

March 31, 2020

MIRAIT Holdings Corporation**【 MIRAIT Technologies Corporation 】****Development of 3D Automated Flight Control Application
to Improve Efficiency and Enhance Facility Inspections by Drones**

Toward development of facility inspection automated flight control application based on
airpalette® UTM drone flight control software through collaboration with NTT Data

MIRAIT Technologies Corporation (head office: Nishi-ku, Osaka-shi; President: Kouichi Takahatake; “MIRAIT Technologies”), which is a Group company of MIRAIT Holdings Corporation, has collaborated with NTT Data Corporation (President: Yo Honma; head office: Koto-ku, Tokyo; NTT Data) to develop a 3D automated flight control application for facility inspection based on *airpalette® UTM** provided by NTT Data. Greater efficiency and sophistication of inspections of communication facilities and buildings will be realized in MIRAIT Technologies’ drone operations from April 1.

MIRAIT Technologies began full-scale drone operations in 2017, and has conducted approximately 400 flights nationwide since then, including facility inspections using drones it owns and outsourcing of drone flights for other companies.

Until now, general 2D automated flight control software could not be used due to the need to take images from multiple angles, and flights were controlled using manual operation in many cases.

Furthermore, inspections using manual flying presented issues such as the need for advanced flying skills and difficulty performing differential analysis due to differences in the routes flown when performing regular inspections.

For this reason, MIRAIT Technologies collaborated with NTT Data, which owns the *airpalette® UTM* automated drone flight control platform, to develop and validate a facility inspection automated flight control application for automated flight maintaining a fixed distance from objects with complex shapes.

Using the application will make it possible to automatically take continuous images of walls and rooftops in building inspections. Furthermore, it can also be applied to inspections of undulating golf courses due to the ease of shooting images from the

same height from the surface. In addition, in inspections of the same object, it is expected to make work more efficient and more precise in downstream processes due to the ability to obtain images from exactly the same route and same angles. Automated flight will eliminate variations in image quality caused by the operator's skill, and safety is expected to be improved by preventing errors in complex flights.

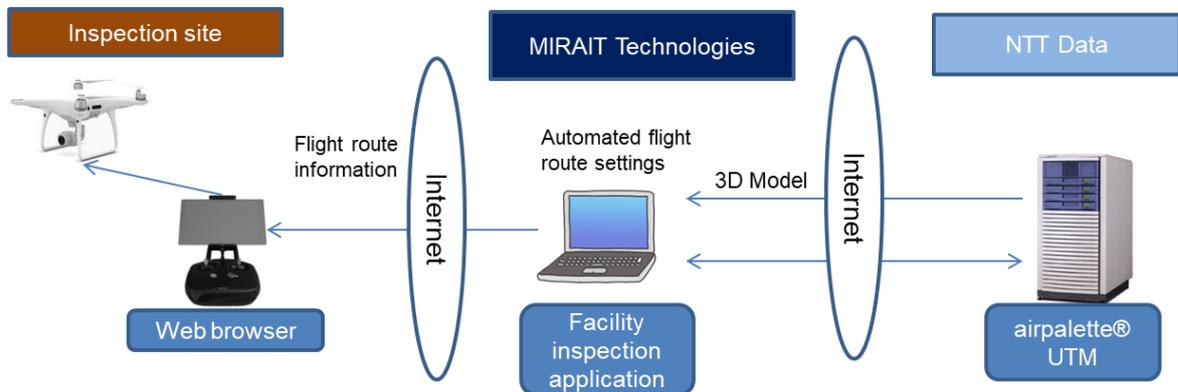
MIRAIT Technologies will strengthen initiatives in advanced facility inspection operations utilizing the application, and is aiming for 300 million yen in facility inspection sales three years from now.

airpalette® is a registered trademark of NTT Data Corporation in Japan, CTM (Europe), the United States and China.

(*Note) *airpalette*® UTM is a drone flight/traffic control software package provided by NTT Data.

Official website of *airpalette*®: <http://www.airpalette.net/ja/utm>

■ System configuration



■ Image of automated flight route settings based on a 3D model

Basic functions screen of *airpalette*® UTM

Example of building inspection route settings

