

Handy remote monitoring system works anywhere

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The VTT Technical Research Centre of Finland has teamed up with ten other European research bodies and companies from six European countries to create a unique remote monitoring system for machines. The product of a three-year EU project, Minimum Cost, Minimum Size, Maximum Benefit Condition Monitoring System, MINICON, is a system that allows greater automation and facilitates maintenance of machines located far apart from each other.

“We demonstrated the prototype in March from our Machine Diagnostics Centre,” says Aino Helle, Senior Research Scientist at VTT Industrial Systems. “Now it’s ready for development into a product. There’s still a lot to be done to turn it into a functional commercial system, such as ensuring the security of data transfer.

“It’s designed for companies that provide maintenance service for customers,” she says. The technology will allow such firms to boost their international competitiveness.

“The idea was to create a light system that works at a minimum size and cost, so that small and medium-sized enterprises such as e.g. machine shops can also use it. The clients of maintenance companies could also be small local firms, even if the maintenance companies themselves tend to be quite large.”

The designers predict that when the new remote monitoring system is adopted, machines and equipment will malfunction or be knocked out of

service less often. Companies that maintain machinery will no longer need to make expensive, often needless, trips to check up on facilities.

Instead, corporations will be able to concentrate on pre-emptive monitoring of machines at a greater distance that show signs of potential upcoming problems.

Thanks to the new electronic surveillance, demanding maintenance jobs can be carried out in a timely fashion with minimal disruption of machine operation. Based on wireless M2M (Machine-to-Machine) technology, the system constantly transmits key figures back to a central base.

The monitoring system works independently from the machines' own control systems. It can be attached to individual machines, but is particularly well suited to maintaining and troubleshooting large sets of machinery. "It's best suited for monitoring series of machines that exist in great number, such as machine tools, pumps and valves," Helle explains.

So could the system be used anywhere on Earth – even remote islands or the Antarctic?

"Well, as long as you have power and can arrange a wireless connection, either via Ethernet, the internet or, for example, the GSM network, then yes," says Helle.

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