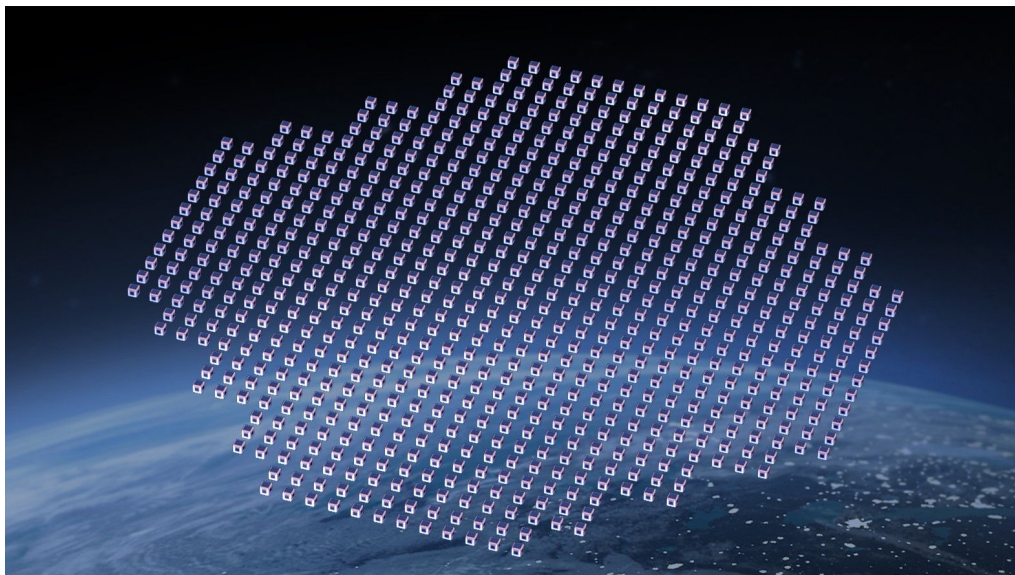


## **IST and NICT Start Joint Research on a Next-generation Space Communication System based on Satellite Formation Flying**



Hokkaido, Japan – Interstellar Technologies Inc. (hereinafter referred to as “IST”), a comprehensive space infrastructure company committed to tackling global challenges through space transportation and utilization, is pleased to announce the commencement of joint research with the National Institute of Information and Communications Technology (hereinafter referred to as “NICT”) in October 2023.

This research initiative will explore communication systems utilizing formation flying of femto-satellites. Through this partnership with NICT, recognized for its advanced communication technology, IST aspires to accelerate its artificial satellite development, maximizing its unique advantage as the sole vertically integrated company in Japan, spanning both rocket and satellite operations.

### **Establishing Core Technology Through Collaborative Research**

In the evolving satellite communication sector, the market has experienced rapid growth, transitioning from the era of traditional 'Satellite Communication 1.0' with large satellites to the current trend of 'Satellite Communication Constellations' ('Satellite Communication 2.0'), characterized by minimal latency and high-speed connectivity, led by SpaceX's 'Starlink' in the United States.

IST (\*1) is actively driving research into next-generation technology that uses formation flying of femto-satellites to create an ultra-large-scale antenna(\*2) to create substantial space-based antennas. By combining this technology with satellite constellation, IST aspires to lead in the practical era of 'Satellite Communication 3.0.' This next generation will enable direct communication between small devices, such as smartphones, and satellites in outer space, eliminating the need for dedicated ground antennas, such as those employed by Starlink.

Additionally, NICT possesses a wealth of research knowledge in satellite communications. During the research period, set to conclude on March 31, 2026, both organizations are dedicated to establish the core technology for communication systems utilizing femto-satellites, with an eye towards future commercialization.

## Comment from Takahiro Inagawa, Interstellar Technologies Inc. CEO

The satellite communication market is anticipated to undergo remarkable growth beyond what we've seen before. And it offers an ideal synergy with our core rocket business. Through collaborative research with NICT on pioneering satellite communication technology, we believe early practical implementation is achievable, bolstering Japan's standing in the communication sector.

### Interstellar Technologies Inc.

IST, a dynamic Japanese start-up, envisions a future where space becomes accessible to all through low-cost and convenient space transportation services. With the headquarters placed in Taiki, Hokkaido, IST's product development spans four locations: the Tokyo branch, Fukushima branch, and a laboratory at the Muroran Institute of Technology.

IST has achieved three successful spaceflights with suborbital launch vehicle MOMO, becoming Japan's first private company to reach space. Currently developing microsatellite launch vehicle ZERO, IST also leads Our Stars, an artificial satellite development project, pioneering Japan's vertically integrated rocket-satellite service.

Location: 149-7 Memu, Taiki, Hiroo-gun,  
Hokkaido, Japan

Representative: Takahiro Inagawa, CEO

Business: Space Transportation Services

<https://www.istellartech.com/en>



---

\*1 By strategically aggregating its managerial assets, Interstellar Technologies, Inc. has solidified its commitment to augmenting synergy in technology and human resources. Effective from August 1, 2023, the company completed a 100% merger with Our Stars Co., Ltd. and concurrently introduced a dedicated satellite development division.

\*2 The technology of deploying formation flight among femto-satellites to assemble substantial space-based antennas is characterized by its superior performance, surpassing that of large-scale satellites. Notably, it boasts robustness, ensuring the maintenance of overall functionality even in the face of multiple satellite malfunctions.

---

Inquiries about coverage of this issue

Satomi Takahashi / Nobumitsu Kobayashi, Public Relations, Interstellar Technologies Inc.

Mail: [press@istellartech.com](mailto:press@istellartech.com)