstrating wireless communication signal reception in space

Used Japan's first external operation systems for more efficient and easier on-orbit demonstration

Tokyo — Space BD, a leading Japanese space startup, announces that it has provided the International Space Station (ISS) Japanese Experimental Module (Kibo) external platform utilization service to Sony Group Corporation (Sony). Their mission was to demonstrate the compatibility of the wireless communication equipment for ELTRES™, a low-power wide-area (LPWA) communication standard developed by Sony. Sony has successfully caught the signals and completed all demonstration in orbit on October 27, 2022

Space BD's external platform utilization service utilize the IVA-replaceable Small Exposed Experiment Platform (i-SEEP). i-SEEP makes demonstrations quicker, cheaper, and with lower risk than the one by using satellites. The in orbit demonstrations requires the fundamental energy resources such as power and communications. While satellite has taken the role as energy supplier, i-SEEP is able to provide the resource directly from the ISS.

Through this easy space utilization service Space BD will continue to expand its service offerings to lower the hurdle of access to space and encourage more people to utilize space.

■ **Space BD's service for this project**

Space BD has provided the one-stop services necessary for this in-space demonstration, including securing launch opportunities and ISS Kibo external platform utilization slots from JAXA, technical coordination, review of environmental test results, and governmental procedures.

For Sony's wireless communication demonstration with i-SEEP, Space BD organized the optimal demonstration environment that reduced the risk of power supply/communication problems in space. This allowed the developer to focus on manufacturing the experiment equipment. Also, we could flexibly respond to Sony's revised operation plan, including an extension of the exposure experiment period. This is another advantage of using i-SEEP for the in-orbit demonstration. In this project, Sony team has used Japan's first external operation systems. Previously, the communications to the ISS is strictly limited, and only JAXA Flight Control Team at Tsukuba Space Center could reach the payload to get the data. JAXA maintained the new external operation systems in April 2022, and Sony connected to the ISS from the permitted location with Space BD as the point of contact.

■ **Demonstration of wireless experiment equipment compatible with ELTRES™**

<Contact>

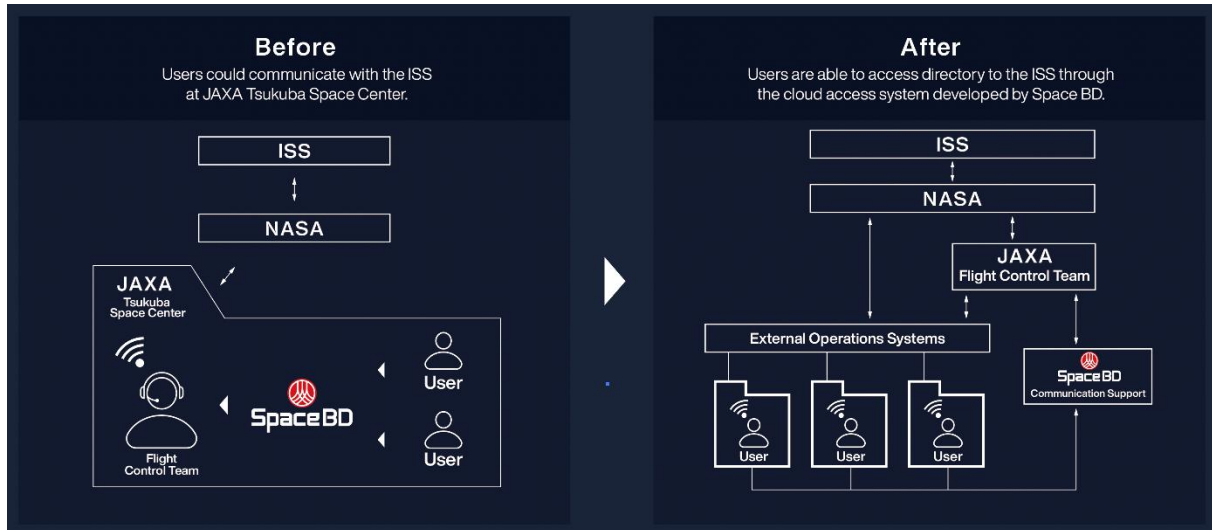
Space BD Inc.

Public Relations (Haruna Iizuka, Marin Hara)

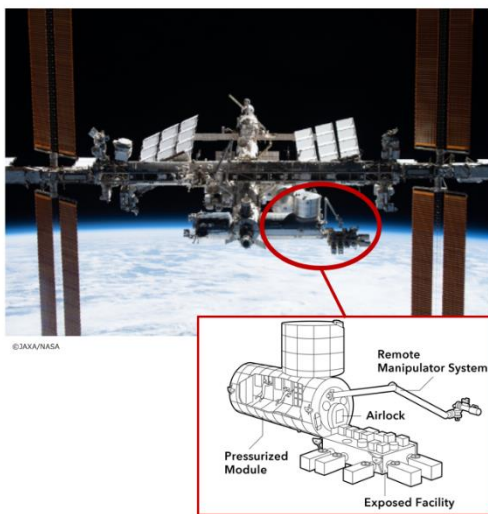
Mail: pr@space-bd.com

Tel: +81-3-6264-7177

Sony has developed its own LPWA wireless communication standard, ELTRES™, and Sony Network Communications Inc. provides a commercial service in Japan called the ELTRES IoT Network Service. This demonstration experiment using i-SEEP showed that Sony's original wireless experiment device compatible with ELTRES™ could receive radio waves sent from the ground to the International Space Station where about 400km above earth.

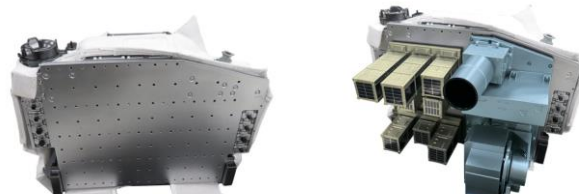


■ About IVA-replaceable Small Exposed Experiment Platform (i-SEEP)



The IVA-replaceable Small Exposed Experiment Platform (i-SEEP) is JAXA's Exposed Facility for Kibo. i-SEEP can provide power and communications directly from the ISS to the payloads.

More info about i-SEEP: <https://humans-in-space.jaxa.jp/en/biz-lab/experiment/facility/ef/i-seep/>



i-SEEP (left) and image of i-SEEP with attached hardware (right)

Space BD was selected by JAXA as the sole commercial service provider for i-SEEP utilization in 2019. Since then, Space BD has developed the utilization of i-SEEP in a wide range of fields in the global market and expanded its services, including setting the external operation functions for users and JAXA facilities. Space BD will continue to contribute to promoting the use of i-SEEP and the expansion of the space industry through its specialized technical know-how and extensive business experience in the space field.

For reference: <https://www.youtube.com/watch?v=pphWgOuvGxM&t=72s>

■ **Comment from Yuki Toyoshima, Engineer, Business Development at Space BD**



We are very honored to have contributed to the success of the Sony Group's ELTRES™ demonstration using our valuable space utilization asset, i-SEEP, and Japan's first external operation system.

We continue to support the development of ELTRES™, a new communication technology without geographical restriction. Meanwhile, we make space utilization easier for more people with i-SEEP, an asset full of potential.

■ **About Space BD**

Space BD is a space business development firm that aims to be a company that represents Japan and develops a world-class industry. Since its foundation in 2017, Space BD has provided a one-stop service from proposing business plans to providing engineering support regarding space utilization, including the International Space Station (ISS). Space BD provides broad support as a space business development firm with over 100 projects to date, including the handling of approximately 50 satellites.

URL: <https://space-bd.com/>