

Remote Support for Multi-Function Device Maintenance with Smart Glasses

Ricoh Japan Deploys Vuzix M400 Smart Glasses

Ricoh Japan, which handles maintenance of Ricoh's multifunction printers and other equipment, has started using Vuzix M400 smart glasses as part of its Maintenance Department's digital transformation program. On-site customer engineers receive remote support from veterans back at the service office, providing the benefits of their long experience and boosting service quality.



VUZIX M400™ SMART GLASSES

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Smart Glasses: Part of the transition to digital maintenance technology

Many manufacturing and service companies are facing difficulty hiring new people and passing on the skills and know-how of veterans to the new generation. Ricoh Japan Corp., which handles the sales and maintenance of multi-function devices and printers manufactured by parent firm Ricoh Co., Ltd., is one such company.

"We've also had problems with hiring new people, and aging veterans, and as a partial solution we began using remote support a few years ago, utilizing digital technology to make it possible for veteran servicemen to support younger ones. From May 2021, we began deploying smart glasses," explains Mr. Shimmyozu Hiroshi, Director Remote Support Department CX Center, who is involved in the remote support project.

There are about 4,600 customer engineers (CE) working at 431 service offices nationwide, visiting customers regularly (or when called) to service multi-function machines. Relatively inexperienced CEs now take Vuzix M400 smart glasses with them.

If the CE can handle the problem at hand by themselves there is no need for the smart glasses. However, for more difficult issues and errors new to the CE, such as output getting smudged for an unknown reason, the Vuzix M400 smart glasses connect to the service office via a mobile router, and the CE uses the camera and microphone to collaborate on the problem with a remote expert.

The more experienced engineer at the office suggests possible causes and solutions based on the imagery and explanation, and uses audio and video to tell the CE what to do.

This approach allows experienced veterans to share their knowledge with inexperienced CEs, training them while simultaneously reducing the time it takes to resolve the customer's problem. According to Ricoh Japan's Mr. Suzuno Fumiharu, Group manager Remote Support Promotion & Development Technology Center/DS Support Department, a former CE himself, "It's just like they're standing right behind me, telling me how to handle it, like a sort of tool to enhance CE capabilities. It would be possible to get similar support with a smartphone, but with smart glasses both your hands are free."

Photo: Pretium aenean pharetra magna ac. Cras adipiscing enim eu turpis acculle omsan sit amet.



New security guidelines for on-site use

Vuzix, headquartered in New York state, specializes in smart glasses manufacturing. Established in 1997, it has been a leader in the industry for 25 years.

The Vuzix M400 is the firm's main design, equipped with an expansive Organic Light Emitting Diode (OLED) display, 12.8-megapixel auto-focus camera, internal speakers, microphone, 3 gyrosensors, acceleration sensor, Wi-Fi, and Bluetooth audio. It runs on the Android OS. Applications include third-party augmented reality and remote support software, as well as a dedicated Zoom (fee-based) subscription.



Photo: Pretium aenean pharetra magna ac. Cras adipiscing enim eu turpis acculle omsan sit amet.

"When we were evaluating various smart glasses we looked at camera and display resolution, of course, but also how well they worked with major remote support software. Vuzix M400 smart glasses let you look at your work with both eyes, by lifting the display up, and Bluetooth earphones prevent guidance from the veteran at the remote office being heard in the customer's office. We liked those features, and the fact that it's proven itself overseas already. The stylish design was another plus," says Suzuno, part of the selection team.

Customer permission must be obtained before the camera and microphone can be used, however. Mr. Tokai Takashi, Tech Strategy Group Strategy Department Technology Center, involved in handling on-site operations, explains that the firm has "drawn up guidelines covering privacy and security. We make sure that our CEs follow them, and get permission from customers in advance."

"Many customers appreciate that we're using advanced tools, and that contributes to a better corporate image."

Customer evaluations have been excellent so far, buoyed by the firm's stance. "Many customers appreciate that we're using advanced tools, and that contributes to a better corporate image. And since the smart glasses are very obvious, there's no worry about anyone thinking we're sneaking photos," adds Tokai.

Resolving even difficult problems faster for improved service quality

Shimmyozu believes that the adoption of smart glasses is significant from the perspective of the Sustainable Development Goals (SDG) at the core of corporate management, such as providing training for inexperienced CEs (SDG 4), providing opportunities for even aged or disabled engineers to provide remote support (SDG 8), innovative technologies (SDG 9), and reducing CO2 emissions by adding virtual support (SDG 13), as shown in the table.

Company management is driving the adoption of digital technology with operations, aiming for a digital transformation of maintenance technology. As Shimmyozu points out, "We only have a few dozen M400 smart

glasses at present, but we plan to equip every young CE with one and further improve service quality." The program is already starting to have effect, with on-site service times being cut by hours in some cases. Since veteran engineers no longer have to accompany less experienced CEs, it is possible to reduce the number of people making on-site visits — a key differentiator when minimizing COVID contagion is crucial.

Vuzix smart glasses address a number of problems companies face today, including training young employees, and sharing the knowledge and skills of veterans in active service.