AT&T Innovations

WaveGuide Develops New IoT Technology Using AT&T's Global Network

WaveGuide developed a hand-held and battery-operated device using the AT&T global network that can detect tiny amounts of metals in equipment fluids to alert preventative maintenance.

What is preventative maintenance?

Most of us have been to the doctor for a check-up and have had bloodwork done. Why? Most likely to check for high glucose, cholesterol, or triglycerides levels. If those levels are high, the doctor might suggest lifestyle changes or prescribe medication. This is preventative care.

The idea is to take action to prevent a bigger medical issue like a heart attack or a disease like diabetes in the future.

Why is it needed in manufacturing?

Now, apply that same concept to the manufacturing industry. Large, expensive equipment that produces products is the backbone of businesses. If the equipment fails, the loss of time, resources, and expenses can be immeasurable. In some instances, a catastrophic failure can be deadly. Machinery that suddenly breaks apart can propel shrapnel at operators. If examining fluid could give insight into equipment function, or signal the onset of failure, wouldn't manufacturers give their equipment a "check-up?"

That is exactly what a new Internet of Things (IoT) handheld device from WaveGuide can do. Owners/operators can perform a fast, easy "check-up" on their equipment.

How is this technology applied?

Massachusetts-based WaveGuide developed a hand-held nuclear magnetic resonance, or NMR, platform technology. That's a mouthful. In a nutshell, it's a portable and battery-operated device that can detect tiny amounts of metals and other particles in equipment fluids – in a matter of minutes. What do metallic particles mean? They can indicate the onset of equipment failure.

Where does IoT connectivity come in?

Once the WaveGuide device collects the data, it provides an actionable alert to the operator. The data is also sent via the highly secure, global AT&T network for further analysis. This helps maintenance teams determine the right course of action — and they have time to look for an appropriate preventative measure. Preventative care can help avoid catastrophic equipment failure.

The device's portability, size, ease of use, and low cost mean testing can be performed virtually any time, anywhere. No more excuses to deny a check-up.

For more information about how IoT technologies continue to drive innovation, go to att.com/iot.