



Case Study

Hitachi High-Tech Fielding Corporation

The key to digitizing service reports is the electronic handwritten signature



The company started operating in April 2012 after developing a digital reporting system that improved the efficiency of its maintenance services. It enables speedy sharing of information within a company and reduces the reporting workload of service engineers.

The most important part of maintenance service is the report

Employing about 700 service engineers across 46 sites in Japan, Hitachi High-Tech Fielding provides maintenance services for the cutting-edge hi-tech equipment manufactured and sold by Hitachi High-Technologies.

In April 2012 it started operating its digital reporting system with the aim of improving the efficiency of its maintenance services. We spoke to Mr. Yamamoto and Mr. Uemura from the Service Design Center in the Service Support HQ which oversees the system's operation. The service report, which records the work performed at the customer's site, is submitted to the customer for their approval. It is also used to store details of the work performed. It is also an important document that provides indicators of the engineers' performance (work time, number of inspection, etc.) and evidence of chargeable costs. "The most dangerous time is when you bring the report back from the customer's site. For example, an engineer would lose the customer's confidential information if he left his bag on the train. There is also the risk of losing the report if our office were to be hit by an earthquake or fire," says Chief Engineer Yamamoto. Apparently the introduction of the new system also

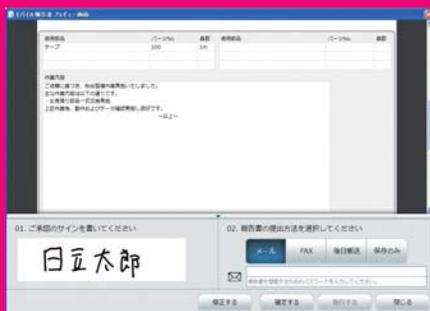
helped the engineers appreciate the importance of the report once again. The information in the report also needs to be shared rapidly within the company. Hitachi High-Tech Fielding wanted to improve its work efficiency by speeding up the information-sharing process and reducing the workload of the engineers writing the reports. In order to solve these problems, they decide to digitize the reports and purchased about 200 STU-300 LCD signature tablets to enable handwritten signatures on the reports.

The biggest concern was personal seals

"Our biggest concern during the development was personal seals. In the previous paper-based operations, engineers could sign either manually or with their seals. We asked the customer if they wanted to enable manual signatures or seal impressions and they chose the latter. The service report is a 4-part form, so even when I told the customer that one manual signature would suffice there were many customers who still expressed a preference for personal seals," says Mr. Yamamoto. The only way that the customer can mark his approval with this new report creation system is by signing, so they were apparently worried about the customer's reaction. However, we were told that there were hardly any customers who absolutely insisted on seals or paper being enabled. About three months after the system's introduction (as of June 2012), 92% of the reports are digitized and the remaining 8% are on paper.



Conventional Service Report



Preview of Electronic Service Report



Electronic Handwritten Signature on Wacom Signature Tablet



Signature digitization achieved within one month

The most problematic thing about creating the service reports was the digitization of the customer's signature and the method of submitting the report. In particular, they struggled with development of the pen function as it was difficult to get accurate data about pen coordinates and pen pressure at first. However Wacom's developer support team was very helpful, "the interface specifications and sample program that came with Wacom's LCD signature tablet were really useful. Thanks to them, we managed to develop the pen function within the short period of about one month," says Mr. Uemura. The entered signature data was converted from an image to text data so could be sent and saved into the form. It was only converted back to an image when it needed to be displayed as the signature. This prevents the replication of manual signatures. To protect customer information when submitting a copy of the report, there is an erroneous transmission prevention function for faxes and a password lock function for emails.

Verification and assessment of the signature input terminal

After testing whether what was written on paper could be accurately digitized and comparing it with other tablet terminals, Hitachi High-Tech Fielding selected Wacom's STU-300 LCD signature tablet as one of the input terminals for customer signatures. According to Mr. Uemura, "It is every easy to write on because the LCD immediately displays what you write. Another reason was that it is light and portable, because engineers will always be carrying it around together with their PCs. Wacom's tablet delivered the best signature reproducibility."



The numbers speak for themselves

The new report creation system that Hitachi High-Fielding developed achieved the following three results in response to the challenges of speeding up internal information sharing and reducing the report writing workload.

1. Information-sharing lead time cut by more than two thirds

It used to take an average of three days for the information to be registered in the system, because the engineers had to physically bring it back to the office when they left the customer's site. The new system automated many processes, reducing this time to 22 hours, which is less than a third of the previous time.

2. Report writing time cut by two thirds

It used to take about 15 minutes to write a standard paper report. As a result of the simulations conducted during the system's development, a standard report can now be written up in about five minutes. This is because engineers no longer need to enter previously used data that is already registered in the database.

3. Data input work by assistants cut 92%

Assistants used to input all the contents of the reports. Under the new system, the information that engineers enter at the customer's site is automatically registered straight into the system. In other words, assistants only need to enter data for the reports that are still written on paper, which is only 8% of the previous amount.

The introduction of paperless reports also had various other effects, such as reducing the workload and cost of transporting the reports and simplifying data protection, management and month-end collation.



Hitachi High-Tech Fielding Corporation

<http://www.hitachi-hitec.com/fielding/>

Established in 1965. Performs maintenance services for a wide range of cutting edge equipment used in R&D, clinical examinations, and the production of semi-conductors, foodstuffs and pharmaceuticals. This equipment is mainly manufactured and sold by Hitachi High-Technologies. It aims to be the top customer service company by providing a "quick and perfect service" globally, so will exploit its extensive experience and knowhow as it continues to propose the appropriate solutions and services to its customers in order to keep them at the leading edge of their respective fields.