

Murakami Develops Contactless Interface Using Floating Pictogram Technology* and Begins Providing Samples

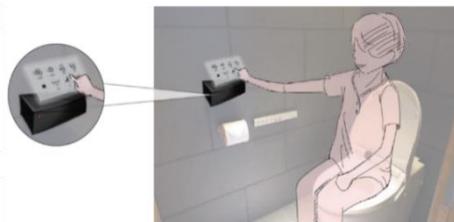
Murakami Corporation (Head office: 11-5 Tenma-cho, Aoi-ku, Shizuoka-city, Shizuoka, President: Taro Murakami, Local code: 7292) today announced that Murakami has completed the basic development of Floating Pictogram Technology* (FPT): contactless interface system using the next-generation ‘air-floating image’ optical technology. In February 2021, Murakami began to provide sample devices that incorporates this technology.



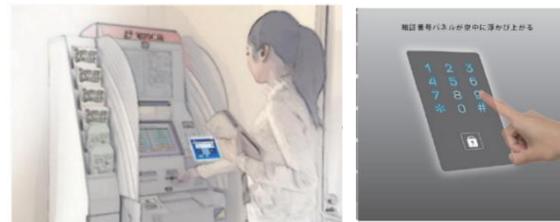
Air floating ten key sample

1. Background of Development

Murakami globally runs mirror system business that develops and manufactures rear-view mirrors for automobiles, and opt-electronics business that develops and manufactures optical components with thin-film technology for office automation equipment. The contactless FPT system, for which basic development has completed, is a system in which interface can be floated up as images in the air, so that they can be operated without directly touching the keys or operating panels by an unspecified number of people. Murakami reached the final stage of development aimed at commercialization as a solution that leads to safety, security and comfort in the era with and after the pandemic of Covid-19.



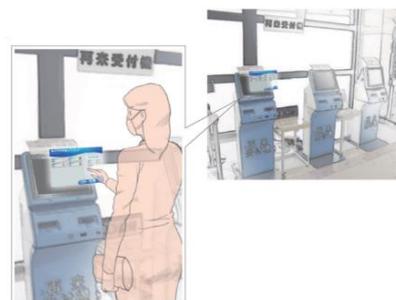
Operation of common/public toilets



Bank ATM operation/Ten key entry



Elevator operation

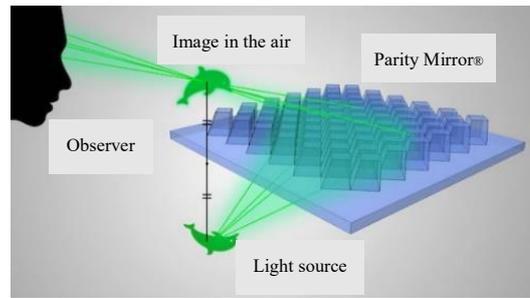


Reception entry of hospitals, etc.

Murakami carried out the development in collaboration with Parity Innovations Co., Ltd. (Head office: NICT Building, 3-5 kodai, Seika-cho, Sagara-gun, Kyoto, President: Satoshi Maekawa): a technology development-oriented venture company and pioneer in air floating image technology. By combining Parity's technology for Parity Mirror®, a specialty optical mirror, with Murakami's high-quality manufacturing technology cultivated in its automobile-related parts business, Murakami built a highly practicable system.

2. Major Features of Contactless FPT System

- ① Bright and highly visible air floating image system
- ② Spatial sensing technology (patent pending) that narrows down the position of a finger operated in the air using a proprietary algorithm and realizes a high-speed response that meets human senses
- ③ Simple system configuration that can be easily deployed for multiple product applications, depending on the size of the product to be embedded and image quality requirements



Parity Mirror® Image

The combination of Parity Mirror®'s 'high-quality floating image technology in the air' and Murakami's proprietary 'highly-responsive areal sensing technology in the air' provides a bright, high-quality response that meets human senses and a sense of operation, making it a highly versatile design for various use cases in different industries and applications.

※ Images in the air of contactless FPT system in this news release are synthetic.

※ Floating Pictogram Technology is applied for registration.

3. Contactless FPT System Sample

Main spec ※	
Brightness	3000cd/m ²
Display Resolution	1280×294 pixel
Size/Weight	W280×D98×H115mm, 700 g



Air floating toilet remote control sample

4. Murakami's Initiatives

In February 2021, Murakami began providing contactless FPT system samples for a fee, which will be evaluated by manufacturers and hospitals for their use. Going forward, Murakami strives to increase the number of samples and improves them according to the situation in which they are used, thereby enhancing their practicability, as well as aiming for mass production in 2022※.

Murakami will utilize various customer requests in R&D through the proposal of contactless FPT system. In the health and hygiene field, it will also contribute to the development of social infrastructures that enable people worldwide to live in a safe, secure and comfortable manner by providing Murakami's technology which can 'serve people', its management philosophy, based on the high-quality manufacturing cultivated in the automotive industry.

※ Specifications, plans, etc. may change in the future.

5. Contact Information

Secretariat of the FPT Project of Murakami Corporation

Contact E-mail Address: fpt@murakami-kaimeido.co.jp

< Introduction to Parity Innovations, Inc. <http://www.piq.co.jp> >

President Maekawa established the company in 2010 as National Institute of Information and Communications Technology (NICT)'s first venture to commercialize the air floating image technology which was developed while he was employed by NICT. The company has received a high degree of attention from both Japan and overseas such as its technology won a special prize of New Value Creation Award at the New Value Creation Exhibition 2018.