

Accelerating Laptop Repair with Cloud Display Devices

A CASE STUDY

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Voodoo Robotics helped a laptop repair service center reduce their turnaround time from 5 days to 4. In some cases, customers paid for expedited service and repairs were completed in 24 hours.

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Summary

Voodoo Robotics leverages the Internet-of-Things (IoT) to help warehouses and distribution centers maximize operational efficiency to fill more orders, in less time, with fewer errors. Our Cloud Display Devices are frequently used as a pick-to-light system, with devices lighting up to indicate which inventory needs to be picked to fill an order. This affordable wireless system enables pickers to locate, pick the correct items and put them in the right place — quickly.

Summary (continued)

But a URL-based system is so flexible that it can be used for many other applications, such as optimizing repair and service centers. One might think that service centers work like a simple pipeline: receiving, repair, shipping. The reality is far more complicated.

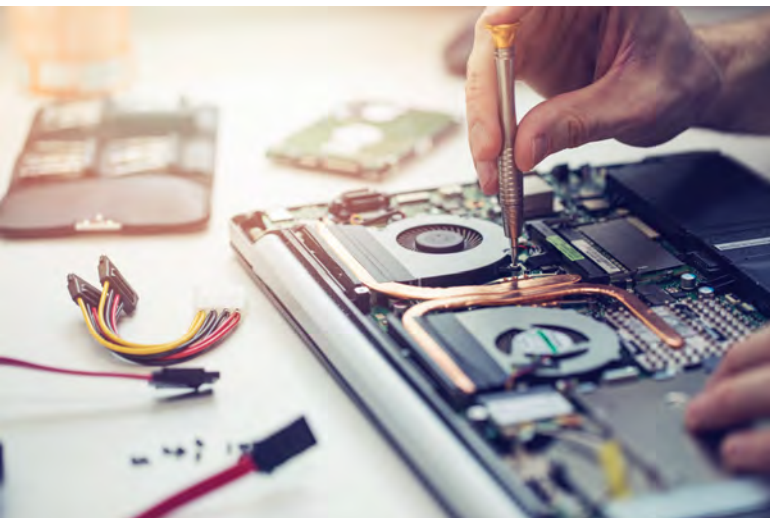
Here's an example of how Voodoo Robotics helped a laptop repair company reduce their turnaround time from 5 days to 4. In some cases, customers paid for expedited service and repairs were completed in 24 hours.



Challenge

Customers send an item to a service center expecting it to be repaired and returned in a timely manner. The unfortunate reality is that many repair centers process thousands of repairs each week and are unable to track items throughout the repair process. Items are frequently lost, temporarily misplaced, or unknowingly fall behind on the repair schedule.

Such was the case for a laptop service center that discovered Cloud Display Devices, which light up with any two lines of text, could be used to identify a laptop and track its repair progress. The center was processing 5,000 repairs each week using bar code scanners and simple software. Despite their efforts, the process lacked the ability to identify repair delays or easily locate specific laptops. In addition to streamlining the repair process, the company wanted to offer an expedited repair service for select customers.



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Environment

The huge service center houses numerous racks along one wall and a bunch of technicians at workstations in the center. The 6-foot racks are filled with thousands of 4-in high totes, each containing a laptop and power cable. A large number and bar code on the tote is paired with the laptop repair order in the database. A leader-board in the front of the room scores technicians on the speed of diagnosis and repair, accuracy of diagnosis, effectiveness of repair, and other key performance metrics.

Processing 5,000 laptops a week means 1,000 are received and 1,000 shipped daily. Each laptop proceeds through a series of steps, beginning with a diagnosis, after which the laptop is returned to the rack while awaiting customer approval and payment for the recommended repair. Once approval and payment are received, the technician must search the rack for the tote by number, which could be anywhere within the first 1/3 section of racks – a very time-consuming task!

After the completed repair, the tote is returned to the middle section of the racks, where another technician, assigned to check the repair, again searches for it and inspects it. If the repair is not satisfactory, the laptop repeats the process. When the repair has been confirmed and the laptop is ready to be shipped to the customer, it is returned to the last 1/3 section of the racks and picked up by the shipping department.

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Not surprising, the company needed a way for technicians to quickly identify laptops, be alerted to any laptop that was falling behind schedule, and allow the shipping department to efficiently separate laptops for shipment.

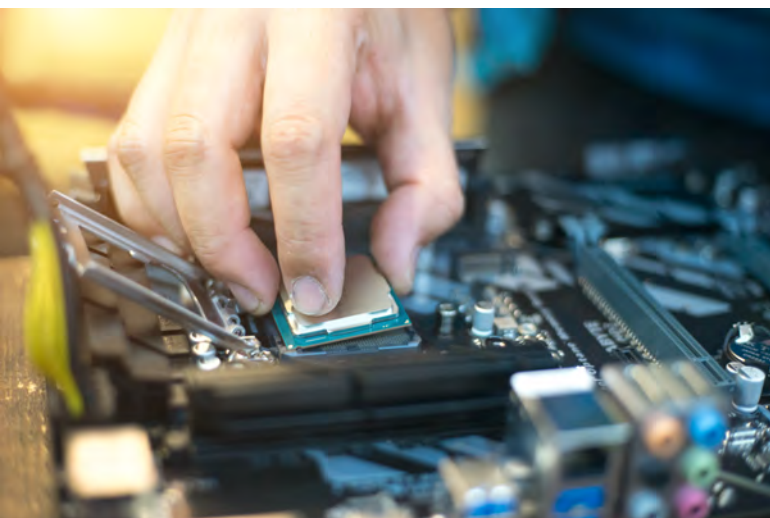
Solution

The company ordered Cloud Display Devices from Voodoo Robotics and attached one to each tote. Instead of simply pairing laptops with tote numbers, a tiny piece of extra code adds the laptop's serial number, status, shipping carrier, and the name of the technician to the Cloud Display Device. When a technician needs

Solution (continued)

a laptop, the device lights up with his name and the ID number associated with the repair, saving valuable time previously spent visually searching thousands of numbers.

As the tote moves through the repair pipeline, the status is updated. If at any point a laptop falls behind schedule, an alert is triggered so the repair can be expedited, which avoids extra overnight shipping charges and creates satisfied customers. When the repairs are finished, all the totes with laptops ready to ship can be lit up, helping the shipping department quickly locate and prepare them for shipping.



Result

By using the technician labor and time more efficiently, the service center was able to reduce the turn-around time from 5 days to 4 days. In select cases, when a customer paid for expedited service, the repair could even be done in 24 hours. Time spent searching



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for laptops, which previously took 5 to 10 minutes, was reduced to seconds. Because laptops were racked between steps but easily found, an average of **30 minutes** of a technician's time was saved throughout the life of **each** repair. The ability to track repair status and expedite failed repairs and other problems reduced the number of delays and overnight shipping expenses. As a result, the service center runs far more efficiently with fewer delays and can offer expedited service for select customers.